



Investing in rural people

People's Republic of China

**Sustaining Poverty Reduction through Agribusiness
Development in South Shaanxi (SPRAD-SS)**

Design completion report

Main report and appendices

Contents

CURRENCY EQUIVALENTS	III
WEIGHTS AND MEASURES	III
ABBREVIATIONS AND ACRONYMS	IV
MAP OF THE PROJECT AREA	VI
EXECUTIVE SUMMARY	VII
LOGICAL FRAMEWORK	XVII
I. STRATEGIC CONTEXT AND RATIONALE	1
A. COUNTRY AND RURAL DEVELOPMENT CONTEXT	1
B. RATIONALE	2
II. PROJECT DESCRIPTION	6
A. PROJECT AREA AND TARGET GROUP	6
B. DEVELOPMENT OBJECTIVE AND IMPACT INDICATORS	13
C. OUTCOMES/COMPONENTS	14
D. LESSONS LEARNED AND ADHERENCE TO IFAD POLICIES AND THE SECAP	24
III. PROJECT IMPLEMENTATION	27
A. APPROACH	27
B. ORGANIZATIONAL FRAMEWORK	28
C. PLANNING, M&E, LEARNING AND KNOWLEDGE MANAGEMENT	31
D. FINANCIAL MANAGEMENT, PROCUREMENT AND GOVERNANCE	36
E. SUPERVISION	39
F. RISK IDENTIFICATION AND MITIGATION	40
IV. PROJECT COSTS, FINANCING, BENEFITS AND SUSTAINABILITY	41
A. PROJECT COSTS	41
B. PROJECT FINANCING	42
C. SUMMARY BENEFITS AND ECONOMIC ANALYSIS	43
D. SUSTAINABILITY	45

List of Tables

TABLE 1: SHAANXI PROVINCE ANNUAL PLANS TO OVERCOME RURAL POVERTY BY 2019	8
TABLE 2. PRE-IDENTIFICATION OF SUBSECTORS IN THE PROJECT AREAS	8
FIGURE 1: TEA VALUE CHAIN MAP	9
TABLE 3: POVERTY DATA IN SPRAD-SS PROJECT AREA.....	10
TABLE 4: MAIN RISKS AND MITIGATIONS	40
TABLE 5: PROJECT COST BY COMPONENT AND FINANCIER	42
TABLE 6: PROJECT COSTS BY EXPENDITURE CATEGORY AND FINANCIER	42
TABLE 7: SUMMARY OF FINANCIAL ANALYSIS.....	43

Appendices

APPENDIX 1:	COUNTRY AND RURAL CONTEXT BACKGROUND	47
APPENDIX 2:	POVERTY, TARGETING AND GENDER	51
APPENDIX 3:	COUNTRY PERFORMANCE AND LESSONS LEARNED	84
APPENDIX 4:	DETAILED PROJECT DESCRIPTION	88
APPENDIX 5:	INSTITUTIONAL ASPECTS AND IMPLEMENTATION ARRANGEMENTS.....	117
APPENDIX 6:	PLANNING, M&E AND LEARNING AND KNOWLEDGE MANAGEMENT	125
APPENDIX 7:	FINANCIAL MANAGEMENT AND PROCUREMENT ARRANGEMENTS	142
APPENDIX 8:	PROJECT COST AND FINANCING	150
APPENDIX 9:	ECONOMIC AND FINANCIAL ANALYSIS	161
APPENDIX 10:	DRAFT PROJECT IMPLEMENTATION MANUAL.....	175
APPENDIX 11:	COMPLIANCE WITH IFAD POLICIES	176
APPENDIX 12:	CONTENTS OF THE PROGRAM LIFE FILE	182
REVIEW NOTE:	SOCIAL ENVIRONMENTAL AND CLIMATE ASSESSMENT PROCEDURES (SECAP)	184

Currency equivalents

Currency Unit	=	
US\$1.0	=	CNY6.64

Weights and measures

1 kilogram	=	1000 g
1 000 kg	=	2.204 lb.
1 kilometre (km)	=	0.62 mile
1 metre	=	1.09 yards
1 square metre	=	10.76 square feet
1 acre	=	0.405 hectare
1 hectare	=	2.47 acres
1 mu	=	0.0667 hectares
1 hectare	=	15 mu

Abbreviations and acronyms

AWPB	Annual Workplan and Budget
BLM	Bureau of Land Management
BOA	Bureau of Agriculture
BOF	Bureau of Finance
BOF	Bureau of Forestry
BOM	Bureau of Meteorology
BOT	Bureau of Transportation
BOWR	Bureaus of Water Resources
CGF	Credit Guarantee Facilities
COSOP	Country Strategic Opportunity Project
CPE	Country Project Evaluation
CPMO	County level PMO
CVA	Climate Vulnerability Assessment
DA	Designated Account
DOF	Department of Finance
ECOCERT	Certification Body for Sustainable Development
EPB	Environment Protection Bureau
FA	Farmer Association
FaaB	Farming as a business
FC	Farmer cooperative
FM	Financial Management
GI	Geographic Indication
IAs	Implementing Agencies
IPRCC	International Poverty Reduction Centre in China
LGOP	Leading Group Office on Poverty Alleviation and Development
LIC	Low income country
LPA	Lead Project Agency
M&E	Monitoring and Evaluation
M4P	Market for the Poor
MDG	Millennium Development Goals
MOF	Ministry of Finance
NPRS	National Poor Registration System
PA	Project Account
PLG	Project Leading Group
PMO	Project Management Office
PPMO	Province level PMO
SPRAD-SS	Sustaining Poverty Reduction through Agribusiness Development in South Shaanxi
RECMB	Rural Economic and Cooperative Management Bureau
RIMS	Result and Impact Management System
TISO	Township Implementation Support Office
U-MIC	Upper-middle-income country
UNDP	United Nations Development project

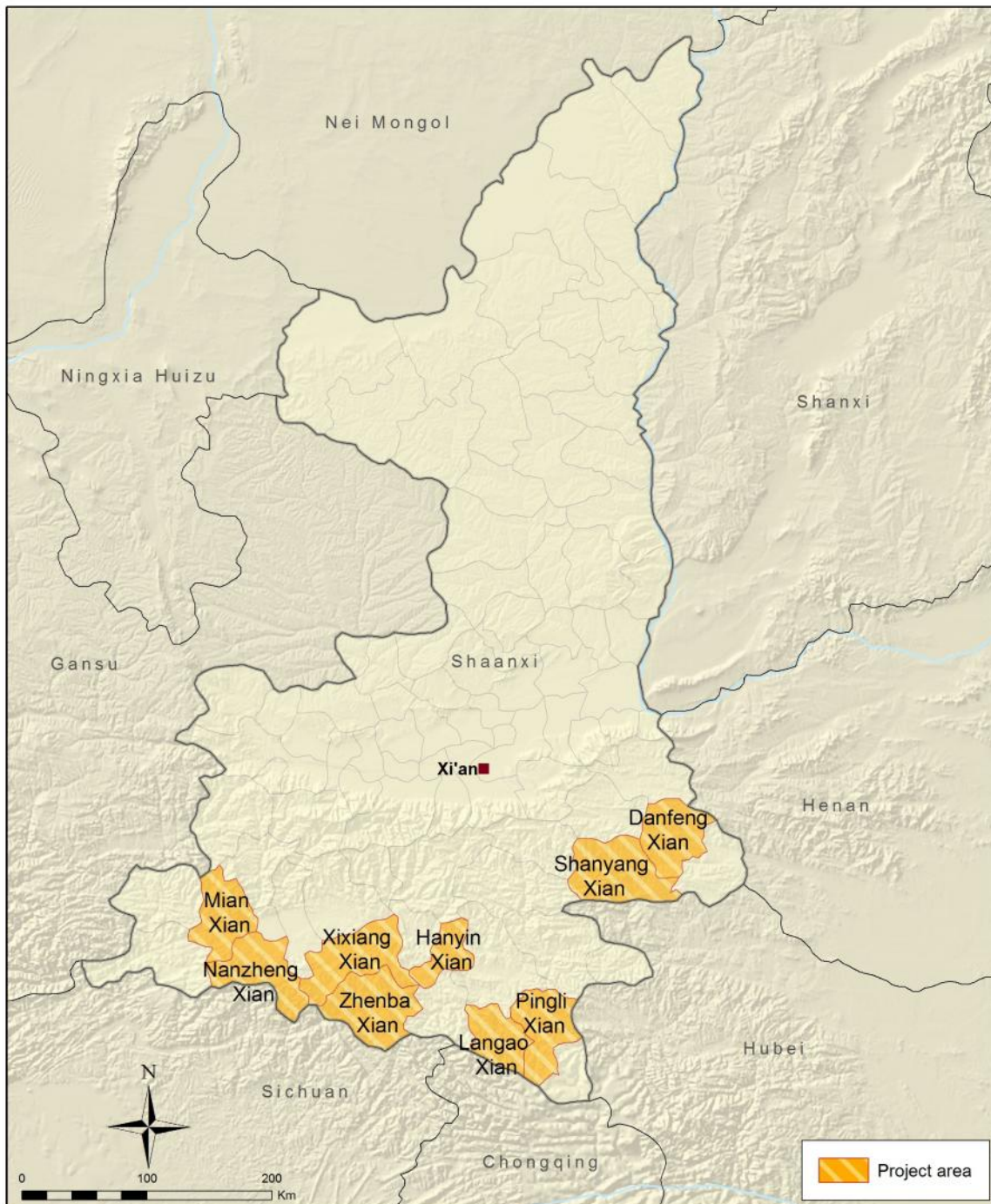
VIG	Village Implementation Groups
WA	Withdrawal Application
WF	Women Federation
WUA	Water User Association

Map of the project area

People's Republic of China

Sustaining Poverty Reduction through Agribusiness development in South Shaanxi

Design report



The designations employed and the presentation of the material in this map do not imply the expression of any opinion whatsoever on the part of IFAD concerning the delimitation of the frontiers or boundaries, or the authorities thereof.
Map compiled by IFAD | 03-04-2018

Executive Summary

A. Strategic context and rationale

Country and rural development and poverty context

1. Economic and rural development context. China has experienced over 30 years of significant economic growth, which triggered rapid rural transformation and successful agricultural development, and contributed to drastically reducing poverty. However, by end-2016, about 43 million people still live below the poverty line in rural areas.

2. Poverty context. Rural poverty in China is largely concentrated in the remote and mountainous areas in the central and western regions. Poor community infrastructures and facilities, limited asset base and limited access to productive assets, and remoteness are among the main causes of poverty. Limited capacity and/or opportunities to access markets and financial resources are among the main factors constraining current poverty reduction efforts.

Agricultural development context

3. Emerging opportunities for smallholder agriculture. Despite the rapid transformation in the agricultural sector, China's agriculture remains predominantly characterized by smallholder farmers, particularly in the mountainous areas, where most of the poor live. The rising demand for high-value agricultural products (e.g. fruits, vegetables, and niche products) and the spread-out of technological innovations (e.g. cell-phone coverage, electronic platforms for marketing, etc.) opened up new opportunities for smallholders, as high-value products are more labour intensive to produce and generate higher return per hectare. Similarly, the rising consumers' demand for food quality and food safety does offer new market opportunities to smallholders, as long as they can adjust their production systems to the required scale and quality or safety standards.

Rationale and alignment with government priorities and RB-COSOP

4. Rationale for the project. Bringing the remaining 43 million poor out of poverty by 2020, and sustaining this achievement in the years following 2020, is the main government's priority of the current Five Year Plan (2016-2020). Poverty reduction through agribusiness development (chanye fupin) is one of the five poverty reduction strategies promoted by the government. Shaanxi province is a priority areas for poverty reduction. On the one hand, the Project justification is associated with addressing the constraints of the remaining pockets of rural poverty. The Project will be implemented in 9 nationally-designated poor counties within the three municipalities of Hanzhong, Ankang, and Shangluo in the Qinba Mountains poverty block in south Shaanxi province where steeply sloped and heavily dissected mountains constrain crop production and are subject to frequent natural disasters. The selective targeting of project area townships and villages has resulted in concentrations of project area registered poor which are greater than the county-wide poverty rates in each of the nine counties. Overall, the poverty rate of 22.0% in the project area is greater than the average for the nine counties' rural population (18.2%), nearly double the provincial average poverty rate (12.4%), and much greater than the national poverty rate of 4.1%.¹ On the other hand, the justification lays in confronting the challenges and realizing the opportunities

associated with the implementation of the poverty eradication project through “agribusiness enterprise development” and “rural financial services development”. The strategy evolves around (i) diversifying both supply (enlarged range of crops and products to be offered to the market) and marketing channels (enlarged range of value chain models and buyers) sides of small scale agriculture; (ii) responding to the changes in raising urban demand by increasing supply of safe and quality food by smallholder in order to capture a permanent share of this new market as well as the growing niche market of certified, geographic branded food, and (iii) building the collective and productive infrastructure that is required for effective market linkages.

5. Alignment with national priorities and strategies. The proposed project is well aligned with the national priorities and strategies as it will (i) contribute to the government’s goal of eradicating rural poverty by 2020 and sustaining this achievement in the following years. Specifically, the proposed project will support the Shaanxi province in implementing its provincial poverty reduction strategies and achieving its poverty reduction targets; (ii) promote poverty reduction through agribusiness development, one of the key poverty reduction strategies of the government; (iii) leverage significant private sector capital and knowledge through public private partnerships around profitable business ventures (such as engaging with the ALIBABA Group including Ant Financial, Rural TAOBAO and China Insurance); and (iv) promote environmental sustainability, in line with the government’s concepts of ‘ecological civilization’ and ‘ecologically-balanced development’.

6. Alignment with COSOP 2016-2020. The SPRAD-SS project is the second investment operation to be designed under the current 2016-2020 COSOP, and it well reflects the recent trend of focusing IFAD support towards enhancing income opportunities and increasing resilience, giving more emphasis to improving access to markets and value-chains, and resilience to climate change. The proposed project serves well the Strategic Objectives 1 and 2 of the 2016-2020 COSOP, as described below, particularly in relation to improved access to physical assets, market, financial services and capacity development for income generation to contribute to the poverty eradication impact. The project design will take into account the experiences learned from previous and on-going IFAD projects in China, particularly LMAPRP, SSADEP and JIMAAPP and from the design of IPRAD-SN including participatory planning, targeting, gender mainstreaming, M&E, and management and coordination of implementation.

7. Alignment with IFAD’ Strategic Framework 2016-2025. The objective and activities of the proposed project are in line with the IFAD Strategic Framework 2016-2025 goal and strategic objectives, particularly strategic objective 2 (increase poor rural people’s benefits from market participation) and strategic objective 3 (strengthen the environmental sustainability and climate resilience of poor rural people’s economic activities).

8. Alignment and contribution to Sustainable Development Goals (SDGs) and Rome-based agencies agenda. The objective and activities of the proposed project are aligned with and will contribute to the Agenda 2030, and, more specifically to SDG1 (eradicating poverty), SDG2 (ending hunger and malnutrition, achieving food security and promoting sustainable agriculture), SDG5 (achieving greater gender equality and empower women), SDG10 (reducing inequality within China), SDG13 (reducing the impacts of climate change), and SDG15 (managing sustainably natural resources and halting and reducing land degradation). The objectives and activities of the proposed project are also aligned with contribute to the Committee on World Food Security (CFS) recommendations on linking smallholders to markets. Project activities in the

sphere of increasing food safety will be implemented in collaboration with FAO to the maximum possible extent.

B. Project description

Project area and target group

9. The Project will be implemented in 9 nationally-designated poor counties within the three municipalities of Hanzhong, Ankang, and Shangluo in the Qinba Mountains poverty block in south Shaanxi province (i.e. Zhenba, Nanzheng, Xixiang, and Mianxian counties in Hanzhong prefecture; Hanyin, Pingli, and Langao counties in Ankang prefecture, and Danfeng, and Shanyang counties in Shangluo prefecture). Within the nine program counties, the program area comprises 102 of the total 139 townships, some 924 of the total 1,699 administrative villages (or just more than half of the nine counties' total number of villages), and 578 of the total 911 designated poor villages (or 63% of the nine counties' total designated poor villages).

Targeting strategy

10. Geographical targeting: The project will target townships and villages according to: (i) being nationally designated poor counties; (ii) higher than average poverty incidence at township and administrative village level would be considered a priority; (iii) suitability for promoting market-oriented production of crops and livestock products with market potentials and agro-environmental potentials; (iv) villages where potential beneficiaries have a strong commitment to small-scale agriculture; and (v) geographical contiguity to the maximum possible extent to ensure some level of economy of scale.

11. Target group. Within the selected targeted administrative villages, the project will specifically target, either through direct targeting or through self-targeting, the nationally registered poor with a specific priority on those eligible for the "Poverty Reduction through Agribusiness Enterprise Development" and "rural financial services" poverty eradication pathways (see rationale).

12. Women and gender. The project follows a strategy to support women's inclusion in agribusiness, reduce their marginalization and workload, and strengthen their participation in project design, implementation, and monitoring and evaluation. This is supported through (a) including gender eligibility criteria in the BP selection process, (b) involving women in Village Implementation Groups, (c) provision of gender awareness training. Project

13. Estimated beneficiaries. the project would assist an expected 339,561 beneficiaries (individuals). The project would directly benefit some 99,732 nationally registered poor residing in the project area which comprise 36% of the project area's direct beneficiaries.

Project development objective

14. Development objective is to bring and maintain the target population in selected areas out of poverty through the development of inclusive, equitable and sustainable value chains.

Components/outcomes

15. The project is organized around three complementary components: (a) Pro-Poor Value Chains and Agribusiness Development; (b) Public Infrastructure and Services; and (c) project management and coordination.

Component 1: Pro-Poor Value Chains and Agribusiness Development. This component aims at promoting the sustainable inclusion of target poor households in profitable value chains by engaging with agribusiness entities (enterprises or cooperatives) on a fair and mutually beneficial way conducive to poverty reduction. The component comprises three subcomponents: 1.1 Development of pro-poor business plans aims at providing the necessary technical support to develop profitable and equitable and inclusive business plans. 1.2 Value Chain Development Fund which aims at providing financial resources to finance ensuring funding for viable and inclusive business plans, leveraging public and private funds..

16. Component 2: public infrastructure and services. This component improving the access to public goods and services (common/village infrastructure, access to climate change adaptation/mitigation best practices, normative and regulatory services associated with food safety) in the targeted project area through a combination of physical improvement, institutional strengthening, technical assistance and policy advisory, in order to promote sustainable, climate resilient and food safe agricultural production. The component comprises two subcomponents: (2.1) climate smart infrastructure development, which aims at enhancing a climate resilient production basis; (2.2) Public Services and regulations for pro-poor agribusiness development, which aims at enhancing capacity in agricultural knowledge dissemination and food safety.

17. Component 3: Project management and coordination. This component will support the planning, coordinating, monitoring, reporting, and overall management functions of the project management offices (PMOs) at provincial and county levels.

C. Project implementation

Approach

Project duration. The project will be implemented over a period of five years.

Project approach. The key features of the project approach include:

(a) Focus on agribusiness entities: The project will primarily focus on agribusiness entities (i.e. agribusiness enterprises, cooperatives and family farms) as the main entry point to link poor farmers or farmers who have been recently brought out of poverty to markets. The project will provide support and incentives to selected agribusiness entities to expand their business by engaging with the project primary target group through fair and mutually beneficial (win-win) contractual arrangements. Individual farmers will be supported by project activities only on the condition they are contractually linked to agribusiness entities.

(b) Focus on cost-effectiveness: Activities to be financed will be selected following the cost-effectiveness criteria, i.e. activities that ensure maximum outreach among target beneficiaries at minimum cost.

(c) Adoption of Business Plans (BPs) as a tool to support pro-poor value chains: The project will co-finance competitively-selected business plans as a means to efficiently allocate public resources to agribusiness entities (enterprises, cooperatives, family farms, etc.) in combination with private funds (from the agribusiness and financial sector) to promote the inclusion of the project target group in sustainable and profitable value chains through mutually beneficial (win-win) contractual arrangements. The project will tap into the expertise and market knowledge of the private sector, both at national and local level, to identify, select and support value chains and pro-poor agribusiness activities.

(d) Complementarity between public and private funds. The project is expected to use public funds to leverage resources in the market (from agribusiness and financial sector). This will be achieved by co-financing viable and pro-poor Business Plans (BPs) presented by agribusiness entities.

Organizational framework

18. Lead implementing agency. The Provincial Development and Reform Commission (PDRC) will take a lead role in project coordination and management. The PDRC will establish a project management office (PMO) to be responsible for project design, management, supervision, administration of project resources, and M&E.

Implementation arrangements

19. Project Leading Groups (PLGs): Project Leading Groups (PLG) will be established at provincial level and in each project county to provide overall guidance and coordination of the project implementation. The key responsibilities of PLG at each level include: (i) Overall supervision of PMO's operations; (ii) Coordination of counterpart funds for carrying out the project; (iii) Review and approval of project Annual Work Plan and Budgets (AWPB); (iv) Coordination of implementing agencies in project implementation; and (v) General oversight of the project implementation address key issues/decisions important for project.

20. Project Management Offices (PMOs) will be established by the PLGs at provincial, and county levels and located at the appropriate agencies at the respective level. PMOs will focus on planning, coordinating, monitoring and reporting of the project under the guidance of PLG of the same level.

Planning, monitoring and evaluation, and learning and knowledge management

21. Planning. The annual workplan and budgets (AWPBs), reflecting planned activities and budget requirements for each year of project implementation, will be the main management tool for project planning and implementation.

22. Monitoring and evaluation (M&E). The project will establish an effective and efficient M&E system from provincial PMO through county PMOs down to the townships. The system will operate in line with IFAD's M&E guideline and building as much as possible on national and provincial existing M&E systems, statistics and databases.

Management Information System: The project will design a MIS tailored to its specific needs, building on positive past experiences from World Bank financed projects.

The MIS system will have three sub-systems that integrate information and allow real-time reporting.

23. Knowledge management. The PPMO and CPMOs will be responsible for capturing and documenting experiences, successful cases and innovations resulting from the project implementation. Plan for scaling-up of successful cases and innovations within the project area will be incorporated into the project AWPBs during the project implementation. Local governments will be encouraged to incorporate scaling up of those successful ventures into their own local development plans, either through support to scale up of the innovations locally or through replication/expansion of the innovations outside, by governments or other donors.

24. Loan repayment and project resources responsibilities. MOF will be the responsible agency for repayment of the loan in subsequent arrangement with Shaanxi province. The loan proceeds will be onlent from the Ministry of Finance (MOF) to DOF of Shaanxi province where the loan proceeds will be further onlent to County BOFs, at the same terms and conditions without additional charges.

25. Flow of funds. There shall be a Designated Account (DA) denominated in US dollars to be opened for the IFAD loan, through which IFAD funding shall be channelled. The DA is to be set up at and managed by DOF. DOF will be directly responsible for the management, maintenance and reconciliation of the DA activities.

26. Retroactive financing: provision is made for retroactive financing from the IFAD financing of up to US\$ 7.2 million for eligible expenditures incurred as from 29 November 2017 up to the entry in force of the financing agreement.

27. Financing of Taxes: The General Conditions of IFAD were amended in 2009 to allow the proceeds of IFAD's financing to be used to finance taxes that are not "excessive, discriminatory or otherwise unreasonable" (section 11.01(c)). The borrower has informed IFAD that it is impractical to exempt the project from all or certain taxes; In Addition, the World Bank's Country Financing Parameters permit the financing of such taxes for a similar project. In view of improvement of the efficiency of funds flow and better support to the project implementation, IFAD's financing will be used to finance taxes for an estimated amount of approximately US\$ 6.6 million.

28. IFAD client portal. The project is to be included in the IFAD client portal pilot.

29. Procurement. Procurement of goods, works and services financed by the project will be carried out in accordance with the Government Procurement Law of the People's Republic of China (2002) and its amendments, to the extent that they are consistent with the provisions of IFAD's Project Procurement Guidelines and Handbook (2010) and its amendments. The procurement methods to be applied in each case will depend on the expenditure and the estimated value of the contract. The thresholds suggested for different procurement methods, to be applied in specific cases, will be detailed in the letter to the borrower.

Governance.

30. Based on the results of the financial management assessment carried out for this project, the current organizational structure of the implementing agencies is considered appropriate. The flow of funds arrangements are considered conducive to the proper implementation of the project. The necessary accounting standards, policies, procedures, asset management, budgeting, audit, reporting, and accounting systems are in place. The overall financial risk for the project is rated as medium.

Supervision

31. The project will be directly supervised by IFAD. In order to facilitate project implementation and ensure the achievement of project objectives, IFAD and the Government will perform annual supervision missions, a midterm review and a completion review.

D. Project costs, financing, and benefits

Project costs

32. Total project cost is estimated at US\$257 million, including contingencies, but excluding expected resources leveraged from financial institutions. Project costs are organized into three major components: (i) Pro-poor value chain and agribusiness development (67percent of baseline costs); (ii) Public infrastructure and services (29 percent of baseline costs); and (iii) Project management and coordination (2 percent of baseline costs). Investment and recurrent costs amount to 98 and 2 percent of the project's total cost respectively. The project costs per component are summarized in table below.

Table 1: Project cost by component and financier

(million of United States dollars)

	The Government		IFAD		Enterprises & Cooperatives		Beneficiaries		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
A. Pro-poor value chain and agribusiness development													
1. Development of pro-poor Value chains	0,0	-	2,2	100,0	-	-	-	-	2,2	0,9	0,0	2,2	0,0
2. Value chain development fund	0,0	-	63,8	37,8	101,9	60,3	3,3	2,0	169,0	65,8	-	152,1	16,9
3. Value chain rural finance development	4,5	72,4	1,7	27,6	-	-	-	-	6,2	2,4	0,3	5,0	0,9
Subtotal Pro-poor value chain and agribusiness development	4,5	2,5	67,7	38,2	101,9	57,4	3,3	1,9	177,5	69,1	0,3	159,3	17,9
B. Public infrastructure and services													
1. Climate resilience infrastructure development	70,7	100,0	-	-	0,0	-	-	-	70,7	27,5	3,5	59,2	7,9
2. Public services development	-0,0	-	1,3	100,0	-	-	-	-	1,3	0,5	0,0	1,2	-
Subtotal Public infrastructure and services	70,7	98,2	1,3	1,8	0,0	-	-	-	71,9	28,0	3,5	60,5	7,9
C. Project management & coordination													
1. Project management	4,4	72,0	1,7	28,0	-	-	-	-	6,0	2,4	0,1	5,1	0,8
2. Monitoring & Evaluation	-	-	1,0	100,0	-	-	-	-	1,0	0,4	0,0	1,0	-
3. Knowledge management	-	-	0,3	100,0	-	-	-	-	0,3	0,1	-	0,3	-
Subtotal Project management & coordination	4,4	59,3	3,0	40,7	-	-	-	-	7,3	2,9	0,1	6,4	0,8
Total PROJECT COSTS	79,5	31,0	72,0	28,0	101,9	39,7	3,3	1,3	256,7	100,0	4,0	226,1	26,6

Project financing

33. IFAD will contribute US\$72 million (28 percent of the total cost) to the project. The government will contribute to the project in the amount of US\$79.5 million (31 percent of the total cost). Participating enterprises and cooperatives are expected to contribute an estimated amount of approximately US\$101.9 million (40 percent of the total cost) as required co-financing for the business plans (mostly on works, equipment

and materials for post-harvest investments). Beneficiaries contribution will in the order of US\$3.3 million (1.3 percent of the total cost) targeted to acquisition of farm inputs and small equipment. The IFAD loan has a co-financing ratio of 1:2.57. The project cost by expenditure accounts is presented in the table below.

Table 2: project costs by expenditure category and financier
(million of United States dollars)

	The Government		IFAD		Enterprises & Cooperatives		Beneficiaries		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
I. Investment Costs													
A. Works	67,3	100,0	-	-	0,0	-	-	-	67,3	26,2	3,3	56,6	7,4
B. Equipment and materials	-	-	-	-	-	-	-	-	-	-	-	-	-
C. Government	-	-	-	-	-	-	-	-	-	-	-	-	-
D. Consultancies	0,0	0,2	6,8	99,8	-	-	-	-	6,8	2,7	0,1	6,7	-
E. Business plan	0,0	-	63,8	37,8	101,9	60,3	3,3	2,0	169,0	65,8	-	152,1	16,9
F. Goods, services and inputs	7,6	84,8	1,4	15,2	0,0	-	-	-	9,0	3,5	0,4	7,1	1,5
Total Investment Costs	75,0	29,7	72,0	28,6	101,9	40,4	3,3	1,3	252,2	98,2	3,9	222,4	25,8
II. Recurrent Costs													
A. Operating	4,6	100,0	-	-	-	-	-	-	4,6	1,8	0,1	3,7	0,7
Total Recurrent Costs	4,6	100,0	-	-	-	-	-	-	4,6	1,8	0,1	3,7	0,7
Total PROJECT COSTS	79,5	31,0	72,0	28,0	101,9	39,7	3,3	1,3	256,7	100,0	4,0	226,1	26,6

Summary benefit and economic analysis

34. The project is an economically viable investment. The project economic NPV of the net benefit stream, discounted at 8%, is RMB 103 million (USD 15.5 million) producing an EIRR of 8.7% for the base case scenario. The results of the sensitivity analysis suggest that the project is relatively robust to output price decreases, input cost increases, and implementation delays.

Sustainability

35. There are several elements in the project that are likely to ensure post-project sustainability of the supported activities and generated benefits: (i) economic viability of the project, as suggested by the results of the economic analysis; (ii) project activities and target beneficiaries are in line with the government's poverty reduction strategy and priorities. It is thus expected that the government will continue to support the overall development of the project area and the target group, to avoid fallback into poverty, after the completion of the project; (iii) financial viability of the business plans will be one of the criteria for the selection of the business plans that will be financed by the project. (iv) Institutional sustainability: the implementation of project activities is carried out by permanent government institutions or existing service providers in the project area; (v) environmental sustainability: project activities are designed not to harm the environment, and possibly to enhance environmental sustainability, and to reduce the negative impacts of climate change.

Risk identification and mitigation

36. The project has been developed drawing from lessons learnt from an extensive number of IFAD-funded and other donors-funded projects. Lessons learnt has been used to mitigate potential risks, including: (i) Limited attention to post-production/marketing: the risk has been mitigated by place great emphasis to post-production and to developing agricultural value chains that promote equitable organizational arrangements,

different channels/opportunities to farmers to link with market opportunities, and increased incomes for the target households.; (ii) Poverty reduction through direct support to dragonhead enterprises gave mixed results: the risk has been mitigated by adopting key criteria for the selection of the enterprises to be supported by the program include: outreach of target group (poor farmers), and establishment of fair contractual arrangements with the primary target group.; (iii) Insufficient poverty coverage by business plans (BPs): the risk has been mitigated by Include a minimum quota of registered poor in BPs; Increasing the number of beneficiaries per BPs; and providing technical assistance to project beneficiaries on gap to bring them up to standard; (iv) The perverse incentive of repayment responsibilities: It is agreed that project resources to co-finance business plans will be provided to the selected agribusiness entities in the form of grant (i.e. the recipient agribusiness would not have to re-pay the project resources received to co-finance its business plan); (v) Limited understanding of value-chain development approach, and experience/capacity to implement it, has limited progress and performance in this area in ongoing projects. This risk has been mitigated through greater support at start-up has to be provided to have project staff and implementing partners familiarizing with the concept of value-chain development and program implementation manual; TA is provided to facilitate successful implementation of the component; Linkages with ongoing or future initiatives aimed at strengthening the capacity of service providers to provide the required services will be pursued (e.g. with Regional Grant for Scaling Up of Pro-poor Value Chain Projects).

E. Corporate considerations

Compliance with IFAD policies

37. The project is in line with IFAD policies, specifically: (i) a specific gender mainstreaming strategy has been designed in compliance with IFAD gender policy; (ii) the project's poverty focus, particularly the selection of the target area, the target beneficiaries, and the business plans, is in line with the IFAD targeting strategy; (iii) the project's scaling-up strategy is in line with IFAD's operational framework for scaling-up results; (iv) the design of subcomponent 1.3, rural finance, is in line with the six guiding principles outlined in the IFAD rural finance policy; (v) the design of the project has complied with the new social, environmental and climate assessment procedures (SECAP): a SECAP note, an environment and social management framework, and a climate change vulnerability assessment have been carried out as part of the project design process.

Alignment and harmonization

38. As highlighted in section I.B (rationale and alignment with government priorities and RB-COSOP), the project overall objective of contributing to poverty reduction through agribusiness and infrastructure development, using business plans as the main development tools, is well aligned with key national and provincial priorities and strategies, including the China Poverty Reduction Outline 2011-2020, the 13th Five Year Plan, the No. 1 Central Document, the Shaanxi poverty alleviation strategies, among other priorities and strategies. The project's objective and activities are aligned with and will contribute to Agenda 2030 and the CFS recommendations. The overall project approach is consistent with that of other development agencies, and particularly with that of the four most recent four World Bank-financed poverty alleviation projects in China.

Innovations and scaling up

39. Innovations: The Project will introduce operational and institutional innovations. The former category will include (i) promoting E-commerce on a large scale among project beneficiaries; (ii) introducing improved food safety system in line with international standards; (iii) piloting geographic indication as a marketing tool for specific regional products; and (iv) using and taking advantage of electronic platforms (including internet, mobile phones, and branchless banking) for e-commerce, rural finance, agricultural extension and project monitoring and evaluation. Institutional innovations include (i) the proposed competitive mechanism to identify, select and support viable agribusiness-led Business Plans, blending public and private funds together for rural poverty reduction; (ii) early engagement during the project design process and partnership with Ant Financial (part of the Alibaba Group) to facilitate access to e-commerce, financing and insurance services as well as market intelligence and know-how for project-supported agribusiness entities.

40. Scaling-up: The SPRAD-SS project's priority is to test (and possibly scale up) sustainable model of poverty reduction through "Agribusiness development." and "improvement to access to rural finance". The scaling-up framework relies on a mix of market-driven forces and government policies. Champions would include the International Poverty Reduction Center in China (IPRCC) under LGOP and the National Development Reform Commission (NDRC). Drivers relates to a mix of (i) market-driven forces; (ii) policy interventions related to poverty eradication; and (iii) a number of national projects promoting value chain development². Incentives relate to (i) for the private sector, smallholders as main providers of raw agricultural products; and (ii) for the smallholders, premium price related to safe, quality and E-traded food and guaranteed market for specific quality and safe food products. The pathway for scaling up includes the following steps: (i) successful implementation of SPRAD-SS sustainable poverty reduction through value chain development; (ii) monitoring and impact evaluation at project level; (iii) learning and stock taking at IFAD country project level; (iv) identification of leveraging measures within government; private sector; development partners; and unions and federations of cooperatives. IFAD's role will be one of providing the necessary expertise, contribute to the monitoring of results and to the knowledge management process that will catalyse the scaling up process.

Policy engagement

41. Several approaches introduced/piloted by the project have the potential to inform policymaking, including (i) pursuing poverty reduction through agribusiness development; (ii) piloting geographic indication as a marketing tool for specific regional products; and (iii) using and taking advantage of electronic platforms (including internet, mobile phones, and branchless banking) for e-commerce, rural finance, agricultural extension and project monitoring and evaluation.

² These include (i) Wholesale market development and upgrading; (ii) Direct "farmer to supermarket" purchase project; (iii) Promotion of Farmers' Cooperatives; (iv) China's "Dragon Head Enterprise" Policy Framework; (v) China's Push on Agri-food Industry and Technology Parks; (vi) New Food Safety Law; (vii) Government Sponsored Agri-food Distribution Centres.

Logical Framework

Results Hierarchy	Indicators					Means of Verification			Assumptions
	Name	Baseline	YR1	Mid-Term	End Target	Source	Frequency	Responsibility	
Goal: Contribute to National poverty reduction programme and economic development in Shaanxi.	No. of registered poor brought out of poverty <small>sex, age</small>	Set by government	Set by government	Full eradication	Maintaining "frictional poverty" ^a below 3%	Survey, National Poor Registration System (NPRS)	Y1, Y3, Y5	PPMO	(A) contribution of SPRAD to national policy at provincial level.
Development Objective: Bringing and maintaining the target population in selected areas out of poverty through the development of inclusive, equitable and sustainable value chains.	DO1: Number of poor brought out of poverty in the project area. ⁴ <small>sex, age</small>	0	-	100,000	100,000	NPRS			(A) poverty eradication successful in project area, in line with Gov policy.
	DO2: % of inclusive business relationships in operation after 3 years or at project completion	0	-	65%	85%	Survey	Y1, Y3, Y5	PPMO	(A) The % is building on the total number of BPs, at design estimated 400.
Outreach: Direct beneficiaries	Number of persons receiving services promoted or supported by the project <small>CI</small>	0	-	150,000	340,000	MIS	Bi-annually	PPMO (aggregation) CPMO (validation) TPMO (collection)	
Outcomes Component 1: Pro-poor value chains developed	% increase in gross per capita income among poor beneficiaries through inclusion in business plans <small>EFA, sex, age</small>	0	-	20%	30%	MIS Survey	Annually Entry ¹ , Y3, Y5	PPMO PPMO (contr. Third party)	
	% of supported enterprises/cooperatives reporting an increase in sales value compared to previous year <small>EFA, CI 2.2.5</small>	0	0	33%	90%	MIS Survey	Annually Entry ¹ , Y3, Y5	PPMO PPMO (contr. Third party)	
Outputs: Competitive Business Plan selection to channel investments to pro-poor value chains	Number of enterprises/ Cooperatives/ SMEs supported by project <small>CI 2.1.1</small>	0	9	200	400	MIS	Bi-annually	PPMO	(A) design estimated approximately 400 enterprises involved. ³
	No of poor included in business plans <small>sex, age;</small>				100,000	MIS	Bi-annually	PPMO	

People's Republic of China
Sustaining Poverty Reduction through Agribusiness Development in South Shaanxi (SPRAD-SS)
Design completion report

Results Hierarchy	Indicators					Means of Verification			Assumptions
	Name	Baseline	YR1	Mid-Term	End Target	Source	Frequency	Responsibility	
	% of business plans awarded to women-led cooperatives/ enterprises, women-groups	-	15%	15%	25%	MIS	Bi-annually	PPMO	
	No of producer accessing inputs and production package <small>CI 1.1.3</small>		5,000	50,000	100,000 (d)	MIS	Bi-annually	PPMO	
	% of beneficiaries using rural value chain credit		20%	40%	80%	Survey	Annually Entry, Y3, Y5	PPMO PPMO (contr. Third party)	
Outcomes/ Component 2: public infrastructure and services conducive to value chain development are delivered	% Increased in volumes of transported products from farm-gate to markets	0	0	15%	25%	Survey	Base, Y3, Y5	PPMO (contr. Third party)	
Output:	Km of road/culvert/bridge constructed <small>CI 2.15</small>	-	0	300	793	MIS	Bi-annually	PPMO	
	Tap water penetration reached more than ²			90%	100%	Village Survey	Y3, Y5	PPMO	
	No of people trained in climate resilient technology <small>CI 3.1.2</small>	0	0	900	900	MIS	Bi-annually	PPMO	
Component 3 - Output: Monitoring and Knowledge Management	No of policy relevant KM products produced & disseminated <small>Policy 1</small>	0	1	4	7	KM product; Dissemination s report	Annually	PPMO	

Notes:

¹ Entry: A sub-sample of beneficiaries and cooperatives will need to fill a survey questionnaire at time BP is awarded and will be followed up during Y3 and Y5 of the survey (since they are not pre-selected a time of baseline).

² The three-year goal in line with the government's 13th five-year plan.

I. Strategic context and rationale

A. Country and rural development context

1. **Thirty years of unparalleled economic growth.** China has experienced an unparalleled period of economic growth in the past thirty years, since it undertook a series of policy and economic reforms. China has become in 2010 the world's second largest economy by nominal GDP and by purchasing power parity (PPP). When China and IFAD initiated their partnership in 1980, China was a low-income country (LIC), with major food security issues. Today China is classified as an upper-middle-income country (U-MIC), with a 2014 gross national income (GNI) per capita of US\$7,400 at market exchange rate (and US\$13,206 at PPP). This period of high economic growth and increase in per capita income has resulted in significant poverty reduction.

2. The ability of China to maintain a rapidly growing economy in the long run depends largely on the capacity of the government to implement comprehensive economic reforms that speed up China's transition to a market economy, rebalance the economy by making consumer demand the main engine of economic growth, boost productivity and innovation, address growing income disparities and enhance environmental protection. The government has recently announced several policy initiatives to address the economic challenges.

3. **China's remarkable progress in poverty reduction and human development.** Due to the economic reforms, as well as to the implementation of extensive national poverty reduction projects, China has made remarkable progress in reducing poverty, hunger and inequality over the past thirty years. Since the early 1980s, almost 800 million people have been lifted out of poverty. In 1981, about 878 million people (i.e. approximately 88% of the population) lived below the poverty line, whereas in 2012 the estimated number of people living below the poverty line was approximately 87 million (i.e. about 6.5% of the total population or 13% of the rural population). Moreover, increase in per capita income in rural areas has been accompanied by broad-based improvements in nutritional status, longevity, other health indicators, and educational attainment of its people.

4. **The transformation of China's agriculture and rural sectors.** China has gone through a deep process of structural and rural transformation over the past thirty years, which underpinned economic growth and contributed to poverty reduction.

(a) **From rural and agriculture-based economy to industry and service-based economy.** China shifted from being a prevailing rural and agricultural-based economy to an industry and service-based economy. The share of rural population declined from more than 80% in 1980 to less than 50% in 2014.

(b) **From collective, low-productivity agriculture to modern, mechanized and commercialized agriculture.** In 1978, China began shifting from a collective agriculture production system to individual household production, which resulted in an increase in agricultural productivity and food production, and diversification of agricultural products. The increase in agricultural productivity and food production resulting from these reforms and investments triggered a number of subsequent economic growth dynamics, such as providing surplus labor which facilitated China's overall industrialization process and generated demand for the intermediate products of manufacturing throughout the rest of economy. An increasing number of farmers began to move to off-farm activities and rent their land. Some households began to specialize into full-time farming, which increased farm size and facilitated mechanization. Mechanization of agriculture has further eased the outflow of labor from agriculture production, further promoting land circulation and consolidation and, consequently, scale of production. The agriculture landscape in China is progressively moving towards a modern (mechanized, standardized, scale and intensive) and commercial agriculture.

- (c) **From rural to urban society.** China experienced a massive migration from rural areas to urban centres in the past thirty years as a consequence of the industrialization process and the resulting employment opportunities in the manufacturing and services sectors. This has spawned uneven regional development and policies favouring urbanization. China's urbanization rate increased from 20% in 1979 to 52.6% in 2012. The share of rural population declined from 81% in 1980 to 45% in 2014. Approximately 12 million rural residents are projected to move annually from rural to urban areas during the next decade, with 70 and 80% of the population projected to reside in cities by 2030 and 2050 respectively. Most of the rural migrants are young men, between 16 and 35 years old, while the elderly, women and children usually remain in rural areas and take over the responsibility of carrying out agricultural activities. Other consequences of urbanization, in addition to the aging and declining supply of agricultural labour include diminishing farming land due to competition from urban expansion, increased pollution, and water shortages due to urban-rural competition for water resources. On the positive side, urbanization has increased internal remittance flows and brought changes in food consumption patterns and dietary behaviours, increasing consumer demand for meat, fish, and eggs.

5. **Present nutrition situation.** In China, the share of malnourished children under 5 years-old has dropped from 13.4% to 1.4% and infant mortality rate decreased from 50.3% to 9.5% between 1990 and 2013. In rural Shaanxi Province, anemia was common among infants six to eleven months of age, with a prevalence of 54.3% in 2014³ which is twice as high as the 2011 average for East and Southeast Asia⁴. Ninety percent of the anemia in children in China under six years-of-age results from iron-deficiency. There are studies which show that feeding practice is highly relevant to anemia and that either iron supplementation or home fortification systems (including other micronutrients) is recommended in rural settings. Shaanxi province has implemented a Nutrition Improvement Plan in 2012-2016 in 43 areas in the province benefitting 2.3 million primary and middle school students. An important element of this plan was the construction of school canteens and increasing proportion of school canteen meals. For the period 2017-2030, China's new national nutrition and health plan will be implemented with the objective of reducing anemia and stunted growth rates among children under five years old as well as reducing the gap between rural and urban students' height, to raise breast-feeding rate among infants under six months old.

B. Rationale

6. **Contribution to the national poverty eradication strategy.** In the ongoing 13th five-year plan, the Chinese Government is attaching an unprecedented and high level emphasis on poverty eradication. President Xi Jinping has clearly indicated that eliminating poverty is China's top priority. The government's well-funded and comprehensive poverty reduction strategy and related projects are described in detail in Appendix 2, while some relevant features are presented below. In terms of poverty reduction interventions, the following four poverty reduction pathways are being prioritized at the national level:

- (a) *Poverty Reduction through Agribusiness Enterprise Development (Chanye Fupin)*, which includes the production, processing and marketing of local leading products through farmer cooperatives in combination with leading enterprises (a pathway that can easily be assimilated to "value chain development in favour of poor producers");
- (b) *Voluntary Resettlement Project*, which provides assistance for some 10 million poor to voluntarily resettle from areas subject to life-threatening natural disasters, where the

³ Luo R, Shi Y, Zhou H, Yue A, Zhang L, Sylvia S, et al. Anemia and Feeding Practices among Infants in Rural Shaanxi Province in China. *Nutrients*. 2014; 6(12):5975–5991. <https://reap.fsi.stanford.edu/sites/default/files/nutrients-06-05975.pdf>

⁴ Stevens, G.A et al. Global, regional, and national trends in haemoglobin concentration and prevalence of total and severe anaemia in children and pregnant and non-pregnant women for 1995–2011: A systematic analysis of population-representative data. *Lancet Glob. Health* 2013.

population density grossly exceeds the carrying capacity of the land, or where remoteness makes the provision of basic services prohibitively expensive or impossible, to newly developed areas;

- (c) *Poverty Reduction through Employment*, which includes the improvement of vocational training; and
- (d) *Rural Financial Services*, which includes the strengthening of rural financial services and the encouragement of microcredit schemes.

7. The *National Poor Registration System – NPRS* (Jiandang Lika Xitong), is the central monitoring tool of the government poverty eradication effort. It includes the identification and registration of the 100 million poor people in 2012, the establishment of a national computerized database management system with detailed information on each of the registered poor, and plans for follow-up individualized assistance (some 400,000 government staff and volunteers are expected to directly assist the identified individual poor at the village level). According to the NPRS, the total number of nationally registered poor declined from 82.5 million in 2013, to just over 70 million at end-2014, and to some 56.3 million as of end-2015. The NPRS identifies the village location, causes of poverty, measures to overcome poverty, government staff and volunteers responsible for assisting each poor person, and other key details for each of the remaining poor. In 2014, the major reported causes of poverty included: poor health (comprising 39% of the poor in 2014); lack of capital (32.8%); lack of skills (21.4%); lack of labour power (18%); lack of land; high expenses for education; limited or no access to drinking water, transport, and/or other basic infrastructure; and other causes. Based on these identified causes of poverty of the NPRS 70 million poor in 2014, the government's "Five-In-One-Batch" (Wuge Yipi) measures for poverty reduction include agribusiness enterprise development (change fupin for some 40 to 50 million poor), voluntary resettlement (10 million poor), social protection (doudi, for at least 10 million poor), increased support for health care and educational expenses, and other measures.

8. SPRAD-SS will contribute to this highly visible and ambitious national poverty eradication effort in Sichuan and Ningxia provinces through "agribusiness enterprise development" and "rural financial services development" (second and fifth pathways mentioned above). The challenges are numerous and relate to both (i) the nature and characteristics of rural poverty; and (ii) the transition phase that the agricultural sector is going through. Regarding the former, the remaining rural poverty is the most difficult to eradicate as it is located in marginal and deprived areas with an aging and unskilled population. The 2020 deadline for poverty eradication set by the Government is close and encourages short-medium term solutions relying on subsidised investment to the detriment of more sustainable, market-driven and longer terms interventions. The frequently promoted "one village - one crop - one enterprise" model has several risks, including cases of (i) insufficient diversification on both the supply side (only one crop) and on the demand side (only one buyer), (ii) financial and economic unsustainability due to excessive reliance on government subsidies for establishment, operation and depreciation cost of the agribusiness firms; (iii) transformation of poor producers in poor rent earners with little or no connection to small-scale agriculture which in turn encourages these small producers to exit agriculture, exacerbating rural migration; and iv) land consolidation in favour of agro-enterprises. Also, poverty is a dynamic process and an "eradication" target cannot be maintained over time, as new poverty will be created and some of the graduated poor can revert into poverty.

9. Industrialization, urbanization and agricultural modernization are developing simultaneously in China, but agricultural development still lags behind in a transition phase characterised by: (i) reduction of the rural population through migration to urban centres; (ii) increase in average farm size through land consolidation; (iii) reduction and professionalization of small farmer population; (iv) modernization of agriculture to address low labour productivity, unclear comparative advantages and low financial and economic returns for a number of crops and food safety issues. As a consequence, the role of smallholder farmers is going to be progressively reduced and will eventually become

marginal. However, this transition will take time and smallholder agriculture will remain a dominant feature of China agriculture for at least 10-15 years.

10. There are still 266 million smallholders in China⁵. They contribute to the majority of the national agricultural production (about 90%) and manage the majority of cultivated land (about 95%). In this transition phase, smallholders remain as the predominant source of food and agricultural products. The demand for safe, high quality food is growing fast, in line with China's strong and sustained economic growth as well as deep-rooted and sophisticated "food culture". The range of marketing channels available to small-scale agriculture is increasing with the spread of supermarkets and corporate agribusinesses sourcing from small producer as well as E-commerce operators increasingly interested in including food and agricultural products in their commercial portfolio. There is a conducive framework that will allow smallholder cooperatives to play a central role in agribusiness development, especially in processing and adding value to the enormous variety of produce that is demanded in China. Key elements of this framework are (i) the new cooperative law that requires cooperatives to enforce transparency, governance and equity as well as enhance services to members, (ii) the market requirements in terms of food quality and safety standards enforced by agribusiness and supermarkets that source from cooperatives; and (iii) the pressure to use the natural resources endowment in a smart and sustainable way to avoid further deterioration.

11. The Project justification is thus strongly associated with addressing the challenges and risks as well as realizing the opportunities associated with the implementation of the poverty eradication project through "*agribusiness enterprise development*" and "*rural financial services development*" and acknowledging the challenges and risks that may arise. The strategy evolves around (i) diversifying both supply (enlarged range of crops and products to be offered to the market) and marketing channels (enlarged range of value chain models and buyers) sides of small scale agriculture; and (ii) responding to the changes in raising urban demand by increasing supply of safe and quality food by smallholder in order to capture a permanent share of this new market as well as the growing niche market of certified, geographic branded food. To seize this opportunity, the underlying logic is that (i) increasing income and associated changing nutrition habits will likely progressively increase the share of income spent on quality, safe and "special" food in urban and peri-urban areas; (ii) smallholder agriculture can remain competitive only by differentiating away from increasingly "industrialised" crops to those "niche" markets where consumers are willing to pay a premium price; and (iii) attempts to compete with more industrialised agriculture can only succeed for a limited time during this agricultural transition phase.

12. Another aspect of the national poverty eradication project on which SPRAD-SS can contribute is with the post 2020 fluctuation of rural poverty. As some level of marginal poverty will be present in the project area after 2020, SPRAD-SS will play a role in containing (i) the creation of new rural poverty and (ii) the cases of falling back into poverty. The market driven and sustainable value chain development models promoted under the project will reduce the likelihood of poverty creation and re-occurrence. As a last element of justification, SPRAD-SS sustainable poverty eradication approach can introduce models which are less demanding in terms of subsidies, thus reducing the burden on public finance.

13. **Rationale for and value-added of IFAD involvement.** In China's rapidly changing rural environment, the role of IFAD is to accompany the transition to modern agriculture and ensure that smallholders do not loose in the process and on the contrary, can see their position improve. IFAD has been a strong partner of China for the past 40 years in improving the livelihoods of the rural poor,

⁵ Total number of rural households in China is 266 million, of which (i) around 10 million HHs are big farmers, family farms or professional service providers; (ii) 100 million HHs grouped in 1,933 million cooperatives; and (iii) the remaining 156 million HHs are small farmers.

Source: Breakdown of rural HHs are reported by Mr. Hongyu Zhang, Director General, Department of Rural Economy, Operation and Management, Ministry of Agriculture, on Sina Web on 25 Sep 2014. The numbers of cooperatives and their member are reported by Xinhua News Agency on 4 Sep 2017, which were quoted from the latest statistics of the State Industry and Commerce Administration.

increasing the connection between the rural and urban areas, and ensuring that the rural poor benefit from this rapid rural transformation. The initial focus of IFAD-supported projects was on increasing production, improving productivity and investing in infrastructure (rural roads, irrigation and drinking water, land terracing, etc.). The last three projects in China, however, have increasingly focused on the marketing of smallholder agriculture as a basis for poverty reduction, and increasingly supported the “soft” aspects of market access and engaging with the private sector, e.g. establishing/brokering market linkages, improving product quality, market information systems, farming as a business (FaaB) type training, technical assistance and capacity-building of cooperatives. Based on the above, it can be stated that IFAD has the experience and expertise in the field of action of the project.

14. **Alignment with COSOP 2016-2020.** The SPRAD-SS project is the second investment operation to be designed under the current 2016-2020 COSOP, and it well reflects the recent trend of focusing IFAD support towards enhancing income opportunities and increasing resilience, giving more emphasis to improving access to markets and value-chains, and resilience to climate change. The proposed project serves well the Strategic Objectives 1 and 2 of the 2016-2020 COSOP, as described below, particularly in relation to improved access to physical assets, market, financial services and capacity development for income generation to contribute to the poverty eradication impact. The project design will take into account the experiences learned from previous and on-going IFAD projects in China, particularly LMAPRP, SSADEP and JIMAAPP, including participatory planning, targeting, gender mainstreaming, M&E, and management and coordination of implementation.

(a) The alignment with strategic Objective 1: *“Increase smallholders’ capacity and opportunities to access markets”* is presented below according to the three thematic areas:

- (i) *Thematic area of focus 1.A: Support inclusive and safe value chain development.* This is the main focus of the SPRAD-SS project. Public, semi-public and private goods will be provided/facilitated for village, production and market infrastructure and facilities, establishment of production basis (plantations, greenhouses, land levelling and terraces), knowledge dissemination for good agricultural practices (production, postharvest and processing), marketing and business support services and facilitation of intra-value chain dialogue with the goal to enhance performance and inclusiveness.
- (ii) *Thematic area of focus 1.B: Support inclusive cooperatives.* Cooperatives will be important rural entities supported by SPRAD-SS (although enterprises might play a greater role). They will receive capacity development for improved governance and management and for enlarging the range of quality services to members including business advice, planning and direct marketing. Cooperatives will be trained in financial education and management and in legal expertise for contract design and enforcement.
- (iii) *Thematic area of focus 1.C: Support inclusive financial services.* Access to rural finance will be improved through (i) technical support for financial institutions (for risk evaluation and innovative financing practices); (ii) support to the Village Mutual Funds (VMFs); (iii) financial literacy for project beneficiaries; and (iv) innovative insurance projects for Farmers.

(b) The alignment with Strategic Objective 2: *Strengthen environmental sustainability and climate resilience* is presented below according to the two thematic areas:

- (i) *Thematic area of focus 2.A: Support sustainable land management at household and landscape level, and agro-biodiversity conservation.* In this thematic area, SPRAD-SS will invest in land levelling, terracing and water saving irrigation technologies.
- (ii) *Thematic area of focus 2.B: Mainstreaming environmental and climate resilience considerations into the country project activities.* Environmental and climate

resilience interventions within SPRAD-SS will include (i) improving canal irrigation efficiency through canal development and rehabilitation (including structure, pipeline and pumping stations), water savings irrigation through drip and sprinkler systems, water conservation through pools, ponds and storage points; and (ii) promotion of drought and heat resisting varieties.

II. Project description

A. Project area and target group

(A.1) Project area

15. The Project will be implemented in 9 nationally-designated poor counties within the three municipalities of Hanzhong, Ankang, and Shangluo in the Qinba Mountains poverty block in south Shaanxi province (i.e. Zhenba, Nanzheng, Xixiang, and Mianxian counties in Hanzhong prefecture; Hanyin, Pingli, and Langao counties in Ankang prefecture, and Danfeng, and Shanyang counties in Shangluo prefecture)⁶. Within the nine program counties, the program area comprises 102 of the total 139 townships, some 924 of the total 1,699 administrative villages (or just more than half of the nine counties' total number of villages), and 578 of the total 911 designated poor villages (or 63% of the nine counties' total designated poor villages).

16. **Agroecological profile.** Shaanxi Province is located in northwestern China. It has a total area of 205,800 km² covering about 2.1% of the total area of China. The province borders the largest number of different provinces (seven provinces of Gansu, Ningxia, Inner Mongolia, Sichuan, Chongqing, Henan and Hubei). In Shaanxi province, there are 10 districts. The population of Han nationality accounts for more than 99.4% in total. The largest ethnic minorities include Hui, Manchu and Mongolia.

17. Shaanxi stretches across basins of the Yellow River (northern side of the province), the Yangtze River (southern side of the province) bounded by the Qinling Mountains. The terrain of Shaanxi is largely divided into three areas: i) the Loess Plateau in the Northern Shaanxi Plateau; ii) the Guanzhong Plain in the middle; and iii) the Southern Shaanxi Mountain Area (or known as the Qinba and Daba Mountain Area. The project area is in the latter. In this area, mountains and hills offers a major agricultural zone. The Qinling range is the major watershed of the Yellow and Yangtze river valleys and an important geographical divide between northern and southern China. It rises more than 2,000 meters above sea level. The Daba is the boundary range between Shaanxi and Sichuan. The Hanshui Valley land between Qinling and Daba ranges is scattered with canyons and basins, of which the Hanzhong Basin is a known farming area. This Qinba Mountain area is one of the 11 poorest regions in China targeted for concentrated interventions under 2011-2020 national poverty reduction strategy. There are more than 3,300 types of wild seed plants in the Qinling and Daba mountain areas, comprising of almost 10% of the total national plants. Among these, the Chinese Kiwi fruit, sea buckthorn, gynostemma plant and selenium-rich tea resources are known for potential development.

18. In terms of land changes, Shaanxi has experienced an overall increases in grassland and forestland, and instead sustained losses in cropland. While Shanbei experienced the largest changes in cropland and grassland (gains in grassland and forestland and a dramatic loss in cropland), in Shannan, grassland did not change much but a significant increase in forestland (by approx. 460 km²) took place while cropland has reduced (by almost 500 km²). Most croplands in Shanbei were transformed into grassland and to forestland in Shannan.

⁶ PDRC will confirm the final list of targeted counties and townships in line with agreed criteria (i.e. poverty incidence/number of poor farmers; potential to develop viable pro-poor value chains) by Appraisal mission.

19. **Poverty profile.** The Shaanxi 13th FYP for Poverty Reduction reports that there were some 9.3 million rural poor in 2010, comprising some 30.6% of the rural population in that year. According to the 2013 and 2014 NBS national household surveys, Shaanxi had 4.1 and 3.5 million rural poor respectively in these years, and the poverty rate as a percentage of the rural population declined from 15.1% to 13.0%.⁷ While these figures are not strictly comparable since they rely on different poverty line methodologies, it is certain that Shaanxi has achieved a massive decline in rural poverty since 2010. The Shaanxi 13th FYP for Poverty Reduction also reports that there were 3.167 million NPRS registered rural poor as of end-2015, comprising some 12.4% of the rural population in that year. The Shaanxi Provincial Poverty Reduction Office reported to the mission that the Shaanxi Provincial NPRS figure for rural poverty as of April 2017 had declined to 2.28 million, or about 9% of the rural population at that time. This suggests that there was a net reduction of nearly 900,000 rural poor in Shaanxi during 2016 and early 2017, but the Shaanxi Provincial Poverty Reduction Office staff advised that there was a major rectification of the Provincial NPRS poverty figures during this period and that the end-2015 and April 2017 numbers were not strictly comparable. Nevertheless, it is certain that the steep decline in rural poverty rates that Shaanxi achieved during the first half of this decade has continued through 2017, and that the number of rural poor appear to have declined by about 7 million – or some 75% -- during 2010-17.⁸

20. **Poverty Reduction Strategy.** Plans for poverty reduction work at the provincial and county levels in Shaanxi closely follow the guidance of the national 2011 Outline, new Five-in-One-Batch approach, and national poverty reduction project under the 13th FYP. In particular, agribusiness development (*chanye fupin*) plays the lead role in Shaanxi's poverty reduction project through 2020. Of the 3.167 million rural poor in end-2015, Shaanxi plans to lift a total of 1.5 million poor above the poverty line through agribusiness development schemes by 2020 (that is, nearly half of the remaining rural poor would participate in agribusiness development). The Shaanxi 13th FYP for Poverty Reduction emphasizes a “one village one product” model and the uptake of improved science and technology, and identifies tea, apples, specialty grains, Chinese dates, kiwi, medicinal plants, edible fungus, dairy, pigs, sheep, forestry products, and other commodities as important products for the poverty reduction through agribusiness development model. The SPRAD-SS Project's primary focus on rural poverty reduction through agribusiness development therefore very closely matches the main thrust of Shaanxi's 13th FYP for rural poverty reduction.

21. The Provincial NPRS database shows that there are the following five main causes of rural poverty in Shaanxi: poor health and limited or no labor power; disability; excessive education expenses; natural disasters; and severely limited land, water, and other natural resources. The Shaanxi 13th FYP for Poverty Reduction's “Eight-In-One-Batch” (*bage yipi*) approach seeks to lift the remaining 3.167 million poor out of poverty through: agribusiness development (1.5 million poor); voluntary resettlement from areas which are extremely remote or subject to natural disasters (1.25 million poor); support for quality rural education and subsidies for excessive educational expenses (0.567 million poor); labor transfer through vocational training and other assistance; support for improved rural health services and subsidies for excessive health expenses; minimum income guarantee (*nongcun dibao*) and other rural welfare systems; ecological protection projects; and support for transport, water, power, communications, and other basic rural infrastructure.

22. Shaanxi's 13th FYP for Poverty Reduction calls for completely overcoming rural poverty and for all 7323 designated poor villages and all 56 designated poor counties to graduate from the poverty lists (that is, to “lose their poverty hats”) by end-2019:

⁷ State Council LGOP, *2015 Yearbook of China's Poverty Alleviation and Development* (Beijing: United Publishing, 2015).

⁸ The 2016-17 rectification of the Shaanxi Provincial NPRS database included both the (a) inclusion of some poor who had been omitted from the 2015 register, and (b) removal of some registered poor who were found to no longer be poor. The Shaanxi Poverty Reduction Office believes that the April 2017 Provincial NPRS database represents the most accurate figures and information currently available.

Table 1: Shaanxi Province Annual Plans to Overcome Rural Poverty by 2019

Number to overcome poverty:	2016	2017	2018	2019	2020	Total
People (million)	1.30	1.07	0.65	0.15	0	3.17
Villages	2907	2428	1629	359	0	7323
Counties	2	20	20	13	0	55

Source: Shaanxi's 13th FYP for Poverty Reduction.

Note: One designated poor county within Xian Municipality had already graduated from poverty by the time that the preparation of the Shaanxi 13th FYP for Poverty Reduction had been completed

23. **Continuing Assistance for Those Returning to Poverty.** State Council statements released on 8 December, 2015 and on 20 October, 2016 confirmed that support will be maintained for several years for those poor individuals, villages, and counties first exiting but then returning to poverty. The 20 October, 2016 Opinion states that: "For a certain period of time, the country's original policy for poverty alleviation will remain unchanged and support will not diminish for poor people, poor villages, and poor counties which have exited poverty." In Pingli County in Shaanxi, for example, the mission was informed that this financial and other support would be maintained for a period of several years for those poor individuals, villages, and counties that exit but then return to poverty. The Pingli County Poverty Reduction Office stated that, on an annual basis, less than 5% of those individuals who have exited poverty subsequently return to poverty. In their experience, the return to poverty has mostly been due to continuing health problems, the return of illness, or the death of the household income earner due to accidents or natural disasters. Those returning to poverty are returned to the NPRS list of registered poor, and are supported through some form of poverty reduction interventions consistent with the cause of the family's return to poverty. The duration of continuing support for those returning to poverty does not appear to be exactly reported in the State Council statements, but it is believed that such support would continue for a period of five years from 2020 or from the year of exiting poverty.

24. **Sub sectors pre-identification.** The project approach is to support any viable Business Plan submitted by an eligible agribusiness entity that show a convincing arrangement to distribute fairly benefits to project target groups. So any product can be eligible and the actual choice of the subsectors and related value chains and products will be made at early implementation stage based on updated analysis. However, a preliminary analysis was carried out in the project areas and a preliminary list of sub-sectors was identified (see table below) on the basis of four main selection criteria: (i) current and potential market opportunities; (ii) private sector leading role and interest; (iii) potential for the inclusion of project target population; and (iv) sustainable use of natural resource endowment.

Table 2. Pre-identification of subsectors in the project areas

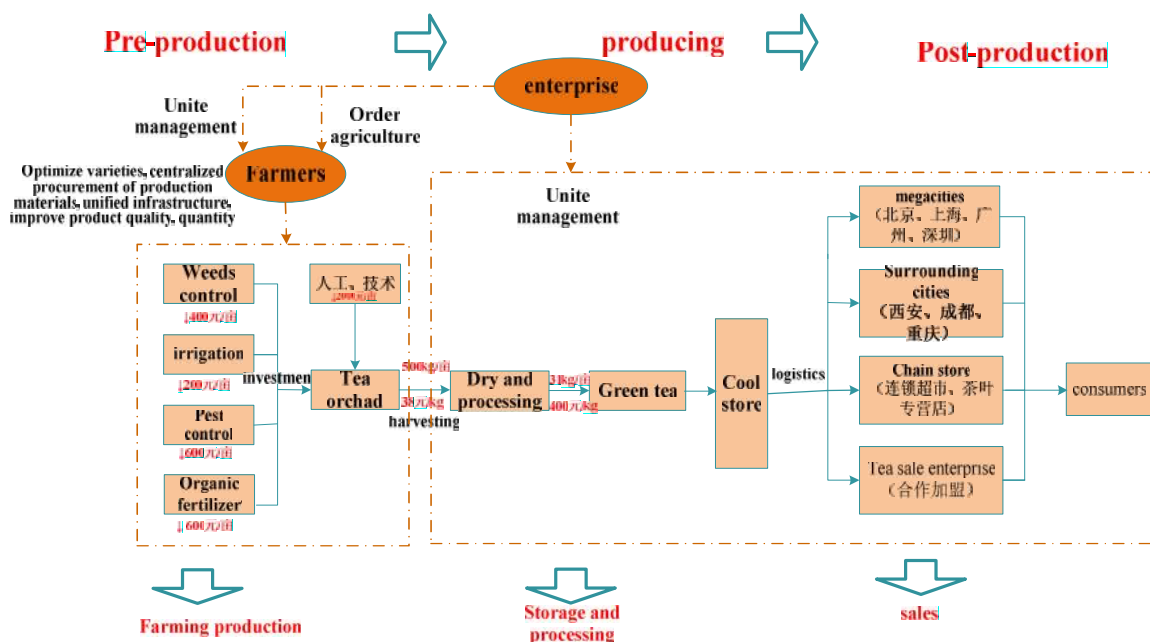
County	Subsectors
Zhenba	Tea, pigs, Chinese herbs
Nanzheng	Tea, specialised fruits, flowers (wild chrysanthemum, daisy),
Xixiang	Black mushrooms
Mianxian	Yam, specialised fruits (Aronia, Roxburgh rose)
Hanyin	Organic rice, tea, Chinese herbs, kiwi
Pingli	Tea, Chinese herbs, pigs, <i>Junglans regia</i> (walnut)
Langao	Tea, Chinese herbs, pigs, kiwi, <i>Pueraria</i>
Danfeng	Chicken
Shanyang	Yellow ginger, tea, pigs

25. The above pre-identification of sub-sectors is indicative and by no means excludes other potential sub-sectors and products which can be identified during project implementation under the 4P model as long as they **are** high profitable market opportunities and generate income to project target farmers and partnering agribusiness entities.

26. **Value chain relationships.** The proposed approach based on a competitive process to identify viable Business Plans originated by agribusiness entities is new to the government counterparts but actually builds on practices that are quite widespread in the project areas and in the pre-identified sub-sectors and related value chains. Agribusiness Dragon Head Enterprises engage with farmers, either individually or more frequently through cooperatives. All four benefit-sharing modalities foreseen in the project design (i.e. contract farming, land rental, dividends, and wages from employment) are actually adopted even though there is no evidence that this is systematically done in a win-win way hence generating tangible benefits for farmers particularly the poor ones.

27. Contract farming is very common and allows farmers, particularly the small-scale and poor ones, to receive prefinancing to meet production needs mostly on a in kind loan basis (i.e. seeds, fertilisers, planting material) which is subsequently recovered by the agribusiness entity by discounting it from the value of the produce. This is often regulated by written contracts even though this is not always the case as verbal agreements are also common for smaller cooperatives. Few DHEs which were interviewed in the project design process The transfer of the land to agribusiness entities in exchange of a rent or shares is also a common practice. This is often associated with the possibility of being employed as labour in the agribusiness entity but this is not always the case.

Figure 1: Tea value chain map



(A.2) Target groups and targeting strategy

28. **Target groups.** The project will target (i) poor and economically capable smallholder farmers with a potential for getting involved in poverty reduction for value chain development according to the

Gouvernement methodology⁹; and (ii) disadvantaged and vulnerable but economically capable poor (i.e. women, young, disabled, ethnic minorities, etc.).

29. **Target beneficiaries.** As summarized in Table 3 below, the project would assist an expected 339,561 primary beneficiaries (individuals) through Component 1, including 280,793 beneficiaries residing in the project area. Overall, the project would directly benefit some 99,732 nationally registered poor residing in the project area. These 99,732 direct beneficiary poor would comprise 36% of the project area's direct beneficiaries, 52% of the total number of project area poor (that is, 192,183 poor as reported in Table 5), and 22% of the total number of poor throughout the nine counties (that is, 462,730 poor as reported in Table 5). Women direct beneficiaries would comprise about 47% of the direct beneficiaries within the project area, and ethnic minority direct beneficiaries would comprise 0.6% of the direct beneficiaries within the project area. Overall, the figures recorded in Tables 5 and 6 show that, consistent with the necessity that the project support only those agricultural enterprises and farmer cooperatives with good prospects for financial viability, the project targeting process has been successful in encouraging outreach to poor villages and to a much greater-than-average concentration of economically active registered poor.

Table 3: Poverty data in SPRAD-SS project area

	Beneficia		Registered Poor		Poor as a Share (%) of Beneficiary		Women		Ethnic Minorities	
	Population		Population		Population		Population		Population	
	Total	Project Area	Total	Project Area	Total	Project Area	Total	Project Area	Total	Project Area
Total	339.561	280.793	136.643	99.732	40	36	159.087	131.923	3.695	1.729
Hanzhong										
Total	202.892	174.452	57.965	44.087	29	25	94.829	81.784	1.674	742
Zhenba	66.349	59.862	13.333	11.697	20	20	30.722	26.742	110	62
Nanzheng	35.813	32.120	14.320	13.274	40	41	17.263	15.353	15	15
Xixiang	59.000	49.820	14.587	8.636	25	17	26.994	24.569	1.234	350
Mianxian	41.730	32.650	15.725	10.480	38	32	19.850	15.120	315	315
Ankang										
Total	83.528	65.253	41.598	28.715	50	44	39.682	30.983	1.901	942
Hanyin	34.682	30.245	14.280	11.200	41	37	16.305	14.210	45	34
Pingli	13.003	9.882	9.538	6.417	73	65	5.893	4.516	31	0
Langao	35.843	25.126	17.780	11.098	50	44	17.484	12.257	1.825	908
Shanluo										
Total	53.141	41.088	37.080	26.930	70	66	24.576	19.156	120	45
Danfeng	29.638	18.650	22.714	14.650	77	79	13.930	8.766	112	37
Shanyang	23.503	22.438	14.366	12.280	61	55	10.646	10.390	8	8

Source: Shaanxi SPRAD-SS Proposal (January, 2018).

30. **Targeting strategy.** Fully consistent with the government's current poverty reduction plans, the project's targeting strategy is to focus on economically active registered rural poor in southern

⁹ The government criteria and methodology for the identification of the rural poor households and the disadvantaged and vulnerable groups will apply.

Shaanxi within selected poor counties, townships and villages. This dual strategy both (a) leverages the full power of the government's National Poverty Registration System (NPRS) in identifying poor individuals and poor communities, and (b) captures many of the near-poor in poor villages. This approach has yielded a program area comprising a relatively high concentration of registered poor within communities with good potential for agribusiness development.

31. **Geographical targeting:** The project will target townships and villages according to: (i) being nationally designated poor counties; (ii) higher than average poverty incidence at township and administrative village level would be considered a priority; (iii) suitability for promoting market-oriented production of crops and livestock products with market potentials and agro-environmental potentials; (iv) villages where potential beneficiaries have a strong commitment to small-scale agriculture; and (v) geographical contiguity to the maximum possible extent to ensure some level of economy of scale. Priorities will be given to the ethnic minority communities in the selection of target villages for implementation of project activities¹⁰.

32. Shaanxi is located in western China and has long been a priority area of the Chinese government's poverty reduction program. With some 3.17 million poor in 2015, Shaanxi's rural poverty rate was 12.43% (or 8.35% of the province's total population in that year). Shaanxi's poor comprised nearly 6% of China's total number of rural poor in 2015, and the poverty rate was more than double the national average of 4.1% (when measured as a share of total population). At the county level, the project comprises nine nationally designated poor counties within the three municipalities of Hanzhong, Ankang, and Shangluo in the Qinba Mountains poverty block. Shaanxi has a total of 56 designated poor counties, and 29 of these are located in the Qinba Mountains poverty block where steeply sloped and heavily dissected mountains constrain crop production and are subject to frequent natural disasters. The 2015 county-based poverty rate (the number of nationally registered poor in 2015 as a share of the county rural population) ranges from 11.4% in Nanzheng to 29.8% in Langao, and averaged 17.7% across all nine project counties. Ethnic minority peoples represent less than 1% of the total population in the Shaanxi project counties, and include small numbers of Miao, and other ethnic minority peoples. Within the nine program counties, the program area comprises 102 of the total 139 townships, some 924 of the total 1,699 administrative villages (or just more than half of the nine counties' total number of villages), and 578 of the total 911 designated poor villages (or 63% of the nine counties' total designated poor villages). This selective targeting of program area townships and villages has in most cases resulted in greater concentrations of program area registered poor (only in Langao and Danfeng counties is the poverty rate in the program area slightly less than the county-wide average poverty rates). Overall, the poverty rate of 20.4% in the program area is somewhat greater than the average for the nine counties' rural population (17.7%), nearly double the provincial average poverty rate (12.4%), and much greater than the national poverty rate. Ethnic minority people comprise only 0.6% of the nine counties' rural population, and only 0.7% of the program area population. Most of the project area ethnic minority population is concentrated in Pingli, Xixiang, and Langao counties.

¹⁰ Since the high proportion of ethnic minority population in the project area, the project design pays more attentions to the benefit of ethnic minorities through responding to the needs for capacity building of ethnic minority population. Specifically, (i) information and knowledge delivery will be provided in the local languages of ethnic minorities to avoid their exclusion from project benefits; (ii) sensitized training on ethnic minorities will be included in the capacity building for PMO staff of all levels the project start-up; (iii) measurable M&E indicators will be developed and included in the project M&E system to monitor and ensure the benefits of ethnic minorities from participating in the project; and (iv) the traditional institutions of ethnic minorities will participate in the annual project planning process.

33. **Beneficiary targeting:** Within the selected targeted administrative villages, the project will specifically target, either through direct targeting or through self-targeting, the nationally registered poor with a specific priority on those eligible for the “*Poverty Reduction through Agribusiness Enterprise Development*” and “*rural financial services*” poverty eradication pathways (see rationale). Ethnic minorities will also have preferential access to project interventions.

34. Direct beneficiaries¹¹ are those people who would participate in the project's Component 1 agricultural enterprise and farmer cooperative activities and benefit from increased incomes through contract farming arrangements, land rental income, wages from fixed and short-term work, and/or shareholding profit sharing. As summarized in Table 6 of Appendix 2, the project would assist an expected 339,561 primary beneficiaries (individuals) through Component 1, including 280,793 beneficiaries residing in the project area. As mentioned above, the project would directly benefit some 99,732 nationally registered poor residing in the project area. These 99,732 direct beneficiary poor would comprise 36% of the project area's direct beneficiaries.

35. **Poverty coverage after poverty eradication by end 2019.** Shaanxi's 13th Five Year Plan for Poverty Reduction calls for the eradication of poverty by 2019. All designated poor villages and counties would graduate from the lists of poor villages and counties by the end of 2019. However, consistent with national policy which guards against poverty recidivism through 2025 (see paragraph above), the names and detailed records of all the registered poor as established in 2014 will be retained and maintained in the NPRS system through 2025 (including all those who have graduated out of poverty since 2014). These registered poor would remain the principal focus of the project's poverty targeting system in 2020 and subsequent years of implementation. It should also be noted that beside those recidivist poor, since the project's targeting strategy has focused on poor townships and villages, most of the project area population is poor or near-poor.

Gender Mainstreaming Strategy

36. The project's gender mainstreaming strategy is to strengthen women's economic power through project activities and to promote women's participation and benefits in the project design, implementation and management, so that women's economic and social status can be improved, and gender awareness of project participants can be built. A gender focus has been applied in the project design by responding to the needs of women according to their increasing role in household businesses as a result of the predominantly male labor migration. Women's participation in project activities will be ensured by applying gender-sensitive M&E indicators. More details are provided in Appendix 2 and WP 2.

37. With the improvement of economic empowerment through the project activities, women will be more actively involved in production and marketing activities, which will improve their status in the household. Together with their collective participation in the project management through the project process, women will be more capable of voicing their views in the community, and will gradually strengthen their role in community decision making.

38. The gender focus has been applied in the project design by responding to the needs of economic empowerment and capacity building for women. Development of measurable M&E indicators will ensure that women's participation in project activities is closely monitored. In addition, some gender disaggregated information will be collected in the baseline survey.

39. A set of gender strategy eligibility criteria have been integrated into agribusiness development through the project process, including: (a) developing gender eligibility criteria for Business Plan (BP) selection. Involvement of women should be higher than their percentage in the local population; women will be present in the boards of cooperatives and enterprises; and at least 50% of technical training opportunities will be shared by women; (b) supporting BPs of women-led

¹¹ The Shaanxi counterparts were not able to provide a clear definition of the project's indirect beneficiaries, and advised the mission that each of the project counties had reported figures for their expected indirect beneficiaries according to their own understanding of who these beneficiaries might be.

cooperative/enterprise. At least 25% of BPs will be awarded to women-led cooperative/enterprise; and (c) Improving women's capacity in BP. In addition, a set of specific actions (see Appendix 2) have been identified to support gender mainstreaming in the project.

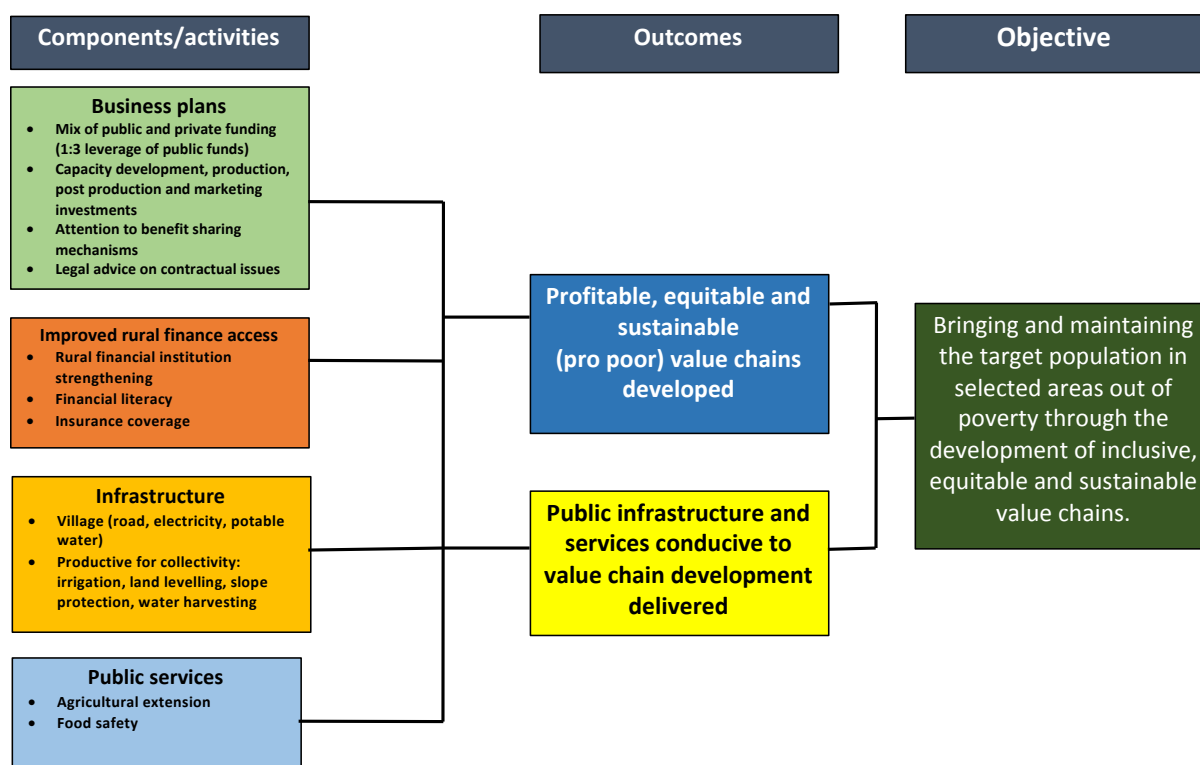
B. Development objective and impact indicators

40. The **overall goal** of the SPRAD-SS project is to contribute to the national poverty eradication strategy in Shaanxi Province. The **development objective** is bring and maintain the target population in selected areas out of poverty through the development of inclusive, equitable and sustainable value chains. This will be achieved by (i) promoting, strengthening and funding public private partnerships through competitive business plans; (ii) establishing climate resilient public infrastructure; (iii) providing public services favouring value chain development and innovative market linkages such as E-commerce, certified trade and food safety measures for targeted rural poverty areas; and (iv) improving access to rural finance specifically for value chain development.

41. **Expected contribution towards climate change adaptation and mitigation.** Project activities are expected to contribute towards reducing the impact of climate change and limiting the magnitude of climate change through: (i) improved soil and water conservation; (ii) improved irrigation efficiency and water savings; (iii) construction/rehabilitation of greenhouses (in some cases solar heated) and plastic mulching; (iv) introduction and promotion of heat and drought resisting varieties; and (v) increased carbon sequestration through plantation of tree crops.

42. **Key impact indicators.** Impact of the project will be measured through (i) Number of poor brought out of poverty in the project area; and (ii) % of inclusive business relationships in operation after 3 years or at project completion (ref. Logframe for more details).

43. **The theory of change.** *The development hypothesis* is that value chains development can be effective for poverty reduction. The starting point of the theory of change is that market opportunities in agricultural products exist in the project area and these can be tapped by small farmers through partnerships with other value chain actors (mostly collectors and agribusiness processors). Public and private funding will be combined into long term profitable and equitable business plans jointly implemented by producers and agribusinesses. Project interventions will allow to correct failures such as insufficient access to knowledge, capital, natural resource and markets by small producers. In this way public-private partnerships will allow for a strengthened position and bargaining power of small producers in the value chains which in turn will generate increased and sustainable flow of income for these producers. The figure below illustrates the above theory of change.



C. Outcomes/Components

Outcomes

44. The main outcomes expected from the project include (i) Pro-poor value chains are developed; (ii) public infrastructure and services conducive to value chain development are delivered.

Components

45. The project is organized around three complementary and mutually reinforcing components. These components and related sub-components are presented below and described in detail in Appendix 4 below.

- (a) **Pro-Poor Value Chains and Agribusiness Development**, which includes three sub-components:
 - 1.1 Development of pro-poor business plans;
 - 1.2. Value Chain Development Fund;
 - 1.3 Value Chain Rural Finance development;
- (b) **Public Infrastructure and Services**, which includes two sub-components:
 - 2.1. Climate-smart Infrastructures Development; and
 - 2.2. Public Services and regulation for pro-poor agribusiness development
- (c) **Project management and coordination**

Component 1: Pro-Poor Value Chains and Agribusiness Development (USD 178 million, 69% of project total costs; IFAD contribution: USD 68 m)

46. **Objective.** This component aims at promoting the sustainable inclusion of target poor households in profitable value chains by engaging with agribusiness entities (enterprises or cooperatives) on a fair and mutually beneficial way conducive to poverty reduction. The component includes three sub-components, namely (i) Development of Pro-Poor Business Plans; (ii) Value Chain Development Fund; and (iii) Value Chain Rural Finance Development.

47. **Justification.** The justification of this project component is based on a fundamental premise that a market-driven approach is needed to help target poor farmers sustainably increase their income and improve their livelihood. This is operationalized by public sector facilitation of *mutually beneficial* (win-win) contractual relationships between these farmers and agribusiness entities (enterprises or professional cooperatives) as part of a viable Business Plan which responds to clear market opportunities in sustainable value chains. This can be achieved by strategically combining public and private sector funds and advice to address target poor farmers needs in terms of access to market, technology, organization and scale, good agricultural practices, and affordable credit as well as post-production and marketing needs of the whole BP; and by creating incentives to the financial sector to expand outreach towards rural clients and become overall more competitive.

Sub-component 1.1: Development of Pro-Poor Business Plans

Activities

48. **Activity 1.1.1. Value chain mapping and meetings.** At very early stage the project staff with the support of private sector partners will carry out an *analysis/mapping of pre-identified sub-sectors and related value chains* in each county. This will include: (i) *market scoping* to identify subsectors and value chains with the highest returns and market prospects at county, provincial and national/export level and suitable for project target agribusiness entities and for including poor farmers in the value chain in a profitable and sustainable way; (ii) a *comprehensive mapping of key actors* (producers, cooperatives, agribusiness enterprises, traders, e-commerce platforms, supermarkets etc.) involved at different stages (inputs provision, production, processing, trading, retailing, export etc.) of these VCs at county/provincial and national level; (iii) *mapping of financial and non-financial (business development and technical) services* available to support these VCs both from the public sector (e.g. extension services, certification, food safety, geographic indication, Government agriculture support funds and subsidies) and the private sector (private banks and financial institutions, insurance providers, agribusiness development service providers etc.).

49. **Activity 1.1.2. Stakeholder awareness and sensitisation.** The participants of VC meetings will also be informed about the concept of linking agribusinesses to target households using the BP methodology and inclusive business arrangements. The process of generating eligible pro poor business ideas will be discussed during these workshops and related steps for the BP preparation and selection process will be explained. Sample proposals and the templates for submitting BP proposals will be shared. The multiple criteria against which the BPs will be evaluated will be transparently communicated.

50. **Activity 1.1.3. Call for proposals and selection of eligible agribusiness entities.** Every year (for the first three years of project implementation) the project will announce a call for business proposals (expression of interest- Eoi), through all possible mass media channels and internet, inviting Eoi proposals from interested agribusiness entities. After the public advertisement, the project staff will follow up at county level with the VC meetings participants to motivate them to apply and clarify any doubt about the process and the expected proposal. The EOI announcement will include the following

information: priority value chains / commodities, priority geographic areas, profile of the households to be targeted by the proposal, eligible agribusiness entities, counterpart funding requirements, timeframe for proposed activities (up to 24 months), list of eligible cost to be supported by the project, deadline for submission of the EoI.

51. Activity 1.1.4. Support to Business Plans development. The project will make available a small amount of financial resources to each selected agribusiness entity to be used to hire an agribusiness consultant to facilitate the preparation and the drafting of the BP and/or to undertake any necessary technical assessment and analysis in order to ensure the viability and solidity of the BP. The preparation of the BP will involve the following actions: (i) data collection and analysis (ii) marketing and profitability assessment (iii) selection of target households (very important) (iv) identification of other business partners (v) financial planning, identification of financial sources (vii) implementation agreement with other stakeholders. The preparation of the BP should be carried out in a participatory way with frequent interaction with the target poor households expected to be engaged and benefit in order to ensure their actual buy-in and full understanding of BP business arrangements. Project staff, particularly the VC specialists, will be available to provide guidance in the process.

52. Activity 1.1.5. Selection and approval of viable Business Plans. Once finalised, BPs will be submitted to the county PMOs by the originating agribusiness entities. Every four months, or with the frequency that is deemed more appropriate, each County PMO will collect the BPs submitted in their county and will forward them to the BP Evaluation Committee (BEC). The BEC will review the BP documentation and, if necessary, undertake field visits to validate the proposed activities and provide comments on or propose further adjustment.

53. Activity 1.1.6 Business Plan implementation support. Upon the signing of the above-mentioned agreements, BPs will enter the implementation stage. The BPs will be implemented by each agribusiness entity according to the BP agreement and related approved BP. Project staff role will be focused on monitoring and supervision (both technical and fiduciary) and implementation support.

Implementation arrangements

54. Activity 1.1.1 Value chain mapping and meetings envisage a lead role to be played by County PMOs, which will make available existing studies and plans on priority industries (subsectors), under the oversight of the Provincial PMO. The County PMOs will be integrated with VC specialists with strong agribusiness background and knowledge of the target industries (sub-sectors) who will help in the VC analysis and mapping and in the facilitation of VC meetings. In addition, project staff will seek the technical advice of the private sector partners (e.g. Alibaba-Rural Taobao) that will provide market intelligence for the market scoping part of the exercise.

55. Activity 1.1.2. Stakeholder awareness and sensitisation. This activity will be carried out by County PMOs under the oversight of the Provincial PMO.

56. Activity 1.1.3 Call for proposals and selection of eligible agribusiness entities. The management of the call for proposals process will be the responsibility of county PMOs while the EoI proposals screening and selection will be done by a BP Technical Evaluation Committee (BEC) appointed by the project in each county. The BEC will include representatives from public institutions (e.g. the Poverty Alleviation and Development Bureau, a relevant technical Bureau) and external experts from the private and the financial sector. The final composition of the BEC will be defined in the PIM.

57. Activity 1.1.4: Support to Business Plans development will be the responsibility of county PMOs which will provide some financial resources to BP originators to develop their approved EoI proposals into full-fledged BPs. County PMOs VC specialists will also be available to provide additional technical advice to agribusiness entities in the preparation of the BPs. In addition, private sector partners (e.g. Alibaba Rural Taobao, Ant Financial) will provide support in the preparation of selected BPs where they see good potential for partnership (e.g. e-commerce, insurance).

58. Activity 1.1.5: Selection and approval of viable Business Plans will be the responsibility of the BEC at county level. County PMOs will submit BPs approved by BEC to the BP County Approval Committee (BAC) for official approval. The BAC will be chaired by the Head of the Leading Group, and will include representatives of other public institutions and of the beneficiaries. The final composition of the BAC will be defined in the PIM.

59. Activity 1.1.6: Business Plan implementation support. This will be under the responsibility of county PMOs, with the support of VC specialists, which will request regular reporting from agribusiness entities and will coordinate monitoring, supervision and implementation support work.

Sub-component 1.2: Value Chain Development Fund

Activities

60. Business Plan funding. The project will have a financing facility called Value Chain Development Fund which will be used to cofinance BPs approved under subcomponent 1.1 according to the above-described process and criteria.

61. BP eligible activities. The BP should include all the activities and investments required to increase the profitability of the agribusiness entity as well as translate this into tangible benefits for the project target poor households engaged in that BP. The exact list of activities will depend on each case but in general a typical BP could include the following four expenditure categories:

- i. *Training and advisory activities.* The BPs could include training/capacity building and technical (extension) or business advisory services in areas such as: (a) supporting target farmers to adopt or upgrade their technologies and farming practices in order to meet market requirements and standards and cope with environmental sustainability and climate change. These services can be provided by the agribusiness entities, or by public institutions or by specialised service providers hired for this purpose; (b) enhancing capacities of other target poor household members who work for the agribusiness entity as labour force in either production, post-production or other functions; and (c) enhancing BP originating agribusiness entities organisational, management and market intelligence capacity enhancement. This support could be provided by private sector partners (such as the Alibaba Group) or by specialised service providers hired for this purpose.
- ii. *Production-support activities.* BPs could include: (a) on-farm investments required by target poor farmers to ensure a level of production that meets market requirements in terms of volumes and quality (on-farm irrigation schemes, small equipment etc.); (b) required one time (e.g. seedlings, piglets) or annual (seeds, pesticides, fertilizers, animal feed) inputs; and (c) collective productive assets (e.g. chicken or fungus shelters).
- iii. *Post-production activities.* BPs could include investment in post-production infrastructure such as collection centres, storage rooms, warehouses, processing facilities, transport, and post-harvest equipment for grading, sorting, aggregating, and processing produce.
- iv. *Marketing and branding activities.* BPs could include activities related to (a) branding (e.g. packaging and label design, geographic indication of origin), (b) marketing (e.g. business to business trips, participation in trade fairs) and (c) obtaining and/or renewing certification labels and comply with food safety or quality standards of buyer and/or of the end market (e.g. No Harm, Green, Organic, ISO, fair trade and others) to the agribusiness entities.

62. Rationale for public co-funding of BPs. One of the main principle of the project is the combination of public and private funds to maximise outreach and ensure efficiency. To this end during BPs' preparation, all possible financing sources, private and public, will be identified and contributions and disbursement schedule from each source will be defined. The rationale for the use of project funds to cofinance BPs stems from the pro-poor focus of the project as it mainly aims to provide an incentive to agribusiness entities to reach out poor households in remote target areas and offer them truly mutually beneficial relationships. In accordance to this rationale project funds, or at least the portion provided by IFAD, will be channelled on a grant basis to support expenditure categories i, ii and iv.

63. **Business plans cost sharing rules and description of type of investments are presented in Appendix 4.**

64. Activity 1.2.2 Business Plan implementation support. Main functions of the project during this phase will be to: (i) monitor compliance with project targeting methodology and criteria to ensure project target group are effectively included, participate and benefit from the implementation of BPs; (ii) monitor the effectiveness and efficiency of activities implemented (training, technical assistance and business development services provided, extension support, quality of assets purchased etc.); (iii) facilitate dialogue and conflict resolution between parties if necessary; (iv) facilitate clustering and bundling of BP activities (e.g. for training) in order to achieve economies of scale and reduce administrative costs.

Implementation arrangements

65. Implementation arrangements for activity *Value Chain Development Fund* envisage a lead role of the County PMOs which will sign an agreement with each agribusiness entity implementing an approved BP. Such agreement will formalise among other things the financial support of the project to the activities listed in the BP, the level of project funding of BP eligible activities, disbursement schedule of project funds linked to a Work Plan-based timeline and intermediate targets and M&E indicators.

Sub-component 1.3: Value Chain Rural Finance Development

Activities

66. Activity 1.3.1 Technical Support to the Rural Financial Institutions (RFIs). Technical assistance support will be provided to relevant RFIs to improve credit access for rural smallholder and poor households, as well as cooperatives and small agricultural enterprises. The TA will support good practice lending processes and procedures within financial institutions, increasing their capacity to assess rural householder and cooperative lending risks. Improved lending will lead to an increased and sustainable supply of loan capital availability for target beneficiaries which will in turn lead to improved beneficiary income and asset development. This TA will improve credit risk evaluation and value chain financing analysis, as well as expand the scope of collateral.

67. Activity 1.3.2 Financial Literacy Education for Farmers and Financial Management Capacity Building for Agribusiness Entities. A financial literacy education and financial management training program will be carried out to support target beneficiaries to identify and assess the credit worthiness of their economic activities as well as their capacity/confidence to apply for credit. The training project will use workshop, leaflet and on-line app and will target low income agricultural producing households. It will have the objective of increasing beneficiary capacity and confidence to identify and then borrow for credit worthy productive activities. The above training project will achieve the objective by improving (i) beneficiaries' quality of demand for credit and insurance; (ii) their income development and asset accumulation; and (iii) their qualification to obtain loans from banks. It will also strengthen value chains by improving the quantity and quality of supply to enterprise and alternative marketing actors.

68. Activity 1.3.3 Innovative Insurance Projects for Farmers. Activity 1.3.3 Innovative Insurance Projects for Farmers. The program will introduce agricultural and life insurance to target farmers to enhance coverage and resilience against weather –related events, accidents and illness shocks. The insurance intervention includes three parts: (i) TA to insurance companies to evaluate value chain risk and to develop new (or adapt existing) products to address value chain risks; (ii) TA to insurance companies to design innovative agricultural insurance for certain regional products; (iii) Insurance premium subsidy to increase insurance repayments for selected crops and livestock; and (iv) Accident and life insurance premium subsidy for targeted poor households to prevent them from falling back into poverty.

Implementation arrangement

69. Technical Support to the Rural Financial Institutions (RFIs) and Risk Compensation Funds from the county governments. The project will contract national and international experts to give structured workshops on credit risk evaluation and value chain financing. Experts will then be deployed to provide hands-on support to participating FIs to design and document new loan procedures and processes. The program can consider inviting non-participating RFIs to participate in workshops. The project counties should mobilise public funds to establish or top up risk compensation funds (RCFs) that eventually will enhance the access of project beneficiaries (poor farmers, cooperatives and agribusiness) to rural finance. A joint commission including representatives from the County Bureau of Finance, County Poverty Alleviation Office and related RFIs has already been established to monitor the operation, management and use of the RCFs. As of the end of 2017, the existing financial capacity of the RCFs in each project county ranges between RMB 10 and 40 million. SPRAD-SS will hence take advantage of existing schemes and practices through which County governments will make available the required RCFs funding to facilitate bank lending to agribusiness entities participating in the project.

70. Financial Literacy Education for Farmers and Financial Management Capacity Building for Agribusiness Entities. This activity will be implemented by national and/or international experts covering the three steps mentioned in the description of the activity above. To ensure accessibility of financial literacy and financial management project, the project will contract education experts to assist in program design and materials.

71. Innovative Insurance Projects for Farmers. This activity will be implemented by the specialised insurance company competitively selected by the PPMO. The insurance broker will be employed to facilitate the implementation of the insurance projects by the PPMO if necessary.

Component 2: Public Infrastructure and Services (USD 72 million, 28% of project total costs; IFAD contribution: USD 1.3 m)

72. **Objective.** This component aims at improving the access to public goods and services (common/village infrastructure, access to climate change adaptation/mitigation best practices, normative and regulatory services associated with food safety) in the targeted project area through a combination of physical improvement, institutional strengthening, technical assistance and policy advisory, in order to promote sustainable, climate resilient and food safe agricultural production.

73. **Justification.** The justification of the component relates to (i) the existence of insufficient village infrastructure that is required to expand agricultural production, enable value chain development and improve rural livelihoods; and (ii) need for public services allowing to improve the agricultural production in terms of climate change adaptation and food safety issues.

74. Investigation in the targeted project counties revealed some gaps in infrastructure conditions, which may limit implementation of the proposed agribusiness development and poverty alleviation activities, including: incomplete rural road networks, underdeveloped and deteriorated irrigation and drainage systems, lack of drinking water and electricity supply facilities, segmented and sloping cultivation lands preventing mechanization and enhancement of water use efficiency as well as causing soil and water erosion. Improved village level infrastructure and public services delivery will allow poor small scale producers to (i) expand and improve agricultural production in line with market requirements, (iii) improve local livelihoods and (iii) enhance resilience to climate-driven shocks and safety of production.

75. Improved food safety systems together with pest management and disease control and food quality management systems will (i) improve the value and quality of food products under the project; (ii) improve the food safety of food consumed by beneficiaries in the project thus contributing to improved quality of life; (iii) with appropriate marketing channels and strategies, increase the volume, value added and net benefit to poor producers in the projects area; (iv) build confidence of the producers, processors and consumers on the products from the project area so that the reputation will be improved thus contributing to more sustainable rural development; and (v) increase beneficiaries income above the poverty line in a sustainable way thus reducing the chances of falling back into poverty.

Sub-component 2.1: Climate-smart Infrastructure Development

Activities

76. As the major road, water and power supply infrastructure systems in the targeted project areas have been covered by relevant government investments, and specific production and processing infrastructure of agribusiness entities will be included in their respective Business Plans under Component 1, this Sub-Component will mainly address the gaps of the village level public infrastructure systems to support the proposed agribusiness development. The approach is to establish a linkages between component 1 and this sub-component so that public infrastructure will serve value chain development with a strong poverty focus.

77. Activity 2.1.1 Improvement and development of irrigation systems. This activity would support development and rehabilitation of: (i) 116 km water delivery pipeline; (ii) 5 pumping stations; and (iii) 147.15 km irrigation and drainage canals. These interventions would develop 3,220 ha new irrigation area and improve 1,507 ha existing irrigation area, hence contribute to agribusiness development and poverty reduction in the project area, through enhancing agricultural productivity, agriculture diversification and climate resilience.

78. Activity 2.1.2 Improvement and development of water source facilities. this activity would support improvement and development of: (i) 86 water ponds; (ii) 4 tube wells; (iii) 12 water pools; and (iv) 7 small weirs. These interventions would secure water supply to irrigation and water supply systems.

79. Activity 2.1.3 Development and improvement of safe drinking water supply systems. This activity would support: (i) development and improvement of 130 km water supply pipelines; and (ii) development and improvement of 35 water storage ponds. These interventions would enable easy access to safe drinking water for a total of 26,265 rural population and 14,840 livestock in the project villages.

80. Activity 2.1.4 improvement and extension of power supply systems. This activity would support: (i) improvement and extension of 129 Km electricity lines; (ii) establishment and rehabilitation of 7 transformation sub-stations; and (iii) replacement of 3 transformers. These interventions would bring enable electricity supply to irrigation systems, agro-processing plants and rural households in 22 project villages.

81. Activity 2.1.5 Development and improvement of rural roads. This activity would support: (i) improvement and pavement of 492 Km concrete village roads; (ii) development and improvement of 270 km gravel production roads; and (iii) development and improvement of 30 km earth access roads. These interventions would improve road access and hence serve both the agribusiness cooperatives and other local farmers in 265 villages located in 64 project townships.

82. Activity 2.1.6 Land preparation. This activity would support: (i) terracing of 287 ha cultivated slope lands; and (ii) levelling of 1,527 ha farmlands. These interventions would benefit 34,800 rural HHs in 100 project villages, and also provide public goods in soils and water conservation.

83. Activity 2.1.6 Support to infrastructure O&M. Public infrastructure systems need relevant institutional arrangement and proper mechanism for sustainable O&M after completion of construction. This activity would support establishment and strengthening of infrastructure O&M organizations, including water users' association and other infrastructure management groups, through construction of office buildings, procurement of furniture and office equipment, provision of technical assistance, and organization of workshops and meetings and training to O&M organizations and beneficiary farmers on O&M of infrastructure systems.

Implementation arrangements

84. These activities will be implemented at selected sites in the project counties in south Shaanxi Province, based on local infrastructure constraints and the project agribusiness development needs. The Provincial Project Management Office under the Provincial Development and Reform Committee (PDRC) will be responsible for overall supervision and coordination. Its sub-ordinate offices at prefecture level will be responsible for direct supervision and coordination of sub-component activities within their respective prefectures. The sub-ordinate offices at county level will be responsible for detailed implementation of sub-component activities within their respective counties.

85. Specific interventions initially identified under this sub-component are subject to further confirmation and adjustments during the project implementation, following the same selection criteria applied during the project preparation: (i) compliance with relevant government policies, plans and guidelines; (ii) contribution to achievement of the project objectives; (iii) availability and good potential for land and water resources development; (iv) readiness of external major infrastructure systems/networks; (v) willingness of local villages and beneficiaries to take over O&M responsibilities; (vi) technical, economic, social and environmental feasibilities; (vii) incorporation of climate change conditions; and (viii) reasonable scope and cost considering the overall project size.

Sub-component 2.2: Public Services and regulations for pro-poor agribusiness development

Activities

86. **Sustainable and Climate-resilient agriculture.** The project would focus on enabling sustainable and climate-resilient agriculture through (a) taking a landscape approach in developing a land-use planning and monitoring system; (b) identifying and enhancing up-to-date climate resilient technologies, techniques and equipment; and (c) improving extension services through public-private-farmer collaboration.

87. Activity 2.2.1. Extension service enhancement. The project will provide 6 man/month TA to enable expert(s) in climate resilient agriculture to develop tailored training materials in line with the agro-ecological systems and trend of climate change in the project counties. The China Northwest Agriculture and Forestry University and other research institutions in Shaanxi have been conducting research and experiment in the project area for some years and are preferred sources of expertise. An additional 2 man/month of TA will be provided to the expert(s) to train 900 trainers from project county BOAs and township extension service centers and farmer cooperative/agro-enterprise, roughly 100 trainers from each county. Trainers will then provide technical training to farmers either through government sponsored training programs or through farmer cooperative/agro-enterprise training initiatives. However, in terms of the number of farmers to be trained, it is difficult to estimate for the time being, which will largely depend on: (i) the number and size of the BPs the project will support; and (ii) the number of villages BOA and township extension agents normally cover in their routine extension services. Nevertheless, through grassroots extension network including the established demonstration households in villages, it is foreseeable that a large number of farmers will partake in and benefit from climate resilient agricultural practice training.

88. With technical support of expert(s) and trainers, BOAs of the 9 project counties will carry out 27 demonstrations of climate resilient agricultural practices including new and improved farming techniques and testing new crops and new crop varieties with good adaptability to climate change in the project area. Each county will select 3 sites that should represent different types of micro climate conditions of the county, as such, successful demonstrations would be then replicated in larger area in the counties. In addition, counties are encouraged to share and make good use of the results of demonstrations where applicable to expand the impact of demonstrations.

89. **Food Safety.** For the food safety and quality elements of the sub-component, activities will include enhancing traceability of food production and processing and enhancing the risk-based inspection of foodborne risks on project-supported products. More specifically, activities will include:

90. Activity 2.2.2. Enhancing traceability of food production and processing: The activity aims at enhancing traceability of agricultural production and processing done by project beneficiaries and in project target areas. Although traceability does not necessarily have a food safety role, it is a critical and effective tool to promote food safety. Traceability is defined as the ability to follow the path of a pathogen (or the origin of food, feed ingredients and food sources) through all stages of production, processing and distribution. The project would focus on production and processing stages only. The increased traceability could i) reinforce emphasis on prevention, in conjunction with Good Manufacturing Practices (GMP) and Hazard Analysis and Critical Control Points (HACCP) instead of reacting to food safety breaches; ii) enable businesses to monitor and defend against risk in real time; iii) increase market penetration and reduce operating costs through making informed decisions; iv) contribute to promptly identify and remove unsafe products from market; and v) improve branding through increasing customer confidence¹². Building on the existing, pilot county-level initiatives of

¹² Source: International Trade Centre, Traceability in food and agricultural products Bulletin 91/2015.

traceability system establishment¹³, the project would introduce or enhance traceability through (a) establishment of information system including software development and equipment provision; (b) training and awareness raising of producers, processors and relevant monitoring and implementing authorities on traceability.

91. Activity 2.2.3. Risk-based inspection of foodborne risks on project-supported products. The activity aims at ensuring safety of project-supported agricultural product or food at the production and processing stages by monitoring of foodborne risks. Foodborne risks include chemical risks related to pesticides or food additives, and microbiological risks due to bacteria, parasites or viruses. According to FAO and WHO, the dimensions of national food control system contains five elements of food law and regulations, food control and management, inspection service, laboratory services and information, and communication and training. Among these five dimensions, the project would focus on the inspection as well as laboratory service and information on foodborne risks of products and processing being done through implementation of project-supported BPs. This focus is on the basis that enhancement of law/regulations and management systems will be better addressed through projects particularly focusing on these specific areas.

Implementation arrangements

92. Extension service enhancement. The responsibilities of the development of climate resilient agriculture training materials, training of trainers, introduction of good practices and the development of knowledge product that will capture the successful demonstrations and experiences rest with the PPMO. More details are provided in Appendix 4.

93. Traceability and risk-based inspection. The PPMO will select a service provider and proposals for partnership in all relevant activities and necessary equipment and tools. PPMO will recruit a Technical Specialist for traceability and risk-based inspection services who is specialized in agricultural product quality and safety management throughout the project and will work under the supervision of Ministry of Agriculture. The Technical Specialist will coordinate the work of traceability and risk-based inspection in addition to leading development of action plans and guidelines.

94. Food safety management system is best implemented in a coordinated and integrated approach of One Health, the initiative that is led by the Department of Agriculture, with a close collaboration with CFDA, CCDC under the Department of Health. QR-based traceability system development including the preparation of training materials, development of advocacy work, and quality control of testing and reporting will be done by service providers selected by the PPMO and DOA. This service provider will also be responsible for training of trainers for traceability and risk-based inspections.

¹³ In Shangluo prefecture, one of three project target areas, a pilot traceability project is attempting to build a QR code platform –with the budget of 500,000 RMB- and, requested by BoA, trying to include characteristics of county in the traceability system

Component 3. Program Management and Coordination (USD 7.3 million, 2.7 % of project total costs; IFAD contribution: USD 3 m)

95. This component will support the implementation of the Project with management and coordination activities properly conducted and required functions fully discharged. It will require the establishment and operation of Project management offices (PMOs) at provincial and county levels, as well as facilitation set-ups at township and village levels. Project implementation will be decentralised to the county level, with the provincial PMO performing overarching functions of planning, coordinating, facilitation, monitoring and reporting. For their appropriate functioning, Project support to the PMOs will include office and training equipment, vehicle rental, capacity building, workshops, monitoring and evaluation (M&E), baseline/RIMS surveys, environmental and gender awareness trainings, study tours, knowledge management, and innovation development. Consulting/advisory services in agribusiness and value chain development will be an important function of the PMOs and will be acquired within or from outside of the PMOs. Costs for Project management and coordination at each level will be jointly financed by the IFAD loans and government counterpart funds. Recurrent costs for all PMOs will be ensured by Government counterpart funding, which will cover staff salaries, travel costs, and administrative costs.

D. Lessons learned and adherence to IFAD policies and the SECAP

96. The main lessons learned from IFAD country project and ongoing portfolio and from other donors (mainly World Bank) are presented below together with indication on how these lessons will be incorporated in the SPRAD-SS Project.

(a) Strategic/programmatic level (from COSOP and CPE)

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ Limited impact of projects' results on policy-making and limited scaling-up: The knowledge, experience, lessons, best practices and results of IFAD-funded projects and projects had limited impact/influence on broad national policies, and have been limitedly scaled-up. IFAD current delivering model, mainly provided in the form of area-based projects, proved non-conducive to inform policy-making and favour scaling-up: interventions tended to have geographically limited impacts (mainly in the project area), have been limitedly scaled-up (rarely beyond the project area), and had limited impact/influence on broad national policies 	<ul style="list-style-type: none"> ▪ The proposed project should not be viewed as an independent, stand-alone project, but as a piece of a broader portfolio which is programmatically piloting different approaches/models of poverty reduction through agribusiness development (complemented by a set of non-lending activities on the same subject) with the objective of demonstrating successful models that can inform policy-making and be replicated/scaled-up nationally. ▪ Specifically, this project will pilot a pro-poor public-private partnership with a large e-commerce operator, and integrate different packages of services, including e-trade, micro-credit, micro-insurance, etc.
<ul style="list-style-type: none"> ▪ Limited attention to post-production/marketing: China's agricultural development strategies have mainly focused on production/productivity enhancement, with emphasis on infrastructure development, with limited attention to post-production/marketing. Limited attention to post-production/marketing also resulted in cases of local overproduction, which led to drops in price of commodities and farmers' income. 	<ul style="list-style-type: none"> ▪ The proposed project will place great emphasis to post-production and to developing agricultural value chains that promote equitable organizational arrangements, different channels/opportunities to farmers to link with market opportunities, and increased incomes for the target households.
<ul style="list-style-type: none"> ▪ Poverty reduction through direct support to dragonhead enterprises gave mixed results: The Government approach of promoting poverty reduction by directly supporting dragonhead enterprises, under the assumption that the benefits generated by the dragonhead enterprises would trickle down to poor 	<ul style="list-style-type: none"> ▪ The project will pilot a different approach to poverty reduction through agribusiness development, whereas support to agribusiness entities, particularly dragonhead enterprises, is conditional to the achievement of certain outreach targets and to the establishment of fair and inclusive contractual arrangements with the project's

Lesson	How lesson has been incorporated in the Program
farmers, gave mixed results, and it did not always proved to be an effective approach.	primary target group.

(b) **Lessons from ongoing portfolio**

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ The perverse incentive of repayment responsibilities: Experiences from SSADEP and JIMAAPP showed that in those cases where the loan repayment responsibility is transferred to the local county authorities, and from them to the beneficiaries (agro-enterprises, cooperatives, or poor households) a perverse incentive is created whereas local authorities have an incentive to select among the entities to support those who could offer the highest likelihood of repayment. This leads to select/support the strongest entities. On the positive side, in the QLMAPRP, where resources are channelled to the beneficiaries as grants through the poverty reduction budgets, the above described problem is less present. 	<ul style="list-style-type: none"> ▪ It is agreed that project resources to co-finance business plans will be provided to the selected agribusiness entities in the form of grant (i.e. the recipient agribusiness would not have to re-pay the project resources received to co-finance its business plan).
<ul style="list-style-type: none"> ▪ Limited understanding of value-chain development approach, and experience/capacity to implement it, has limited progress and performance in this area in ongoing projects: PMOs have strong capacity and experience in implementing agricultural production/productivity enhancement projects, but limited in value chain development. The concept of value chain development is new, and not entirely understood (for instance, PMOs have difficulties in determining what could be considered eligible for financing under value-chain development activities). This has hampered progress and performance in this area. 	<ul style="list-style-type: none"> ▪ Greater support at start-up has to be provided to have project staff and implementing partners familiarizing with the concept of value-chain development and program implementation manual. ▪ TA is provided to facilitate successful implementation of the component. ▪ Linkages with ongoing or future initiatives aimed at strengthening the capacity of service providers to provide the required services will be pursued (e.g. with Regional Grant for Scaling Up of Pro-poor Value Chain Projects).
<ul style="list-style-type: none"> ▪ Existing packages often do not provide sufficient incentives to enterprises and cooperatives to engage with target beneficiaries: Experience with ongoing projects showed that in some cases existing packages provided through the projects (e.g. public or semi-public goods, access to finance, etc.) do not provide sufficient incentives to enterprises and cooperatives to engage with target beneficiaries. Often the definition of public/semi-public good is not clear. 	<ul style="list-style-type: none"> ▪ Flexibility in determining the packages to enterprises/cooperatives to provide the incentives to engage in project activities is critical. ▪ Outreach and poverty focus would need to be among the key criteria for the selection of the business plans (and thus of the cooperatives/enterprises) that will be supported by the support of the Program. ▪ Mechanisms to ensure that the benefits generated from the support packages provided through the project will reach the intended beneficiaries in a verifiable way have to be included.
<ul style="list-style-type: none"> ▪ Value chain financing: Collateral requirements and short lending term are still the main limiting factors for agribusiness entities to access commercial loans required for business development. While on the other hand liquidity with commercial banks is usually excessive as reflected in low lending/deposit ratio. Guaranteed lending especially through third party partly addresses the collateral barrier but on the other hand pushes loan interest higher and makes the loan less attractive, while capacity of guarantee companies becomes also a limiting factor for sustainability. 	<ul style="list-style-type: none"> ▪ Innovative and diversified financing tools will be explored to address the accessibility challenge. ▪ Technical support to financial institutions to introduce diversified lending techniques and instruments could improve lending ▪ Expand different types of collateralization method to help mitigate risk concerns of financial institutions

(c) **Lessons from other donors' efforts in poverty reduction (mainly from the World Bank's poverty reduction projects¹⁴)**

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ Equitable and viable value chain development: The final set of projects is in the early stages of implementation and any lessons must be considered preliminary. However, the first two poverty reduction projects included rural enterprise development components which performed poorly. Based on the negative results of the first two projects and the initial implementation experience of the final two projects, it is evident that there are significant obstacles to (a) identifying financially viable value chains, and (b) ensuring that the poor secure an adequate and appropriate share of the benefits from successful agricultural value chain development. While the first two poverty reduction projects largely failed to surmount these challenges, the final set of projects have (a) adopted enhanced selection measures for identifying potentially viable agricultural value chains, and (b) emphasized the development of farmer cooperatives which may better provide the poor with an appropriate share of the increased value of output and employment opportunities. 	<ul style="list-style-type: none"> ▪ The design of the new project is placing greater emphasis on establishing criteria and a process (selection of business plans on a competitive basis) for identifying potentially viable value chains.
<ul style="list-style-type: none"> ▪ Government's interference in the selection process of the agribusiness enterprises/value chains to support: Government line departments tend to interfere in the process of selection of the agribusiness entities/value chains to support suggesting the use of project resources to implement existing county development plans (mainly expanding production of the priority crops and commodities in the county development plans), rather than to support agribusiness entities/value chains that have higher market potential and/or willingness to enter into equitable arrangements with poor farmers. 	<ul style="list-style-type: none"> ▪ The proposed project proposes the adoption of a competitive mechanism to select the cooperatives/value chains to be supported by the program based on the assessment of business plan proposals against targeting/outreach and viability criteria.
<ul style="list-style-type: none"> ▪ Development of Business Plans: Experiences from the four WB-funded Poverty Alleviation Projects showed that (a) not all agribusiness entities, particularly cooperatives or small/medium enterprises, have sufficient capacity to develop and implement a business plan. The business plans should be considered as part of a more comprehensive cooperative development process. However, building the basic capacity of these agribusiness entities needs to happen prior to the development of the business plan. (b) The idea to include the costs for training in the business plan proved to be only partially successful. Additional and regular training needs to be provided from the project. 	<ul style="list-style-type: none"> ▪ Support for development and supervision of BP elaboration and implementation will be provided under the project ▪ The project is taking the approach of making available a small amount of financial resources (RMB 15,000) to each selected agribusiness entity to be used to hire an agribusiness consultant to facilitate the preparation and the drafting of the BP and/or to undertake any necessary technical assessment and analysis in order to ensure the viability and solidity of the BP
<ul style="list-style-type: none"> ▪ Facilitators: Experiences from some of the WB-funded Poverty Alleviation Projects have experienced problems 	

¹⁴ The core of the World Bank's support for poverty reduction in China and collaboration with the LGOP system at the central and provincial level since 1989 has been a series of six poverty reduction projects and three China poverty assessment studies. The six poverty reduction projects can be grouped into three themes. The first two projects (which began implementation in 1995 and 1997) adopted a complex multi-sectoral approach at the village level supported through a basic participatory approach. The second two projects (which began implementation in 2005 and 2010) adopted a simpler multi-sectoral approach at the village level supported through a much stronger focus on participation and community empowerment. The third group of projects (which began implementation in 2014 and 2015 and are still under implementation) focus on developing agricultural value chains that promote equitable organizational arrangements and increased incomes for the target households.

Lesson	How lesson has been incorporated in the Program
regarding unrealistic expectations placed on the facilitators hired by the project.	

97. **Adherence to the Social Environmental and Climate Assessment Procedures (SECAP).** A SECAP review note has been prepared. The main issues highlighted in the note include: (i) Water loss and soil degradation in the Qinling-Daba mountainous areas; (ii) needs for adoption of improved agricultural and food technology for food quality; and (iii) need for Income diversification and social safety nets for highland-based smallholder farmers. The Full SECAP note is presented at the end of the report.

III. Project implementation

A. Approach

98. **Value chain approach.** The project will take a value-chain approach to poverty alleviation, focused on creating sustainable commercial linkages between the targeted producers and potential markets that generate enough revenue to lift people out of poverty. The value chain approach has distinctive features such as: (i) focus on end markets for value added products and assessing marketing potential from an ex-ante point of view; (ii) understanding the role of value chain governance; (iii) recognition of the importance of relationships among value chain actors; (iv) facilitating changes in actor behaviour mainly through capacity development and incentives; and (v) empowering small producers and their cooperatives.

99. **Flexibility.** Considering the fluidity of value chain and market dynamics, flexibility in project design and implementation is critical to successful outcomes. Flexibility will be built in through (i) private sector-driven business plans guiding the investments in component 1; (ii) diversifying both on the supply side of small scale agriculture by enlarging the range of crops and animal products promoted under the project and on the demand side by trying to enlarge the range of market outlets for smallholder products.

100. **Complementarity between public and private funds.** The project is expected to use public funds to leverage resources in the market (from agribusiness and financial sector). This will be achieved by co-financing viable and pro-poor Business Plans (BPs) presented by agribusiness entities.

101. **Business plan.** Agribusiness enterprises, cooperatives (and other forms of producer associations) will be the entry point for SPRAD-SS investment in pro-poor value chain development. Business planning will be the main tool for channelling investment funds to these entities. These plans will be following the below principles (Business plan proposed outline and elaboration/implementation steps are presented in appendix 4):

- (i) *Poverty Focus:* Each project investment must involve strong features of participation and outreach to the poor farmers. This should include giving poor farmers a due role in the cooperative and investment decision making and securing a fair share of the benefits going to the poor farmers.
- (ii) *Business and market driven process:* Cooperative investment plans should respond to promising business opportunities and should be market driven. They should respond the investment needs and opportunities identified by eligible cooperatives. The project funds will be provided at the discretion and under the management of the eligible cooperatives not as a supplement to government development projects.
- (iii) *Transparency:* All project support and decisions should be carried in an open and transparent manner. All potentially eligible and interested applicants as well as the general public in the project areas will be informed through public advertisement, invitation for proposals and public disclosure. Support to cooperatives will be made public. The same

level information will be provided to all potentially interested enterprises operating in the food business sector.

- (iv) *Value Chain approach*: Support of investment proposals should consider the complete value chain and would take an end-market focus. Pure production expansion will not be supported.
- (v) *Innovation*: Investment proposals should be featured by a high level of innovation. Innovative features could include organizational and technical innovation, marketing and product promotion, new product presentation, responsiveness to emerging consumer trends and preferences, etc.
- (vi) *Economic efficiency and financial viability*: All project funding should meet standard economic viability criteria and should aim for a high financial viability, which in turn will be critical for meeting the poverty objective.

102. **Diversification.** The project will enlarge the range of options on both demand and supply sides. On the demand side, the project will link small producer groups/cooperatives with a number of buyers including supermarkets and agribusiness, agribusiness (both local and corporate/international), eco-tourism, as well as final consumer through E-commerce. The priority of the project will be to establish linkages with the largest number of buyers for each participating producer group/cooperative in order to reduce single-buyer risk (monopsony) and broaden the set of production and marketing skills of these groups/cooperatives. The project will also favour the promotion of crops and livestock products that generate the highest net benefits to small producers thus are more likely to generate poverty reduction.

103. On the supply side, the project will ensure that where feasible, participating producer groups/cooperatives have a small number of crops and/or animal products to be developed and marketed. Also, innovative approaches to value-adding through post-harvest management, grading, packaging and product differentiation will be piloted through “business plans” applying food safety improvements as well as environmental, geographic and Fairtrade certifications to local produce in order to access specific market demand. Once tested, such approaches will be scaled-up and replicated across other suitable value chains.

104. **Pro-poor infrastructure development.** For the selection of the infrastructures to be financed through the project, priority will be given to infrastructures in poor areas/villages and to improve connectivity between those production-based villages and other dynamic stages of the value chain (e.g. processing, marketing).

B. Organizational framework

105. **Lead Project Agency.** The Provincial Development and Reform Commission (PDRC) will take a lead role in project coordination and management. Specifically, the Foreign Loan Project Management Office (FLPMO) attached to the PDRC would take lead responsibility for project design, management, supervision and evaluation, and will act as the Provincial Project Management Office (PPMO). The PPMO will have the primary responsibility for coordinating and supervising the project implementation, administration of project resources, and monitoring and evaluation. In order to successfully implement an integrated development project, which covers different sectors and involves multiple partners, it is critical the Director of the PPMO exerts leadership and convening power. Particularly, the PPMO will have the primary responsibilities in: (i) administering the Designated Account and Project resources especially the IFAD loan; (ii) overseeing the use of Project resources and Project procurement; (iii) ensuring effective flow of funds for Project implementation; (iv) providing appropriate technical and implementation support to the counties; (v) coordinating and undertaking knowledge management activities; (vi) monitoring and evaluation; and (viii) ensuring sharing of data, information, experiences, good practices within and beyond program.

106. **Project Leading Groups (PLGs):** Project Leading Groups (PLG) will be established at each project county to provide overall guidance and coordination of the project implementation. Each PLG

would be led by a senior official of government of the same level and composed of representatives from the related departments/bureaux and institutions. The key responsibilities of PLG at each level include: (i) Overall supervision of PMO's operations; (ii) Coordination of counterpart funds for carrying out the project; (iii) Review and approval of project Annual Work Plan and Budgets (AWPB); (iv) Coordination of implementing agencies in project implementation; and (v) General oversight of the project implementation address key issues/decisions important for project.

107. **Provincial Leve Coordinating Mechanism:** At the provincial level, a coordinating mechanism through regular meetings will be established involving at least DOF, PDRC, DOA and the PAO. The coordination will be chaired by DOF or PDRC who will call for such meetings as and when required, but at least every six months. Regular updates on project progress and implementation issues would be provided by the PPMO to this coordinating members every 3 month during the 1st and 2nd project year.

108. The Shaanxi **Provincial Department of Finance (DOF)** and county Bureau of Finance (BOF) will have the primary responsibility for the administration of project resources. The responsibilities of DOF/BOFs at the provincial and county levels are described in Appendix 5.

109. **Project Management Offices (PMOs)** will be established by the PLGs at provincial, municipal, and county levels and located at the appropriate agencies at the respective level. The Provincial PMO (PPMO) and each County PMO (CPMO) will be staffed with qualified and full-time staff in adequate numbers, at a minimum covering the functions of a director, a deputy director, an accountant, a cashier, an M&E officer, a planning/implementation coordinator, a gender focus point. PMOs will focus on planning, coordinating, monitoring and reporting of the project under the guidance of PLG of the same level. Implementation of project activities would remain with relevant technical agencies at county level on the basis of their mandate and technical expertise to ensure close integration and coordination of the project activities with the governmental development activities in the project area, leveraging various concessional government policy instruments to support and complement the project, to achieve more efficient and effective use of resources, better results and impact on the target population and sustainability.

110. The **Provincial PMO (PPMO)**. The PPMO will have the primary responsibility for coordinating and supervising the project implementation, administration of project resources, and monitoring and evaluation. In order to successfully implement an integrated development project, which covers different sectors and involves multiple partners, it is critical the Director of the PPMO has the convening power and experienced in exercising leadership for the project to be successfully implemented. The PPMO will be responsible for coordinating project implementation across the 9 counties. Its specific responsibilities are described in Appendix 5.

111. The **prefectural level governments** will only provide facilitating and supervisory role to their respective counties, when and as requested by the PPMO. Project resources will be channelled directly from provincial level to county level without passing through the prefecture level.

112. The **County PMOs (CPMOs)** will be responsible for coordinating project implementation across sectors at county level. Given the multi-sectoral nature of the project and the need to mobilize multiple sources of government counterpart financing to comply with the co-financing requirements, it is important to have a powerful convening CPMO and an effective coordination mechanism in each county, in order to enhance internal cohesion of project implementation. The CPMO will be staffed with minimum amount of full-time staff either from the hosting bureau or from other related bureaus, covering at least the function of project Director, planning and implementation officer, financial officer, M&E officer, agribusiness development officer. The CPMOs responsibilities are described in Appendix 5.

113. **Expert teams** consisting of government officials and/or agribusiness specialists will be established at provincial and county levels to provide capacity building, facilitation and review of

business plan and value chain related activities. The latter may be recruited from within or outside of the county as necessary.

114. A **Business Plan Evaluation Committee (BEC)** and BP Approval Committee (BAP) will be established at the count level to facilitate and technical review and approval of the business plans for PPPP financing. The BEC shall be consisted of both government officials and agribusiness specialists, the later may be recruited/invited from within or outside of the county as necessary, including at least one member each from banking sector and agribusiness practitioners. The BAC will be chaired by the Head of the Leading Group, and will include representatives of other public institutions. The final composition of both the BEC and BAC will be defined in the PIM.

115. At village level, **Village Implementation Groups (VIGs)** will be established in the project-targeted villages to ensure appropriate targeting, participatory planning, implementation, and monitoring of the project activities. The VIG will be headed by the director of the existing village committee and composed of about 8-12 people, including all the village committee members and 3-5 farmer representatives from different categories of household well-being. Of the farmer representatives, women will be no less than 40%.

116. **Farmers' organizations** such as Water User Associations (WUAs), Farmer Cooperatives (FCs) and their Associations (FAs) will participate in the implementation and monitoring of project activities. WUAs will participate in system planning and design, construction supervision, as well as training. WUAs will gradually take over the responsibility of operation & maintenance (O&M) for improved irrigation and drainage systems under the project. Similarly FAs/FCs will be involved in value chain enhancement activities and monitoring the implementation of project activities, identifying their training needs and facilitating services delivery. Women are expected to play an equal role within the different farmer groups and VIGs.

117. **Implementing agencies.** Implementation of project activities would remain with relevant technical agencies at county level on the basis of their mandate and technical expertise to ensure close integration and coordination of the project activities with the governmental development activities in the project area. The implementing agencies will include Bureaus of Water Resources (BOWRs); Bureaux of Transportation (BOTs); Bureau of Agriculture (BOA); Bureau of Forestry (BOFR); Rural Economic and Cooperative Management Bureau (RECMB). In addition, there are also other technical Bureaux in the project counties who will be responsible for supporting the CPMOs in undertaking the implementation of specific project activities that fall within their respective mandate. Such bureaus include such as Land Management (BLM), Environment Protection Bureau (EPB), Women Federation (WF), and Bureau of Meteorology (BOM). The detailed responsibilities of each agencies will be elaborated at the appraisal when the intended project activities are becoming more specific.

118. **Involvement/partnership with private sector.** The project will facilitate the interaction among the actors operating in the same value chain and agricultural subsector and will tap into the expertise and market knowledge of the private sector, both at national and local level, to define, select and support the project-supported value chains and pro-poor agribusiness activities. On a competitive and transparent basis, private actors such as e-commerce platforms (e.g. Alibaba-Rural Taobao), financial institutions (e.g. County Rural Commercial Banks, AntsFinance) and Insurance Company (e.g. China Insurance Company) will partner with the project to provide technical advice and guidance in the process of identification, selection and support of agribusiness entities and related BPs. Opportunities to promote partnerships with supermarkets will also be explored. The details on their participation in the project will be spelled out during appraisal.

119. The **Project Implementation Manual (PIM)** will be finalized and adopted before project disbursement, to guide project implementation. The PIM elaborates on the requirements for targeting, planning & reporting, procurement and financial management. It also describes project implementation arrangements within the component and subcomponents, including project

management institutions and the roles of various stakeholders. The approval of the PIM by IFAD will be a condition to disbursement.

120. **Opportunity to partner with Alibaba Group:** PPMO confirmed the willingness to include Alibaba Group as a possible partner and co-financer in the project. It is confirmed that Alibaba Group will not receive funds from the project. Potential for partnership with the Alibaba Group through the Ant Financial Company (here under Ant Financial) is being explored along the following lines: (i) *E-commerce*: provisions will be made in the design for the project supported agribusinesses to adopt e-commerce as part of their marketing strategy. The e-platforms of Alibaba Group (e.g. *Rural Taobao*) will be approached during project design/implementation to formalize such e-commerce access for project supported products and agribusinesses. This service provision will be on a competitive basis and will follow government procurement rules, where applicable; (ii) *Business plans*: Ant Financial could support the project in terms of initial quality enhancement/assurance for the BPs, through training to project staff/agribusiness entities on development of BPs and through supporting the review of the BPs, especially those BPs that have higher potential to access on-line trade and value chain finance opportunities offered by Ant Financial. The provincial and county Business Plans Evaluation Committees (PBEC and CBECs) will invite Ant Financial to join the technical review and seek its professional comments to the BPs, before such BPs are passed on to County PLG for final endorsement; (iii) *Value chain financing*: Ant Financial is willing to explore possible value chain financing for promising BPs/agribusiness entities, particularly those with access to the Alibaba e-commerce platforms. The basic model implies partnering with local commercial banks and governments and provide information/data based on risk assessment and product design/suggestion in order to facilitate local commercial banks to extend non-collateral-dependent loans to the agribusinesses. Such partnership will thus require further consultations; (iv) *Insurance*: There is potential for the project to introduce loan insurance and asset insurance (including agricultural insurance) in the project. China Insurance (*Nonglianzhongxin*) is interested in providing asset insurance which will be pursued during project implementation when the potential insurers and type of assets/risks are better known. This service provision will be provided on a competitive basis.

C. Planning, M&E, learning and knowledge management

Orientation

121. The project will start with a project orientation phase at start-up (see Appendix 6). Past experience in China shows that the value chain development approach is not necessarily easily grasped by implementing agencies, making orientation at start-up key. This includes the following activities:

- (a) **Sharing of PDR and technical documents with project staff members.**
- (b) **Orientation meetings for all SPRAD project staff.**
- (c) **County orientation meetings.**
- (d) **Staff capacity building.**

Planning

122. Planning for the proposed project will follow the current practices for IFAD-funded projects in China, which are on annual basis through the development of Annual Work Plan and Budgets (AWPBs). AWPB is a planning and management tool for the project implementation. Its development will be based on the demands of target groups through participatory approach and fully engage the IAs. An AWPB will include, among other things, the financial and physical progresses that have been made, a detailed description of planned project activities over the period, a procurement plan for at least 18 months, and a plan for implementation of activities by semester. AWPBs will also reflect the recommendations made by the last project Review mission as well as corresponding actions taken

and their effect. The PPMO will consolidate the AWPBs developed by each CPMO and submit it to IFAD for “no objection” review for each project fiscal year before its implementation.

123. AWPBs should be drafted by the IAs through participatory approach, based on the demand of potential beneficiaries. The IAs at county level should be aware of available resources in the development of AWPBs. Full consultations with the upper bureau and department of the same line will be necessary before submitting the draft AWPBs to CPMOs. Project implementation should be in compliance with the AWPBs in the form cleared by the PLGs and IFAD. If required, the CPMOs, through the PPMO, may propose adjustment of AWPBs during implementation, which will become effective upon approval by the PPMO and after obtaining no objection from IFAD.

124. An important basis of formulating AWPBs is the project Logical Framework (logframe) that sets up the project outputs, outcomes, and objectives. Their fulfilment will be monitored and evaluated (M&E) through the measurement of indicators that have been set up correspondingly.

Monitoring and evaluation

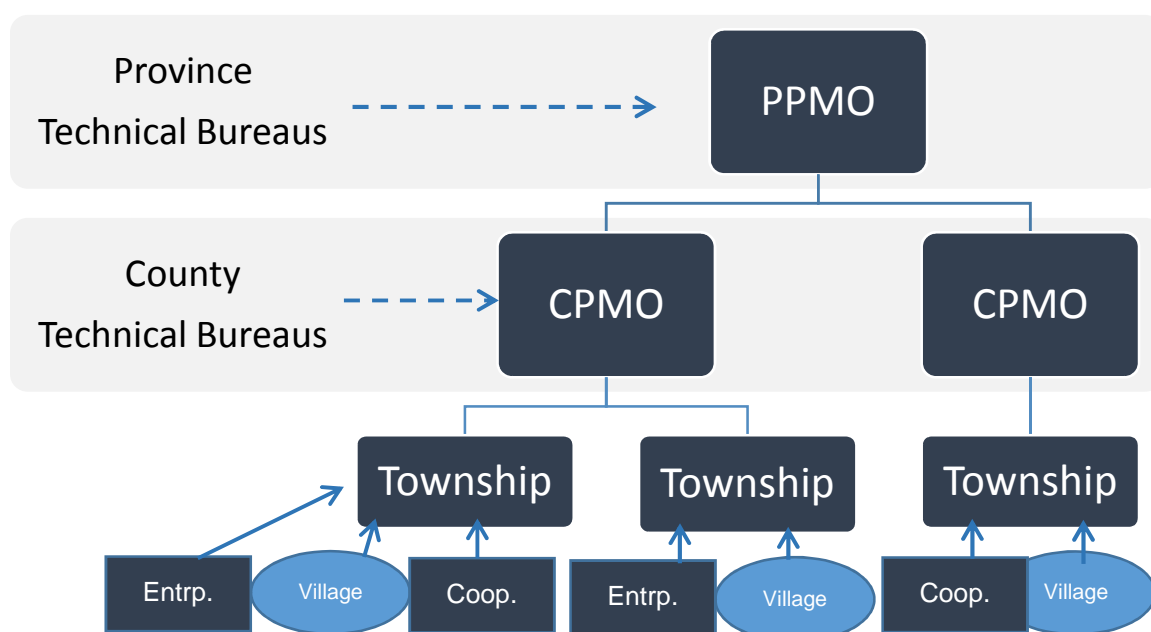
125. The project will establish an effective and efficient M&E system from provincial PMO through county PMOs down to the townships. The system will operate in line with IFAD's M&E guideline and building as much as possible on national and provincial existing M&E systems, statistics and databases.

126. The special features of the SPRAD-SS M&E system will include (these features are discussed in more details in Appendix 6):

- (a) A consolidation role led by PDRC to underpin knowledge management (KM) and facilitate replication/scaling-up of successful experiences, based on strong provincial and county M&E practices;
- (b) Special attention to assessing the poverty alleviation impact of the project, in line with the government's poverty eradication effort;
- (c) An emphasis on making M&E data accessible and usable for project implementers and decision makers, through a user-friendly MIS system¹⁵ that (i) integrates conventional financial and implementation data from all levels (village, county, province) with results data based on the logframe; (ii) provides management dashboards and customizable data visualizations; and (iii) is readily accessible to PMOs at the central, provincial and county level.
- (d) Investment in the M&E capacity and analysis, by recruiting a third party to support PPMO with guidance, hands-on technical support and data analysis.
- (e) Data collection and information dissemination through innovative ICT: given the advanced state of China's ICT and mobile infrastructure, and the high levels of cell phone ownership even in rural areas, it was agreed during the appraisal mission that this technology should be leveraged to share important information with farmers (e.g. data on weather or prices) and to collect feedback from beneficiaries.

127. **Monitoring:** The monitoring and evaluation will follow the project implementation structure. Data reporting is in line with Figure 1. And will be supported by the Management Information System (MIS).

¹⁵ See Terms of Reference for MIS development attached.



128. The PPMO will consolidate information received from CPMO and Townships through the MIS system. Data entry will be most significantly done at Township level. The design team estimates at each township the equivalent of 40 men-day work required (2 month full-time staff), and 20 men-day (1 month) per county. The town-ship ME officer will receive / collect data from Enterprises and Cooperatives and/or validate the information provided by these private sector entities through the MIS system (see below). In addition, township ME officer will collect information from villages, especially regarding the registered poor and their performance, but also regarding agreed indicators to measure performance of activities and investments financed under component 2.

129. **Management Information System:** The project will design a MIS tailored to its specific needs, building on positive past experiences from World Bank financed projects. The MIS system will have three sub-systems that integrate information and allow real-time reporting. The three sub-systems will function as following:

- (a) **Project Management/ Contract Management:** This system will include information about all out-going contracts of the project, including the related call for proposals, bidding documents and bid evaluation reports for infrastructure and business plans financed under component 2 and component 1, respectively. As a new feature, investments/ activities financed will be georeferenced to allow overlaying information with survey and ME data (see below). The system will also include the engineers approval after physical inspection, which shall trigger the final contract disbursement for infrastructure investments, as well as the progress reports from Coops and Enterprises that trigger instalments/tranches.
- (b) **Financial Management:** This system will include the financial reporting and generate Withdrawal Applications (WAs) that can be sent to IFAD. Ideally an easy interface with IFAD's newly design Client Portal is included. Again, financial data will be referenced to location of the activities financed (either geo-referencing or reporting by Administrative Village).
- (c) **Progress Monitoring:** Furthermore, the system will collect information on logframe indicators and other project-relevant indicators (see below). These include output level

information as well as ready-available outcome level data. In addition, the system will be available to participants of the business proposals (enterprises, coops, etc.) to enter their required data. Township ME officer will enter data and approve correctness of data entered by cooperatives/enterprises. CPMO ME officer will ensure quality from townships through spot-checks. PPMO ME and KM officer will consolidate information and report to IFAD and line-ministries.

130. The MIS system will also include pre-defined charts and tables in a dashboard format to support project management. As such, it will display – per component, sub-component, activity and per geographic unit (county, township, village) – the physical progress and the financial progress vs. planned and vs. overall targets. This shall enhance project managements alertness in case of implementation challenges and/or issues of cost-escalation, under-performance or force-major.

131. **Survey with multiple modules to measure outcomes:** the project will conduct three rounds of **survey** (base-line, mid-term and end-line). The survey will consist of a set of modules, some of which will require broader data collection, to allow comparison with control group. See Table below for more details.

Survey type	Unit of observation <i>Frequency</i>	Type of Analysis	Main research question to address
HH-survey (poor)	Poor (registered in 2017) <i>Y1 – Y3 – Y5</i>	Panel data	Does project meet its development objective? Do poor benefit from public investments (C2)?
HH-survey (BP-participants)	Poor and non-poor <i>Y1 – Y3 – Y5</i>	Diff-in-Diff	Do the BPs reach the poor and non-poor? What differences exist?
Enterprise-Survey (BP-participants)	Enterprise/ Cooperatives <i>Start of BP – Y3 – Y5</i>	Panel data	Do participating enterprises remain/become profitable? Do they change their engagement with poor/near poor?
Village-survey	Administrative villages <i>Y1 - Y3 - Y5</i>	Panel data	Do villages benefit from public investments? Do villages see change in business attitude?
Gov staff survey	Public servants at all levels <i>Y1 - Y3 - Y5</i>	Panel data	Does the use of BPs add or reduce work-load for civil servants? Is it perceived as feasible measure for rural transformation?

132. **Appendix 6** provides more details on the ME system.

Learning and knowledge management

133. The project knowledge management strategy will be drawn from the experiences of previous and on-going IFAD projects and introduces further developments.

- (a) An effective M&E framework will be established to monitor the implementation progress against AWPBs, and outcomes and impact against the project objectives;

- (b) Workshops and meetings, including PPMO and implementing agencies, will be held regularly and on as-required basis, to share knowledge, experiences, innovations and success cases during project implementation. So will be the production of project newsletters and cross review of project implementation between counties;
- (c) Ensure the linkages among project M&E, AWPBs and log frame for improving project planning. M&E will monitor and evaluate the results of project implementation against relevant indicators set up in the logframe, which will be used as guidance for development of the following AWPB;
- (d) Baseline surveys will be carried out regularly to assess the project impact and draw experiences for subsequent implementation and for other IFAD projects;
- (e) Eligible enterprises and cooperatives will participate in the project planning and M&E, which will improve their internal planning and management capacity as well as the project's sustainability;
- (f) Knowledge sharing among IFAD-funded projects will also be achieved through cross-project visits, participation in country wide or region wide knowledge sharing platforms and activities, and study tours;
- (g) Documentation of project results and lessons learnt for sharing with other on-going and subsequent IFAD projects.

134. The PPMO and CPMOs will be responsible for capturing and documenting experiences, successful cases and innovations resulting from the project implementation and organize semi-annual and/or annual workshops during the project implementation to disseminate the experiences and innovations for scaling-up. Plan for scaling-up of successful cases and innovations within the project area will be incorporated into the project AWPBs during the project implementation. Local governments will be encouraged to incorporate scaling up of those successful ventures into their own local development plans, either through support to scale up of the innovations locally or through replication/expansion of the innovations outside, by governments or other donors.

135. **Regional knowledge networking:** The project management will actively participate in regional knowledge networking activities in areas related to the project, including: (i) improvement of strategies and approaches on poverty reduction; (ii) enhancement of technology and market access; (iii) partnership development with relevant institutions and agencies; (iv) regular and frequent contributions to IFAD-Asia China window; (v) workshops of knowledge sharing related to poverty reduction and agricultural and rural development in the region, domestically and overseas; (vi) country and region wide research and development studies and pilot activities where appropriate and useful for the country project; and (vii) south-south cooperation involvement.

136. **Scaling-up:** The SPRAD-SS project's priority is to test (and possibly scale up) sustainable model of poverty reduction through "Agribusiness development." and "improvement to access to rural finance". The scaling-up framework relies on a mix of market-driven forces and government policies. *Champions* would include the International Poverty Reduction Center in China (IPRCC) under LGOP and the National Development Reform Commission (NDRC). *Drivers* relates to a mix of (i) market-driven forces associated to the predominantly small-scale nature of the Chinese agriculture (small producers generate 90% of agricultural production) and the growing demand for safe and high quality food; and (ii) policy interventions related to poverty eradication by 2020 (by far the most powerful), food safety legal framework and the modernization of agriculture; (iii) a number of national projects promoting value chain development¹⁶ and (iv) the projectatic approach retained for the SPRAD-SS project with Ministry of Finance as borrower. *Incentives* relate to (i) for the private sector, smallholders

¹⁶ These include (i) Wholesale market development and upgrading; (ii) Direct "farmer to supermarket" purchase project; (iii) Promotion of Farmers' Cooperatives; (iv) China's "Dragon Head Enterprise" Policy Framework; (v) China's Push on Agri-food Industry and Technology Parks; (vi) New Food Safety Law; (vii) Government Sponsored Agri-food Distribution Centres.

as main providers of raw agricultural products; (ii) For the smallholders, premium price related to safe, quality and E-traded food and guaranteed market for specific quality and safe food products. The *pathway* for scaling up would include the following steps: (i) successful implementation of SPRAD-SS sustainable poverty reduction through value chain development; (ii) monitoring and impact evaluation at project level based on project M&E and on the National Poverty reduction System (NPRS); (iii) learning and stock taking at IFAD country project level and at national level; (iv) identification of leveraging measures within government (policy change, mainstreaming into national projects); private sector (local and corporate firms, E-commerce, financial Institutions, partnership with large E-commerce operators such as ALIBABA and JINDONG); development partners; union and federations of cooperatives; and (v) Scaling up through *expanding services* to more clients in a given geographical space, *horizontal replication*, from one geographic area to another, *functional expansion*, by adding additional areas of engagement or roles for a project organization; and *vertical up-scaling*, moving from county to provincial and to a national-wide engagement. *IFAD's role* will be one of providing the necessary expertise, contribute to the monitoring of results and to the knowledge management process that will catalyse the scaling up process.

137. **Innovations:** The Project will introduce operational and institutional innovations. The former category will include (i) promoting E-commerce on a large scale among project beneficiaries; (ii) introducing improved food safety system in line with international standards; (iii) piloting geographic indication as a marketing tool for specific regional products; and (iv) using and taking advantage of electronic platforms (including internet, mobile phones, and branchless banking) for e-commerce, rural finance, agricultural extension and project monitoring and evaluation.

D. Financial management, procurement and governance

138. The Shaanxi Provincial Department of Finance (DOF) will have the primary responsibility for the administration of project resources. The Department/Bureaux of Finance (DOF/BOFs) at the provincial and county levels respectively will be responsible for the followings: (i) opening and management of the Project Accounts; (ii) administering the project resources including the IFAD loan and counterpart funds; (iii) review and approval of the financing needs of project implementation; (iv) overseeing the use of project resources; (v) ensuring effective flow of funds for project implementation; (vi) providing appropriate training to the financial officers of PMOs in terms of financial management; and (vii) preparing Withdrawal Applications (WAs) and reimbursement of eligible project expenditures on a timely basis.

139. MOF will be the responsible agency for repayment of the loan in subsequent arrangement with Shaanxi province. The loan proceeds will be onlent from the Ministry of Finance (MOF) to DOF of Shaanxi province where the loan proceeds will be further onlent to County BOFs, at the same terms and conditions without additional charges. At county level, the funds will be transferred from BOFs to PMOs and the later will forward the funds to relevant project implementing agencies (IAs) for the project implementation in accordance with expenditures incurred under approved annual work plan and budgets (AWPBs).

140. Counterpart funding will consist of allocations made by the project province and counties/districts. Government will ensure that counterpart funds are contained in the domestic fiscal allocations for the counties, and that they are released for the project on time. The counterpart funding maintain in the Treasury Accounts of the counties will be used to pre-finance the project expenditures as well.

141. Budget allocations will be made to enable the function of the provincial and county PMOs, to cover investment and recurrent expenses, office and training equipment, capacity building, M&E, knowledge management, and agribusiness facilitation services. Modest project support will also be reserved for function at township where existing government staff and facilities will be used. Recurrent costs for all PMOs will be ensured by government counterpart funding, which will cover staff salaries, travel costs, administrative costs, and operation and maintenance of vehicles etc..

142. **Fund flow:** In accordance with the section 4.04(d) of the General Conditions, immediately after entry into force of the Financing Agreement, there shall be a Designated Account (DA) denominated in US dollars to be opened for the IFAD loan, through which IFAD funding shall be channelled. The DA is to be set up at and managed by DOF. DOF will be directly responsible for the management, maintenance and reconciliation of the DA activities. Supporting documents required for IFAD disbursements will be prepared and submitted by CPMOs through PPMO for review and verification before sending to DOF for further disbursement processing.

143. The PPMO and county PMOs are responsible for reviewing the Disbursement Request as well as the supporting documentation required for IFAD disbursements. Disbursement Requests will be prepared and submitted by CPMOs to PPMOs for review and verification before sending the Disbursement Request to DOF for further disbursement processing. Once approved, project resources will be channeled directly from provincial level to county level without passing through the prefecture level.

144. Upon fulfilment of conditions precedent to withdrawal and the Borrower's request, the Fund will make one (or more) withdrawal(s) of up to the ceiling USD 8 million for the loan (will determine after the project costs are provided) , and deposit such amount(s) into the Designated Account; DOF shall submit withdrawal applications to replenish the Designated Account from time to time, based on expenditures, provided that the amount claimed is not less than 20% of the initial deposit. All withdrawals must be in line with projected expenditures as detailed in the approved AWPBs.

145. PMOs and IAs shall maintain Implementation ledger Accounts in local currency in the Treasury System or commercial banks to receive the proceeds of the IFAD financing and/or the counterpart funding respectively. The County PMOs and BOFs will ensure that funds received at each level are transferred without delay. Separate bookkeeping is maintained by each of the IAs where Project activities will be implemented.

146. **Accounting system:** the installation or adaptation of an accounting system for the IFAD program will be stipulated as condition for withdrawal. PDRC are presently using electronic accounting systems and are also developing their Management Information System (MIS) which would encompasses financial, procurement, output monitoring and other management functions. The accounting system should be web-based allowing aggregated reporting at the program level, and if possible direct producing of WA from the system. The MIS system should allow the project to record information on BP identification/preparation/selection process/accounting. Disbursement rules for all project activities will be set up in the Accounting Module under the MIS system to facilitate efficient funds flow and project monitoring. Participating cooperatives and enterprises will have access to the MIS system to record project information. The system will link the project activities with relevant expenditures categories.

147. Retroactive financing would be made available for eligible expenditures related to system installation/adaptation and training.

148. **Financial Management Manual:** (i) The PPMO in consultation with DOF will prepare a financial management (FM) Guideline for the project to regulate the project financial management. The PPMO shall make sure that proper internal controls are defined and described in the FM guideline, as part of the PIM. The PIM will be made a condition to disbursement. The project shall draft and submit to IFAD a progress report for the loan on a biannually basis which shall indicate the financial and physical achievements during project implementation. Annual financial statements should be prepared and delivered to IFAD no later than four (4) months after the end of each Fiscal Year. (ii) Dedicated finance staff should be appointed in the implementing agencies at provincial and county level. This will be a disbursement condition to disburse funds to participating cooperatives and enterprises. Participating enterprises/cooperatives should also have sufficient financial capacity. Capacity building will be provided through the project;

149. **Statement of Expenditure (SOE):** the Loan Disbursement Handbook (LDH) of IFAD provides the explanation on how program expenses financed with IFAD loan or grants will be claimed, including through SOEs. In view of desire to minimize disbursement documentation and increase efficiency, the

SOE thresholds that will apply for withdrawal application under related procedures are as follows: eligible expenditures pertaining to all contracts costing less than USD 200,000. SOE thresholds can be changed by IFAD during the Project implementation by notification to the Borrower/Recipient and Project Management.

150. Withdrawal applications for contracts or invoices with amounts higher than these SOE thresholds must be accompanied by copies of relevant supporting documents evidencing eligible expenditure (refer to Section 3 of the Loan Disbursement Handbook). The SOE and other documentation shall state amounts requested for withdrawal after excluding amounts financed from other financing sources or counterpart funds. Lending terms: The IFAD loan is granted on ordinary lending terms and shall be subject to interest on the principal amount of the Loan outstanding at a rate equal to the IFAD Reference Interest Rate, payable semi-annually in the Loan Service Payment Currency, and shall have a maturity period of eighteen (18) years, including a grace period of five (5) years¹⁷, starting from the date that the Fund has determined that all of the conditions precedent to withdrawal have been fulfilled. The currency of the loan will be in USD.

151. **Retroactive financing:** As an exception to the General Conditions for Agricultural Development Financing, provision is made for retroactive financing from the IFAD financing of up to US\$ 7million for eligible expenditures incurred as from xxx 2017 up to the entry in force of the financing agreement. Eligible expenditures for retroactive financing are considered those incurred to finance: (i) purchase of essential items (including equipment and procurement of necessary software for the PMOs; (ii) recruitment of project staff; (iii) costs related to tendering, selection, and recruitment of service providers; (iv) costs related to the finalization of the program implementation manual, customization of accounting software to fit IFAD requirement and license fees, start-up trainings and workshops; (v) establishment of the M&E system, including carrying-out of the baseline survey and development of MIS; (vi) exposure visits for knowledge and experiences sharing; (vii) surveys and feasibility studies; (viii) training and technical assistance for cooperatives, including recruitment of service providers, cooperative support field officers, technical advisors for business plans development, brokers/facilitators for linkages with supermarkets; and value-chain officers and monitoring & evaluation officers; and (ix) business plans. Retroactive expenditures are pre-financed by the government at its own risk. Eligible expenditures will be only reimbursed after fulfillment of disbursement conditions.

152. **Financing of Taxes:** The General Conditions of IFAD were amended in 2009 to allow the proceeds of IFAD's financing to be used to finance taxes that are not "excessive, discriminatory or otherwise unreasonable" (section 11.01(c)). The borrower has informed IFAD in writing that it is impractical to exempt the project from all or certain taxes; In Addition, the World Bank's Country Financing Parameters permit the financing of such taxes for a similar project. In view of improvement of the efficiency of funds flow and better support to the project implementation, IFAD's financing will be used to finance taxes for an estimated amount of approximately US\$6.6 million.

153. **IFAD Client Portal:** The IFAD Client Portal (ICP) is an interactive platform which allows IFAD borrowers to securely conduct business electronically with IFAD. China is one of the countries where the ICP is being piloted. The mission confirmed positively that this project can be included in the ICP pilot after assessing the readiness of the project for using the ICP. This implies that the Project will be able to securely submit Withdrawal Applications directly through the portal and obtain internal approvals from the concerned provincial government electronically, without transmitting hard copies to IFAD. In addition, through the ICP, clients will have access to real-time financing information as and when required on country portfolios and operational and financial information relating to projects. The

¹⁷ A variation of the standard three year grace period can be requested to the IFAD Executive Board upon submission of the Program for approval as long as the Net Present Value of the repayments of the loan is maintained.

PMO/DOF, whoever is approving the Withdrawal Application to IFAD, would need to have at least one email account on an official mail server.

(D.2) Procurement and governance

154. Procurement will be carried out in compliance with IFAD procurement guidelines and handbook (published on IFAD's website). The PIM will detail procurement requirements and procedures. The procurement methods, prior review arrangements, cost and time estimates, and risk mitigation measures will be defined in the Letter to the Borrower and reflected in the procurement plan.

155. Review of Procurement Decisions by IFAD: Procurement of goods, civil works, services, consultants services and recruitments of individual consultants shall be defined as follows:

Procurement Method	Prior or Post	Comments
Procurement of Goods and Services (Non Consultants)		
NCB Civil Works	Post	Except procurement first contract for each county as per the approved Procurement Plan each year and thereafter any contract valued CNY 7,000,000 equivalent or more
NCB Goods and Services	Post	Except contracts contract valued CNY 1,400,000 equivalent or more
Shopping for goods, civil works and services	Post	All contracts
Direct Contract for goods, civil works and services	Post	Except procurement valued CNY 1,400,000 equivalent and above
Works by Force Account	Post	All contracts
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS), Fixed Budgeted Selection (FBS), Least Cost Selection (LCS) and Consultants Qualification Selection (CQS)	Prior	Except procurement valued CNY 700,000 equivalent and below
Sole Source Selection (SSS)	Prior	Except procurement valued CNY 140,000 equivalent or below
Recruitment of Individual Consultants		
Competitive Selection Process	Prior	Except procurement valued CNY 350,000 equivalent or above
Single Source Selection	Prior	Except procurement valued below CNY 140,000 or equivalent

E. Supervision

156. The project will be under the direct supervision of IFAD. In order to facilitate the project's implementation and ensure the achievement of project objectives, IFAD and the Government will perform project supervisions/reviews that include annual supervision, mid-term review, and completion review.

- (a) **Annual supervision:** Annual supervision will be conducted by supervision missions sent by IFAD, and to the extent possible jointly with the Government. The missions will review the progress of project implementation, both physically and financially; implementation performance; fiduciary aspects, results, impact and sustainability. Recommendations to issues raised, if any, will be made by the mission to improve the project implementation. For the first supervision of the project, the focuses will be on reviewing adherence to the project strategies and institutional performance, including implementation arrangements, targeting, appropriateness of procurement, functioning of the M&E system, and effectiveness of financial management.
- (b) **Mid-term review:** IFAD and the Government will jointly carry out a “mid-term review” (MTR). Among other things, the MTR mission will review the project approaches and strategies including the effectiveness of targeting and gender mainstreaming strategies, implementation modalities, poverty and gender focuses, impact of individual intervention, and sustainability. The mission will recommend a scaling-up or reorientation as may be required to achieve project objectives and remove eventual constraints. Recommendations from the MTR may result in modifications to the Loan Documents.
- (c) **Completion review:** Completion review, also jointly conducted by IFAD and the Government, will evaluate, among other things, the results and impact of the project, review sustainability and exit arrangement, and draw experiences and lessons for later IFAD and government supported projects.

F. Risk identification and mitigation

157. The main project risks and related mitigation measures are presented in the table 4 below.

Table 4: Main risks and mitigations

Risk	Risk Level	Mitigation Measure	Residual Risk Level
Limited attention to post-production/marketing: China's agricultural development strategies have mainly focused on production/productivity enhancement, with emphasis on infrastructure development, with limited attention to post-production/marketing. Limited attention to post-production/marketing also resulted in cases of local overproduction, which led to drops in price of commodities and farmers' income.	M	<ul style="list-style-type: none"> The proposed project will place great emphasis to post-production and to developing agricultural value chains that promote equitable organizational arrangements, different channels/opportunities to farmers to link with market opportunities, and increased incomes for the target households. 	L
Poverty reduction through direct support to dragonhead enterprises gave mixed results: The Government approach of promoting poverty reduction by directly supporting dragonhead enterprises, under the assumption that the benefits generated by the dragonhead enterprises would trickle down to poor farmers, gave mixed results, and it did not always proved to be an effective approach.	H	<ul style="list-style-type: none"> The key criteria for the selection of the enterprises to be supported by the program include: (i) outreach of target group (poor farmers), and (ii) establishment of fair contractual arrangements with the primary target group. 	M
Insufficient poverty coverage by business plans (BPs): Business plans can include only a small number of registered poor because: <ul style="list-style-type: none"> Density of poverty is low (on average around 20% of rural households are registered poor in the project area) as the project is dealing with residual poverty pockets; Registered poor are not easily integrated in business ventures; 	H	<ul style="list-style-type: none"> Include a minimum quota of registered poor in BPs Increase the number of beneficiaries per BPs Provide technical assistance to project beneficiaries on gap to bring them up to standard 	M

Risk	Risk Level	Mitigation Measure	Residual Risk Level
The consequence is that a significant number of BPs must be implemented to achieve the poverty eradication target			
BP can be driven by weak and/or unsuited enterprises and cooperatives	M	<ul style="list-style-type: none"> Due diligence and creditworthiness check at the stage of initial BP proposal (prior to full BP elaboration) 	L
Market potential of proposed VC to be promoted under BP is low	H	<ul style="list-style-type: none"> Market intelligence check by large operators such as e-commerce or supermarkets involved in partnerships 	M
The perverse incentive of repayment responsibilities: Experiences from other IFAD-funded projects showed that in those cases where the loan repayment responsibility is transferred to the local county authorities, and from them to the beneficiaries (agro-enterprises, cooperatives, or poor households) a perverse incentive is created whereas local authorities have an incentive to select among the entities to support those who could offer the highest likelihood of repayment, and not necessarily those who best capacity to achieve the project objectives/target beneficiaries.	H	<ul style="list-style-type: none"> It is agreed that project resources to co-finance business plans will be provided to the selected agribusiness entities in the form of grant (i.e. the recipient agribusiness would not have to re-pay the project resources received to co-finance its business plan). 	L
Limited understanding of value-chain development approach, and experience/capacity to implement it, has limited progress and performance in this area in ongoing projects: PMOs have strong capacity and experience in implementing agricultural production/productivity enhancement projects, but limited in value chain development. The concept of value chain development is new, and not entirely understood (for instance, PMOs have difficulties in determining what could be considered eligible for financing under value-chain development activities). This has hampered progress and performance in this area.	H	<ul style="list-style-type: none"> Greater support at start-up has to be provided to have project staff and implementing partners familiarizing with the concept of value-chain development and program implementation manual. TA is provided to facilitate successful implementation of the component. Linkages with ongoing or future initiatives aimed at strengthening the capacity of service providers to provide the required services will be pursued (e.g. with Regional Grant for Scaling Up of Pro-poor Value Chain Projects). 	M

IV. Project costs, financing, benefits and sustainability

A. Project costs

158. Total project cost is estimated at US\$257 million, including contingencies, but excluding expected resources leveraged from financial institutions. Project costs are organized into three major components: (i) Pro-poor value chain and agribusiness development (69 percent of baseline costs); (ii) Public infrastructure and services (28 percent of baseline costs); and (iii) Project management and coordination (3 percent of baseline costs). Investment and recurrent costs amount to 98 and 2 percent of the project's total cost respectively. The project costs per component are summarized in table 5 below.

Table 5: Project cost by component and financier
(million of United States dollars)

	The Government		IFAD		Enterprises & Cooperatives		Beneficiaries		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
A. Pro-poor value chain and agribusiness development													
1. Development of pro-poor Value chains	0,0	-	2,2	100,0	-	-	-	-	2,2	0,9	0,0	2,2	0,0
2. Value chain development fund	0,0	-	63,8	37,8	101,9	60,3	3,3	2,0	169,0	65,8	-	152,1	16,9
3. Value chain rural finance development	4,5	72,4	1,7	27,6	-	-	-	-	6,2	2,4	0,3	5,0	0,9
Subtotal Pro-poor value chain and agribusiness development	4,5	2,5	67,7	38,2	101,9	57,4	3,3	1,9	177,5	69,1	0,3	159,3	17,9
B. Public infrastructure and services													
1. Climate resilience infrastructure development	70,7	100,0	-	-	0,0	-	-	-	70,7	27,5	3,5	59,2	7,9
2. Public services development	-0,0	-	1,3	100,0	-	-	-	-	1,3	0,5	0,0	1,2	-
Subtotal Public infrastructure and services	70,7	98,2	1,3	1,8	0,0	-	-	-	71,9	28,0	3,5	60,5	7,9
C. Project management & coordination													
1. Project management	4,4	72,0	1,7	28,0	-	-	-	-	6,0	2,4	0,1	5,1	0,8
2. Monitoring & Evaluation	-	-	1,0	100,0	-	-	-	-	1,0	0,4	0,0	1,0	-
3. Knowledge management	-	-	0,3	100,0	-	-	-	-	0,3	0,1	-	0,3	-
Subtotal Project management & coordination	4,4	59,3	3,0	40,7	-	-	-	-	7,3	2,9	0,1	6,4	0,8
Total PROJECT COSTS	79,5	31,0	72,0	28,0	101,9	39,7	3,3	1,3	256,7	100,0	4,0	226,1	26,6

B. Project financing

159. IFAD will contribute US\$72 million (28 percent of the total cost) to the project. The government will contribute to the project in the amount of US\$79.5 million (31 percent of the total cost). Participating enterprises and cooperatives are expected to contribute an estimated amount of approximately US\$101.9 million (40 percent of the total cost) as required co-financing for the business plans (mostly on works, equipment and materials for post-harvest investments). Beneficiaries contribution will in the order of US\$3.3 million (1.3 percent of the total cost) targeted to acquisition of farm inputs and small equipment. The IFAD loan has a co-financing ratio of 1:2.57. The project cost by expenditure accounts is presented in table 6 below.

Table 6: project costs by expenditure category and financier
(million of United States dollars)

	The Government		IFAD		Enterprises & Cooperatives		Beneficiaries		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
I. Investment Costs													
A. Works	67,3	100,0	-	-	0,0	-	-	-	67,3	26,2	3,3	56,6	7,4
B. Equipment and materials	-	-	-	-	-	-	-	-	-	-	-	-	-
C. Government	-	-	-	-	-	-	-	-	-	-	-	-	-
D. Consultancies	0,0	0,2	6,8	99,8	-	-	-	-	6,8	2,7	0,1	6,7	-
E. Business plan	0,0	-	63,8	37,8	101,9	60,3	3,3	2,0	169,0	65,8	-	152,1	16,9
F. Goods, services and inputs	7,6	84,8	1,4	15,2	0,0	-	-	-	9,0	3,5	0,4	7,1	1,5
Total Investment Costs	75,0	29,7	72,0	28,6	101,9	40,4	3,3	1,3	252,2	98,2	3,9	222,4	25,8
II. Recurrent Costs													
A. Operating	4,6	100,0	-	-	-	-	-	-	4,6	1,8	0,1	3,7	0,7
Total Recurrent Costs	4,6	100,0	-	-	-	-	-	-	4,6	1,8	0,1	3,7	0,7
Total PROJECT COSTS	79,5	31,0	72,0	28,0	101,9	39,7	3,3	1,3	256,7	100,0	4,0	226,1	26,6

C. Summary benefits and economic analysis

160. **Benefits and Beneficiaries:** The project will benefit a total of about 478,869 individuals and these approximately represent 29% of all individuals in the project area. The project will target (i) poor and economically capable smallholder farmers with a potential for getting involved in poverty reduction for value chain development according to the Government methodology; and (ii) disadvantaged and vulnerable but economically capable poor (i.e. women, young, disabled, ethnic minorities, etc.).

161. Benefit will take the form of increased volume of agricultural production, increased quality and safety of production, increased value added of agricultural products and more efficient production systems. These benefits will translate in to higher farm gate prices, higher volumes marketed, lower production and processing costs and higher value-added products marketed which in turn will generated sustainable increased income.

162. The result of the financial analysis are summarised in the table 7 below.

Table 7: Summary of financial analysis

	Tea		Kiwi		Medicinal plants		Konjak		Chicken		
	Production	Processing	Production	Processing	Production	Processing	Production	Processing	Production a/	Processing	
<u>Base case</u>											
FIRR	10,08%	21,06%	10,03%	16,03%	21,95%	18,32%	13,08%		19,09%	n.a.	19,83%
NPV @ 10% (10,000 RMB)	207	737	62	318	940	290	2.364		521	n.a.	1099
<u>Sensitivity analysis (FIRR)</u>											
10% increase in producer price b/	13,56%	13,28%	14,66%	7,52%	25,52%	16,83%	21,66%	strongly negative FIRR		n.a.	7,60%
20% increase in producer price	16,69%	3,15%	18,62%	-5,97%	28,83%	15,29%	29,70%	strongly negative FIRR		n.a.	-11,81%
10% decrease in producer price	5,99%	27,78%	4,14%	22,91%	18,06%	19,78%	3,57%		49,32%	n.a.	30,54%
20% decrease in producer price	0,84%	33,88%	-5,56%	28,97%	13,80%	21,20%	-7,56%		73,98%	n.a.	40,61%
<u>Benefit sharing mechanisms (% of beneficiaries)</u>											
Contract farming	60%		30%		80%		75%			80%	
Land rental	10%		10%		5%		10%			5%	
Dividends by enterprise/cooperative	24%		10-20%		10%		15%			6%	
Salaries	6%		40-50%		5%		0%			9%	
<u>Incremental income generation potential (RMB/year/beneficiary)</u>											
Contract farming	1.500		5000-7000		2.500		1.600			3.500	
Land rental	250-300		600		400		450			n.a.	
Dividends by enterprise/cooperative	700		n.a.		500		600			500	
Salaries (part time work for enterprise/cooperative)	3.600		20000*		10.000		n.a.			26.500	

a/ Chicken production is a short cycle activity that does not require investment. Hence FIRR can not be calculated

b/ An increase in producer price generates a positive return for producers but a negative one for processors sourcing from these producers. That explain the symmetric behaviour of FIRR between production and processing stages

163. **Results of the financial and sensitivity analysis.** The financial viability has been assessed based on FIRR of the BPs. Results suggest that as structured, the BP are financially viable and show reasonable financial returns in the range of 10-22%. The income redistribution potential between production and processing stages within each of the 5 value chains to which BPs relate has been assessed based on (i) sensitivity analysis on the producer price; (ii) benefit sharing mechanism; and (iii) incremental income generation potential (see table 7 above). The interesting results are summarised in the table 8 below.

Table 8: income redistribution potential of selected VC

Value chains/BP	Income generation potential	Potential for changing income distribution	Implication for project activities ¹⁸
Tea	Relatively low at about 1500 RMB/ producer/ year (equivalent to about US\$225)	High given (i) the margin for an increase in producer price by 10% as shown by the sensitivity analysis	BP is sub-optimal in terms of income distribution but can be improved through better negotiation between producers and processors within contract farming.
Kiwi	Relatively high at about 900US\$/producer/year	Medium given (i) fair benefit sharing mechanism based on sensitivity analysis (an increase in producer price would generate negative returns for processors); and (ii) already high incidence of contract farming	This BP is sub-optimal in terms of income distribution but can be improved through (i) increased frequency of contract farming; and (ii) more equitable negotiation between producers and processors within contract farming.
Medicinal plants	medium at about US\$380/producer/year	High given (i) significant flexibility for increasing producer price without significantly reducing returns to processing (see sensitivity analysis); and (ii) high incidence of contract farming	This BP would benefit from (i) support for contractual negotiation for increasing producer price; and (ii) more equitable negotiation between producers and processors within contract farming
Konjak	Low at about US\$240/producer/year	Low given (i) absence of margin for increasing producer price without significantly reducing returns to processing (see sensitivity analysis); and (ii) already high incidence of contract farming	This BP is sub-optimal in terms of income redistribution potential and would benefit from significant investments in productivity and quality of konjak in order to free margins for producer price increase
Chicken	high at about US\$530/producer/year	Low given (i) absence of margin for increasing producer price without significantly reducing returns to processing (see sensitivity analysis); and (ii) already high incidence of contract farming and low possibility of increasing contractual labor	This BP has acceptable poverty reduction potential associated with the fast financial returns and the very low capital investment needed

164. **Economic Profitability.** The project is an economically viable investment. The project economic NPV of the net benefit stream, discounted at 8%, is RMB 103 million (USD 15.5 million) producing an EIRR of 8.7% for the base case scenario¹⁹.

165. **Sensitivity Analysis.** Project results were tested to sensitivity analysis so as to measure variations due to unforeseen factors. These variations apply to total project benefit and costs. Results of the sensitivity analysis are presented in the table 9 below.

¹⁸ These considerations represent also risk mitigation measures.

¹⁹ The estimated economic returns might be underestimated as a consequence of (i) the BP selected for the EFA are mostly slow return crops (plantation crops such as tea, kiwi, konjak, medicinal plants); and (ii) a number of benefits such as improved living conditions resulting from village infrastructure (potable water, electricity and village roads), long term impact of "climate smart" agricultural conditions and improved food safety (to mention the main ones) were not quantified.

Table 9: summary of sensitivity analysis

Base case	8,7%
Total project cost increase by 10%	7,8%
Total project cost increase by 20%	7,0%
Total project cost decrease by 10%	9,6%
Total project cost decrease by 10%	10,6%
Total project benefits increase by 10%	9,5%
Total project benefits increase by 20%	10,3%
Total project benefits decrease by 10%	7,7%
Total project benefits decrease by 20%	6,6%
Benefits lagged 1 year	7,4%
Benefits lagged 2 years	6,6%

D. Sustainability

166. Sustainability of the project can be rated high, attributing to three key factors: (i) the existence of the highly visible government poverty reduction policy, in which the project is fully embedded; (ii) the fact that the project focuses strongly in improving the sustainability of poverty reduction interventions through value chain development; and (iii) the fact that large private sector operator such as the Alibaba Group could be involved in project financing and implementation.

167. **Institutional sustainability:** Implementation of the project activities will be delegated to relevant technical agencies at county level. Those agencies are permanent governmental institutions and they are also the primary service providers for project-related activities in the project area. Improvements in poverty reduction will be appropriated by these agencies and scaled up to neighbouring counties and possibly different provinces. A significant effort will be placed in establishing public private partnerships in the project area. If successful, this effort will build the social capital for the institutional sustainability of poverty reduction beyond the project area in other counties of the Shaanxi province. It is also possible that the National Development Resource Commission (NDRC) can become a roll out channel for successful poverty reduction practices demonstrated by the project.

168. A potential partnership with the Alibaba Group could open up to significant sustainable opportunities. The Group has the capacity to improve access to Ecommerce-based supply of marketing, rural financial and insurance products at national and international level. The Group is driven by a strong Corporate Social Responsibility (CSR) in contributing to the government Poverty Eradication Strategy. The combination of these two factors increases the likelihood of roll out well beyond the project area for those interventions and practices that have proven successful.

169. **Technical sustainability:** Staff of the project-involved technical service agencies at all levels will receive regular training on updated technology and knowledge with the project support and other governmental projects. The close collaboration between PMOs and technical agencies in project implementation will further strengthen the sustainable technical services to the project beneficiaries. Strengthened market linkage between upstream small producers and agro-enterprises will also provide a good basis for sustainable technical services.

170. **Environmental sustainability:** Many of the project activities have strong attributes of environmental improvement such as: (i) climate-smart and environmentally sound agricultural improvements; (ii) strong focus on food safety and quality through certification (green, hazard-free, organic, Fairtrade, geographic indication, etc.). In addition, technical services to project beneficiaries

during the project implementation will offer trainings on environment-friendly practices, which will also contribute to the improvement of environment.

Appendix 1: Country and rural context background

I. Country economic context

1. **Thirty years of unparalleled economic growth.** China has experienced an unparalleled period of economic growth in the past thirty years, since when, in the late 1970s, it undertook a major program of reforms. These reforms included, particularly, the second land reform²⁰, a gradual market liberalization, and the opening-up to international trade and foreign investments, among other reforms²¹. Since then China has maintained an average annual gross domestic product (GDP) growth rate of 9.8%, with the GDP per capita rising from US\$220 in 1980 to US\$8,123 in 2016. Benefiting from this trend, China has become the world's second largest economy by nominal GDP and by purchasing power parity (PPP). When China and IFAD initiated their partnership in 1980, China was a low-income country (LIC), with major food security issues. Today China is classified as an upper-middle-income country (U-MIC), with a 2016 gross national income (GNI) per capita of US\$15,500 at PPP. This period of high economic growth and increase in per capita income has translated in significant poverty reduction.

2. The ability of China to maintain a rapidly growing economy in the long run depends largely on the ability of the government to implement comprehensive economic reforms that speed up China's transition to a market economy, rebalance the economy by making consumer demand the main engine of economic growth, boost productivity and innovation, address growing income disparities and enhance environmental protection. The government has recently announced several policy initiatives to address the economic challenges.

3. The estimated population in China in 2016 was 1,379 million. The rural population was approximately 592 million, about 43% of the total population, a decrease of 10% over 2010. The annual population growth rate was approximately 0.5%. Migrant population was 247 million.

4. **China's remarkable progress in poverty reduction²² and human development²³.** Thanks

²⁰ **China's second land reform.** China's second land reform, which followed the first land reform in the 1950s which took land away from landowning classes and redistributed it to all farmers contributing to create social equality and reduce income inequality, but resulting in nearly two decades of stagnation in agriculture, was initiated through the household responsibility system (HRS) in 1978. The HRS reform dismantled the communes and de-collectivised of agriculture, and replaced collective farming by contracting cultivated land to all village households. This implementation of the HRS had positive effects on the equitable distribution of land to farmers, and ultimately on agricultural productivity, agricultural structural change and poverty alleviation. Moreover, the increase in agricultural productivity and food production resulting from HRS triggered a number of subsequent economic growth dynamics, such as providing agricultural surplus labour for labour-intensive rural township and village enterprise development in the mid-1980s, facilitating China's overall industrialization since the early 1990s, and generating demand for the intermediate products of manufacturing in the rest of economy.

²¹ **Additional drivers of China's economic growth.** In addition to the land and market reforms and trade liberalization, other major factors that contributed to China's rapid economic growth and rural transformation included: (i) *Investing in rural roads*: highway mileage increased from 890,000 kilometres in 1978 to 4.4 million kilometres in 2013. As of 2011, 95% of townships and 80% of administrative villages were connected by public, paved roads; (ii) *investing in water infrastructures*: investments in irrigation and flood control have been China's largest government budgetary allocation in the agricultural sector. As a result of these investments, the percentage of irrigated land increased from 38% to 55% in the past 20 years; (iii) *Fiscal and administrative decentralization*.

²² **China's progress towards meeting the Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs).** According to the joint United Nations-Ministry of Foreign Affairs Report on China's Progress toward the MDGs (*China's Progress Toward the Millennium Development Goals: 2013 Report*, Beijing), China has met 7 out of the 15 well-defined targets under the MDGs ahead of the 2015 target date. China is also one of the first countries in the world to have reached the MDG1 of reducing the portion of people living on less than one dollar a day and who suffer from hunger by half. China is projected to be the first country in the world to achieve SDG1 - no poverty.

²³ **China's progress in human development.** Along with the remarkable progress in poverty reduction, measured by increase in per capita income, China has also recorded impressive progress in human development. According to the UNDP's Human Development Report 2017, with the current value of 0.738 in the Human Development Index (HDI), China ranked 90th out of 188 countries in 2016, and since 2014 is within the High Human Development Countries category. This value represents a

to the economic reforms, as well as to the implementation of extensive national poverty reduction programs, China has made remarkable progress in reducing poverty, hunger²⁴ and inequality²⁵ over the past thirty years. Since the early 1980s, almost 800 million people have been lifted out of poverty. In 1981, about 878 million people (i.e. approximately 88% of the population) lived below the poverty line²⁶, whereas in 2016 the estimated number of people living below the poverty line was approximately 43 million (i.e. about 3% of the total population or 7% of the rural population). Moreover, increase in per capita income in rural areas²⁷ has been accompanied by broad-based improvements in nutritional status, longevity and other health indicators, and educational attainment of its people.

II. Agriculture and rural economy

5. **The transformation of China's agriculture and rural sectors.** China has gone through a deep process of structural and rural transformation over the past thirty years, which underpinned economic growth and contributed to poverty reduction.

- a) **From rural and agriculture-based economy to industry and service-based economy:** China shifted from being a prevailing rural- and agriculture-based economy to an industry- and service-based economy. The share of the agriculture sector in GDP decreased from about 30% in 1980 to 10% in 2010 to 9.1% in 2014, while the share of the industry and services sectors shifted from 49 and 21% to 47 and 43% over the same period respectively. Similarly, as the industry and service sectors grew in importance, the share of employment in the agriculture sector fell from 69% in 1980 to 34% in 2014. The share of rural population declined from more than 80% in 1980 to less than 50% in 2014.
- b) **From collective, low-productivity agriculture to modern, mechanized and commercialized agriculture:** In 1978, China shifted from collective agriculture production system to individual household production, which resulted in an increase in agricultural productivity and food production, and diversification of agriculture products. Agriculture productivity increased at about 2% per year. Cereal production almost doubled. The agriculture GDP grew at an average rate of 4.5% over the past thirty years. The share of crop in the total agriculture output decreased from 76% in 1980 to 51% in 2005, while the share of livestock and fisheries increased from 18% and 2% to 35% and 10%, respectively, during the same period. The main factors that favoured this process include investments in water infrastructures, particularly irrigation; market liberalization, which favoured the emergence of a multitude of agribusiness entities, market integration, and specialization; subsidized access to modern inputs (e.g. farm machinery and technology, new crop varieties, pesticides, fertilizers); and the land

remarkable increase (+78%) from the 0.407 it registered on this scale in 1980. Since 1990, its HDI has increased at an average of 1.57% per year.

²⁴ **China's progress in reducing hunger and food insecurity.** Since 1978, China has almost doubled its cereal production (from 247 million metric tons in 1978 to 447 million metric tons in 2009), increased the grain output per capita (from 319 Kg/319Kg/capita in 1978 to 399 Kg/399Kg/capita in 2009), and quintupled the meat and output per capita (from 9 to 44 Kg/capita between 1978 and 2009). China is now feeding over 1.3 billion people, or 20% of the world's population. In 2005, the Government decided to stop receiving WFP support, considering China's successful advances in ensuring food security. China's value in the IFPRI's Global Hunger Index (GHI) fell from 25.1 in 1990 (serious hunger level) to 8.6 in 2015 (low hunger level).

²⁵ **China's progress in addressing inequality.** China experienced a significant rise of inequality (measured by GINI coefficient) during most years of its economic reform. The GINI coefficient grew from 27.7 in 1984/85, to 35.5 in 1993/94, to 42.6 in 2002/03 (Rural Development Report 2016). However, it has since then slowly decreased, thanks to the government's efforts to boost economic development in less developed regions and increase farmer's income, among other factors, and it was estimated to be 37 in 2011/2012. There is still however a significant gap in the per capita income between rural and urban areas, between western/central regions and eastern/coastal regions, and between the agriculture and industry/service sectors.

²⁶ Based on **international poverty line** of US\$1.90 per day expressed in 2011 purchasing power parity (PPP).

²⁷ **Increase in rural income.** The rural per capita net income increased from 133.6 CNY in 1978 to 981.2 in 2007. During the period 1978-2002, the growth rate of farmers' per capita net income stood at 7.2%. The per capita net income in the nationally-designated priority poverty counties increased from CNY 648 in 1994 to 1,337 in 2000, and from 3,273 CNY in 2010 to 4,602 CNY in 2012.

utilization. The increase in agricultural productivity and food production resulting from these reforms and investments triggered a number of subsequent economic growth dynamics, such as providing agricultural surplus labour which facilitated China's overall industrialization process, and generated demand for the intermediate products of manufacturing in the rest of economy. These labour transformations have affected the nature of farming and the way farmers engage in agriculture. More and more farmers began to move to off-farm activities and rent out their land. A few households have begun to specialize into full-time farming, which increased farm size and facilitated mechanization²⁶. Mechanization of agriculture has further eased the outflow of labour from agriculture production, further promoting land circulation and consolidation and, consequently, scale of production. The agriculture landscape in China is progressively moving towards a modern (mechanized, standardized, scale and intensive) and commercial agriculture.

- c) **From rural to urban society:** China experienced a massive migration from rural areas to urban centers in the past thirty years as a consequence of the industrialization process and the resulting employment opportunities in the manufacturing and services sectors, uneven regional development, and policies aimed at favouring urbanization. China's urbanization rate increased from 20% in 1979 to 52.6% in 2012. The share of rural population declined from 81% in 1980 to 45% in 2014; approximately 12 million rural residents are projected to move annually from rural to urban areas over the next decade; 70 and 80% of the population is projected to reside in cities by 2030 and 2050, respectively. Most of the migrants are young men, between 16 and 35 years old, while the elderly, women and children usually remain in rural areas and take over the responsibility of carrying out agricultural activities. Other consequences of urbanization in addition to the aging and declining in the supply of agricultural labor force included a diminishing farming land due to competition for land of expanding urban areas, and increased pollution and water shortages due to urban-rural competing demand for water resources. On the positive side, urbanization increased internal remittance flows and brought changes in food consumption patterns and dietary behaviours, rising demands for meat, fish, and eggs.

III. Policy frameworks

6. At the Second Session of the Twelfth National People's Congress on March 5, 2014, the Chinese Premier presented the major tasks for 2014 in the agricultural and rural sector as follows: (i) make agriculture, rural areas, and farmers the number one priority and accelerate agricultural modernization in order to ensure China's food security and increase farmers' incomes; (ii) strengthen policies for supporting and protecting agriculture; (iii) strengthen the foundation of agricultural and rural development; and (iv) push forward rural reform; (v) explore new ways to alleviate poverty through development and move faster to promote development of contiguous poor areas and reduce poverty.

7. In January 2014, the Chinese government issued its first policy document of 2014, underscoring the importance of rural reform, developing modern agriculture and maintaining agriculture as the foundation of its economy. The four major principles of the policy documents are (i) continue to make household management as the basis of rural operations while develop various forms of management; (ii) make traditional intensive farming and modern technological equipment complement each other; (iii) realize coordination between high output and efficiency and sustainable use of resources; and (iv) Strengthen functional complementarity between government support and protection and the market playing the decisive role in resource allocation. It highlighted eight important areas: (i) improve national food security system; (ii) intensify support and protection for agriculture; (iii) Establish a long-term mechanism for sustainable agricultural development; (iv) deepen reform of rural land system; (v) build a new agricultural management system; (vi) speed up innovation of rural financial system; (vii) improve the mechanism of integrated development of urban and rural areas; and (viii) improve rural governance.

8. Among the priorities set in the 2017 Number One Document issued in February 2017: (i) strengthen the 'advantaged industries', including by promoting ecological branding and geographic

indication; (ii) improve the quality and safety of agricultural products; (iii) support agricultural operations and entities at different scale, including family farming and farmer cooperatives; (iv) pursue integration of production, supply, sales and credit; (v) promote green agriculture and pursue environmental sustainability of agricultural operations, including pursue clean agricultural production, adopt water saving technologies/practices, etc.; (vi) take advantage of the opportunities from new industries, including tourism, e-commerce, and food processing industry; (vii) improve the basic public service base in rural areas; (viii) continue promotion of poverty eradication; (ix) accelerate rural finance innovations.

9. Some of the key messages delivered during the 19th National Congress of the Communist Party of China in October 2017 include: (i) Reaffirmation of a shift towards a more equitable and sustainable model of development; (ii) Restated focus on poverty alleviation. As basic needs are met (and extreme poverty eradicated), focus on pursuing general well-being and avoid that the most vulnerable groups (young, old, handicapped, etc.) fall back into poverty; (iii) push to better include smallholders in upscaled agricultural operations.

Appendix 2: Poverty, targeting and gender

I. CURRENT SITUATION

Country Rural Poverty

1. **Incidence of Poverty.** There is broad consensus that China has achieved an historic reduction in absolute poverty since the initiation of the rural reform process in 1978. Based on the international poverty line of \$1.90 per day (expressed in 2011 purchasing power parity), the World Bank estimates that the incidence of poverty in China declined from 878 million in 1981 to 87 million in 2012 (or from 88% to 6.5% of the population). Official government estimates indicate a similarly sharp and prolonged decline in the number of poor, and that the number of rural poor had declined to about 43.4 million by end-2016. Moreover, these monetary based estimates of declining poverty have been matched by broad-based improvements in nutritional status, educational attainment, longevity and other health outcomes, and other indicators of well-being. Overall, it is clear that China's tremendous success in poverty reduction has played the leading role in global poverty reduction over the last four decades.

2. China is the first developing country to achieve the United Nations Millennium Development Goal (MDG) of reducing the number of its people living in extreme poverty and hunger by half. Its reform-driven economic growth, together with a well-funded national poverty reduction program, has brought about this massive reduction in absolute rural poverty. Since 2010, the official government estimates of rural poverty have been based on a 2,300 yuan poverty line expressed in constant value terms (adjusted for price increases, the 2016 poverty line was 3,100 yuan). As shown in Table 1 below, official estimates indicate that rural poverty declined by nearly 123 million individuals from 166 million in 2010 to 43 million in 2016, or from 12.4% to 3.1% of total population:

Table 1: Official Estimates of Poverty in China, 2010-16

	Number of Rural Poor	Annual Reduction	Total Population	Poverty Rate**
Year	(million)	(million)	(million)	(%)
2010	166		1341	12.4%
2011	123	43.3	1347	9.1%
2012	99	23.4	1354	7.3%
2013	83	16.5	1361	6.1%
2014	71	12.3	1368	5.2%
2015	56	14.4	1375	4.1%
2016	43	12.4	1382	3.1%

Source: China State Council Information Office's White Paper "China's Progress in Poverty Reduction and Human Rights" (Beijing: Information Office of the State Council, 17 October, 2016).

** Poverty rate expressed as a share of total population (as opposed to a share of the rural population). Since the "number of rural poor" does not include any urban poor (see paragraphs 5-6 below), the poverty rates modestly understate the true national poverty rates.

3. **Location of Poverty.** While there is consensus on China's great success in reducing poverty, there is an important disagreement and debate regarding the location and composition of poverty in China. Most importantly, official government statistics indicate that China's remaining poverty is highly and increasingly concentrated in mountainous areas in central and western China and among

extremely poor ethnic minority people and other disadvantaged groups including people with disabilities, the elderly, and women and children. For example, the National Bureau of Statistics' (NBS) *2011 Poverty Monitoring Report of Rural China* states that more than 95% of the extremely poor in 2010 resided in the western and central provinces (having increased from nearly 90% in 2000), the number of poor in mountainous areas increased from nearly 49% of total poverty in 2000 to nearly 53% in 2010, and ethnic minority people accounted for at least 26% of China's poor in 2010 (or about three times ethnic minority peoples' share of national population).²⁸ Zhang reports that 72% of the poor resided in China's nationally designated 148,000 poor villages in 2005.²⁹ On the other hand, the World Bank's 2009 China poverty assessment concludes that more than half the poor reside outside the designated poor villages, the number of poor in mountainous areas accounted for only 40% of total poverty in 2003, and ethnic minority people accounted for only 22% of China's poor in 2003, and therefore recommends "rebalancing the focus of poverty reduction efforts from poor areas to poor people."³⁰

4. While these important uncertainties about the location and characteristics of poverty remain unresolved, the government's most recent official analysis concludes that remaining rural poverty is "mostly distributed" in the 832 nationally designated poor counties and the remaining 128,000 nationally designated poor villages. The government's figures indicate that some 93% of the 71 million remaining poor in 2014 resided in the western (49.7%) and central (43.4%) provinces, and 22.6% of the poor were ethnic minority people. Of the 83 million registered poor in 2013, some 50.7 million (or 61.5%) resided within the nationally designated poor counties. The top eight provinces/regions by number of poor and by poverty rate in 2014 are shown in Table 2:

Table 2: Top Eight Provinces by Number of Poor and Poverty Rate in 2014

Rank	Number of Poor			Poverty Rate (%)	
	Province/Region	Number (million)	Share of National (%)	Province/Region	Poverty Rate (%)
	National Total	70.17	100.00	National Total	7.2
1	Guizhou	6.23	8.88	Xizang	23.7
2	Yunnan	5.74	8.18	Gansu	20.1
3	Henan	5.65	8.05	Xinjiang	18.6
4	Guangxi	5.40	7.70	Guizhou	18.0
5	Hunan	5.32	7.58	Yunnan	15.5
6	Sichuan	5.09	7.25	Qinghai	13.4
7	Gansu	4.17	5.94	Shaanxi	13.0
8	Anhui	3.71	5.29	Guangxi	12.6

5. **Urban Poverty.** Most observers conclude that remaining poverty in China is primarily a rural phenomenon. World Bank estimates, for example, show that the urban poverty rate declined from

²⁸ See pages 13 and 59 of NBS' *2011 Poverty Monitoring Report of Rural China* (Beijing: China Statistics Press, 2012).

²⁹ See Zhang Lei, *The Evolution of Poverty Reduction Policies in China 1949–2005* (Beijing: China Financial and Economic Publishing House, 2007).

³⁰ See pages xi, 56-57, and 83 of The World Bank's *From Poor Areas to Poor People: China's Evolving Poverty Reduction Agenda* (Washington, DC: World Bank, 2010).

59.4% in 1981 to just 0.4% by 2012, and it is widely believed that the comprehensive social security and welfare system, highly egalitarian distribution of income, tight control of migration, and full employment kept urban poverty to very low levels until the initiation of state-owned enterprise reform and the growing influx of rural migrants to urban areas beginning in the mid-1990s. Hussain, on the other hand, argued that official government estimates of urban poverty of fourteen million in 2000 may have substantially underestimated urban poverty, and found significant regional differences in the urban poverty rate and considerable bunching of the urban population just above city-specific poverty lines. His analysis indicates that urban poverty might have amounted to some 37 million in 1998 (or about three times the 12.3 million reported by the World Bank for that year).³¹ More recently, Wu Fulong used social surveys in six major urban areas to provide a detailed taxonomy of the emerging urban poor and found that laid-off urban residents who have failed to find reemployment are the poorest residents in urban areas, migrant workers are not necessarily the poorest residents of urban areas, and the poverty rate in the six cities surveyed in 2006–2007 was about 22.4 percent.³²

6. While there is some uncertainty regarding the levels of urban poverty in China over the last four decades, it is certain that (a) urban poverty is poorly understood since there is no official urban poverty line, and (b) the influx of large numbers of rural inhabitants into China's urban areas presents major emerging challenges to poverty reduction. Most importantly, while very large-scale rural to urban migration has made great contributions to both overall economic growth and poverty reduction, there are many well-recognized adverse social consequences to this demographic trend. Within rural areas, the frequently extensive departure of young laborers has left many villages with mostly only elderly inhabitants and some young children, and severely undermined family life in many cases (for example, it is believed that there are at least some 60 million left behind children in rural areas). Within urban areas, the rural migrant population has emerged as a massive underclass citizenry subject to dangerous working conditions, deplorable and unsafe living conditions, and limited access to education, health, and other social services. With rural to urban migration now well in excess of 200 million people and another 300 million such migrants expected to move into urban areas over the next twenty years, the scale of these challenges is unprecedented.

National Rural Poverty Reduction Strategy

7. **Government Policy and Programs.** The Chinese government has a well-funded and comprehensive poverty reduction strategy and program. Established in 1986, the State Council Leading Group Office of Poverty Alleviation and Development of China plays the lead role in orchestrating a wide range of programs and funding which seek to achieve China's hallmark "development-oriented poverty reduction." Including a full hierarchy of units at the central, provincial, and lower levels, the Leading Group for Poverty Reduction system (LGOP) includes three core programs: *Tiexi Daikuan* (the Subsidized Credit Program administered by LGOP), *Caizheng Zijin* (the Budgetary Funds Program administered by MOF), and *Yigongdaizhen* (the Food for Work Program administered by NDRC). Central government annual funding for these three core programs increased by nearly ten billion yuan during 2002-10, reaching 27.6 billion yuan in 2010, further jumped to about 46.7 billion yuan in 2015, and was slated to increase by more than 40% in 2016. Moreover, since 2000, these core programs have been supplemented by massive support for universal basic education, improved rural health programs, an extensive rural welfare system, and dramatic improvements in transport, electrification, and other basic infrastructure in the countryside. Central and local government funding for these expanding basic education, rural health, and rural welfare systems now exceed funding for the core three programs by many fold. Furthermore, agricultural

³¹ See Arthar Hussain, *Urban Poverty in China: Measurement, Patterns and Policies* (SES Papers 34. Geneva, Switzerland: International Labour Office, 2003).

³² See Wu, Fulong, Chris Webster, Shenjing He, and Yuting Liu, *Urban Poverty in China* (Northampton, MA: Edward Elger, 2010).

land taxes were eliminated in 2006, and a historic switch to net resource transfers to the rural sector was achieved at about that time.³³

8. The current ten year poverty reduction program is summarized in the document: "Outline for Development-oriented Poverty Reduction for China's Rural Areas 2011-2020" (hereafter, "2011 Outline"). Maintaining the core approach of development-oriented poverty reduction, the 2011 Outline emphasizes the strengthening of several key measures to overcoming poverty including targets for (a) completing and upgrading poor area rural infrastructure such as access to safe drinking water, transport, power, farm land, irrigation, and housing, (b) social protection including further improvements in access to education, health care, and upgrading the rural welfare and pension systems, and (c) environmental protection and green poverty reduction. For the core poverty reduction program, the 2011 Outline introduces or expands the following five LGOP "signature" activities:

- **National Poor Registration System (Jiandang Lika Xitong)**, which includes the identification and registration of the 100 million poor people in 2012, the establishment of a national computerized database management system with detailed information on each of the registered poor, and plans for follow-up individualized assistance (some 400,000 government staff and volunteers are expected to directly assist the identified individual poor at the village level),
- **Poverty Reduction through Agribusiness Enterprise Development (Chanye Fupin)**, which includes the production and processing of local leading products through farmer cooperatives and mutual fund organizations in combination with leading enterprises,
- **Voluntary Resettlement Program**, which provides assistance for some 10 million poor to voluntarily resettle from areas subject to life-threatening natural disasters, where the population density grossly exceeds the carrying capacity of the land, or where remoteness makes the provision of basic services prohibitively expensive or impossible, to newly developed areas,
- **Poverty Reduction through Employment**, which includes the improvement of the Dew Program's vocational training, and,
- **Rural Financial Services**, which includes the strengthening of rural financial services and the encouragement of microcredit schemes.

9. The 2011 Outline maintains the poverty reduction program's focus on fourteen contiguous poverty blocks (lagging poor regions). The fourteen contiguous poverty blocks include 505 nationally designated poor counties. Adding in some 175 nationally designated poor counties in Xizang, Sichuan and Xinjiang, and another 152 nationally designated poor counties which are outside the fourteen poverty blocks, there are currently a total of 832 nationally designated poor counties.

10. **New Poverty Eradication Program under Thirteenth Five Year Plan.** The Chinese Government is now attaching an unprecedented and high level emphasis on poverty eradication. Most importantly, President Xi has clearly indicated that eliminating poverty is now China's top priority. President Xi has stated that "to eradicate poverty, improve people's livelihood and realize common prosperity, is the essential requirement of socialism." Indeed, the first of President Xi's *Four Comprehensives* is the elimination of poverty throughout China by 2020. A strategic plan for achieving poverty elimination by 2020, as an important sector-specific plan in the Thirteenth Five Year Plan (FYP), was recently formulated and released in early-2017.³⁴

³³ The State Council White Paper "New Progress in Development-Oriented Poverty Reduction for Rural China" (Information Office of the State Council, 2011) reviews the progress of the totality of China's poverty reduction work during 2001-10.

³⁴ An outline of the key elements of the poverty reduction plan is summarized in the article on page 6 of the December 8, 2015 *Renmin Ribao* (in Chinese).

11. Under the direction of Vice Premier Wang Yang, the Jiandang Lika National Poverty Registration System (NPRS) has been completed and the names of China's remaining poor are now available in the central database in Beijing. The NPRS is a key initiative essential to achieving "accurate poverty targeting" (*jingjun fupin*) and, since 2014, has played the key role in both the identification of the remaining poor and the assessment of the nation's success in lifting those poor out of poverty (see Box 1). In addition to this important new measure, other key strategies in the new Thirteenth FYP poverty reduction program include even greater participation of all members of society in poverty reduction work, the adoption of independent third party evaluations of the effectiveness of poverty reduction activities, and the substantial extension of China's assistance to poverty reduction work in other developing countries.

12. The total number of nationally registered poor is updated on a regular basis and at the end of each year, and declined from 82.5 million in 2013, to just over 70 million at end-2014, and to some 43.4 million as of end-2016 (see Table 1 above). The NPRS identifies the village location, causes of poverty, measures to overcome poverty, government staff and volunteers responsible for assisting each poor person, and other key details for each of the remaining poor. In 2014, the major reported causes of poverty included: poor health (comprising 39% of the poor in 2014); lack of capital (32.8%); lack of skills (21.4%); lack of labor power (18%); lack of land; high expenses for education; limited or no access to drinking water, transport, and/or other basic infrastructure; and other causes. Based on these identified causes of poverty of the NPRS 70 million poor in 2014, the government's "Five-In-One-Batch" (*Wuge Yipi*) measures for poverty reduction include agribusiness enterprise development (*chanye fupin* for some 40 to 50 million poor), voluntary resettlement (10 million poor), social protection (*doudi*, for at least 10 million poor), increased support for health care and educational expenses, and other measures. As least some provinces and some of the nationally designated counties have set explicit targets to eliminate poverty through these and additional measures by 2018 or 2019, or one or two years in advance of the nation as a whole. In Shaanxi, for example, some 2 counties are scheduled to eliminate poverty in 2016, another 20 counties are expected to graduate from poverty in 2017, and all 56 of the province's 56 nationally designated poor counties are planned to overcome poverty by end-2019.

Box 1. NPRS Objectives, Methodologies, and Principles

Objectives. The NPRS was established in 2014 as the key mechanism for (a) identifying and registering China's poor population and designated poor administrative villages and poor counties, (b) analyzing the causes of poverty, (c) coordinating assistance measures down to the household, village, and county levels, and (d) ensuring the timely eradication of poverty. The NPRS has quickly become the crucial backbone of China's plans to eradicate poverty by 2020, and now plays the key role in both the identification of the remaining poor and the assessment of the nation's success in lifting those poor out of poverty.

Methodology. Guidelines for the NPRS were summarized in the 2 April, 2014 LGOP Document No. 24 which established the system's objectives, methodologies, and management principles. In accordance with the National Bureau of Statistics (NBS) 2013 household survey results, the No. 24 Document specifies that the total number of NPRS poor in 2013 would be set at 82.49 million and provided the specific provincial headcount numbers of poor as detailed in its Annex 1 ("The Number of Poor People and the Incidence of Poverty in the Provinces in 2013"). However, it was recognized that provincial poverty estimates could exceed these NBS figures by up to 10%. Within these provincial caps, each province was instructed to "decompose" the number of rural poor in each county in accordance with a "poverty population size decomposition reference method" (as specified in Annex 2), and each county PRO and township government were in turn responsible for "decomposing" poverty numbers within the counties and townships down to the village and household levels. Data entry occurs at the township level and is reported up electronically to the county, municipal, provincial, and central levels. The number of poor villages was limited to 30% of the total number of villages in China's 12 western provinces, to 20% in the ten central provinces, and to 15% in the nine coastal provinces.

The No. 24 Document established a nine-step process for identifying poor households, villages, and counties based upon (a) per capita income, housing, education attainment, health status, and other characteristics, and (b) "farmers' applications, democratic appraisal, public disclosure, and step-by-step auditing." At least 50 indicators are digitally recorded for each poor individual, more than 100 indicators are digitally recorded for each poor village, and more than 150 indicators are digitally recorded for each poor county. This massive database is most likely the largest poverty database in existence in the world, and its successful establishment marked an important innovative milestone in the orchestration of China's intense efforts to eliminate all rural poverty by 2020.

Transparency and Disclosure. Subject to a variety of crosschecks, audits, community verification and consultation, and significant penalties for data falsification, the NPRS (a) achieves a certain degree of transparency at the local level, and (b) can be considered to provide a credible current assessment of the number of poor at all levels in China. At the local level, each registered poor household attaches a placard with key information to their front door, and some six signatures are required for the authentication of each poor household. Examination of the NPRS at the county, township, village, and household levels has confirmed the integrity and transparency of the system. All data are subjected to a comprehensive annual update and to regular updates throughout the year as needed. While disclosure at the village level is judged to be substantial, database access is closely guarded at the county level and heavily restricted at the provincial and central levels.

13. **2016 Poverty White Paper.** The White Paper on "China's Progress in Poverty Reduction and Human Rights" released by the Information Office of the State Council on 17 October, 2016 (hereafter, "2016 Poverty White Paper") provides a summary of China's poverty reduction work during the reform and opening up period (that is, from 1978 to present) and sets out China's path to eliminate poverty by 2020. The 2016 Poverty White Paper notes the breadth of China's poverty reduction actions including "building rural and agricultural infrastructure, helping increase the incomes of impoverished population, and providing public services such as social security and health care,

education and cultural services,” and reconfirms the task of “eliminating rural poverty and rehabilitating all impoverished counties by 2020.” The 2016 Poverty White Paper points out that:

- development remains China’s fundamental approach to poverty reduction,
- some 40 billion yuan of central government funding was leveraged to resettle 5.9 million poor since 2012, and that a new round of resettlement programs were initiated in 2016 with increased levels of central government funding and greater “subsidy standards,”
- efforts to increase poverty reduction through education support and improved rural health care have been undertaken including (a) 83 billion yuan for compulsory education schools and 42 billion yuan for tuition subsidies for secondary vocational schools during 2012-15, (b) 79 billion yuan for infrastructure construction at 110,000 health service units in poverty stricken areas, while (c) the coverage of the New Rural Cooperative Medical System has expanded to 97% of rural residents, and,
- the number of recipients of rural subsistence allowances was 49 million in 2015 and the allowance increased from 143 yuan per recipient per month in 2011 to 265 yuan per recipient per month by 2015 (suggesting that total support was some 156 billion yuan in 2015).

14. Including support for communications infrastructure (including broadband), drinking water and irrigation systems, electrification (nearly 25 billion yuan was invested during 2013-15 to “fully resolve electricity problems for people without power supply across the country”), transport, safe housing and other buildings, and other rural infrastructure in impoverished areas, “government assigned special poverty alleviation funding amounted to 190 billion yuan with an average annual growth rate of 14.5%” during 2010-16.

15. A total of 320 central government units have taken responsibility for helping lift targeted areas out of poverty, and the coastal provinces and municipalities are supporting 207 poor counties in 10 central and western provinces. The 2016 Poverty White Paper states that “private enterprises, social organizations and individuals participate in poverty alleviation,” and that the “10,000 enterprises assisting 10,000 villages” campaign was launched through “which private enterprises help targeted poor villages, with Wanda, Evergrande, and some other private enterprises taking the lead in pairing up with poor counties to engage in poverty alleviation actions, and Suning and Jingdong and other e-commerce enterprises becoming actively involved in poverty alleviation.” The 2016 Poverty White Paper also reports that (a) “performance in poverty alleviation has been included as a major criterion in the assessment of leaders in impoverished counties,” and (b) “the mechanism of stationing officials in villages to work on poverty alleviation has been improved” and “in total 128,000 work teams and 530,000 personnel are involved, covering all poor villages across the country.”

16. The 2016 Poverty White Paper makes clear that China is deeply committed to eliminating poverty by 2020. Backed by ample funding, promoted through a clear accountability system at all levels of government, supported by all government channels and a growing variety of civil society actors, and reinforced by a comprehensive package of policies and actions, there is no doubt that China will indeed be successful in eliminating poverty by 2020.

Disadvantaged Groups

17. Ethnic minority people, people with disabilities, the elderly, and women and children represent disproportionately large shares of China’s remaining poverty and suffer the deepest levels of poverty. Section 3 of the 2016 Poverty White Paper highlights this major challenge and states that “the poor population in such specific groups as women, children, the elderly, the disabled and ethnic minorities are the focus of poverty reduction,” and that since 2012 “the Chinese government has increased support for these groups in policy priorities to ensure their rights to social security, health, education and other services are effectively protected.”

18. **Ethnic Minority People.** As noted in paragraph 3 above, ethnic minority people represent less than one tenth of China's total population but roughly one quarter of the remaining poor. Some official sources suggest that ethnic minority people represent more than half of China's poor.³⁵ A large share of China's ethnic minority people are concentrated in the central and western provinces, and 11 of the 14 nationally designated poverty blocks straddle ethnic autonomous areas. Most observers conclude that the high rates of ethnic minority poverty are closely related to: (a) poor natural resource and ecological conditions, particularly in upland areas, (b) difficulty in adapting to commercialized production, and (c) weak linkages to overall macroeconomic growth.³⁶ For example, using data from the 2002 China Household Income Project, Bjorn Gustafsson and Ding Sai conclude that the main causes of rural ethnic minorities' greater incidence of poverty are spatial.³⁷ Relying on the same 2002 data, (a) Emily Hannum and Wang Meiyuan reveal that, despite declines in their rates of poverty over time, some ethnic minority groups remain significantly disadvantaged in educational attainment, health status, wage income, and other characteristics,³⁸ and (b) Carlos Gradin confirms that poverty rates differ greatly between China's ethnic minority groups with the Miao people having the highest poverty rate (more than double that of all ethnic minority people).³⁹

19. **People with Disabilities.** People with disabilities remain among the poorest of the poor in rural China, and it is believed that people with disabilities may comprise about one third of the remaining rural poor. There is a mutually reinforcing relationship between poverty and disability in which the inadequacy of effective public health measures and medical care in poor areas increases the chances of suffering a disabling injury or illness, and people with disabilities and their families are often pushed into extreme poverty by medical costs related to their injury or illness and by limited or no employment opportunities other than farming. Issued in 2012 by the General Office of the State Council, the "Outline of Development-oriented Poverty Reduction for Rural Persons with Disabilities 2011-2020" emphasizes that poor people with disabilities are key targets of poverty reduction work. The 2016 Poverty White Paper confirms that (a) targeted surveys have identified 26.6 million people with disabilities, and (b) these people with disabilities are receiving support for basic livelihoods, employment and income growth, and basic public services. For example, through government subsidies, the houses of 1.2 million households with people with disabilities have been renovated since 2012, and 3.2 million poor rural people with disabilities have received practical technical training over these same years. The 2016 Poverty White Paper reports that these measures have lifted nearly 5 million poor rural people with disabilities out of poverty since 2012.

20. **The Elderly.** The demographic transition is occurring faster in China's rural areas than in urban areas as young rural migrants move out to urban areas, and the rural dependency ratio is projected to increase from 13.5% in 2008 to 34.4% in 2030. Cai Fang and others have shown that the rural elderly represent a disproportionate share of China's poor, and many are working past ages sixty-five and seventy-five out of necessity.⁴⁰ The 2016 Poverty White Paper notes that the

³⁵ According to information from the State Ethnic Affairs Commission, some 19.55 million ethnic minority people were poor in 2009, accounting for 54% of the total rural poor population in China as defined in that year. See State Minority Affairs Commission "Poverty Monitoring Result of Minority Autonomous Areas in 2009" (18 September, 2010).

³⁶ Wang Sangui, et al. *Trend, Causes and Strategies to Minority Poverty* (Guizhou Social Science. Vol 276, No. 12, December 2012. 85-90).

³⁷ See Gustafsson, Björn, and Ding Sai. *Temporary and Persistent Poverty among Ethnic Minorities and the Majority in Rural China* (Discussion Paper 3791. Bonn, Germany: Institute for the Study of Labor, 2008).

³⁸ Hannum, Emily, and Meiyuan Wang, "China: A Case Study in Rapid Poverty Reduction" (In *Indigenous Peoples, Poverty and Development*. Edited by Gillette Hall and Harry Patrinos, 149–205. New York: Cambridge University Press, 2012).

³⁹ Carlos Gradin, "Rural Poverty and Ethnicity in China" (In Thesia Garner and Kathleen Short, eds., *Measurement of Poverty, Deprivation, and Economic Mobility*. Emerald Group Publishing, pp. 221-247).

⁴⁰ Cai, Fang, John Giles, Philip O'Keefe, and Dewen Wang, *The Elderly and Old Age Support in Rural China: Challenges and Prospects* (Washington, DC: World Bank, 2012).

government is piloting “rural social old-age insurance” systems and that services and facilities for the elderly are increasing. However, greater measures to improve the well-being of the rural elderly poor – particularly those in remote upland villages – are urgently needed.

21. **Women and Children.** Poverty exacerbates society-wide problems of lower rates of female participation in education, higher relative female infant mortality rates, and high rates of maternal mortality. Although female participation in education has improved dramatically over the last decade, women still accounted for nearly three quarters of China's illiterate population aged 15 and over as recently as 2014. Particularly in poor areas, girls are less likely than boys to receive medical care and to progress to higher levels of education. Agriculture is being feminized, yet rural women have limited access to credit and technical training, and there are increasingly heavy demands on female labor. This may in part explain why China's female suicide rate is five times the world average. As noted in paragraph 6 above, there are some 60 million left behind children in rural areas, and these children are known to suffer greater rates of psychological stress and lower nutritional status than other rural children. Scott Rozelle, for example, has undertaken surveys in poor counties in Shaanxi which have found “that more than half of eighth graders in poor rural areas in China have IQs below 90” and that “left behind children tend to leave school earlier, eat poorly, and have little cognitive stimulation in the crucial first years of life.”⁴¹ The 2016 Poverty White Paper notes several specific programs to address poverty among rural women and children including:

- strengthened education and training for women in poor areas since 2011, with training for more than 2 million women in rural areas in central and western China,
- free breast and cervical cancer screening for rural women which covers 532 nationally designated poor counties,
- undertaking the “National Program for the Development of Children in Poor Areas (2014-20) with improved care for left behind children,
- implementing a rural students nutrition improvement program for students receiving compulsory education since 2011, and,
- supporting a nutrition improvement program for children in poor areas since 2012 which provides free nutrition packages to infants aged six to 24 months.

Poverty Reduction Work in Shaanxi

22. **Incidence of Rural Poverty.** The Shaanxi 13th FYP for Poverty Reduction reports that there were some 9.3 million rural poor in 2010, comprising some 30.6% of the rural population in that year. According to the 2013 and 2014 NBS national household surveys, Shaanxi had 4.1 and 3.5 million rural poor respectively in these years, and the poverty rate as a percentage of the rural population declined from 15.1% to 13.0%.⁴² While these figures are not strictly comparable since they rely on different poverty line methodologies, it is certain that Shaanxi has achieved a massive decline in rural poverty since 2010. The Shaanxi 13th FYP for Poverty Reduction also reports that there were 3.167 million NPRS registered rural poor as of end-2015, comprising some 12.4% of the rural population in that year. The Shaanxi Provincial Poverty Reduction Office reported to the mission that the Shaanxi Provincial NPRS figure for rural poverty as of April 2017 had declined to 2.28 million, or about 9% of the rural population at that time. This suggests that there was a net reduction of nearly 900,000 rural poor in Shaanxi during 2016 and early 2017, but the Shaanxi Provincial Poverty

⁴¹ See Dennis Normille, “One in three Chinese children faces an education apocalypse” in *Science*, 21 September, 2017 (<http://www.sciencemag.org/news/2017/09/one-three-chinese-children-faces-education-apocalypse-ambitious-experiment-hopes-save>).

⁴² State Council LGOP, *2015 Yearbook of China's Poverty Alleviation and Development* (Beijing: United Publishing, 2015).

Reduction Office staff advised that there was a major rectification of the Provincial NPRS poverty figures during this period and that the end-2015 and April 2017 numbers were not strictly comparable. Nevertheless, it is certain that the steep decline in rural poverty rates that Shaanxi achieved during the first half of this decade has continued through 2017, and that the number of rural poor appear to have declined by about 7 million – or some 75% -- during 2010-17.⁴³

23. **Poverty Reduction Strategy.** Plans for poverty reduction work at the provincial and county levels in Shaanxi closely follow the guidance of the national 2011 Outline, new Five-in-One-Batch approach, and national poverty reduction program under the 13th FYP. In particular, agribusiness development (*chanye fupin*) plays the lead role in Shaanxi's poverty reduction program through 2020. Of the 3.167 million rural poor in end-2015, Shaanxi plans to lift a total of 1.5 million poor above the poverty line through agribusiness development schemes by 2020 (that is, nearly half of the remaining rural poor would participate in agribusiness development). The Shaanxi 13th FYP for Poverty Reduction emphasizes a "one village one product" model and the uptake of improved science and technology, and identifies tea, apples, specialty grains, Chinese dates, kiwi, medicinal plants, edible fungus, dairy, pigs, sheep, forestry products, and other commodities as important products for the poverty reduction through agribusiness development model. The SPRAD-SS project's primary focus on rural poverty reduction through agribusiness development therefore very closely matches the main thrust of Shaanxi's 13th FYP for rural poverty reduction.

24. The Provincial NPRS database shows that there are the following eleven causes of rural poverty in Shaanxi in 2017 (listed in the order of their share of total provincial poverty): (1) poor health (accounting for 25.8% of provincial poverty); (2) disability (17.5%); (3) lack of capital (14.1%); (4) lack of technology/skills (11.6%); (5) lack of labor power (11.4%); (6) lack of road access (6.9%); (7) excessive education expenses (6.0%); (8) limited motivation for development (5.0%); (9) impacted by natural disasters (1.2%); (10) lack of land (0.3%); and limited access to safe drinking water (0.2%). The Shaanxi 13th FYP for Poverty Reduction's "Eight-In-One-Batch" (*bage yipi*) approach seeks to lift the remaining 3.167 million poor out of poverty through: agribusiness development (1.5 million poor); voluntary resettlement from areas which are extremely remote or subject to natural disasters (1.25 million poor); support for quality rural education and subsidies for excessive educational expenses (0.567 million poor); labor transfer through vocational training and other assistance; support for improved rural health services and subsidies for excessive health expenses; minimum income guarantee (*nongcun dibao*) and other rural welfare systems; ecological protection programs; and support for transport, water, power, communications, and other basic rural infrastructure. Consistent with national policy, the Shaanxi 13th FYP for Poverty Reduction emphasizes the (a) leadership role of the party and government, (b) responsibility system at the provincial, municipal, and county levels in which party and government leaders are held accountable for achieving the agreed upon poverty reduction targets, and (c) key role of the NPRS system in accurate poverty reduction. Some 18,600 cadres have already been sent down to the township and village levels to assist with the role out of the poverty reduction program, and some 3000 enterprises are reportedly assisting 3328 villages.

25. Shaanxi's 13th FYP for Poverty Reduction calls for completely overcoming rural poverty and for all 7323 designated poor villages and all 56 designated poor counties to graduate from the poverty lists (that is, to "lose their poverty hats") by end-2019:

⁴³ The 2016-17 rectification of the Shaanxi Provincial NPRS database included both the (a) inclusion of some poor who had been omitted from the 2015 register, and (b) removal of some registered poor who were found to no longer be poor. The Shaanxi Poverty Reduction Office believes that the April 2017 Provincial NPRS database represents the most accurate figures and information currently available.

Table 3: Shaanxi's Annual Plans to Overcome Rural Poverty by 2019

Number to Overcome Poverty:	2016	2017	2018	2019	2020	Total
People (million)	1.30	1.07	0.65	0.15	0	3.17
Villages	2907	2428	1629	359	0	7323
Counties	2	20	20	13	0	55

Source: Shaanxi's 13th FYP for Poverty Reduction.

Note: One designated poor county within Xian Municipality had already graduated from poverty by the time that the preparation of the Shaanxi 13th FYP for Poverty Reduction had been completed.

26. Similar poverty reduction plans are observed in the project area counties in Shaanxi. Pingli County, for example, has carefully identified the (a) remaining number of poor and the associated causes of their poverty, and (b) poverty alleviation measures mapped to each of the remaining poor and annual plans for poverty eradication. Immediately upon request, the Pingli County Poverty Reduction Office made use of the County NPRS database to generate reports (a) disaggregating the causes of poverty in 2014 and as of July 2017, (b) showing the numbers of poor to be assisted by each of the eight poverty reduction measures as of July 2017, and (c) presenting the numbers of poor disaggregated by township in 2014 and as of July 2017. The number of poor to be assisted by each of the eight poverty reduction measures for Pingli's 38,212 remaining poor as of July 2017 were: (a) 23066 poor through agribusiness development; (b) 9981 poor through labor transformation; (c) 12021 poor through ecological protection; (d) 28473 poor through resettlement; (e) 3228 poor through housing improvement; (f) 2529 poor through assistance for illness and health care; (g) 4318 poor through assistance for educational expenses; and (h) 7933 poor through some form of welfare assistance (*doudi*). Since Pingli County's plans call for many of the poor to benefit from multiple forms of poverty reduction assistance, the total number people to be assisted (91,549 people/times) is 240% of the number of remaining rural poor in July 2017 (that is, 38,212 poor). The first of Pingli County's reports is summarized in Table 4:

Table 4: Pingli County Causes of Poverty end-2014 and July 2017

Cause of Poverty	End-2014		July, 2017	
	Number of Poor	Share (%)	Number of Poor	Share (%)
Illness	8331	12.2	4370	9.9
Disability	4237	8.1	3135	10.8
Education Expenses	3485	3.8	1790	3.3
Disaster	542	0.7	263	0.6
Lacking Land	295	0.5	80	0.2
Lacking Water	34	0.1	9	0.1
Lacking Skills	7896	10.4	2302	5.0
Lacking Labor	6413	16.3	4391	20.6
Lacking Capital	23055	28.7	12132	26.0
Limited Road Access	12480	16.5	8852	20.1
Limited Motivation	1300	2.8	888	3.6
Total	68068	100.0	38212	100.0

Source: Pingli County Poverty Reduction Office.

27. Each of the nationally registered poor in Shaanxi have a poster attached to their dwelling identifying their name, income level, and other household characteristics in 2015. The poster also specifies the measures for overcoming poverty in each year 2016-2019, and the name of the government staff or volunteer responsible for providing the necessary poverty alleviation assistance. All of this information is available on the counties' Poverty Alleviation Office's computerized database. The computerized database makes it immediately possible to both (a) fully disaggregate all aspects of the county's registered poor (including gender, cause of poverty, poverty reduction measures, educational status, ethnicity, etc.), and (b) check details for each individual poor and poor household (including photos of the family, their home, and their key assets). As for all nationally registered poor, this database is sent up to the provincial and national levels on an annual basis.

Poverty and Livelihoods in Southern Shaanxi

28. **Concentrated Poverty.** The Qinba Mountains Poverty Block comprises one of China's greatest concentrations of remaining poverty with 77 nationally designated poor counties and covering portions of six provinces (Shaanxi, Henan, Hubei, Chongqing, Sichuan, and Gansu). Of the 77 nationally designated poor counties in the Qinba Mountains Poverty Block, some 29 counties are situated in Southern Shaanxi. The July, 2017 "Shaanxi NPRS Analysis Report" documents that the 1.322 million remaining NPRS poor in these 29 counties in Southern Shaanxi account for 58% of all of Shaanxi's 2.28 remaining NPRS poor. On this basis, it is clear that the SPRAD project targets the greatest remaining concentration of poor in the province within one of China's greatest remaining Poverty Blocks.

29. **Causes of Poverty.** The LGOP's May, 2012 "Qinba Mountains Block Development and Poverty Assault Plan for 2011-2020" Document (hereafter, "Qinba Poverty Assault Document") makes clear that the area's high elevation, steeply sloped mountains, and scattered population are the primary causes of poverty in the Qinba Mountains. Ranging between 500 to 2,950 meters elevation, the SPRAD project area is deeply dissected in narrow, steep-sided valleys, with many rock outcroppings and shallow soils. Arable land comprises less than 10% of the total land area, and arable land per capita is only about 0.12 ha. Soil fertility is generally low, with limited organic matter, phosphorus, and potassium. Average annual rainfall ranges between 450 to 1300 mm, but spring and autumn droughts are common and high-intensity summer rainfalls often causes flooding and waterlogging of soils. Settlements are scattered and remote from roads, and the majority of households consequently have limited access to markets, agricultural extension, and other services. The project area is subject to frequent natural disasters, including landslides, flooding, and drought, and is "one of China's six major debris flow-prone areas."

30. **Livelihood Strategies.** Current farming systems in the project area (a) are sufficient to achieve basic food security, and (b) reduce weather-related income shocks through the close integration of field crops, animal husbandry, and tree crops. Land use is dominated by forestry and some 60% of the land area is covered by oak and coniferous forests. A variety of relay-cropping patterns, which include corn, wheat, potato, sweet potato, pulses, rice, and rapeseed, are employed on the arable land to increase production and reduce the impact of climatic risks. Corn cultivation has severely encroached upon the forest area in the mountains. Pigs are a major source of cash income, while sales of poultry, vegetables, mushrooms and fungi, fruit, and nuts are also important secondary sources of cash income. At higher elevations, the production and gathering of medicinal plants also contributes to cash incomes. In addition, as throughout all of rural China, out-migration of youth to off-farm employment opportunities has been extensive and represents a primary livelihood strategy for most farm households in the project area.

31. The "Qinba Poverty Assault Document" makes clear the depth of poverty in Southern Shaanxi and elsewhere in the Qinba Mountains at the turn of the century. Weak levels of basic rural infrastructure were a major constraint at that time and (a) greatly limited access to markets, and (b)

contributed to low levels of educational attainment and access to even the most basic health care services. At least 70% of farm households experienced seasonal safe drinking water problems. Since 2000, massive government investments into transportation systems and social services have enabled a near complete transformation of the Qinba Mountains Poverty Block. Major highways now link almost all of the counties in Southern Shaanxi, and a new high-speed railway between Xian and Chengdu commissioned in November 2017 has cut passenger rail transit times between these two cities from 11 to just 4 hours. From 2001 to 2010, the school-age enrollment rate reportedly increased from 86% to 99%. Some 89% of the farm population now participates in the new rural cooperative medical insurance program, and all administrative villages and townships have established health clinics.

32. **Remaining Challenges.** Despite these tremendous achievements, the July, 2017 “Shaanxi NPRS Analysis Report” states that some (a) 3282 designated poor villages (or 47% of all poor villages) are not accessible by some form of public transportation, (b) 896 designated poor villages still do not have access to electricity, and (c) 448,200 poor households still experience problems with access to safe drinking water. The “Shaanxi NPRS Analysis Report” also documents that (a) illness is the most important cause of poverty in Shaanxi, accounting for one quarter of remaining poverty at present, and (b) the poor under the age of 16 and over the age of 60 account for about 40% of the remaining poor in the province. On this basis, the Report recommends that Shaanxi may need to formulate “more policies and measures for the protection of the elderly and children of poor families” and that the three municipalities of Hanzhong, Ankang, and Shangluo “should increase the proportion of safeguards and properly handle” the problem protecting poor children and the elderly.

33. **Deep Poverty Counties.** President Xi Jinping undertook a poverty reduction field visit to Southern Shaanxi in early 2017 and identified the extreme depth of poverty in the area. Following his visit, some 11 of the 29 nationally designated poor counties in Southern Shaanxi were deemed “deep poverty counties.” These 11 counties have been elevated to become a core focus of Shaanxi’s poverty reduction program and will receive greater funding and policy support during 2018-19. The SPRAD project area includes four – Zhenba, Langao, Shanyang, and Danfeng – of Shaanxi’s 11 deep poverty counties.

Returning to Poverty

34. **Continuing Assistance for Those Returning to Poverty.** State Council statements released on 8 December, 2015 and on 20 October, 2016 confirmed that support will be maintained for several years for those poor individuals, villages, and counties first exiting but then returning to poverty. The 20 October, 2016 Opinion states that: “For a certain period of time, the country’s original policy for poverty alleviation will remain unchanged and support will not diminish for poor people, poor villages, and poor counties which have exited poverty.” In Pingli County in Shaanxi, for example, the mission was informed that this financial and other support would be maintained for a period of several years for those poor individuals, villages, and counties that exit but then return to poverty. The Pingli County Poverty Reduction Office stated that, on an annual basis, less than 5% of those individuals who have exited poverty subsequently return to poverty. In their experience, the return to poverty has mostly been due to continuing health problems, the return of illness, or the death of the household income earner due to accidents or natural disasters. Those returning to poverty are returned to the NPRS list of registered poor, and are supported through some form of poverty reduction support consistent with the cause of the family’s return to poverty. The duration of continuing support for those returning to poverty does not appear to be exactly reported in the State Council statements, but it is believed that such support would continue for a period of five years from 2020 or from the year of exiting poverty.

PROJECT TARGETING

Targeting Strategy

35. Targeting. Fully consistent with the government's current poverty reduction plans, the project's targeting strategy is to focus on economically active registered rural poor in southern Shaanxi within selected poor counties, townships and villages. This dual strategy both (a) leverages the full power of the government's National Poverty Registration System (NPRS) in identifying poor individuals and poor communities, and (b) captures many of the near-poor in poor villages. This approach has yielded a program area comprising a relatively high concentration of registered poor within communities with good potential for agribusiness development.

36. The demographics and poverty in the program area are summarized in Table 5 below:

	Rural Population		Registered Poor		Poverty Rate (%)		Women		Ethnic Minorities	
	Total	Project Area	Total	Project Area	Total	Project Area	Total	Project Area	Total	Project Area
	Total	2,540,762	873,849	462,730	192,183	18	22	1,501,719	489,779	12,661
Hanzhong										
Total	1,274,938	446,500	187,754	84,400	15	19	803,631	271,675	7,620	1,367
Zhenba	241,491	80,892	48,968	17,871	20	22	131,561	44,069	769	110
Nanzheng	396,676	70,509	45,149	15,279	11	22	272,575	58,277	627	15
Xixiang	350,274	108,446	52,839	17,236	15	16	197,386	53,466	5,135	844
Mianxian	286,497	186,653	40,798	34,014	14	18	202,109	115,863	1,089	398
Ankang										
Total	583,724	193,275	131,054	53,661	22	28	335,248	93,425	4,258	1,162
Hanyin	273,717	100,833	49,770	23,812	18	24	145,839	46,042	325	34
Pingli	172,747	54,752	38,212	13,995	22	26	107,368	26,980	821	0
Langao	137,260	37,690	43,072	15,854	31	42	82,041	20,403	3,112	1,128
Shangluo										
Total	682,100	234,074	143,922	54,122	21	23	362,840	124,679	783	136
Danfeng	279,240	92,256	50,848	20,341	18	22	146,493	43,360	365	98
Shanyang	402,860	141,818	93,074	33,781	23	24	216,347	81,319	418	38

Source: Shaanxi SPRAD-SS Proposal November 2017).

Project Area and Target Groups

37. **Project Area.** At the provincial level, Shaanxi is located in western China and has long been a priority area of the Chinese government's poverty reduction program. With some 3.17 million poor in 2015, Shaanxi's rural poverty rate was 12.43% (or 8.35% of the province's total population in that year). Shaanxi's poor comprised nearly 6% of China's total number of rural poor in 2015, and the poverty rate was more than double the national average of 4.1% (when measured as a share of total population).

42. At the county level, the program comprises nine nationally designated poor counties within the three municipalities of Hanzhong, Ankang, and Shangluo in the Qinba Mountains poverty block. Shaanxi has a total of 56 designated poor counties, and 29 of these are located in the Qinba

Mountains poverty block where steeply sloped and heavily dissected mountains constrain crop production and are subject to frequent natural disasters. As summarized in Table 5 above, the 2015 county-based poverty rate (the number of nationally registered poor in 2015 as a share of the county rural population) ranges from 11.4% in Nanzheng to 31.4% in Langao, and averaged 18.2% across all nine project counties. The project area comprises a rural population of 873,849 people including 192,183 registered poor (or 22% of the project area rural population), 489,779 females (48.5% of the project area total population), and 2655 ethnic minority people (0.3% of the project area rural population).

43. Within the nine program counties, the updated project area includes 84 of the total 139 townships (or 60% of the nine counties' total number of townships), 566 of the total 1,700 administrative villages (or 33% of the nine counties' total number of villages), and 407 of the total 911 designated poor villages (or 45% of the nine counties' total number of designated poor villages). As shown in Table 5 above, this selective targeting of project area townships and villages has resulted in concentrations of project area registered poor which are greater than the county-wide poverty rates in each of the nine counties. Overall, the poverty rate of 22.0% in the project area is somewhat greater than the average for the nine counties' rural population (18.2%), nearly double the provincial average poverty rate (12.4%), and much greater than the national poverty rate. Ethnic minority people, including primarily Hui and Miao people, comprise only 0.5% of the nine counties' rural population. Since most of the Hui people are not registered poor and do not reside in designated poor villages, ethnic minority people account for the lesser share of only 0.3% of the project area population.

44. **Direct Beneficiaries.** The Shaanxi PPMO successfully applied a uniform definition of the project's Component 1 direct beneficiaries across all nine project counties. These direct beneficiaries are those people who would participate in the project's Component 1 agricultural enterprise and farmer cooperative activities and benefit from increased incomes through contract farming arrangements, land rental income, wages from fixed and short-term work, and/or shareholding profit sharing. As summarized in Table 6, most (that is, 83% of the total number of 339,561 direct beneficiaries) of these expected direct beneficiaries reside within the project area. In addition, some 58,768 direct beneficiaries reside in nearby non-project villages and would directly benefit from the project through contract sales of their farm and animal husbandry products or from wages earned in project supported enterprises and cooperatives. Since the project supported enterprises and cooperatives would be identified through the business plan competitive selection process, the numbers of direct beneficiaries reported in Table 6 are indicative of the actual numbers that can be expected to benefit during project implementation.

Table 6: Project Area Direct Beneficiaries' Demographics and Poverty

	Beneficia		Registered Poor		Poor as a Share (%) of Beneficiary		Women		Ethnic Minorities	
	Population		Population		Population					
	Total	Project Area	Total	Project Area	Total	Project Area	Total	Project Area	Total	Project Area
Total	339.561	280.793	136.643	99.732	40	36	159.087	131.923	3.695	1.729
Hanzhong										
Total	202.892	174.452	57.965	44.087	29	25	94.829	81.784	1.674	742
Zhenba	66.349	59.862	13.333	11.697	20	20	30.722	26.742	110	62
Nanzheng	35.813	32.120	14.320	13.274	40	41	17.263	15.353	15	15
Xixiang	59.000	49.820	14.587	8.636	25	17	26.994	24.569	1.234	350
Mianxian	41.730	32.650	15.725	10.480	38	32	19.850	15.120	315	315
Ankang										
Total	83.528	65.253	41.598	28.715	50	44	39.682	30.983	1.901	942
Hanyin	34.682	30.245	14.280	11.200	41	37	16.305	14.210	45	34
Pingli	13.003	9.882	9.538	6.417	73	65	5.893	4.516	31	0
Langao	35.843	25.126	17.780	11.098	50	44	17.484	12.257	1.825	908
Shanluo										
Total	53.141	41.088	37.080	26.930	70	66	24.576	19.156	120	45
Danfeng	29.638	18.650	22.714	14.650	77	79	13.930	8.766	112	37
Shanyang	23.503	22.438	14.366	12.280	61	55	10.646	10.390	8	8

Source: Shaanxi SPRAD-SS Proposal (January, 2018).

45. As shown in Table 6, the project would assist an expected 339,561 primary beneficiaries (individuals) through Component 1, including 280,793 beneficiaries residing in the project area. Overall, the project would directly benefit some 99,732 nationally registered poor residing in the project area. These 99,732 direct beneficiary poor would comprise 36% of the project area's direct beneficiaries, 52% of the total number of project area poor (that is, 192,183 poor as reported in Table 5), and 22% of the total number of poor throughout the nine counties (that is, 462,730 poor as reported in Table 5). Women direct beneficiaries would comprise about 47% of the direct beneficiaries within the project area, and ethnic minority direct beneficiaries would comprise 0.6% of the direct beneficiaries within the project area. Overall, the figures recorded in Tables 5 and 6 show that, consistent with the necessity that the project support only those agricultural enterprises and farmer cooperatives with good prospects for financial viability, the project targeting process has been successful in encouraging outreach to poor villages and to a much greater-than-average concentration of economically active registered poor.

46. **Indirect and Basic Infrastructure Beneficiaries.** Unfortunately, the Shaanxi PPMO did not convincingly respond to the September 2017 Detailed Design mission's request to define and estimate the project's large number of expected indirect beneficiaries. The November 2017 Shaanxi SPRAD Feasibility Study Report (FSR) does report that there would be 489,904 indirect beneficiaries (that is, "*Jianjie Shouyi Renkou*") and disaggregates these indirect beneficiaries by county and by gender, ethnicity, and poverty status (see Annex Table 1 of the FSR). However, the Shaanxi PPMO was not able to provide a clear definition of the project's indirect beneficiaries, and advised the mission that each of the project counties had reported figures for their expected indirect beneficiaries according to their own understanding of who these beneficiaries might be. (In addition, none of the staff in the November 2017 field visit counties of Shanyang and Danfeng were able to define their counties' reported figures for indirect beneficiaries). In addition to this failure to define and properly estimate the project's expected number of indirect beneficiaries, the FSR does not separately

estimate the expected number of direct beneficiaries from the project's Component 2 support for village roads, drinking water systems, and other basic infrastructure.

47. **Targeting Requirement.** The November 2017 Post Formulation mission proposed that the project adopt some guideline or requirement specifying that the registered poor would comprise an agreed upon minimum share of the project's Component 1 direct beneficiaries. One possible format for such a requirement would be that the registered poor would account for at least 50% of the direct beneficiaries of any business plan proposal to be supported under the project. By comparison, it was reported to the mission that Shaanxi's ongoing "Poverty Reduction through Agribusiness Development Program" (that is, the "*Chanye Fupin*" Program) requires that the registered poor comprise 100% of that Program's beneficiaries. While that high level is unrealistic even within the context of Shaanxi's ongoing program and would certainly not be possible in the SPRAD context, it is believed that the project should adopt some minimum level of the registered poor's participation in the agribusiness enterprises and farmer cooperatives to be supported through Component 1.

48. **Poverty Coverage After 2019.** Shaanxi's 13th Five Year Plan for Poverty Reduction calls for the eradication of poverty by 2019, and all designated poor villages and counties would also graduate from the lists of poor villages and counties by the end of 2019. However, consistent with national policy which guards against poverty recidivism through 2025, the names and detailed records of all the registered poor as established in 2014 will be retained and maintained in the NPRS system through 2025 (including all those who have left poverty since 2014). It was reconfirmed during the November 2017 mission that these registered poor would remain the principal focus of the project's poverty targeting system in 2020 and subsequent years of implementation. In addition, since the project's targeting strategy has focused on poor townships and villages, most of the project area population is poor or near-poor.

49. **Targeting Recommendations and Agreements.** Based on these findings, the November 2017 mission recommended and it was agreed that the Shaanxi PPMO would: (a) properly define and report (on a uniform basis across all nine project counties) the project's Component 1 expected indirect beneficiaries; (b) separately estimate the expected number of direct beneficiaries from the project's Component 2 support for village roads, drinking water systems, and other basic infrastructure; and (c) consider adopting some guideline or requirement which guarantees that the registered poor comprise an agreed upon minimum share of the project's Component 1 direct beneficiaries.

46. **Poverty Distribution in Hanyin County.** As a demonstration of the powerful utility of the NPRS system at the local level, the Hanyin County Poverty Reduction Office was able to quickly generate and print out reports for the mission (a) disaggregating the causes of poverty, (b) showing the numbers of poor to be assisted by each of the eight poverty reduction measures, and (c) presenting the numbers of poor disaggregated by township (similar to the reports generated by Pingli County as discussed in paragraph 26 above). In addition, at the mission's request, the Hanyin County Poverty Reduction Office generated reports detailing the poverty rates and other figures for the administrative villages in the townships with the lowest (Chengguan) and highest (Tiefusi) poverty rates in the County. These data for the lowest and highest poverty rate townships in Hanyin County in 2015 are reported in Table 7.

47. The examination of Hanyin County's demographics and poverty at the county, township, and village levels is illuminating and surprising. First, of the 49,770 NPRS registered poor in 2015, only 39.5%, or some 19,637, were female. (By comparison, females comprise 55.4% of Hanyin's total rural population as shown in Table 5 above.) The Hanyin County Poverty Reduction Office advised the mission that (a) it was common for poor women to exit poverty by departing their poor villages through marriage and other means, which would explain the extraordinarily low proportion of female registered poor, and (b) it was not possible that there was any meaningful error in the gender disaggregation of poverty in the County NPRS database. Second, the range in poverty rates between Hanyin County's 10 townships of 4.97% to 34.8% is extremely wide. Third, as shown in Tables 7, the ranges in poverty rates between administrative villages of 1.39% to 26.12% (in Chengguan Township) and of 24.58% to 41.06% (in Tiefusi Township) are also extremely wide. Finally, the selection and

designation of poor administrative villages appears suspect and calls for further examination and explanation since (a) the village with the single highest poverty rate (that is, Gongtong Village in Tiefusi Township with a poverty rate of 41.06%) is reportedly not a designated poor village, while (b) the poverty rates of two designated poor villages (namely, Yuehe and Qujia villages in Chengguan Township) are much lower than the poverty rates of any of the 10 villages in Tiefusi Township (including the three "non-poor" villages in Tiefusi Township).

	Rural Population		Poverty	Designated
	Total	NPRS Poor	Rate (%)	Poor
Chengguan Township				Village
Caoqiao Village	3889	255	6.56	No
Dongnan Village	1197	29	2.42	No
Guoyuan Village	380	1	0.26	No
Huaba Village	1437	73	5.08	No
Jiefang Village	2024	57	2.82	No
Longling Village	1220	17	1.39	No
Pingan Village	1170	168	14.36	YES
Qilin Village	1055	24	2.27	No
Qianjin Village	1883	45	2.39	No
Sanping Village	2270	202	8.90	No
Shuangxing Village	2719	42	1.54	No
Wuyi Village	4905	335	6.83	No
Yangjiaba Village	4110	94	2.29	No
Yuehe Village	3808	194	5.09	YES
Zhangjiao Village	2488	113	4.54	No
Zhaojiahe Village	1835	194	10.57	YES
Zhongyan Village	2572	41	1.59	No
Taiping Village	3599	81	2.25	No
Xinxing Village	1501	392	26.12	YES
Sanyuan Village	2567	122	4.75	No
Zhongba Village	6439	154	2.39	No
Total	53068	2633	4.96	
Tiefusi Township				
Tiefu Village	1642	634	38.61	YES
Heyi Village	1927	771	40.01	YES
Gaofeng Village	1516	540	35.62	YES
Sihe Village	3021	1100	36.41	YES
Shuangxi Village	1375	453	32.95	YES
Lizhuang Village	1794	514	28.65	YES
Jizhong Village	1674	662	39.55	YES
Anping Village	1562	384	24.58	No
Gongtong Village	526	216	41.06	No
Zhanggou Village	614	165	26.87	No
Total	15651	5439	34.75	
Source: Hanyin County Poverty Reduction Office.				
Note: Chengguan Township had the lowest poverty rate and Tiefusi Township had the highest poverty rate in Hanyin County in 2015.				

GENDER MAINSTREAMING

48. **Gender and Poverty in China.** As of end-2015, women comprised about half of the 56 million rural poor population in China.⁴⁴ According to an NBS survey in the nationally designated poor counties, the degree of poverty was greater among women than among men. In 2010, women's poverty incidence was 9.8% while men's was 9.4%, and the incidence of low-income women was 0.6 percentage points higher than that of men. Rural women's average level of education in Midwestern China was 6.8 years, which was 0.8 years less than those in Eastern China. In the "2015 Global Poverty Reduction and Development Forum", Vice President of the All-China Women's Federation (ACWF) Cui Yu indicated there were about 35 million women still living under poverty line⁴⁵. In the nationally designated poor counties, the overall education level of female laborers was less than that of male laborers. In the same year, among female laborers in the nationally designated poor counties, the illiteracy rate was 15.7%, while the figure was 5.5% among male laborers.⁴⁶ The development of the Accurate Poverty Targeting policy required targeting of poor households, but women's poverty is hidden below the household targeting unit within the relations within the household.⁴⁷ Since the participatory approach was adopted in government poverty reduction strategy since 2001, some projects have been implemented which specially target the needs of rural poor women through technical training, microcredit, drinking water systems, and healthcare improvements, and have produced effective achievements. However, even though these projects have targeted poor women as the primary beneficiaries, the projects contributed less to gender equality than they could have due to a lack of a gender perspective, and could not change the trend of women's increasing marginalization in terms of income, opportunity, and rights in the context of the continuing increase of rural women's responsibilities, obligations, and labor intensiveness.⁴⁸ Nevertheless, the Chinese Women Development Outline (2011–2020) sets the objective of reducing female poverty through developing poverty reduction measures which can benefit women's development.

49. **Gender Analysis of the Project Area.** There was a total of 1.5 million women in all nine project counties in 2016, and 32.6% of them resided in the project area. According to data collected by six county PMOs (see Table 8 below), female laborers in the project counties comprised 56.25% of counties' labor population, but the figure was eight percentage point lower in the project area. Meanwhile, the percentage of female laborers varied significantly among project counties, and the data needs to be verified. Among seven counties, only in Xixiang County had female laborers obtained a full nine years of compulsory education, while those in the other six counties received less education than male laborers, and women laborers in Zhenba had only four years of education on average. However, women in the project area in Nanzheng and Shanyang obtained less education than the average level of the counties. In comparison with the average level, female migrant laborers had better education years than the average in four project counties.

⁴⁴ X.L. Wang and R. Gao. Poverty Reduction of Rural Women: Objective, Challenge and Policy Option. Collection of Women's Studies, No. 6 Ser. No. 138, Nov. 2016. Pages 5-8.

⁴⁵ Y. Cui. Eliminating Poverty of Women, Promoting Integrated Development of Women. China Poverty Alleviation, Nov. 1st, 2015. Pages 20-21.

⁴⁶ Summary of Poverty Alleviation work of All China Women's Federation.
<http://acwf.people.com.cn/BIG5/n/2014/1020/c99013-25865868.html>. Cited on May 30, 2017

⁴⁷ S.J. Cai. Scanning and Reflection on Poverty of Rural Women under Perspective of Targeted Poverty Alleviation. Social Sciences Review, Vol. 31, No. 12, Dec, 2016. Pages 81-84.

⁴⁸ A.J. Wang. Rural Poverty Measurements from a Social Gender Perspective. Journal of Wuhan University of Technology (Social Science Edition), 2013, 26(5).

Table 8: Female Laborers and Education Levels (2016)

	% of Female in Laborers		Education Years of Laborers				Education Years of Migrated Laborers			
			Average		Female Laborer		Average		Female Laborer	
	Program Counties	Program Area	Program Counties	Program Area	Program Counties	Program Area	Program Counties	Program Area	Program Counties	Program Area
Total	56.25	48.04								
Hanzhong										
Total	46.63	45.18								
Zhenba	NA	NA	NA	NA	4.0	4.0	NA	NA	6.0	6.0
Nanzheng	43.00	47.09	8.5	8.2	7.0	5.0	9.0	8.5	7.5	7.0
Xixiang	54.89	50.22	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Mianxian	43.90	42.87	9.0	9.0	6.0	6.0	9.0	9.0	6.0	6.0
Ankang										
Total	56.59	67.32	NA	NA	NA	NA	NA	NA	NA	NA
Hanyin	67.00	66.00	7.6	7.2	6.3	6.3	8.2	7.9	7.5	7.4
Pingli	39.92	70.33	8.0	8.0	8.0	8.0	10.0	10.0	9.0	9.0
Langao	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Shangluo										
Total	42.11	33.82	NA	NA	NA	NA	NA	NA	NA	NA
Danfeng	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Shanyang	42.11	33.82	8.0	7.0	7.0	6.0	7.0	6.0	6.0	6.0

50. **Women and Poverty.** As reported in Table 9 below, female poverty incidence was lower than the average in four of the five counties which were able to provide data to the November 2017 mission. Danfeng County was the exception. However, female poverty incidence in the project area was higher than that at county level in all project counties. On average, the percentage of women among the poor population was slightly less than that in the total population. However, the share of female laborers among poor laborers in the project area was comparatively higher, and women laborers in the project area need more opportunities to participate in agro-business development.

Table 9: Women and Poverty in the Project Area (2016)

	% of Women in Population		Female Poverty Incidence (%)		% of Women in Poor Population		% of Women in Poor Laborers	
	Project Counties	Project Area	Project Counties	Project Area	Project Counties	Project Area	Project Counties	Project Area
Total	47.20	45.62	NA	NA	45.18	43.46	43.54	49.80
Hanzhong								
Total	47.78	44.35	NA	NA	42.93	40.16	40.52	40.93
Zhenba	46.30	46.00	NA	NA	NA	NA	48.81	46.01
Nanzheng	48.00	39.78	8.60	15.80	52.38	49.92	42.99	44.60
Xixiang	47.62	46.99	10.66	11.30	39.81	35.04	31.28	34.44
Mianxian	48.64	45.04	7.37	7.56	36.50	38.40	39.00	38.52
Ankang								
Total	46.23	46.88	NA	NA	44.58	43.80	55.20	68.11
Hanyin	46.54	44.25	NA	NA	47.99	46.00	66.00	66.99
Pingli	46.14	48.90	19.18	20.79	40.14	40.07	40.00	71.09
Langao	45.77	48.03	NA	NA	NA	NA	NA	NA
Shangluo								
Total	46.84	46.87	NA	NA	48.44	48.39	36.19	59.63
Danfeng	47.38	47.38	NA	NA	NA	NA	NA	NA
Shanyang	46.48	46.44	24.90	33.10	48.44	48.39	36.19	59.63

51. **Labor Migration.** It is common in rural China that finding work in the off-farm sectors in urban areas is an important means of increasing farmers' incomes and reducing poverty. However, in most cases, males of poor families are the ones to migrate to the urban areas to work, while women remain in the rural area to engage in agriculture and other household activities. In this context, the female population remaining at home becomes a special group of the poor population. As shown in Table 10 below, patterns of labor migration in the project area are similar to those of other poor areas of China. However, women took only a small proportion among the migrant laborers in the project counties and project area. Therefore, the majority of female laborers have stayed in the agricultural sector in the project area, and they are eager for the chance to improve their economic status by remaining in the village.

Table 10: Labor Migration (2016)

	<u>% of Migrating Laborers among Total Laborers</u>		<u>% of Females among Migrating Laborers</u>	
	<u>Project Counties</u>	<u>Project Area</u>	<u>Project Counties</u>	<u>Project Area</u>
Total	50.6	49.4	29.25	24.35
<u>Hanzhong</u>				
Total	51.86	48.45	28.91	18.22
Zhenba	NA	NA	NA	NA
Nanzheng	34.96	26.99	22.26	21.86
Xixiang	76.66	83.92	50.25	38.18
Mianxian	39.53	39.54	3.16	3.07
<u>Ankang</u>				
Total	36.77	30.86	30.47	32.89
Hanyin	34.96	26.99	46.00	47.29
Pingli	39.65	39.74	8.55	10.46
Langao	NA	NA	NA	NA
<u>Shangluo</u>				
Total	78.95	88.66	29.14	39.61
Danfeng	NA	NA	NA	NA
Shanyang	78.95	88.66	29.14	39.61

52. **Decision Making in the Household and Community.** Empowering women in the community decision making system is one of the objectives of the Chinese Women Development Outline (2011–2020). As shown in Table 11 below, the limited data from project counties indicate a less optimistic situation. In the project area, women only took around 10% of the village head positions, and the situation varied greatly county by county. In Mianxian, Pingli and Shanyang counties where ACWF had made great efforts on women's participation in community decision-making and administration, women were significantly empowered in community management. According to ACWF staff, integrating ACWF experience with agro-business development projects can yield remarkable impacts on empowering rural women. At the household level, very few women were registered as household heads. Within the project counties, both Pingli and Shanyang had very high rates of female headed household. This is uncommon in rural China.

53. **Women's Workload.** Due to the significant male labor migration rate, rural women have to shoulder the responsibilities of both agriculture production and daily housework. Inconvenient irrigation systems and road conditions often increase women's heavy workload for channeling water and transporting farm inputs and products. Further, when droughts occur, tap water system of some communities in the mountainous area do not work, further increased women's workload by necessitating the transportation of household drinking water.

Table 11: Female Decision Maker of Community and Household (2017)

	% of Women among Village Heads		% of Female Household Heads	
	<u>Project Counties</u>	<u>Project Area</u>	<u>Project Counties</u>	<u>Project Area</u>
Total	11.52	9.78	13.33	8.17
<u>Hanzhong</u>				
Total	9.28	10.45	7.55	4.17
Zhenba	NA	NA	NA	NA
Nanzheng	NA	NA	3.50	NA
Xixiang	7.26	8.77	15.35	3.13
Mianxian	11.11	11.11	4.64	4.43
<u>Ankang</u>				
Total	13.31	14.44	19.52	11.25
Hanyin	2.13	3.85	6.07	6.12
Pingli	24.82	28.95	33.62	22.54
Langao	NA	NA	NA	NA
<u>Shangluo</u>				
Total	12.97	2.06	24.01	24.45
Danfeng	NA	NA	NA	NA
Shanyang	12.97	2.60	24.01	24.45

54. **Women's Access to Technology.** As evidenced in Table 12 below, there is a serious shortage of human resources for extension in the project area. Each technician should cover hundreds of households on average, and more than 2,000 households shared one technician in Mianxian County. Furthermore, women do not represent an appropriate share of the technical extension system staff at the county, township and village levels. Technicians are close to the farmers at these levels, yet less than one third of local level technicians are women. This hampers access for rural women to technical support. Although comprising the majority of agricultural laborers remaining in the village, rural women represent less than 40% of those taking advantage of technical training in the project area.

Table 12: Women's Access to Technology (2016)

	% of Female Employees in Technical Institutes		% of Female Technicians		% of Female Farmer Technicians		% of Women in Technical Training	
	Project Counties	Project Area	Project Counties	Project Area	Project Counties	Project Area	Project Counties	Project Area
Total	32.1	30.38	27.43	21.87	28.96	35.91	38.52	35.22
Hanzhong								
Total	34.71	26.67	28.56	19.53	29.46	35.43	36.78	30.63
Zhenba	26.55	15.14	4.43	1.56	16.67	23.08	33.28	13.38
Nanzheng	40.73	37.50	38.07	34.04	33.78	39.58	44.92	42.60
Xixiang	23.23	24.44	22.31	21.28	21.00	22.22	21.22	25.82
Mianxian	34.62	25.93	28.57	25.93	NA	NA	0.00	0.00
Ankang								
Total	9.40	12.64	24.04	22.90	34.79	25.36	44.61	45.46
Hanyin	9.40	12.64	9.16	8.40	15.91	10.45	46.07	45.99
Pingli	NA	NA	34.70	33.64	39.92	39.44	39.13	43.55
Langao	NA	NA	NA	NA	NA	NA	NA	NA
Shangluo								
Total	33.31	33.33	40.24	35.29	25.10	43.50	25.00	25.56
Danfeng	NA	NA	NA	NA	NA	NA	NA	NA
Shanyang	33.31	33.33	40.24	35.29	25.10	43.50	25.00	25.56

55. **Women's Participation in Cooperatives.** According to seven county PMOs, there were 3,062 cooperatives in seven project counties (excluding Langao and Danfeng counties), and 790 cooperatives were located in the project area. Women-led cooperatives comprised 15.15% of the cooperatives in the project counties while the figure was only 10.25% in the project area. A more favorable situation was reported in the project area of Shanyang County, which has built a good foundation for empowering women's participation in cooperative development through the project. As the key labor force in the project area, women occupied more than one third of the membership in the cooperatives, which is higher than the average of the project counties. With such a good foundation, expanding women's economic empowerment through cooperative membership is guaranteed. Women's participation in cooperatives is summarized in Table 13 below.

Table 13: Women's Participation in Cooperatives (2016)

	% of Women-led Cooperative among all		% of Women's Membership in Cooperatives	
	<u>Project Counties</u>	<u>Project Area</u>	<u>Project Counties</u>	<u>Project Area</u>
Total	15.15	10.25	19.60	35.06
<u>Hanzhong</u>				
Total	8.31	7.74	19.27	32.06
Zhenba	3.49	4.31	28.77	28.77
Nanzheng	5.17	7.27	13.22	11.24
Xixiang	14.92	10.75	3.03	25.28
Mianxian	7.51	10.13	35.26	37.99
<u>Ankang</u>				
Total	17.48	14.29	32.92	39.76
Hanyin	18.25	19.79	33.52	42.27
Pingli	15.97	5.17	30.32	30.70
Langao	NA	NA	NA	NA
<u>Shangluo</u>				
Total	28.83	41.38	11.00	66.67
Danfeng	NA	NA	NA	NA
Shanyang	28.83	41.38	11.00	66.67

56. **Women's Participation in Agro-enterprises.** As reported in Table 14 below, according to the data provided by seven county PMOs, there were 678 agro-enterprises in the project counties, and 31.86% of them were in the project area. Women already took a significant role in these enterprises, with about 10% of board positions belonging to women in the project counties, and the proportion was even higher in the project area. Obviously, women represent the majority of the enterprise employment in both the project counties and the project area, and Xixiang and Shanyang counties had the highest percentage of female employees. Women also developed 15.49% and 18.06% of the enterprises in the project counties and project area.

57. **Women's Organization.** The Shaanxi Women's Federation (SWF) was established in October 1950, and is the dominant organization for women in Shaanxi Province. It has positioned itself as the organization representing women and protecting women's rights, and promoting gender equality. SWF has offices and representatives at the provincial, prefecture and county levels, and has very strong linkages down to the grassroots levels with representatives in townships and administrative villages. Since 2016, under the reform arrangement of ACWF, SWF has expanded its organization structure from a representative to the federation with elected members at township and village/community levels, and each villagers' group has one representative in the village WF. Consequently, SWF has stronger linkages with grass root women from now on. In Danfeng County, for example, the government allocated 500,000 yuan in order to strengthen the village/community WF operations. Thus, women's mobility in the project area is ensured.

58. **NGOs.** In comparison with other provinces in China, Shaanxi shares more specialist resources and experience on rural women development. There are several NGOs working on rural women issues, and most of them have been closely cooperating with SWF at different levels. Two

NGOs were interviewed during the mission. First, the Shaanxi Society of Women Study, which was established in 1986, has long-term experience on promoting rural women in participation in community decision-making and administration, and is well known throughout China. Second, as a young NGO, the Shaanxi Jiayi Women Development Center has already accumulated some experience on accompanying the growth of several women-led cooperatives in different counties. Therefore, the project can easily find the technical support to promote gender equality from local NGOs.

Table 14: Women's Participation in Agro-enterprises (2016)

	<u>% of Women in Board</u>		<u>% of Women-led Agro-enterprises</u>		<u>% of Women in Employees</u>	
	<u>Project Counties</u>	<u>Project Area</u>	<u>Project Counties</u>	<u>Project Area</u>	<u>Project Counties</u>	<u>Project Area</u>
Total	9.22	12.53	15.49	18.06	58.69	55.13
<u>Hanzhong</u>						
Total	4.68	6.24	12.93	13.82	42.92	36.65
Zhenba	3.49	4.31	11.90	13.64	NA	27.95
Nanzheng	3.63	3.64	2.33	0.00	44.20	38.11
Xixiang	6.22	6.29	14.29	20.00	72.73	69.11
Mianxian	6.31	9.13	15.25	15.09	36.20	35.39
<u>Ankang</u>						
Total	27.57	41.28	23.33	27.87	63.44	59.74
Hanyin	29.92	50.00	15.79	11.11	64.96	60.08
Pingli	15.97	5.17	24.43	30.77	54.36	56.63
Langao	NA	NA	NA	NA	NA	NA
<u>Shangluo</u>						
Total	21.91	72.22	30.00	33.33	76.07	77.94
Danfeng	NA	NA	NA	NA	NA	NA
Shanyang	21.91	72.22	30.00	33.33	76.07	77.94

59. **Gender mainstreaming strategy.** The project's gender mainstreaming strategy is to strengthen women's economic power through project activities, and to promote women's participation and benefits in the project design, implementation and management, so that women's economic and social status can be improved, and gender awareness of project participants can be built. A gender focus has been applied in the project design by responding to the needs of women according to their increasing role in household businesses as a result of the predominantly male labor migration. Women's participation in project activities will be ensured by applying gender-sensitive M&E indicators.

60. With the improvement of economic empowerment through the project activities, women will be more actively involved in production and marketing activities, which will improve their status in the household. Together with their collective participation in the project management through the project process, women will be more capable of voicing their views in the community, and will gradually strengthen their role in community decision making.

61. The gender focus has been applied in the project design by responding to the needs of economic empowerment and capacity building for women. Development of measurable M&E indicators will ensure that women's participation in project activities is closely monitored. In addition, some gender disaggregated information will be collected in the baseline survey.

62. A set of gender strategy eligibility criteria have been integrated into agribusiness development through the project process, including: (a) developing gender eligibility criteria for Business Plan (BP) selection. Involvement of women should be higher than their percentage in the local population; women will be present in the boards of cooperatives and enterprises; and at least 50% of technical training opportunities will be shared by women; (b) supporting BPs of women-led cooperative/enterprise. At least 25% of BPs will be awarded to women-led cooperative/enterprise; and (c) Improving women's capacity in BP. In addition, the following actions will support gender mainstreaming in the project:

- Promoting women's participation in community management. Women will be involved in Village Implementation Groups (VIG) and Infrastructure O&M Committees. Meanwhile, for ensuring women's capacity for participating in decision-making, women will share half of the O&M training opportunities.
- Building support systems for women's participation. Involving the SWF in the Project Leading Group at both the county and provincial levels, and township Implementation Support Office. In addition, hiring gender specialists at both the county and provincial levels to facilitate the implementation of gender strategy through the project process.
- Building a network for women in the project. Annual exchange activity will be organized for women involved in the project in each county, and provincial women's exchanges will be held every two years. Besides networking individuals, government agencies and other gender issues concerned organizations will be engaged in the project. These exchanges will also provide women and these organizations with the opportunity to exchange their experience on promoting women's participation in the project process.
- Capturing the successful demonstrations and experiences for scaling-up in Shaanxi Province. Workshops will be organized for accepted cooperative and enterprise BPs and for CPMOs to share their experience with gender equality promotion in the project; supporting gender specialists to capture the successful demonstrations and experiences carried out in the project for the SWF to advocate and apply throughout the province.
- Building awareness for the project management system. In the beginning of the project, gender awareness training will be integrated in the project management training for PMO staff at all levels. Gender perspectives will be integrated in the training modules for the staff of implementing agencies, and for VIG and O&M Committee members during the project implementation. Provincial and county gender specialists will be involved in these trainings.

IV. MONITORING AND EVALUATION

63. **M&E.** In line with the strategies of gender mainstreaming and targeting of the project, related M&E indicators will be developed before project implementation. The indicators should be able to explain the status of participation and benefits of women, minority, poverty, and vulnerable groups. The following considerations can be indicative:

- Participants in different project components/activities by gender;
- Participants in different sector of trainings by gender;
- Participants in different project components/activities by household category;
- Participants in different sector of trainings by household category;

- Participants in different project components/activities by ethnic minority;
- Participants in different sector of trainings by ethnic minority;
- Improvement of women's access to technologies, information, credit and markets;
- Women's memberships in project-supported cooperatives;
- Membership by household category in project-supported farmer cooperatives;
- Women's leadership in project-supported cooperatives and enterprises; and,
- Women's employment in project-supported enterprises.

64. The project M&E system will take full advantage of the NPRS data on the poor in the project area. These data are updated annually, and it will therefore be possible to carefully determine the changes in the number of poor in the project area on an annual basis during implementation. As noted in paragraphs 8, 11 and 12 above, the NPRS provides over 100 indicators on each of the registered poor, and this detailed data will make it possible to undertake a careful review of many aspects of the changes in the well-being of the project area poor during implementation. It should also be possible to examine the questions regarding the location and other characteristics of the poor throughout South Shaanxi (see paragraph 3 above).

Attachment 1: Targeting Checklist for Project Design

Targeting checklist	Design
1. Does the main target group - those expected to benefit most- correspond to IFAD's target group as defined by the Targeting Policy (poorer households and food insecure)?	Yes. The main target group is the economically active rural poor in South Shaanxi in communities with adequate potential for agribusiness development.
2. Have target sub-groups been identified and described according to their different socio-economic characteristics, assets and livelihoods - with attention to gender and youth differences? (matrix on target group characteristics completed?)	Ethnic minority groups have been identified and are more than fully represented in the project area. Further target sub-groups may be identified and described through the baseline survey work (pending).
3. Is evidence provided of interest in and likely uptake of the proposed activities by the identified target sub-groups? What is the evidence? (matrix on analysis of project components and activities by principal beneficiary groups completed?)	Yes. Identified target sub-groups -- poor and vulnerable, and different ethnic minority peoples -- are interested in and will likely take up the proposed activities which respond to their development needs.
4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy, involving some or all of the following measures and methods:	
4.1 Geographic targeting – based on poverty data or proxy indicators to identify, for area-based projects or projects, geographic areas (and within these, communities) with high concentrations of poor people	The project geographically targets (a) poor counties identified by the government, and (b) poorer townships and villages as identified by poverty rates, per capita grain production, and other factors. Priority has been given to the selection of ethnic minority communities.
4.2 Direct targeting - when services or resources are to be channelled to specific individuals or households	An important objective of the project would be to directly benefit at least XXX% of the NPRS registered poor in each of the project area villages' through project Component 1 supported cooperatives and pilot enterprises (TBD).
4.3 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups	The project responds to the priority needs of women, minority, poor and vulnerable households on income generation from small scale agricultural production through the linkage of value chain.
4.4 Empowering measures - including information and communication, focused capacity- and confidence-building measures, organizational support, in order to empower and encourage the more active participation and inclusion in planning and decision making of people who traditionally have less voice and power	The objective of the project is to empower women, the poor, and ethnic minority people in agricultural and value chain development. Their full participation is designed in all the project activities and leadership development through the project implementation.
4.5 Enabling measures –to strengthen stakeholders' and partners' attitude and commitment to poverty targeting, gender equality and women's empowerment, including policy dialogue, awareness-raising and capacity-building	Provincial and county project Offices are keen to extend their successful approach to more remote and poorer townships and villages. Targeting and gender awareness are included in the project

	management training for the project staff in the start-up of the project implementation.
4.6 Attention to procedural measures - that could militate against participation by the intended target groups	Criteria of geographical targeting at the township and village levels have been established, and women, the poor, and ethnic minority participation is determined in the eligibility criteria of each activity.
4.7 Operational measures - appropriate project/project management arrangements, staffing, selection of implementation partners and service providers	Targeting responsibilities are explicitly mentioned in TORs for all PMO staff. Project coordinator will be responsible for seeing that gender and poverty targeting is effective. Accountability for project targets will be a selection criterion of the implementation partner and service provider.
5. Monitoring targeting performance. Does the design document specify that targeting performance will be monitored using participatory M&E, and also be assessed at mid-term review? Does the M&E framework allow for the collection/analysis of sex-disaggregated data and are there gender-sensitive indicators against which to monitor/evaluate outputs, outcomes and impacts?	Targeting performance is a key monitoring objective, and a set of M&E indicators have been designed based on gender difference and village poverty levels. The PMOs will manage the monitoring of targeting performance on a regular schedule based on designed indicators.

Attachment 2: Gender Checklist for Project Design

Gender checklist	Design
1. The project design report contains – and project implementation is based on - gender-disaggregated poverty data and an analysis of gender differences in the activities or sectors concerned, as well as an analysis of each project activity from the gender perspective to address any unintentional barriers to women's participation.	Gender differences were analyzed for the concerned activities and sectors with sex-disaggregated poverty data in the project area, as well as rural women's role, development difficulties, and needs relevant to project activities.
2. The project design report articulates – or the project implements – actions with aim to: Expand women's economic empowerment through access to and control over productive and household assets;	The project will expand women's economic empowerment through expanding women's participation in all cooperatives and enterprises with project support. Meanwhile, provision of technical capacity building will ensure women's economic empowerment.
Strengthen women's decision-making role in the household and community, and their representation in membership and leadership of local institutions;	The project strengthens women's decision-making role in the household and community by ensuring their participation in farmers' cooperative membership and leadership in cooperatives and enterprises. In addition, women-led business plans will be supported in each project county.
Achieve a reduced workload and an equitable workload balance between women and men.	Workload reduction is not included in the project objectives, but improvement of drinking water and irrigation systems, and roads/transportation will reduce the workload of women as the majority of agricultural laborers.
3. The project design report includes one paragraph in the targeting section that explains what the project will deliver from a gender perspective.	Yes, there is a paragraph explaining the gender mainstreaming approach in the PDR.
4. The project design report describes the key elements for operationalizing the gender strategy, with respect to the relevant project components.	Yes, the key elements for operationalizing the gender strategy is discussed in the Working Paper "Poverty, Targeting, and Gender."
5. The design document describes - and the project implements - operational measures to ensure gender- equitable participation in, and benefit from, project activities. These will generally include:	
5.1 Allocating adequate human and financial resources to implement the gender strategy	All gender actions identified in the gender strategy have been properly costed and budgeted in the project design.
5.2 Ensuring and supporting women's active participation in project-related activities, decision-making bodies and committees, including setting specific targets for participation	Gender eligibility criteria have been developed for BP selection, including that the involvement of women should be greater than their percentage in the local population; women will be present in the boards of cooperatives/enterprises; and at least 50% of technical training opportunities will be shared by women. In addition, at least 25% of BPs will be awarded to women-led cooperatives/enterprises.
5.3 Ensuring that project/project management arrangements (composition of the project management unit/project coordination unit, project	Involving women in Village Implementation Groups and Infrastructure O&M Committee; Involving Women's Federation in the Project Leading Group at both county

<p>terms of reference for staff and implementing partners, etc.) reflect attention to gender equality and women's empowerment concerns</p>	<p>and provincial levels, and township Implementation Support Office; Gender awareness training will be integrated into the project management training for PMO staff at all levels.</p>
<p>5.4 Ensuring direct project/project outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited</p>	<p>Involvement of Women's Federation at township and village levels in the project will ensure that women are reached by all the project activities; and, Promoting more female technicians engaged in project activities will be required.</p>
<p>5.5 Identifying opportunities to support strategic partnerships with government and others development organizations for networking and policy dialogue</p>	<p>Gender specialists will be hired at both the county and provincial levels to facilitate the implementation of gender strategy through the project process; Annual exchange activities will be organized for women involved in the project in each county, and provincial exchanges will be held every two years; Workshops will be organized for project supported BPs and CPMOs to share their experience on gender equality promotion; Gender specialists will be supported to capture the successful demonstrations and experience carried out in the project for Shaanxi Women's Federation to advocate and extend throughout the province.</p>
<p>6. The project's logical framework, M&E, MIS and learning systems specify in design – and project M&E unit collects, analyses and interprets sex- and age-disaggregated performance and impact data, including specific indicators on gender equality and women's empowerment.</p>	<p>The percentage of women among beneficiaries in different project activities has been specified and indicated in the logframe, and all relevant logframe indicators are sex-disaggregated.</p>

Appendix 3: Country performance and lessons learned

I. Country performance

1. The China country program has consistently been a solid program. The recent Country Program Evaluation (2014), the evaluation of the Independent Office of Evaluation (IOE) of the IFAD country program in China during the period 1999-2013, rated the overall performance of the country program “satisfactory”: programs and projects have been considered relevant and well aligned to the Government’s main development strategies and priorities; project objectives and targets have been achieved or exceeded; impact has been significant (particularly in terms of income, assets, agriculture productivity and food security); and results sustainable over time. Performance knowledge management and policy dialogue was considered improving over time, but only moderately satisfactory. Scaling-up has not been systematically pursued.

2. Overall, the China program performs better than the average of IFAD programs in the Asia and Pacific Region in almost all performance dimensions. However, the performance has been decreasing over the past few years in several dimensions, and particularly implementation progress, disbursement, poverty focus and effectiveness of targeting approach, and performance of M&E. There are two recent projects in the portfolio (SSADEP and JIMAAPP) that have been categorized as problematic.

II. Lessons learned

3. Below a list of the main lessons learnt, and how the proposed program will try to incorporate them.

(d) Strategic/programmatic level (from COSOP and CPE)

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ Limited impact of projects’ results on policy-making and limited scaling-up: The knowledge, experience, lessons, best practices and results of IFAD-funded projects and projects had limited impact/influence on broad national policies, and have been limitedly scaled-up. IFAD current delivering model, mainly provided in the form of area-based projects, proved non-conducive to inform policy-making and favour scaling-up: interventions tended to have geographically limited impacts (mainly in the project area), have been limitedly scaled-up (rarely beyond the project area), and had limited impact/influence on broad national policies 	<ul style="list-style-type: none"> ▪ The proposed project should not be viewed as an independent, stand-alone project, but as a piece of a broader portfolio which is programmatically piloting different approaches/models of poverty reduction through agribusiness development (complemented by a set of non-lending activities on the same subject) with the objective of demonstrating successful models that can inform policy-making and be replicated/scaled-up nationally. ▪ Specifically, this project will pilot a pro-poor public-private partnership with a large e-commerce operator, and integrate different packages of services, including e-trade, micro-credit, micro-insurance, etc.
<ul style="list-style-type: none"> ▪ Limited attention to post-production/marketing: China’s agricultural development strategies have mainly focused on production/productivity enhancement, with emphasis on infrastructure development, with limited attention to post-production/marketing. Limited attention to post-production/marketing also resulted in cases of local overproduction, which led to drops in price of commodities and farmers’ income. 	<ul style="list-style-type: none"> ▪ The proposed project will place great emphasis to post-production and to developing agricultural value chains that promote equitable organizational arrangements, different channels/opportunities to farmers to link with market opportunities, and increased incomes for the target households.
<ul style="list-style-type: none"> ▪ Poverty reduction through direct support to dragonhead enterprises gave mixed results: The Government approach of promoting poverty reduction by directly supporting dragonhead enterprises, under the assumption that the benefits generated by the dragonhead enterprises would trickle down to poor 	<ul style="list-style-type: none"> ▪ The project will pilot a different approach to poverty reduction through agribusiness development, whereas support to agribusiness entities, particularly dragonhead enterprises, is conditional to the achievement of certain outreach targets and to the establishment of fair and inclusive contractual arrangements with the project’s

Lesson	How lesson has been incorporated in the Program
farmers, gave mixed results, and it did not always proved to be an effective approach.	primary target group.

(e) **Lessons from ongoing portfolio**

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ The perverse incentive of repayment responsibilities: Experiences from SSADEP and JIMAAPP showed that in those cases where the loan repayment responsibility is transferred to the local county authorities, and from them to the beneficiaries (agro-enterprises, cooperatives, or poor households) a perverse incentive is created whereas local authorities have an incentive to select among the entities to support those who could offer the highest likelihood of repayment. This leads to select/support the strongest entities. On the positive side, in the QLMAPRP, where resources are channelled to the beneficiaries as grants through the poverty reduction budgets, the above described problem is less present. 	<ul style="list-style-type: none"> ▪ It is agreed that project resources to co-finance business plans will be provided to the selected agribusiness entities in the form of grant (i.e. the recipient agribusiness would not have to re-pay the project resources received to co-finance its business plan).
<ul style="list-style-type: none"> ▪ Limited understanding of value-chain development approach, and experience/capacity to implement it, has limited progress and performance in this area in ongoing projects: PMOs have strong capacity and experience in implementing agricultural production/productivity enhancement projects, but limited in value chain development. The concept of value chain development is new, and not entirely understood (for instance, PMOs have difficulties in determining what could be considered eligible for financing under value-chain development activities). This has hampered progress and performance in this area. 	<ul style="list-style-type: none"> ▪ Greater support at start-up has to be provided to have project staff and implementing partners familiarizing with the concept of value-chain development and program implementation manual. ▪ TA is provided to facilitate successful implementation of the component. ▪ Linkages with ongoing or future initiatives aimed at strengthening the capacity of service providers to provide the required services will be pursued (e.g. with Regional Grant for Scaling Up of Pro-poor Value Chain Projects).
<ul style="list-style-type: none"> ▪ Existing packages often do not provide sufficient incentives to enterprises and cooperatives to engage with target beneficiaries: Experience with ongoing projects showed that in some cases existing packages provided through the projects (e.g. public or semi-public goods, access to finance, etc.) do not provide sufficient incentives to enterprises and cooperatives to engage with target beneficiaries. Often the definition of public/semi-public good is not clear. 	<ul style="list-style-type: none"> ▪ Flexibility in determining the packages to enterprises/cooperatives to provide the incentives to engage in project activities is critical. ▪ Outreach and poverty focus would need to be among the key criteria for the selection of the business plans (and thus of the cooperatives/enterprises) that will be supported by the support of the Program. ▪ Mechanisms to ensure that the benefits generated from the support packages provided through the project will reach the intended beneficiaries in a verifiable way have to be included.
<ul style="list-style-type: none"> ▪ Value chain financing: Collateral requirements and short lending term are still the main limiting factors for agribusiness entities to access commercial loans required for business development. While on the other hand liquidity with commercial banks is usually excessive as reflected in low lending/deposit ratio. Guaranteed lending especially through third party partly addresses the collateral barrier but on the other hand pushes loan interest higher and makes the loan less attractive, while capacity of guarantee companies becomes also a limiting factor for sustainability. 	<ul style="list-style-type: none"> ▪ Innovative and diversified financing tools will be explored to address the accessibility challenge. ▪ Technical support to financial institutions to introduce diversified lending techniques and instruments could improve lending ▪ Expand different types of collateralization method to help mitigate risk concerns of financial institutions

(f) **Lessons from other donors' efforts in poverty reduction (mainly from the World Bank's poverty reduction projects⁴⁹)**

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ Equitable and viable value chain development: The final set of projects is in the early stages of implementation and any lessons must be considered preliminary. However, the first two poverty reduction projects included rural enterprise development components which performed poorly. Based on the negative results of the first two projects and the initial implementation experience of the final two projects, it is evident that there are significant obstacles to (a) identifying financially viable value chains, and (b) ensuring that the poor secure an adequate and appropriate share of the benefits from successful agricultural value chain development. While the first two poverty reduction projects largely failed to surmount these challenges, the final set of projects have (a) adopted enhanced selection measures for identifying potentially viable agricultural value chains, and (b) emphasized the development of farmer cooperatives which may better provide the poor with an appropriate share of the increased value of output and employment opportunities. 	<ul style="list-style-type: none"> ▪ The design of the new project is placing greater emphasis on establishing criteria and a process (selection of business plans on a competitive basis) for identifying potentially viable value chains.
<ul style="list-style-type: none"> ▪ Government's interference in the selection process of the agribusiness enterprises/value chains to support: Government line departments tend to interfere in the process of selection of the agribusiness entities/value chains to support suggesting the use of project resources to implement existing county development plans (mainly expanding production of the priority crops and commodities in the county development plans), rather than to support agribusiness entities/value chains that have higher market potential and/or willingness to enter into equitable arrangements with poor farmers. 	<ul style="list-style-type: none"> ▪ The proposed project proposes the adoption of a competitive mechanism to select the cooperatives/value chains to be supported by the program based on the assessment of business plan proposals against targeting/outreach and viability criteria.
<ul style="list-style-type: none"> ▪ Development of Business Plans: Experiences from the four WB-funded Poverty Alleviation Projects showed that (a) not all agribusiness entities, particularly cooperatives or small/medium enterprises, have sufficient capacity to develop and implement a business plan. The business plans should be considered as part of a more comprehensive cooperative development process. However, building the basic capacity of these agribusiness entities needs to happen prior to the development of the business plan. (b) The idea to include the costs for training in the business plan demonstrated to be only partially successful. Additional and regular training needs to be provided from the project. 	<ul style="list-style-type: none"> ▪ Support for development and supervision of BP elaboration and implementation will be provided under the project ▪ The project is taking the approach of making available a small amount of financial resources (RMB 15,000) to each selected agribusiness entity to be used to hire an agribusiness consultant to facilitate the preparation and the drafting of the BP and/or to undertake any necessary technical assessment and analysis in order to ensure the viability and solidity of the BP
<ul style="list-style-type: none"> ▪ Facilitators: Experiences from some of the WB-funded 	

⁴⁹ The core of the World Bank's support for poverty reduction in China and collaboration with the LGOP system at the central and provincial level since 1989 has been a series of six poverty reduction projects and three China poverty assessment studies. The six poverty reduction projects can be grouped into three themes. The first two projects (which began implementation in 1995 and 1997) adopted a complex multi-sectoral approach at the village level supported through a basic participatory approach. The second two projects (which began implementation in 2005 and 2010) adopted a simpler multi-sectoral approach at the village level supported through a much stronger focus on participation and community empowerment. The third group of projects (which began implementation in 2014 and 2015 and are still under implementation) focus on developing agricultural value chains that promote equitable organizational arrangements and increased incomes for the target households.

Lesson	How lesson has been incorporated in the Program
Poverty Alleviation Projects have experienced problems regarding unrealistic expectations placed on the facilitators hired by the project.	

Appendix 4: Detailed project description

1. The SPRAD-SS project has two main components: Component 1: Infrastructure development and climate-smart Production; and Component 2: Pro-poor Value Chain development. The two components are interlinked and provide the basis for integrated and coherent support for the development of the entire value chain – from production to final sale to the consumer.

Component 1: Pro-Poor Value Chains and Agribusiness Development (USD 178 million, 69% of project total costs; IFAD contribution: USD 68 m)

2. **Objective.** This component aims at promoting the sustainable inclusion of target poor households in profitable value chains by engaging with agribusiness entities (enterprises or cooperatives or other value chain actors such as supermarkets, traders, e-commerce operators etc.) on a fair and mutually beneficial way conducive to poverty reduction. The component includes three sub-components, namely (i) Development of Pro-Poor Value Chains; (ii) Value Chain Development Fund; and (iii) Value Chain Rural Finance Development.

3. **Justification.** The justification of this project component is based on a fundamental premise that a market-driven approach is needed to help target poor households sustainably increase their income and improve their livelihood. This is operationalized by public sector facilitation of *mutually beneficial* (win-win) contractual relationships between these households and agribusiness entities as part of a viable Business Plan (BP) which responds to clear market opportunities in sustainable value chains. This can be achieved by strategically combining public and private sector funds and advice to address target poor farmers needs in terms of access to market at competitive prices, technology and quality inputs, organization and scale, good agricultural practices, and affordable credit as well as post-production and marketing needs of the whole BP; and by creating incentives to the financial sector to expand outreach towards rural clients and become overall more competitive. In addition rural households are expected to benefit from fair employment conditions both on farm and off farm, transparent and equitable share of dividends and land rental arrangements.

4. **Theory of change.** The development hypothesis and theory of change is that poor farmers and households, through tailored support are primed to benefit (in terms of income, livelihoods, assets and social capital) as key actors in viable business arrangements/ models aimed at improved marketing and (quality) product enhancement to meet current market demands, and overall contributing at consolidating Government poverty reduction targets. This approach necessarily requires better organization and capacities of poor farmers, improvement of their technological and business skills, mutually beneficial and fair contracts with agribusiness partners, and access to financial services.

Sub-component 1.1: Development of Pro-Poor Value Chains

Activities

5. **Activity 1.1.1. Value chain mapping and meetings.** At very early stage the project staff with the support of private sector partners will carry out an *analysis/mapping of pre-identified sub-sectors and related value chains* in each county. This will include: (i) *market scoping* to identify subsectors and value chains with the highest returns and market prospects at county, provincial and national/export level and suitable for project target agribusiness entities and for including poor farmers in the value chain in a profitable and sustainable way; (ii) a *comprehensive mapping of key actors* (producers, cooperatives, agribusiness enterprises, traders, e-commerce platforms, supermarkets etc.) involved at different stages (inputs provision, production, processing, trading, retailing, export etc.) of these VCs at county/provincial and national level; (iii) *mapping of financial and non-financial (business*

development and technical) services available to support these VCs both from the public sector (e.g. extension services, certification, food safety, geographic indication, Government agriculture support funds and subsidies) and the private sector (private banks and financial institutions, insurance providers, agribusiness development service providers etc.).

6. The VCs analysis and mapping will be officially presented in project-facilitated VC meetings with the participation of all relevant actors operating in the same sub-sector and value chain, including representatives from coops, private sector enterprises, financial institutions (FIs) and public sector institutions. The objective of the meeting will be to discuss and validate key findings as well as agree on priority follow-up actions and investments to address common key challenges of the sub-sector. The latter can include both activities to be funded by the project (either through component 1 and/or 2) as well as by the Government through other projects. VC meetings can then be repeated with the frequency demanded by the participants.

7. Among the expected outcomes of these VC meetings are: (i) a common vision for the development of a particular VC by all its actors; (ii) trust building among the actors which is a pre-condition to strengthen business relationships; (iii) the validation of key investments to be supported by the project and/or by the Government both in terms of private (e.g. quality inputs, production technology and training) and public goods (e.g. infrastructure such as rural roads and village-level irrigation); and (iv) stakeholder sensitisation about the project strategy, approach and activities eligible for funding.

8. Activity 1.1.2. Stakeholder awareness and sensitisation. The participants of VC meetings will also be informed about the concept of linking agribusinesses to target households using the BP methodology and inclusive business arrangements. The process of generating eligible pro poor business ideas will be discussed during these workshops and related steps for the BP preparation and selection process will be explained. Sample proposals and the templates for submitting BP proposals will be shared. The multiple criteria against which the BPs will be evaluated will be transparently communicated.

9. Activity 1.1.3. Call for proposals and selection of eligible agribusiness entities. Every year (for the first three years of project implementation) the project will announce a call for business proposals (expression of interest- EoI), through all possible mass media channels and internet, inviting EoI proposals from interested agribusiness entities. After the public advertisement, the project staff will follow up at county level with the VC meetings participants to motivate them to apply and clarify any doubt about the process and the expected proposal. The EOI announcement will include the following information: priority value chains / commodities, priority geographic areas, profile of the households to be targeted by the proposal, eligible agribusiness entities, counterpart funding requirements, timeframe for proposed activities (up to 24 months), list of eligible cost to be supported by the project, deadline for submission of the EoI.

10. These EoI proposals will be presented in a simple template including: (i) background details about the agribusiness entity (e.g. Business or Cooperative registration); (ii) preliminary details about the business idea, including objectives, problem statement, proposed solution / actions, expected results; (iii) identification of business/commercial partners along the VC both downstream and upstream (e.g. product suppliers, input providers, buyers); (iv) number of project target households (registered poor) involved in the proposal and percentage out of total number of households (at least 50%); (v) description of the modalities through which poor households benefit from the proposal choosing from four modalities defined in project design: i.e. contract farming, on farm and/or off farm employment, shareholding and dividends, land rental); (vi) preliminary total cost disaggregated by category (investment/working capital/capacity building) and expected sources of funding of the proposal including own funds of the EoI originator.

11. *Selection of eligible EoI proposals:* Screening and shortlisting of the business proposals will be done by a *BP Evaluation Committees (BEC)* set up by the project in each county. The selection process will involve an initial screening of EoIs for eligibility and compliance with the call for proposal.

The screening process will reject proposals for the following reasons: (i) not meeting the eligibility criteria; (ii) not complying with call for proposal requirements; (iii) If the requested documentary evidence is not provided; (iv) if the Eol application is not completed and signed. If the proposal is rejected in the rapid screening, the county PMO will inform the applicant accordingly together with the reasons for rejection. Proposals that are rejected can be improved and re-submitted in subsequent calls for proposals.

12. Proposals that have passed the screening stage will be reviewed by the BEC on the basis of criteria and related scores (see below). If necessary a validation visits to the applicant will be carried out to check the information included in the Eol proposal. Selection criteria will address two main dimension of the proposal: (i) compliance with project requirements in terms of priority subsectors, poverty targeting (inclusion of required percentage of registered poor⁵⁰) and gender (inclusion of women and youth), eligible activities and counterpart funding (up to 50 points); and (ii) institutional and financial viability of the Eol originator (agribusiness entity) based on due diligence criteria aligned with the private sector and banking "standards" (up to 50 points) and of the proposed business proposal. A detailed scoring matrix will be included in the PIM.

13. The agribusiness entities and related Eol proposals selected will be ranked according to these criteria and related scores. Proposals with or exceeding a score of 70 points are considered approved and the originator agribusiness entities will be informed to proceed with the preparation of a detailed BP. Those with scores less than 70 points will be returned to applicants together with the declaration of negative result and the main reasons for failure. Proposals that are rejected can be improved and re-submitted in subsequent calls for proposals.

14. *Cooperative capacity building.* In the case of Eols submitted by cooperatives, if the main reason for the rejection is not the potential viability of the business idea neither its targeting focus but rather some key organisational and capacity weakness (e.g. in accounting and financial management) of the applicant entity, the project may decide to address this issue by facilitating a tailored capacity building package provided by specialised service providers. If the issue appears to be satisfactorily addressed the cooperative will have the chance to resubmit its proposal to the BEC without waiting for the subsequent call for proposals.

15. Activity 1.1.4. Support to Business Plans development. The project will make available a small amount of financial resources to each selected agribusiness entity to be used to hire an agribusiness consultant to facilitate the preparation and the drafting of the BP and/or to undertake any necessary technical assessment and analysis in order to ensure the viability and solidity of the BP. The preparation of the BP will involve the following actions: (i) data collection and analysis (ii) marketing and profitability assessment (iii) selection of target households (very important) (iv) identification of other business partners (v) financial planning, identification of financial sources (vi) implementation agreement with other stakeholders. The preparation of the BP should be carried out in a participatory way with frequent interaction with the target poor households expected to be engaged and benefit in order to ensure their actual buy-in and full understanding of BP business arrangements. Project staff, particularly the VC specialists, will be available to provide guidance in the process.

16. *Main elements of the BP:* The BP will describe how the agribusiness entity business will grow and progressively increase the profitability and sustain the inclusion of the project target households. It will present (i) the nature of business including forward and backward linkages to other value chain actors (ii) details about the proposed business model with project target beneficiaries (contract farming, land transfer and rental, shareholding and employment) and related supporting legal documentation (i.e. a template of the purchase contract with farmers, lease contract, dividends distribution policy, and employment contract); (iii) description of end market opportunities (expected demand in terms of quality and quantity) and proposed marketing channels (e-commerce, agents,

⁵⁰ In the project all individuals whose name happened to be registered in the National Poverty Registration System (NPRS) since 2014 are defined as "poor".

supermarkets etc.); (iv) BP objectives and expected results / targets; (v) specific measures adopted by the agribusiness entity to support the inclusion of target project beneficiaries, e.g. provision of technical advisory services and prefinancing of inputs and production costs; (vi) activity-based budget (up to 24 months); (vii) financial plan estimating the total BP costs and co-financing needs (viii) financial analysis; (ix) risks analysis; (x) gender equity and social inclusion strategies with specific focus on women and youth; (xi) Environmental sustainability and climate resilience of production and processing practices; (xii) baseline and M&E indicators (business, social, environmental/climate). An indicative Business plan outline is presented in the attachment 1 below.

17. Despite the fact that project support is limited to a period of up to 24 months, the BP is in fact an instrument to help the agribusiness entity to plan how to further develop its business. To this end the BP may present even longer projected growth targets in key areas such as market share increase; increase in profitability and return on investment; increase in the quantity of produce purchased from the target households; increase in the number of poor target beneficiaries linked to the business; increase in the total returns to the target households and increase in direct and indirect employment in the business. It may also include any enabling infrastructure requirements (e.g. rural roads, water supply and irrigation, land preparation) expected to be financed by the project and or the Government.

18. The detailed activities in the BPs will be divided into expenditure categories: (i) working capital needs including target farmers inputs and labour costs; (ii) market development investments including study tours, trade fair participation, certification, branding; (iii) training and advisory needs of target farmers and of the agribusiness entity; (iv) production-related on farm equipment and infrastructure (for target farmers); and (v) post-production equipment and infrastructure (for the agribusiness entity). A co-financing plan needs to be included in each BP indicating contributions from different partners: the BP originating agribusiness entity and farmers involved, financial institutions, business partners, Government and the project.

19. Each BP will include a detailed Work Plan to execute the activities within the proposed timeframe and a Disbursement Plan for project funds. Depending on the size and duration of the BP the disbursement will be split in two or more tranches. In order to receive the subsequent tranche the recipient agribusiness entity will need to submit supporting documentation of the expenditures incurred using the previous tranche linked to a progress report of physical activities and M&E indicators.

20. *Specific BP requirements.* The project should pay particular attention to the expected impact on target poor households by ensuring the inclusion in the BP of the following: (i) a baseline survey of the farmers who are going to engage in contract farming relationships with the agribusiness entity as part of the proposed BP as well as other target beneficiaries (women, youth), to assess their current situation and how the BP will improve it in terms of measurable quantitative indicators; (ii) evidence of fair and mutually beneficial contracts between the agribusiness entity and project target beneficiaries in the four benefit-sharing modalities identified in the project design; (iii) provision of adequate extension services and capacity building for the small-holder suppliers, either provided by the agribusiness or by specialized SPs or by the Government; and (iv) clear arrangement to meet production working capital requirements of farmers (either through project funds, a loan from a financial institution and/or from the agribusiness partner).

21. *Involvement of Financial Institutions (FIs).* As part of the preparation of the BP the agribusiness entity will consult with FIs to check their interest in funding the part of the BP cost not covered by the project. A formal BP review by a FI will be a necessary condition for the submission of the BP to the project for evaluation and final approval. For this purpose the project will establish agreements with FIs at county and provincial level. A list of these FIs will be provided to the agribusiness entity at the beginning of the BP preparation and, if necessary, contacts will be facilitated by project staff.

22. Activity 1.1.5. Selection and approval of viable Business Plans. Once finalised, BPs will be submitted to the county PMOs by the originating agribusiness entities. Every four months, or with the frequency that is deemed more appropriate, each County PMO will collect the BPs submitted in their

county and will forward them to the BP Evaluation Committee (BEC). The BEC will review the BP documentation and, if necessary, undertake field visits to validate the proposed activities and provide comments on or propose further adjustment.

23. The BEC will evaluate BPs on the basis of a set of *technical criteria* (agreed upon with the private and the financial sector) and related scores, including: (i) overall market potential and marketing strategy including marketing arrangements with formal or less formal partners (e-commerce platforms, supermarkets etc.); (ii) profitability and viability of the planned investment and activities from a financial and technical point of view: e.g. internal rate of return, incremental benefit/cost ratio, payback period; technical viability of proposed production and post production actions and investments; (iii) expected increase of beneficiary incomes from participating in the BP through one or more of defined benefit-sharing modalities (e.g. improved farmer gate prices, improved on-farm productivity hence production, land rent; dividends and wages); (iv) fairness and transparency of the contractual arrangements between the agribusiness entity and respectively the target poor farmers (i.e. contract duration, existence of a transparent price setting mechanism, suitable payment terms, risk mitigation measures including force majeure) and target project beneficiaries (wage and other contractual provisions); (v) gender and youth aspects: proportion of women and youth involved, impact on women's workloads, incremental earnings for women and youth; (vi) environmental/climate aspects: improvement of sustainable and climate resilient farming practices, (vii) soundness of risk (climatic, market etc.) analysis and inclusion of risk mitigation measures (e.g. different type of insurance) use of organic fertilizers, plant protection methods; and (viii) compliance with required level of BP cofinancing from agribusiness entity, with its own resources and/or through loans from other business partners (VC finance) or the financial sector (see 1.2 Value Chain Development Fund). A detailed 100 point-based scoring matrix will be included in the PIM.

24. During the BEC meeting, (i) BEC members will discuss and give individual score to each BP; (ii) The scores of the reviewers will be immediately aggregated and averaged and a ranking will be produced; (iii) the BEC will verify the final ranking of the BPs. Those BPs with or exceeding a score of 70 points will be assessed positively. Conversely, those with scores less than 70 points will be returned to BP originators for revision and possible re-submission in a later date.

25. Once cleared by the BEC, the BPs will be submitted for official approval to the *BP Approval Committee (BAC)* set up in each County, which will be chaired by the Head of the Leading Group (County Vice Governor) and include representatives of other relevant public institutions. Like the BEC the BAC will meet up to three times per year. After BAC approval BPs will be finally submitted to the Provincial PMO for no objection. This step is a key requirement to then proceed to the signing of the BP agreements.

26. *BP agreements.* A BP will involve at least two type of agreements: (i) an agreement between the project represented by the County PMO and each agribusiness entity which will briefly describe the main activities as part of the approved BP and related cost to be funded by the project according to the BP expenditure categories and cofinancing rules), their calendar for execution, progress indicators, financial management requirements, result-based disbursement schedule linked to the calendar of execution; (ii) a set of contracts or legal documentation between actors involved in the BP which will vary depending of the BP contents: e.g. a purchase contract between an agribusiness entity and individual farmers including all key sections (e.g. the supply of a specific quantity of products, of a specific quality, at a determined price with a agreed delivery schedule); an employment contract, dividends regulation, land rental contract. The project staff can facilitate, if necessary, the negotiation of this second type of contracts making sure that project beneficiaries are taking informed decisions and are well aware of the commitments are taking.

27. Activity 1.1.6 Business Plan implementation support. Upon the signing of the above-mentioned agreements, BPs will enter the implementation stage. The BPs will be implemented by each agribusiness entity according to the BP agreement and related approved BP. Project staff role will be focused on monitoring and supervision (both technical and fiduciary) and implementation support.

28. *The agribusiness role.* Each agribusiness entity will be responsible for properly managing the project funds disbursed by the project in combination with its own or borrowed funds to implement the BP agreed activities. Procurement of goods and services will be directly undertaken by each agribusiness entity which will also be responsible for financial management and keeping the supporting documentation. Notwithstanding, if appropriate for efficiency purpose, the project may facilitate clustering and bundling of BP activities (e.g. for a training which is relevant for a large number of agribusiness entities) in order to achieve economies of scale.

29. *The project role.* The main functions of the project during BP implementation phase will be to: (i) make available funds to each participating agribusiness entity according to the disbursement schedule included in the signed BP agreement; (ii) monitor the physical progress, the effectiveness and efficiency of activities implemented (training, technical assistance and business development services provided, extension support, quality of assets purchased etc.); (iii) ensure that each BP party is actually delivering according to its commitment and facilitate dialogue and conflict resolution between parties if necessary; (iv) monitor compliance with project targeting methodology and criteria to ensure that project target group are effectively included and participate as well as actually benefit from the implementation of BPs. This will be done on the basis of the baseline of indicators included in each BP which should be systematically updated as part of the monitoring function.

30. The project will also produce a number of knowledge products (guidelines, manuals, case studies and a collection of lessons learnt) to inform about good practices and so provide guidance to the Government and other stakeholders to replicate and scale-up the approach.

31. *Phasing of BPs.* Over the five year duration of the project it is estimated that a total of around 400 BPs (approximately 40-50 BPs per county on average) will be implemented, involving different types of BP originators (agribusiness enterprises, cooperatives including women coops, other VC actors). It is, however, important to highlight that the number of BPs is purely indicative and has been estimated just to assess the potential workload for project staff both at identification/selection and at implementation stage. The project target is expressed in terms of number of poor household members directly benefitting from the implementation of these BPs. Whether this is achieved through 400 or more/less BPs does not really matter.

Tentative BP phasing

Details of phasing	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Total
Project as a whole							
No of EoI proposals received	180	180	180	-	-		540
No of proposals selected and detailed BP developed	135	135	135	-	-		405
Total no of BPs ongoing	90	225	270	180	45	-	
At county (average)							
No of EoI proposals received	20	20	20	-	-		60
No of proposals selected and detailed BP developed	15	15	15	-	-		45
Total no of BPs ongoing	10	25	30	20	5	-	

Implementation arrangements

32. Activity 1.1.1 Value chain mapping and meetings envisage a lead role to be played by County PMOs, which will make available existing studies and plans on priority industries (subsectors), under the oversight of the Provincial PMO. The County PMOs will be integrated with VC specialists with strong agribusiness background and knowledge of the target industries (sub-sectors) who will help in the VC analysis and mapping and in the facilitation of VC meetings. In addition, project staff will seek the technical advice of the private sector partners (e.g. Alibaba-Rural Taobao) that will provide market intelligence for the market scoping part of the exercise.

33. Activity 1.1.2. Stakeholder awareness and sensitisation. This activity will be carried out by

County PMOs under the oversight of the Provincial PMO.

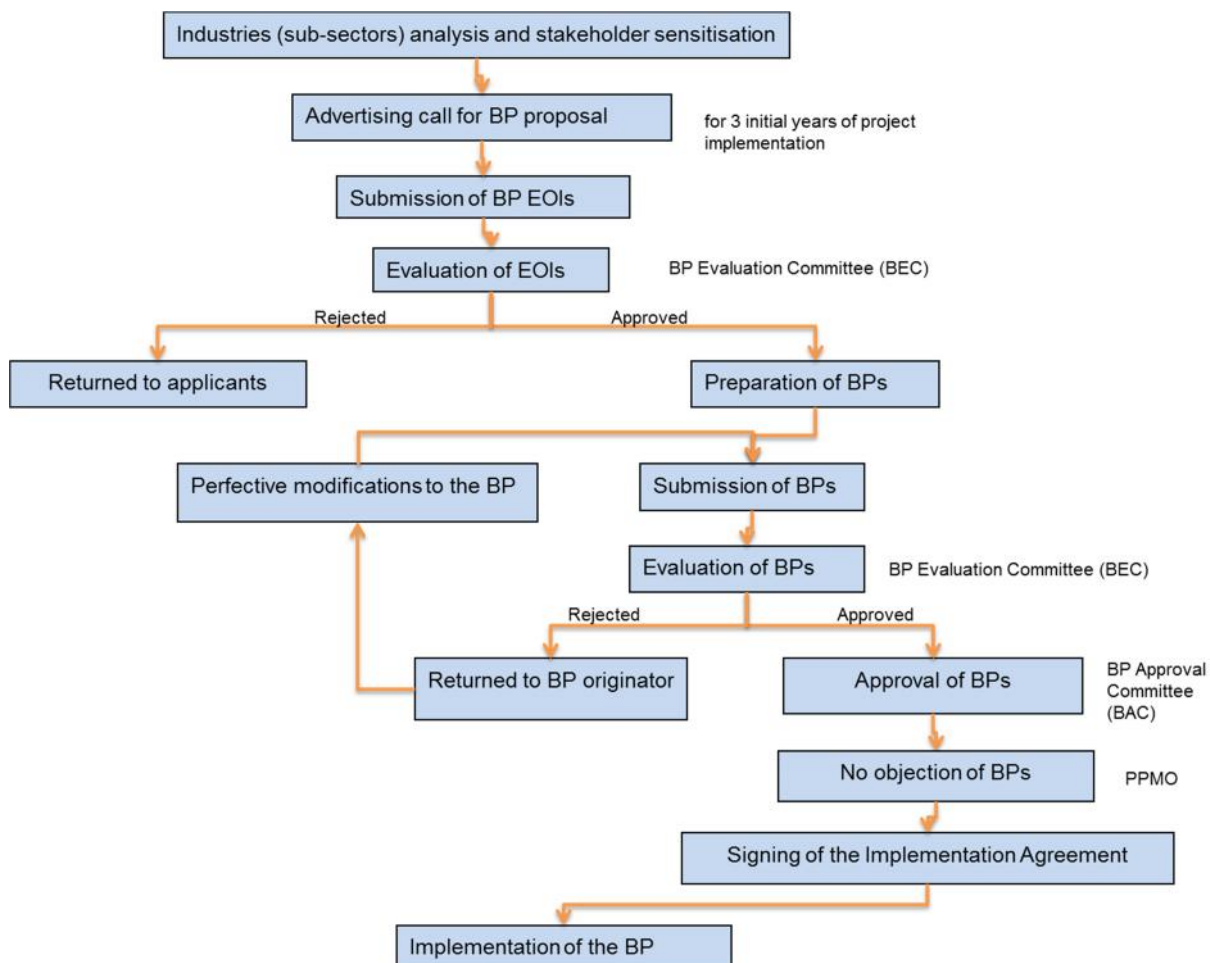
34. Activity 1.1.3 Call for proposals and selection of eligible agribusiness entities. The management of the call for proposals process will be the responsibility of county PMOs while the EoI proposals screening and selection will be done by a BP Technical Evaluation Committee (BEC) appointed by the project in each county. The BEC will include representatives from public institutions (e.g. the Poverty Alleviation and Development Bureau, a relevant technical Bureau) and external experts from the private and the financial sector. The final composition of the BEC will be defined in the PIM.

35. Activity 1.1.4: Support to Business Plans development will be the responsibility of county PMOs which will provide some financial resources to BP originators to develop their approved EoI proposals into full-fledge BPs. County PMOs VC specialists will also be available to provide additional technical advice to agribusiness entities in the preparation of the BPs. In addition, private sector partners (e.g. Alibaba Rural Taobao, Ant Financial) will provide support in the preparation of selected BPs where they see good potential for partnership (e.g. e-commerce, insurance).

36. Activity 1.1.5: Selection and approval of viable Business Plans will be the responsibility of the BEC at county level. County PMOs will submit BPs approved by BEC to the BP County Approval Committee (BAC) for official approval. The BAC will be chaired by the Head of the Leading Group, and will include representatives of other public institutions and of the beneficiaries. The final composition of the BAC will be defined in the PIM.

37. Activity 1.1.6: Business Plan implementation support. This will be under the responsibility of county PMOs, with the support of VC specialists, which will request regular reporting from agribusiness entities and will coordinate monitoring, supervision and implementation support work.

BP identification/ preparation/ selection process



Sub-component 1.2: Value Chain Development Fund

Activities

38. Business Plan funding. The project will have a financing facility called Value Chain Development Fund which will be used to cofinance BPs approved under subcomponent 1.1 according to the above-described process and criteria.

39. BP eligible activities. The BP should include all the activities and investments required to increase the profitability of the agribusiness entity as well as translate this into tangible benefits for the project target poor households engaged in that BP. The exact list of activities will depend on each case but in general a typical BP could include the following four expenditure categories:

- v. *Training and advisory activities*. The BPs could include training/capacity building and technical (extension) or business advisory services in areas such as: (a) supporting target farmers to adopt or upgrade their technologies and farming practices in order to meet market requirements and standards and cope with environmental sustainability and climate change. These services can be provided by the agribusiness entities, or by public institutions or by specialised service providers hired for this purpose; (b) enhancing capacities of other target poor household members who work for the agribusiness entity as labour force in either production, post-production or other functions; and (c) enhancing BP originating agribusiness entities organisational, management and market intelligence capacity enhancement. This support could be provided by private sector partners (such as the Alibaba Group) or by specialised service providers hired for this purpose.
- vi. *Production-support activities*. BPs could include: (a) on-farm investments required by target poor farmers to ensure a level of production that meets market requirements in terms of volumes and quality (on-farm irrigation schemes, small equipment etc.); (b) required one time (e.g. seedlings, piglets) or annual (seeds, pesticides, fertilizers, animal feed) inputs; and (c) collective productive assets (e.g. chicken or fungus shelters).
- vii. *Post-production activities*. BPs could include investment in post-production infrastructure such as collection centres, storage rooms, warehouses, processing facilities, transport, and post-harvest equipment for grading, sorting, aggregating, and processing produce.
- viii. *Marketing and branding activities*. BPs could include activities related to (a) branding (e.g. packaging and label design, geographic indication of origin), (b) marketing (e.g. business to business trips, participation in trade fairs) and (c) obtaining and/or renewing certification labels and comply with food safety or quality standards of buyer and/or of the end market (e.g. No Harm, Green, Organic, ISO, fair trade and others) to the agribusiness entities.

40. Rationale for public co-funding of BPs. One of the main principle of the project is the combination of public and private funds to maximise outreach and ensure efficiency. To this end during BPs' preparation, all possible financing sources, private and public, will be identified and contributions and disbursement schedule from each source will be defined. The rationale for the use of project funds to cofinance BPs stems from the pro-poor focus of the project as it mainly aims to provide an incentive to agribusiness entities to reach out poor households in remote target areas and offer them truly mutually beneficial relationships. In accordance to this rationale project funds, or at least the portion provided by IFAD, should be channelled on a grant basis to support expenditure categories i, ii and iv.

41. BPs cost-sharing rules. Each BP should include a co-financing plan indicating the contributions from different sources for financing the expenditure categories. This will include contributions from the

agribusiness entities and the farmers (private) and the project (public) according to the guidelines presented below. Contribution of the agribusiness entities and the farmers will be regarded as self-contribution from their own resources or from borrowings from FIs. (see preliminary proposal on Cost sharing of Investments in table hereunder. The final version will be included in the PIM).

BP Expenditure categories and cofinancing rules

BP expenditure category / Activity	Project funding ⁵¹ (%)	Agribusiness entity funding ⁵² %	Target poor people funding ⁵³
Training and advisory services	90%		
On farm technical (extension) advisory services for target poor farmers whenever public extension services not available	90%	10%	-
Training/capacity building to target poor farmers or poor household member participating in the BP	90% up to a maximum of RMB 700 per poor person	10%	-
Training/capacity building to the agribusiness entity	90% (up to a maximum of RMB 50,000 per agribusiness entity)	10%	-
Production inputs	90%		
Pro-poor kick-start package for target BP poor farmers engaged in contract farming: one-time inputs (e.g. seedlings, piglets, small chicken) provided <u>only</u> once	90%	-	10%
Pro-poor kick-start package for target BP poor farmers engaged in contract farming: annual inputs (e.g. seeds, fertilisers, animal feed) provided <u>only</u> for the first year	90%		10%
Production infrastructure and equipment⁵⁴	50%		
On-farm individual investments (e.g. irrigation equipment) required by target poor farmers	50% up to a maximum of RMB 3,000 per target poor farmer	-	50%
Pro-poor contribution for collective productive assets (e.g. chicken or fungus shelter, tea irrigation system)	Amount proportional to the number of target poor households involved in the BP (RMB 10,000 per person) up to a maximum amount of RMB 650,000 or 50% of the total investment	50%	
Post-production infrastructure and equipment⁵⁵	50%		

⁵¹ The amount and ceiling have been determined looking at experiences from other projects and in consultation with the provincial and county governments and agribusiness entities. For instance, one of the lessons of the World Bank-funded Shaanxi Poor Rural Areas Community Development Project, where a 20:80 co-financing ratio was applied for post-production infrastructure and equipment, was that the proposed ratio was not sufficient to attract private enterprises. Similarly, the decision to include post-production infrastructure/equipment among the expenditure categories eligible for project co-financing is drawn from the IFAD-funded SSADeP. In that project, the above expenditures are not eligible and this fact resulted in a limited interest from enterprises to apply for project funding. The ceiling of RMB 1 million is the same applied by the World Bank in the Shaanxi Poor Rural Areas Community Development Project.

⁵² Either with its own funds and/or by borrowing from the financial sector or business partners (VC finance).

⁵³ Either with their own funds or by borrowing from the agribusiness entity that purchases their products

⁵⁴ It should be noted that one of the conditions for financing post-production infrastructure and equipment is that the ownership of the assets purchased with project resources remain with the project beneficiaries, including through the pilot of a pro-poor equity sharing mechanism.

⁵⁵ It should be noted that the co-financing ratio (i.e. 50:50) and the ceiling (RMB 1 million) are minimum requirements

BP expenditure category / Activity	Project funding ⁵¹ (%)	Agribusiness entity funding ⁵² %	Target poor people funding ⁵³
Pro-poor contribution for investments on post production equipment (e.g. processing machinery) or infrastructure (e.g. storage facilities)	Amount proportional to the number of target poor households involved in the BP (RMB 10,000 per person) up to a maximum amount of RMB 1,000,000 or 50% of the total investment	50%	-
Marketing and branding activities	90%		
Branding	90% up to a maximum of RMB 10,000	10%	-
Trade fair participation	90% up to a maximum of RMB 15,000	10%	-
Certification cost <u>only</u> for the first year	90% up to a maximum of RMB 50,000	10%	-

42. Training and advisory services. This expenditure category will cover 90% of three types of activities with the remaining 10% to be financed by the agribusiness entity: (i) on farm technical (extension) advisory services for target poor farmers whenever public extension services are not available; (ii) training/capacity building to target poor farmers or poor household member participating in the BP up to a maximum of RMB 700 per poor person; and (iii) training/capacity building to the agribusiness entity (e.g. organisational, management and market intelligence) up to a maximum of RMB 50,000 per agribusiness entity.

43. Pro Poor kick start grant package. The package covers the initial size of the investment required by a target poor farmer to become a supplier of an agribusiness entity under a contract farming scheme⁵⁶. In other words it is the size of investment required to produce the quality and the quantity of product required for developing marketing linkage with the agribusiness for the first time according to the details in the BP. The package will cover 90% of the cost of one-time inputs for target poor farmers (e.g. seedlings, piglets) provided only once; and annual inputs for target poor farmers (e.g. seeds, fertilisers, animal feed) provided only for the first year. The remaining 10% is expected to be covered by the target farmers either through their own funds or through contract farming prefinancing arrangement with the agribusiness entity following a practice well established in the project area.

44. Production individual investments. This expenditure category will cover 50% of on-farm individual investments (e.g. irrigation equipment, agricultural tools and equipment) required by target poor farmers on their plot up to a maximum of RMB 3,000 per target poor farmer. The remaining 50% is expected to be covered by the target farmers either through their own funds or by borrowing from a financial institution or through contract farming prefinancing arrangement with the agribusiness entity.

45. Pro-poor contribution for collective productive assets. The pilot *pro-poor equity share mechanism* will also be applied to co-invest in productive collective assets (e.g. chicken or fungus shelters, tea irrigation system) include in approved BPs. The project will cofinance 50% of the total investment up to a maximum amount of RMB 650,000 (approximately USD 100,000)⁵⁷. The amount of project cofinancing will be proportional to the number of poor households involved in the BP (based on the list of beneficiaries attached to the BP): the agribusiness entity will be eligible to receive RMB 10,000 per poor household member involved up to the above-mentioned ceiling⁵⁸.

⁵⁶ This package will not be provided to farmers employed to farm a land which they have transferred to the agribusiness entity.

⁵⁷ The objective of this ceiling is to avoid that a single BP could potentially absorb the majority of the project funds allocated to a particular county. It has been determined as a result of close consultation with a sample of agribusiness entities and is also aligned with the practice of a similar WB-funded project in the country.

⁵⁸ This contribution may be provided through different mechanisms. One option is to provide it as a equity share per target poor household member involved in the BP. Giving farmers shares of a agribusiness entity is already a common practice in China

46. Pro-poor contribution for post production assets. It is expected that the more business-oriented part of the BP, i.e. post production investments, should be largely funded through private funds (either agribusiness entity own capital or by borrowing from FIs) or with the support of Government financial schemes (e.g. Poverty Reduction Investment Company). If, despite a viable BP, the agribusiness entity could not mobilise the totality of the required investment, the project would make available cofinancing through a pilot *pro-poor equity share mechanism*. The project will cofinance 50% of the total investment up to a maximum amount of RMB 1,000,000 (approximately USD 150,000)⁵⁹. The amount of project cofinancing will be proportional to the number of poor households involved in the BP (based on the list of beneficiaries attached to the BP): the agribusiness entity will be eligible to receive RMB 10,000 per poor household member involved up to the above-mentioned ceiling⁶⁰.

47. Marketing and branding. This expenditure category will cover 90% of BP costs related to branding (up to a maximum of RMB 10,000), trade fair participation (up to RMB 15,000) and the first year cost of one or more certifications (up to RMB 50,000).

Implementation arrangements

48. Implementation arrangements for activity *Value Chain Development Fund* envisage a lead role of the County PMOs which will sign an agreement with each agribusiness entity implementing an approved BP. Such agreement will formalise among other things the financial support of the project to the activities listed in the BP, the level of project funding of BP eligible activities, disbursement schedule of project funds linked to a Work Plan-based timeline and intermediate targets and M&E indicators.

Sub-component 1.3: Value Chain Rural Finance Development

Activities

49. Activity 1.3.1 Technical Support to the Rural Financial Institutions (RFIs) and Risk Compensation Funds from the county governments. Rural financial institutions technical assistance will support good practice lending processes, increased capacity to assess credit risk with internet and big data, and employ a wider variety of collateral. This will lead to improved capacity to sustainably expand lending to target beneficiaries. The outcome of the support will help to create sustainable sources of credit to poor households, cooperatives and small agribusiness (target beneficiaries) and to support production, processing and marketing activities.

50. Technical assistance support will be provided to relevant RFIs to improve credit access for rural smallholder and poor households, as well as cooperatives and small agricultural enterprises. The TA will support good practice lending processes and procedures within financial institutions, increasing their capacity to assess rural householder and cooperative lending risks. Improved lending will lead to an increased and sustainable supply of loan capital availability for target beneficiaries which will in turn lead to improved beneficiary income and asset development. This TA will improve credit risk evaluation and value chain financing analysis, as well as expand the scope of collateral.

51. *Credit Risk Evaluation and Value Chain Financing.* Improved credit risk evaluation and value chain financing will enhance target beneficiary access to capital by increasing financial institutions capacity to better assess risks underlying smallholder and poor household loans. TA will be provided to participating RFIs to more accurately and systemically identify borrower capacity to borrow.

when farmers give in their land to the agribusiness entity. Its application in the case of investments on assets will be piloted by the project initially in a small number of BPs and if successful will be replicated at larger scale.

⁵⁹ See footnote 53.

⁶⁰ See footnote 54.

Broadly, the TA project will have three components:

- Analysis of participating RFI credit risk/loan procedures processes, including loan officer incentives;
- Design and documentation of new loan procedures and processes; and
- Introduction and training on new loan processes and procedures.

52. Training could include centralized group workshops and/or study tours. Senior bank executives will be provided general training to ensure institutional support and appropriate TA design. The project will contract national and international experts to give structured workshops on credit risk evaluation and value chain financing. Experts will then be deployed to provide hands-on support to participating FIs to design and document new loan procedures and processes. The program can consider inviting non-participating RFIs to participate in workshops.

53. The project counties should mobilise fiscal resources to establish or top up risk compensation fund (RCFs) in favour of project beneficiaries including poor farmers, cooperatives and agribusiness. The RCFs will be established in project counties either directly through government-bank partnership or with additional participation of provincial or other loan guarantee companies. Commercial banks are responsible for selecting borrowers and approving loan. RFIs will be allowed to access the risk compensation funds to leverage loans with a ratio ranging from 8 to 10. In the case of default, credit risk will be shared by the local governments and the RFIs. The defaulting loans will be suspended if the default rate exceeds 5%. The main procedures for the set up and operation of RCFs are found below.

54. *Step One. Engage with the county RCC and county finance offices.* As the RCCs in the Project counties will likely be the major (possibly the sole) provider of credit to farmer, it is critical that the county project management office (CPMO) negotiates with the RCCs or other local banks the establishment or top up of a risk compensation funds (RCFs). Topics for negotiation will include RFIs lending rates of interest, loan size, terms and conditions and the definition of eligible borrowers. Estimated loan sizes for poor households, smallholder households and cooperatives should be considered and used to guide the definition of RCF caps for each borrower type (note: caps should be flexible to allow for adjustment according to demand - see step 3 below). Subsequently, the RCFs amount will be estimated based on the projected requirement of commercial loans by the business plans to be supported by the project. To maximize RCCs participation, lending criteria should closely align with current lending RCCs practices. The project will develop a short operational manual with the input of the RCCs and other relevant stakeholders.

55. *Step Two. Selected participating RFIs:* Together with county level finance office, the project will develop a set of criteria for RFIs participation. All formal RFIs should be considered including microfinance institutions. The criteria should ensure appropriate incentives to participate and disincentives for inappropriate lending and moral hazards. Lending terms and conditions will be spelled out as per above and RFI overall lending targets and targets by borrower type should be developed. RFIs will be allowed to participate on the basis of these agreements and a commitment to follow the project operating manual.

56. *Step Three. Select project borrowers—The project will target the four categories of agribusiness entities:*

57. Poor rural households. All registered poor rural households meeting the following criteria will be eligible for a credit guaranteed loans from RCCs:

- Reside in project county;
- Proposed use of funds is for productive purposes with potential to generate sufficient income to repay loan;
- Provides applicable (lower) collateral requirements or collateral substitute; and
- Have no outstanding and/or very low balance loans from formal financial institutions, including RCCs and no loans outstanding from informal sources.

- Household beneficiaries of value chain support activities (usually cooperative members) meeting these eligibility requirements will be proactively encouraged to access RCFs loans. Other more specific requirements may be developed during the project negotiations.
58. Rural smallholder households. Smallholder households meeting the following criteria will be eligible for a RCFs loans:
- Reside in project county;
 - Proposed use of funds is for productive purposes which the potential to generate sufficient income to repay loan;
 - Provides applicable (lower) collateral or collateral substitute; and
 - Have no overdue loans and/or very low balance loans from formal financial institutions, including RCCs and no loans outstanding from informal sources.
 - Smallholder household beneficiaries of the value chain support activities meeting these eligibility requirements will be encouraged to access RCFs loans. Other more specific requirements may be developed during negotiations for the project.
59. Cooperatives. Cooperatives meeting the following criteria will be eligible for a RCFs loan:
- Operate in project county;
 - Registered as a farmer cooperative and engage in farm production, and/or agricultural product processing and/or marketing;
 - Have a clear ownership structure and good governance;
 - Have audited financial statements (or equivalent), a business plan and clear business strategy;
 - Have adequate equity capital, preferably equity investments from members;
 - Proposed use of funds for productive purposes which the potential to generate sufficient income to repay loan; and
 - Have no loans overdue from formal or informal financial institutions, including RCCs.
 - Preference will be given to cooperatives participating in BP supported activities and contracting with registered poor households.
60. *Step Four – Ensure Continuous Loan Access*: Project beneficiaries who have successfully repaid a loan(s) on time should be granted access to a second loan from participating RFIs. RFIs shall register all beneficiary borrowers into the credit bureau system of the Peoples Bank of China (PBC). Once loans are successfully repaid, RFIs should be in a position to provide credit based on client credit history and financial services relationship. As a general rule, borrowers should not require a guarantee on a third or any subsequent loan. The RCFs, in association with participating RFIs, will negotiate a deadline for granting loans provided by the project (e.g., towards the end of the fourth year of project operation).
61. Monitoring and Evaluation of RFIs Technical and Institutional Support. Monitoring and evaluation of the RFIs technical assistance program should focus on the evaluation of both the implementation and subsequent performance of changes to procedures and processes. During implementation, RFIs officers should be required to provide and share monthly reports detailing design and implementation challenges (e.g., management, systems and human resource challenges). Failure to provide monthly reports should result in the suspension of technical assistance. RFIs will not be required to share proprietary information. It is recommended that the technical workshops and shared RFI experience be compiled in a set of knowledge products and made available online for other RFIs. Evaluation of the RFIs institutional assistance program should focus on both the default risk performance and amount of the RCFs loans. The RFIs will provide monthly volume and performance data to the CPMO and PPMO. Details of reports can be negotiated and should be simple and streamlined and include inter alia, number of loan applications, successful loan applicants and default rates. Failure to provide reporting will result in the suspension of the risk compensation funds

to the applicable participating RFIs. Loan performance criteria agreed to at design and contracted during implementation will guide lending operations oversight and monitoring. It is recommended once non-performing loans (or loan payments overdue in excess of three months), overall, or in any one of the four borrower type categories reaches 5%, lending should be suspended for that category of borrowers. Lending can resume once non-performing loans falls below 5% (overall or by type). Lending should also be suspended for each beneficiary category once predefined volume limits have been reached, though this should be flexible based on experience and pipeline projections for borrower type categories.

62. Activity 1.3.2 Financial Literacy Education for Farmers and Financial Management Capacity Building for Agribusiness Entities. A financial literacy education and financial management training program will be carried out to support target beneficiaries to identify and assess the credit worthiness of their economic activities as well as their capacity/confidence to apply for credit. The training project will use workshop, leaflet and on-line app and will target low income agricultural producing households. It will have the objective of increasing beneficiary capacity and confidence to identify and then borrow for credit worthy productive activities. The above training project will achieve the objective by improving (i) beneficiaries' quality of demand for credit and insurance; (ii) their income development and asset accumulation; and (iii) their qualification to obtain loans from banks. It will also strengthen value chains by improving the quantity and quality of supply to enterprise and alternative marketing actors. The development of the project includes three steps:

63. *Step One.* The program will contract national and/or international inclusive finance literacy experts to design financial literacy project workshops focused on:

- Assessing the income potential of a proposed productive activity and whether income can support a loan; and
- Outlining the steps to prepare for and make application for a loan; and
- Introduction the channels and steps to apply for a loan online (such as P2P, online credit); and
- Forming good habit of saving; and
- Understanding life insurance, property insurance and risk diversification; and
- To ensure accessibility of financial literacy project, the experts will also contract popular education experts to assist in program design and materials; and
- Building up the minimum required capacity to qualify beneficiaries for business plan implementation and lending from banks; and
- Improving the financial management capacity and accounting practice of agribusiness entities.

64. *Step Two.* Once designed, the workshop will be piloted in two to three counties. Adjustments and revisions will be made and the program finalized.

65. *Step Three.* Once finalized, the workshop will be converted into an on-line application. The application will provide financial literacy and financial management training courses, the completion of which will be verifiable. The development of the application will require contracting a national specialised service provider. Distribution of the application will be free and some of the county RFIs will be encouraged to require smallholder and poor household clients to successfully complete the application training. RFIs will be encouraged to provide access to a smartphone for clients who do not own one. Fintech companies (such as Ant Financial, JD finance, We chat group) will be encouraged to participate and develop on-line app, training courses and or on-line loan applications. The financial management training project can also be implemented through the local chambers/associations of enterprises and cooperatives.

66. Activity 1.3.3 Innovative Insurance Projects for Farmers. The program will introduce agricultural and life insurance to target farmers to enhance coverage and resilience against weather –related events, accidents and illness shocks. The insurance intervention includes four parts:

- a) TA to insurance companies to evaluate value chain risk and to develop new (or adapt existing) products to address value chain risks;
- b) TA to insurance companies to design innovative agricultural insurance for certain regional products;
- c) Insurance premium subsidy to increase insurance repayments for selected crops and livestock; and
- d) Accident and life insurance premium subsidy for targeted poor households to prevent them from falling back into poverty.

67. The intervention strategy focuses on risk transfer and insurance products, as part of a comprehensive strategy to increase the resilience of poor farmers and to support sustainable increases in productivity. The agricultural insurance program will select the crop and livestock insurance subject according to the target agribusiness. Appropriate insurance premium subsidy will be distributed to poor farmers participated in the target agribusiness for enhancing insurance amount or purchasing insurance. Commercial insurance companies will be encouraged to development new insurance products responding to the absence of feasible insurance products.

68. Based on the investigation on the existing rural social security system and the local government's policy life insurance support in each county, the program can provide appropriate subsidy for target poor households in partnership with the commercial life insurance companies to top up the insurance amount. After the increase in income of poor households and improved ability to resist risk of insurance company, the subsidy will be gradually reduced and finally cancelled.

Implementation arrangement

69. Technical Support to the Rural Financial Institutions (RFIs) and Risk Compensation Funds from the county governments. The project will contract national and international experts to give structured workshops on credit risk evaluation and value chain financing. Experts will then be deployed to provide hands-on support to participating FIs to design and document new loan procedures and processes. The program can consider inviting non-participating RFIs to participate in workshops. The project counties should mobilise public funds to establish or top up risk compensation funds (RCFs) that eventually will enhance the access of project beneficiaries (poor farmers, cooperatives and agribusiness) to rural finance. A joint commission including representatives from the County Bureau of Finance, County Poverty Alleviation Office and related RFIs has already been established to monitor the operation, management and use of the RCFs. As of the end of 2017, the existing financial capacity of the RCFs in each project county ranges between RMB 10 and 40 million. SPRAD-SS will hence take advantage of existing schemes and practices through which County governments will make available the required RCFs funding to facilitate bank lending to agribusiness entities participating in the project.

70. Financial Literacy Education for Farmers and Financial Management Capacity Building for Agribusiness Entities. This activity will be implemented by national and/or international experts covering the three steps mentioned in the description of the activity above. To ensure accessibility of financial literacy and financial management project, the project will contract education experts to assist in program design and materials.

71. Innovative Insurance Projects for Farmers. This activity will be implemented by the specialised insurance company competitively selected by the PPMO. The insurance broker will be employed to facilitate the implementation of the insurance projects by the PPMO if necessary.

Component 2: Public Infrastructure and Services (USD 72 million, 28% of project total costs; IFAD contribution: USD 1.3 m)

72. **Objective.** This component aims at improving the access to public goods and services (common/village infrastructure, access to climate change adaptation/mitigation best practices, normative and regulatory services associated with food safety) in the targeted project area through a combination of physical improvement, institutional strengthening, technical assistance and policy advisory, in order to promote sustainable, climate resilient and food safe agricultural production.

73. **Justification.** The justification of the component relates to (i) the existence of insufficient village infrastructure that is required to expand agricultural production, enable value chain development and improve rural livelihoods; and (ii) need for public services allowing to improve the agricultural production in terms of climate change adaptation and food safety issues.

74. Investigation in the targeted project counties revealed some gaps in infrastructure conditions, which may limit implementation of the proposed agribusiness development and poverty alleviation activities, including: incomplete rural road networks, underdeveloped and deteriorated irrigation and drainage systems, lack of safe drinking water and electricity supply facilities, segmented and sloping cultivation lands preventing mechanization and enhancement of water use efficiency as well as causing soil and water erosion. Improved village level infrastructure and public services delivery will allow poor small scale producers to (i) expand and improve agricultural production in line with market requirements, (iii) improve local livelihoods and (iii) enhance resilience to climate-driven shocks and safety of production.

75. Improved food safety systems together with pest management and disease control and food quality management systems will (i) improve the value and quality of food products under the project; (ii) improve the food safety of food consumed by beneficiaries in the project thus contributing to improved quality of life; (iii) with appropriate marketing channels and strategies, increase the volume, value added and net benefit to poor producers in the projects area; (iv) build confidence of the producers, processors and consumers on the products from the project area so that the reputation will be improved thus contributing to more sustainable rural development; and (v) increase beneficiaries income above the poverty line in a sustainable way thus reducing the chances of falling back into poverty.

76. **Theory of change.** The theory of change linking this component to the Program Development Objective is as follows: improved food safety systems as well as cleaner and climate-smart production will (i) attract higher-income and larger client basis that are willing to pay a premium price for better and safer agricultural products; (ii) that will translate into higher sale value and income for enterprises and cooperatives supported by the project; (iii) improved benefit-sharing mechanisms within pro-poor public private partnerships will ensure higher portion of this increased income to project beneficiaries; and (iv) this will ensure more sustainable poverty reduction for beneficiaries.

Sub-component 2.1: Climate-smart Infrastructure Development

Activities

77. As the major road, water and power supply infrastructure systems in the targeted project areas have been covered by relevant government investments, and specific production and processing infrastructure of agribusiness entities will be included in their respective Business Plans under Component 1, this Sub-Component will mainly address the gaps of the village level public infrastructure systems to support the proposed agribusiness development. More details are provided in Appendix 4 and in WP 1.

78. Activity 2.1.1 Improvement and development of irrigation systems. This activity would support development and rehabilitation of: (i) 116 km water delivery pipeline; (ii) 5 pumping stations; and (iii) 147.15 km irrigation and drainage canals. These interventions would develop 3,220 ha new irrigation area and improve 1,507 ha existing irrigation area, hence contribute to agribusiness development and poverty reduction in the project area, through enhancing agricultural productivity, agriculture diversification and climate resilience.

79. Activity 2.1.2 Improvement and development of water source facilities. this activity would support improvement and development of: (i) 86 water ponds; (ii) 4 tube wells; (iii) 12 water pools; and (iv) 7 small weirs. These interventions would secure water supply to irrigation and water supply systems.

80. Activity 2.1.3 Development and improvement of safe drinking water supply systems. This activity would support: (i) development and improvement of 130 km water supply pipelines; and (ii) development and improvement of 35 water storage ponds. These interventions would enable easy access to safe drinking water for a total of 26,265 rural population and 14,840 livestock in the project villages.

81. Activity 2.1.4 improvement and extension of power supply systems. This activity would support: (i) improvement and extension of 129 Km electricity lines; (ii) establishment and rehabilitation of 7 transformation sub-stations; and (iii) replacement of 3 transformers. These interventions would bring enable electricity supply to irrigation systems, agro-processing plants and rural households in 22 project villages.

82. Activity 2.1.5 Development and improvement of rural roads. This activity would support: (i) improvement and pavement of 492 Km concrete village roads; (ii) development and improvement of 270 km gravel production roads; and (iii) development and improvement of 30 km earth access roads. These interventions would improve road access and hence serve both the agribusiness cooperatives and other local farmers in 265 villages located in 64 project townships.

83. Activity 2.1.6 Land preparation. This activity would support: (i) terracing of 287 ha cultivated slope lands; and (ii) levelling of 1,527 ha farmlands. These interventions would benefit 34,800 rural HHs in 100 project villages, and also provide public goods in soils and water conservation.

84. Activity 2.1.6 Support to infrastructure O&M. Public infrastructure systems need relevant institutional arrangement and proper mechanism for sustainable O&M after completion of construction. This activity would support establishment and strengthening of infrastructure O&M organizations, including water users' association and other infrastructure management groups, through construction of office buildings, procurement of furniture and office equipment, provision of technical assistance, and organization of workshops and meetings and training to O&M organizations and beneficiary farmers on O&M of infrastructure systems.

Implementation arrangements

85. These activities will be implemented at selected sites in the project counties in south Shaanxi Province, based on local infrastructure constraints and the project agribusiness development needs. The Provincial Project Management Office under the Provincial Development and Reform Committee (PDRC) will be responsible for overall supervision and coordination. Its sub-ordinate offices at prefecture level will be responsible for direct supervision and coordination of sub-component activities within their respective prefectures. The sub-ordinate offices at county level will be responsible for detailed implementation of sub-component activities within their respective counties.

86. Specific interventions initially identified under this sub-component are subject to further confirmation and adjustments during the project implementation, following the same selection criteria applied during the project preparation: (i) compliance with relevant government policies, plans and guidelines; (ii) contribution to achievement of the project objectives; (iii) availability and good potential

for land and water resources development; (iv) readiness of external major infrastructure systems/networks; (v) willingness of local villages and beneficiaries to take over O&M responsibilities; (vi) technical, economic, social and environmental feasibilities; (vii) incorporation of climate change conditions; and (viii) reasonable scope and cost considering the overall project size.

Sub-component 2.2: Public services and regulations for pro-poor agribusiness development

87. Activity 2.2.1 Extension service enhancement. Agricultural technological extension in project counties is carried out primarily by the Bureau of Agriculture (BOA) and township agricultural comprehensive service stations. The institutional setup of BOA in each county might vary but the functions and services offered are identical as crop and livestock production technological extension, agricultural mechanization, rural economy management and agricultural product quality and safety testing. In addition to agricultural development planning and the implementation of central and provincial government agricultural development and extension programs, BOAs often with the support of township extension stations carry out extension services tailored to meet the needs of local farming communities, including demonstration of new farming techniques adapted to local agro-ecological systems and climate conditions and new crop varieties. According to data provided by project counties, there are about 1,200 extension agents under the umbrella of BOAs and their extension activities are funded by government regular allocations and/or ad hoc programs.

88. At township level, the agricultural comprehensive service center, in addition to assisting BOAs implementing national and provincial programs, offers technical services in crop and livestock production, water resource management and forestry to farmers in villages, while the organizational setup might differ among townships. Staff size of township centers varies according to the area and farming population each serves, ranging from 10 to 20 professionals. Being an actor closest to the audience, the township center interacts directly and frequently with farmers in villages to address specific technical issues confronted in daily farm production activities, provide advices on farming practices including cultivation techniques and pest management. Township centers also have simple laboratory with rapid testing and analysis instruments and agents for testing the quality and safety of agricultural products of farmer cooperatives/agro-enterprises. In some townships, each village has a township extension agent assigned, who delivers service, reports the use of banned chemicals and mobilizes expertise to address technical issues that are out of his/her competency. According to estimation of township extension agents, about 80% of farmers in a village receives services and/or training offered by township extension center.

89. Training of farmers is implemented through a number of initiatives including the central government's "New Type of Career Farmer Training Program" carried out through the agricultural broadcast and television school system, local agricultural administration programs and ad hoc training to resolve specific farming issues of local areas. The national training program of new career farmer focuses on training of large farmer households, youth and returned migrant workers to become career farmers such as family farm owners and/or farmer cooperative head. Each county has its own annual target of training, for instance, Shanyang County will train over 100 farmers in 2017 through the national program.

90. Members of farmer cooperatives, agro-enterprises and large households of crop and animal production are also served by the grassroots extension network, in addition to more specific technical training on farming techniques and skills in order to meet the quality, safety and uniformity requirements of entities. Modalities of training include classroom training, on-site hands-on training and visiting demonstration households in villages. According to local practices, 1 out of 10-15 farmer households in a village is selected as demonstration household to help fellow villagers observe and learn farming technique, cultivation of new crop varieties and pest management, forming an informal and effective farmer-to-farmer extension web.

91. It is compulsory for all agricultural extension agents to attain 80 hours of refreshing training annually, and each agent can choose the field of expertise to pursue improvement based on their own specific needs of career development. Study tour to other provinces and short courses in universities and research institutions are among the options available.

92. Discussions with officials and technicians of BOA and township extension center revealed that there was very limited awareness and knowledge about adaptation to climate change in crop farming even though changes in temperature and precipitation have been felt on the ground in the past decade. Research in this respect is on-going in universities and agricultural research institutions and some efforts have been made in Northern Shaanxi in the Loess Plateau to experiment new farming practices to cope with climate change for scaling up, but not yet in the project area in Southern Shaanxi.

93. This set of activities aims at enhancing grassroots agricultural extension services through capacity building and service scope expansion to incorporate screening, training, demonstration and scaling-up of climate resilient crop and farming techniques in extension service, including: (i) development of climate resilient agriculture training materials; (ii) training of trainers; (iii) introduction of good practices; (iv) demonstration of recommended good practices; and (v) development of knowledge product that will capture the successful demonstrations and experiences for sharing even beyond the project area in Southern Shaanxi. Training of farmers will be provided by trainers of county, township and farmer cooperatives/agro-enterprises through government regular training programs and initiatives of cooperatives/agro-enterprises, and such training will be delivered through multiple modalities inter alia hands-on coaching, on-site interactive discussion and farmer-to-farmer extension with demonstration households serving as anchors.

94. The project will provide 6 man/month TA to enable expert(s) in climate resilient agriculture to develop tailored training materials in line with the agro-ecological systems and trend of climate change in the project counties. The China Northwest Agriculture and Forestry University and other research institutions in Shaanxi have been conducting research and experiment in the project area for some years and are preferred sources of expertise. An additional 2 man/month of TA will be provided to the expert(s) to train 900 trainers from project county BOAs and township extension service centers and farmer cooperative/agro-enterprise, roughly 100 trainers from each county. Trainers will then provide technical training to farmers either through government sponsored training programs or through farmer cooperative/agro-enterprise training initiatives. However, in terms of the number of farmers to be trained, it is difficult to estimate for the time being, which will largely depend on: (i) the number and size of the BPs the project will support; and (ii) the number of villages BOA and township extension agents normally cover in their routine extension services. Nevertheless, through grassroots extension network including the established demonstration households in villages, it is foreseeable that a large number of farmers will partake in and benefit from climate resilient agricultural practice training.

95. With technical support of expert(s) and trainers, BOAs of the 9 project counties will carry out 27 demonstrations of climate resilient agricultural practices including new and improved farming techniques and testing new crops and new crop varieties with good adaptability to climate change in the project area. Each county will select 3 sites that should represent different types of micro climate conditions of the county, as such, successful demonstrations would be then replicated in larger area in the counties. In addition, counties are encouraged to share and make good use of the results of demonstrations where applicable to expand the impact of demonstrations.

96. Activity 2.2.2. Enhancing traceability of food production and processing. The activity aims at enhancing traceability of agricultural production and processing done by project beneficiaries and in project target areas. Although traceability does not necessarily have a food safety role, it is a critical and effective tool to promote food safety. Traceability is defined as the ability to follow the path of a pathogen (or the origin of food, feed ingredients and food sources) through all stages of production, processing and distribution. The project would focus on production and processing stages only. The increased traceability could i) reinforce emphasis on prevention, in conjunction with Good

Manufacturing Practices (GMP) and Hazard Analysis and Critical Control Points (HACCP) instead of reacting to food safety breaches; ii) enable businesses to monitor and defend against risk in real time; iii) increase market penetration and reduce operating costs through making informed decisions; iv) contribute to promptly identify and remove unsafe products from market; and v) improve branding through increasing customer confidence⁶¹. Building on the existing, pilot county-level initiatives of traceability system establishment⁶², the project would introduce or enhance traceability through (a) establishment of information system including software development and equipment provision; (b) training and awareness raising of producers, processors and relevant monitoring and implementing authorities on traceability. The overall implementation of Activity 2.2.2 will be led by the Department of Agriculture⁶³, its county-level Bureau of Agriculture and township-level Agriculture Comprehensive Service Centres in collaboration with the provincial China Food and Drug Administration (CFDA) and provincial Chinese Centre for Disease Control and Prevention (CCDC) and their county level Market Supervision Bureau and Food and/or Drug Administration (the institutional setup varies among counties).

97. Establishment of traceability system. The project would focus on building a traceability project of max 3 agricultural products which are supported by the project's BPs. Among available technologies, the project would particularly explore the use of QR code⁶⁴ (quick response code) to build a system which is easy to use, to record the accurate information at any time of production, processing and transportation stages, and to assign a unique identity to each product. The project would invest in the following areas: (a) to conduct a detailed analyse of steps/processes of production and processing (ex. cultivation –seeding and soil preparation, seeding period incl. planation and tillage, growth period – frame building, picking, protection, harvest -; storage; and logistics); (b) to organize a technical workshop per product to decide on the breadth of information to be recorded; depth of layers of the food chain to be covered; and level/extent of detail of the information. The workshop would be participated by provincial and county officials, private sector (enterprises and e-commerce business such as ALIBABA), and cooperatives. Technical specialists and researchers who are experienced in designing and applying the QR code based traceability system would be also invited; (c) to plan and design a traceability system (system architecture) covering each part of system such as input, data management, output, query and auxiliary systems. This traceability system development will be implemented by a research team comprising of start-up IT businesses, research institutes, and/or technical specialists experienced in the development of QR code system and the traceability of agricultural products.

98. *Training and awareness raising of producers, processors and relevant monitoring and implementing authorities on traceability.* Two types of training would be organized by the project: one is on traceability in general to promote the adoption of traceability system by producers and processors, and the other is on the QR-code based traceability system established by the project (see the above para). Specifically the project would invest in the following areas: (a) development of training materials on traceability and the project's traceability system by contracting national consultants and engaging the research team who developed the project's traceability system; (b) training of trainers and outreach producers and processors through trainers; (c) site visit or knowledge

⁶¹ Source: International Trade Centre, Traceability in food and agricultural products Bulletin 91/2015.

⁶² In Shangluo prefecture, one of three project target areas, a pilot traceability project is attempting to build a QR code platform –with the budget of 500,000 RMB- and, requested by BoA, trying to include characteristics of county in the traceability system

⁶³ The Ministry of Agriculture is responsible for the supervision and management of agricultural food products before they are placed on the market, or at manufacturing or processing facilities. Once agricultural food products are on the market, the supervision and management of food safety responsibility is under the Chinese National Center for Food Safety Risk Assessment (CFDA). General Administration of Quality Supervision, Inspection and Quarantine of the PRC (AQSIQ) is responsible for the supervision and management of food packaging materials, containers and tools for food production and trading. AQSIQ is also responsible for the safety, testing and management of food imports and exports.

⁶⁴ The QR code has the following characteristics and benefits: achieving symbolization of large volume of information; saving spaces for printing; 360-degree high-speed reading capability. In July 2001, QR code as registered as a Chinese national standard. Source: Construction of Melon Traceability System based on QR Code for Shunzi Vegetable Cooperatives, MSMI 2015.

exchange workshop with DOA and developers of the QR-code based traceability system and agricultural cooperatives who adopted and applied it in production and processing stages; and (d) preparation of traceability promotion campaigns among producers and processors. This training and awareness-raising activity will be implemented by DOA and county-level ACSCs.

99. Activity 2.2.3. Risk-based inspection of foodborne risks on project-supported products. The activity aims at ensuring safety of project-supported agricultural product or food at the production and processing stages by monitoring of foodborne risks. Foodborne risks include chemical risks related to pesticides or food additives, and microbiological risks due to bacteria, parasites or viruses. According to FAO and WHO, the dimensions of national food control system contains five elements of food law and regulations, food control and management, inspection service, laboratory services and information, and communication and training. Among these five dimensions, the project would focus on the inspection as well as laboratory service and information on foodborne risks of products and processing being done through implementation of project-supported BPs. This focus is on the basis that enhancement of law/regulations and management systems will be better addressed through projects particularly focusing on these specific areas.

100. To improve monitoring of foodborne risks, the project would support: (a) analysing hazards specific to a product, planning of critical control points per product supported by the project and identifying control measures. This enables the activity 2.2.2 focuses on prevention rather than testing on end-product, and prepares project beneficiaries to be better eligible for the application of food safety certification such as HACCP; and (b) risk-based inspection and laboratory service on analysed foodborne risks or hazards identified per product through sampling.

101. Analysing hazards specific to a product, planning of critical control points per product supported by the project and identifying control measures. To develop surveillance system, the project would focus on the following support: (a) two national experts will be recruited to work with CFDA and DOA in both microbiological issues and chemical contamination issues set up the surveillance system at the county level, identifying reportable disease list per product and control points through production and processing stages; (b) a stakeholder meeting to kick off the concrete collaborative activity on surveillance system development and maintenance will be held at the beginning of the project; and (c) development of manuals/ guidelines to strengthen surveillance of production and processing of project supported BPs and dissemination of such information to the local officers through training and a workshop. PPMO would lead the implementation of this activity in close collaboration with each relevant agencies (CFDA, MoA, MoH and CCDC).

102. Risk-based inspection and laboratory service on analysed foodborne risks or hazards identified per product. Prevention is the focus of this activity and advocacy of modern risk-based inspection. To strengthen risk-based inspection and laboratory service, the project would invest on the following areas: (a) a specialist will be recruited to stock-take on the inspection-related activities so that the roles can be articulated to clarify relationships between all ministries/agencies/department involved in food-related inspections; (b) the specialist to assist MoA in assessing the current primary food production controls so that development of inspection techniques for primary production controls, including the development of processes, checklists and guidance document.; (c) to train the food inspectors – this may best be achieved with the joint training of MoA and MoH involving both CFDA and CCDC. Commodity and facility-based food inspection trainings in the format of training-of-trainers will be organized, by recruiting three international experts on the top 3 priority food safety issues on inspection categorization and methods of sampling, as well as food safety components of the new curriculum for training inspectors. The training also has a sub-component in training of the private enterprises so that they would clearly understand what elements are important when inspection is conducted.

103. The Activity 2.2.2 will be implemented by DOA⁶⁵ and its county-level ACSC in collaboration with the provincial China Food and Drug Administration (CFDA) and provincial Chinese Centre for Disease Control and Prevention (CCDC). When the needs for pesticide residue inspection are identified for a specific product (through this activity), the Institute for the Control of Agrochemicals (ICAMA) under the Ministry of Agriculture will be responsible for pesticide quality control and residue monitoring. To avoid constraint of staffing, the project would consider to integrate a third-party testing as well in addition to lab services to be done through national lab systems.

Implementation Arrangements

104. Extension service enhancement. The responsibilities of the development of climate resilient agriculture training materials, training of trainers, introduction of good practices and the development of knowledge product that will capture the successful demonstrations and experiences rest with the PPMO, including:

- Engaging specialist(s) of climate resilient agriculture from universities and/or research institutions to develop training materials;
- Providing necessary background information to the engaged specialist(s);
- Setting up for a panel consisting of researchers, county agricultural officials, township extension agents and technicians of farmer cooperatives and agro-enterprises supported through BPs to review the training materials for the improvement;
- Printing the training materials as one of project knowledge products to be distributed to the targeted trainees;
- Engaging specialist (preferably the same specialist(s) who developed the training materials) to deliver training to officials and technicians of BOA, extension agents of township extension centers (stations) and technicians of farmer cooperatives/agro-enterprises;
- Engaging specialist(s) to scope and recommend climate resilient crop varieties and farming techniques to project counties in close collaboration with the BOAs, who should also provide technical support to extension agents of townships to carry out demonstration of identified varieties and techniques; and
- Supporting the specialist(s) to capture the successful demonstrations and experiences carried out all 9 project counties for distribution to a broader audience including but not limited to the technical bureaus at county level as agriculture, livestock, forestry, water resources and land management, as well as relevant farmer cooperatives and agro-enterprises. Through IFAD Asian Portal, such knowledge products should be uploaded to the website for sharing globally.

105. The BOAs will be responsible for the implementation of demonstrations of identified climate resilient crop varieties and farming techniques with the support of township extension service stations and/or farmer cooperatives/agro-enterprises. Specific activities include: (i) design of demonstration; (ii) locating demonstration on farmers' field; (iii) implementing demonstration with the support of township extension agents and/or technicians of farmer cooperatives/agro-enterprises; (iv) documenting the results of demonstration for the development of knowledge product; and (v) scaling up the successes in suitable cropping areas of the counties.

106. Traceability and risk-based inspection. The PPMO will select a service provider and proposals for partnership in all relevant activities and necessary equipment and tools. PPMO will recruit a Technical Specialist for traceability and risk-based inspection services who is specialized in agricultural product quality and safety management throughout the project and will work under the

⁶⁵ The Ministry of Agriculture is responsible for the supervision and management of agricultural food products before they are placed on the market, or at manufacturing or processing facilities. Once agricultural food products are on the market, the supervision and management of food safety responsibility is under the Chinese National Center for Food Safety Risk Assessment (CFDA). General Administration of Quality Supervision, Inspection and Quarantine of the PRC (AQSIQ) is responsible for the supervision and management of food packaging materials, containers and tools for food production and trading. AQSIQ is also responsible for the safety, testing and management of food imports and exports.

supervision of Ministry of Agriculture. The Technical Specialist will coordinate the work of traceability and risk-based inspection in addition to leading development of action plans and guidelines.

107. Food safety management system is best implemented in a coordinated and integrated approach of One Health, the initiative that is led by the Department of Agriculture, with a close collaboration with CFDA, CCDC under the Department of Health. QR-based traceability system development including the preparation of training materials, development of advocacy work, and quality control of testing and reporting will be done by service providers selected by the PPMO and DOA. This service provider will also be responsible for training of trainers for traceability and risk-based inspections.

Component 3. Program Management and Capacity Building (USD xx million, xx% of project total costs; IFAD contribution: USD xx m)

108. This component will support the implementation of the Project with management and coordination activities properly conducted and required functions fully discharged. It will require the establishment and operation of Project management offices (PMOs) at provincial and county levels, as well as facilitation set-ups at township and village levels. Project implementation will be decentralised to the county level, with the provincial PMO performing overarching functions of planning, coordinating, facilitation, monitoring and reporting. For their appropriate functioning, Project support to the PMOs will include office and training equipment, vehicle rental, capacity building, workshops, monitoring and evaluation (M&E), baseline/RIMS surveys, environmental and gender awareness trainings, study tours, knowledge management, and innovation development. Consulting/advisory services in agribusiness and value chain development will be an important function of the PMOs and will be acquired within or from outside of the PMOs. Costs for Project management and coordination at each level will be jointly financed by the IFAD loans and government counterpart funds. Recurrent costs for all PMOs will be ensured by Government counterpart funding, which will cover staff salaries, travel costs, and administrative costs.

Implementation Arrangements

109. The SPRAD-SS Project will be The SPRAD-SS program will be implemented over a period of five years, in nine southern counties of south Shanxi Province.

110. The overall management of the Program will be coordinated by the Provincial Department of Reform Commission (PDRC), where an existing Foreign Loan Project Management Office (FLPMO) will act as the Provincial PMO (PPMO) for the Program. Among others, the PPMO will have the primary responsibility for coordinating and supervising the Project implementation in the nine counties in terms of overall and annual planning, supervision and implementation support, administration of Project resources and monitoring and evaluation.

111. Particularly, the PPMO will have the primary responsibilities in: (i) administering the Designated Account and Project resources especially the IFAD loan; (ii) overseeing the use of Project resources and Project procurement; (iii) ensuring effective flow of funds for Project implementation; (iv) providing appropriate technical and implementation support to the counties; (v) coordinating and undertaking knowledge management activities; (vi) monitoring and evaluation; and (viii) ensuring sharing of data, information, experiences, good practices within and beyond program.

112. Despite its history of 20 years and a track record of having managed 8 IFI loan projects, the FLPMO is new to IFAD and its type of village/household targeted project, agribusiness development and value chain support is a technical area that the FLPMO has not experienced so far.

113. In order to facilitate the effective implementation of agribusiness-led rural poverty reduction models, FLPMO will need to be further capacitated to acquire technical/advisory skills/services to

facilitate and supervise the conduct of relevant project activities. In addition, the peculiar Monitoring and Evaluation (M&E) requirement of IFAD program also calls for internal capacity or outsourcing of function/services to satisfy program management requirement. The financial management and procurement functions of the FLPMO appear to be relatively adequate for SPRAD-SS.

114. The prefectural level government will only provide facilitating and supervisory role to their respective counties, when and as requested by the PPMO. Project resources will be channeled directly from provincial level to county level without passing through the prefecture level.

115. Major implementation responsibilities of the Project rest with the counties. At the county level, Project Leading Groups (PLG) will be established to provide overall guidance and coordination of the Project implementation. Each PLG will be led by a senior official of government and composed of representatives from the related departments/bureaux and institutions. The key responsibilities of PLG at each level include: (i) overall supervision of PMO operations; (ii) coordination of counterpart funds for carrying out the Project; (iii) review and approval of Project Annual Work Plan and Budgets (AWPB); and (iv) coordination of implementing agencies in Project implementation.

116. The Provincial PMO (PPMO) and each county PMO (CPMO) shall be staffed with qualified and full-time personnel in adequate numbers, at a minimum comprising of an executive director, an accountant, a cashier, a planning officer, an M&E officer and an implementation coordinator. Staffing the CPMO with additional staff members seconded from the related technical bureaus could be a desired practice in SPRAD. Given the nature of the Project, a value chain facilitator will be positioned in the CPMO to facilitate and oversee the Project implementation in this respect.

117. To support the preparation and implementation of the PPPP business plans, an expert panel consisting of both government officials and agribusiness specialists will be established at provincial level to provide capacity building, facilitation and review of business plan and value chain related activities.

118. CPMO will be headed by the Director of the Bureau and reports directly to the county PLG. CPMO will be hosted at an appropriate bureau of the counties, depending on its relevance of the program and the focus of activities in each county. Regardless whichever technical bureau is hosting the CPMO, it has the duty and responsibility of maintaining direct and close coordination with the PPMO in all project related business. Between the county and provincial levels, CPMOs will follow the overall leadership from the PPMO.

119. A Business Plan Advisory Committee (BPAC) will be established at the count level to facilitate and approve the business plans for PPPP financing. The BPAC shall be consisted of both government officials and agribusiness specialists, the later may be recruited from within or outside of the county as necessary.

120. At the township level, a Township Implementation Support Office (TISO) will be established consisting of 3-4 existing staff within the township government. The main responsibility of TISO is on planning, implementation support, monitoring and reporting of Project activities in Project villages.

121. At the village level, a Village Implementation Group (VIG) would be established in the Project-targeted villages to ensure appropriate targeting, mobilise household participation and monitor Project activities. These VIG shall be led by the head of the villages with the inclusion of 3-4 poor beneficiaries, not less than 40% of the members will be women representatives.

122. The Department/Bureau of Finance at Provincial/County level will undertake the majority of the fiduciary roles of the Project under the overall leadership of the Ministry of Finance including: (i) opening and management of the Designated/Project Accounts; (ii) administering the Project resources including the IFAD loan and counterpart funds; (iii) review and approval of the financing needs of Project implementation; (iv) overseeing the use of Project resources; (v) ensuring effective flow of funds for Project implementation; (vi) providing appropriate training to the financial officers of PMOs in terms of financial management; and (vii) reviewing/processing disbursements and Withdrawal Applications (WAs) on a timely basis.

Attachment 1 to Appendix 4: Outline of business plan

The mission agreed using a common outline for each of the investment proposals. Each proposal should be presented in a 10 to 15 page document plus three annex tables. The document should cover the following sections:

- 1. Proposing Unit:** *(all information provided here should refer to the existing situation and not to future plans)*
 - 1.1. *Name of the Cooperative*
 - 1.2. *Date of registration*
 - 1.3. *Type of product(s) or industry*
 - 1.4. *Current business activities (please indicate the main business activities, type of business, size of operation including volumes of products produced/traded/processed during the past years, main area of operations (e.g. township, county, national, etc.);*
 - 1.5. *Current financial situation (registered capital, list of shareholders showing the shares of each shareholder, annual turn-over, annual profits, existing loans incl. types and maturity, dept/equity ratio, etc.)*
 - 1.6. *Current business relationships (in what way is the cooperative already linked to any down- and up-stream partners such as formal or informal contracts with sellers (in case of inputs), or buyers/processors)*

- 2. Background Situation of the Related 'Industry':** *Explain the relevant background situations related to the proposed investment. Current production/trading/processing arrangements, technologies, etc. within the project are (village, township or county). What is wrong or inefficient with the current situation, in particular in terms of technologies, organizational arrangements, benefit sharing in the value chain, etc. Are there any market failures preventing the private sector to develop the proposed production system? Where are the specific business opportunities?*

- 3. Objective and Targets:** *This section should explain what is going to be achieved with the proposed investment and how the achievement would be measured. The objective and targets should be concrete, measurable and most importantly realistic: e.g. 'the net production value would be increased by xxx million RMB, this incremental production value would be shared between the enterprise and the farmers with the farmers receiving at least xx% of the incremental value'. It is important that the objective and targets are realistic. They will be monitored and the investment will be considered a failure, if the objective is not achieved, in which case financing will also be stopped.*

- 4. Main beneficiaries:**
 - 4.1. *Direct Beneficiaries: Who would directly benefit from this investment? Farmers? How many? Registered Poor? How many? Enterprises or companies? How would poor farmers be targeted? Are there specific actions including more member or more poor farmers over time?*
 - 4.2. *Indirect Beneficiaries: What other benefits are expected from this investment and who would indirectly benefit? For example: non-members in the village, traders, local shops, input suppliers, etc.*

- 5. Description of the Investment:** *This section should provide a detailed description of the proposed investment activities; the section could be structured as follows:*
 - 5.1. *Investment in Cooperative Management Facilities (e.g. office building, office equipment, etc.,*
 - 5.2. *Investment in Production Facilities/Assets owned by individual members or the cooperative (e.g. tree planting, sheds, greenhouses, nurseries, hatcheries, sprinklers, drip systems, silage pits, agricultural machinery, manure treatment facilities, etc. (please note that the*

investments can only include fixed asset investments, no annual farm inputs such as seed, fertilizer, pesticides, etc.),

- 5.3. Investment in Processing and Marketing, (e.g. product collection/transportation, storage warehouse, cleaning, grading, packaging, fresh-keeping, testing equipment, IT equipment, etc.),*
- 5.4. Investment in Services and Training, (e.g. market studies, consultant services, attending fairs and exhibitions, study tours, technical and management training, etc.),*
- 5.5. Investment in Product Branding/Certification,*
- 5.6. Other Investment including working capital.*
- 5.7. Un-allocated funds.*

Detailed Cost Table: Following the same structure above (5.1. to 5.6.) a detailed cost table should be presented showing all investment activities, units, quantities, unit costs and total costs by year over a period of at least 3 years. The phasing of the investment should follow a rational manner taking into account the capacity of the cooperative. The format for the detailed cost table, which needs to be used, is attached .

- 6. Financing Arrangements:** *The chapter should describe the sources of funds and amounts (e.g. project funds, beneficiaries contribution, cooperative savings, Bank loans, investor or big household contribution, etc.) showing that the total financing can be secured. In addition a detailed table should be provided showing the proposed financing arrangements for each investment activity. The table should follow the same itemized list as shown under chapter 5 above. It should be noted that:*
 - 6.1. Individual investments could be financed from the project funds or from the cooperative's own resources at each 100%.*
 - 6.2. Working capital and annual input costs as well as labor contribution from the cooperative and its members cannot be financed from project funds and must be financed from the beneficiaries or cooperative using their own assets or Bank loans.*
 - 6.3. The project financing must not exceed 50% of the total financing.*
 - 6.4. About 20% of the funds should be kept unallocated for future development needs of the cooperative or contingencies.*
 - 6.5. The allocation of funds for 'Soft' investments under item 5.4 and 5.5 (TA, training, studies, certification, etc. see chapter above) should be at least 15% of the project funds (IFAD funds).*
 - 6.6. The total project funds should not exceed an amount of RMB 30,000 per cooperative member.*
- 7. Organizational Arrangements:** *This section should describe the proposed organizational arrangements; what is the nature of the cooperative (e.g. service type cooperative doing marketing/pre-processing or full production cooperative using the members' land)? Evidence of organizational arrangements (e.g. copies of contracts, asset validation, registration of cooperatives, etc.) should be provided as attachments to the proposal). Who would be the owners of each of the key investments (e.g. storage warehouse, cold store, packaging facility etc.) and who would have the responsibilities for operation and maintenance?*
- 8. Simplified Cash flow analysis.** *To understand whether the proposed investment is really profitable and competitive a detailed cash flow and financial analysis needs to be provided separately for each major stakeholders in the value chain. This needs to include crop or livestock models at the farm level (example tables are provided in Attachment 2) and cash flow analysis at cooperative level taking into account depreciation costs. It is very important that the assumptions used in the crop models and business cash flow tables are realistic reflecting the true field situations. Please note that most yield and price assumptions used by the Governments are*

highly optimistic as they refer to best case scenarios and do not reflect average field observations. This is not acceptable as such misleading assumption expose farmers to high risks.

- 9. Benefit Sharing and Poverty Impact.** *This section should quantify the benefit sharing between different stakeholders and the projected income of a typical poor household member from different sources (e.g. net value of household production (first level benefit), projected dividend (second level income), and or labor for the cooperative.*

- 10. Market risk analysis.** *Any investment proposal promoting the development or expansion of a product/industry need to be supported by a detailed market analysis showing where the markets for the product are and what quantities these market are likely to absorb at what prices. For all proposals the main risks in terms of marketing need to be identified: e.g. exposure to a single processor, rapid expansion of the supply, extreme loss of consumer trust (bad practices, food safety issues), etc. The investment proposal should show how such risks could be reduced or mitigated, how resilient the business would be in case these problems occur.*

- 11. Environmental Safeguards.** *This section should assess all potential environmental impacts of the proposed investment and proposed mitigation measures in case of any negative environmental impacts. For proposals involving agro-processing the national standards and approval requirements need to be stated. In case of approvals already granted (e.g. by the environmental protection bureaus) copies of the approval should be attached. For livestock production manure treatment should be described and costed and in the case of grazing local policies of grazing restrictions need to be observed.*

- 12. Social Safeguards.** *In addition to the poverty aspects already covered in various sections above this chapter should describe.*
 - 12.1. The involvement of women. What efforts have been taken to include women in the membership, decision making and management bodies, training projects, etc.*
 - 12.2. The involvement of ethnic minority population (in case there are ethnic minorities in the project areas. Are they affected? How are they involved?*

The potential long- and short-term impact of peoples assets. Is land required? How much? How will or was it acquired?

Attachment 2 to Appendix 4: the potential role of ALIBABA group

Role of Alibaba Group. Potential for partnership with the Alibaba Group through the Ant Financial Company (here under Ant Financial) is being explored along the following lines:

- (a) **E-commerce:** provisions will be made in the design for the project supported agribusinesses to adopt e-commerce as part of their marketing strategy. The e-platforms of Alibaba Group (e.g. *Rural Taobao*) will be approached during project design/implementation to formalize such e-commerce access for project supported products and agribusinesses. The product requirements and standards as well as online marketing/trading skills and necessary training and capacity building will be provided by Ant Financial as part of the partnership. The project counties coordinated by the Provincial PMO will work with Ant Financial to identify the products and the operating modalities to improve access to e-commerce platforms by project beneficiaries. Budget allocations will be made in the project to support project beneficiaries access to e-commerce platforms. As an onset activity, awareness raising events will be organized to have Ant Financial inform the project staff, project beneficiaries and agribusinesses on e-commerce practices and related requirements;
 - (b) **Business plans:** The project will finance fair, inclusive and financially viable business plans (BPs) as a means to promote agribusiness development while achieving poverty reduction outcomes. Sound and quality BPs paves the way for the very success of the project. Ant Financial will support the project in terms of initial quality enhancement/assurance for the BPs, through training to project staff/agribusiness entities on development of BPs and through supporting the review of the BPs, especially those BPs that have higher potential to access on-line trade and value chain finance opportunities offered by Ant Financial. It is indicatively estimated that Ant Financial can help to support the review of some 5-20% of the BPs which are promising for e-commerce or external value chain financing, without extra cost for the project. The PPMO, in coordination with County PMOs, will invite Ant Financial to provide training on BP development. The County BP Evaluation Committee (C-BPAC) will invite Ant Financial to join the technical review and seek its professional comments to the BPs, before such BPs are passed on to County PLG for final endorsement.
 - (c) **Value chain financing:** BPs will be jointly financed by IFAD/government funds and self-mobilized resources from the agribusiness entities. Due to limitation in accessing working capital and cash flow, some agribusiness entities would require commercial loans to satisfy financing needs for the BP and other related investment. Ant Financial is willing to explore possible value chain financing for promising BPs/agribusiness entities, particularly those with access to the Alibaba e-commerce platforms. The basic model implies partnering with local commercial banks and governments and provide information/data based on risk assessment and product design/suggestion in order to facilitate local commercial banks to extend non-collateral-dependent loans to the agribusinesses. Although limited budget allocation may be required by the project for this model, its feasibility is subject to the interest and willingness of local banks and government and depends on the types of data/information and availability. Such partnership will thus require further consultations;
 - (d) **Insurance:** There is potential for the project to introduce loan insurance and asset insurance (including agricultural insurance) in the project. China Insurance (*Nonglianzhongxin*) is interested in asset insurance which will be pursued during project implementation when the potential insures and type of assets/risks are better known. Ant Financial will be able to participate and explore loan insurance through its joint venture with China insurance, when loans are associated with the asset/agriculture insurance provided by China insurance.
17. It is clarified that Alibaba Group will not receive funds from the project.

Appendix 5: Institutional aspects and implementation arrangements

A. Project Management and Coordination Arrangements

1. The SPRAD-SS project will be implemented over a period of five years, in nine counties of three prefectures in southern Shaanxi province.

2. **Lead Project Agency:** The Provincial Development and Reform Commission (PDRC) will take a leading role in project coordination and management. Specifically, the Foreign Loan Project Management Office (FLPMO) attached to the PDRC would take lead responsibility for project design, management, supervision and evaluation, and will act as the Provincial Project Management Office (PPMO).

3. Despite its history of 20 years and a track record of having managed 8 IFI loan projects, the FLPMO is new to IFAD and its type of village/household targeted project, agribusiness development and value chain support is a technical area that the FLPMO has not experienced so far. In order to facilitate the effective implementation of the project, and particularly of the agribusiness-led rural poverty reduction models, the capacity of the PPMO/FLPMO would need to be strengthened to acquire technical/advisory skills/services to facilitate and supervise the implementation of relevant project activities by either recruiting additional resources or outsourcing specific functions/services to adequately carry out the management functions associated with project implementation. In addition, the peculiar Monitoring and Evaluation (M&E) requirement of IFAD program also calls for internal capacity or outsourcing of function/services to satisfy program management requirement. The prefectural level government will only provide facilitating and supervisory role to their respective counties, when and as requested by the PPMO.

4. **Project Leading Groups (PLGs):** Project Leading Groups (PLG) will be established at each project county to provide overall guidance and coordination of the project implementation. Each PLG would be led by a senior official of government of the same level and composed of representatives from the related departments/bureaux and institutions. The key responsibilities of PLG at each level include:

- a) Overall supervision of PMO's operations;
- b) Coordination of counterpart funds for carrying out the project;
- c) Review and approval of project Annual Work Plan and Budgets (AWPB); and
- d) Coordination of implementing agencies in project implementation;
- e) General oversight of the project implementation address key issues/decisions important for project.

5. **Provincial Level Coordinating Mechanism:** At the provincial level, a coordinating mechanism through regular meetings will be established involving at least DOF, PDRC, DOA and the PAO. The coordination will be chaired by DOF or PDRC who will call for such meetings as and when required, but at least every six months. Regular updates on project progress and implementation issues would be provided by the PPMO to this coordinating members every 3 month during the 1st and 2nd project year.

6. The Shaanxi **Provincial Department of Finance (DOF)** and county Bureau of Finance (BOF) will have the primary responsibility for the administration of project resources. The DOF/BOFs at the provincial and county levels will be responsible for the followings:

- f) Opening and management of the Designated/Project Accounts;
- g) Administering the project resources including the IFAD loan and counterpart funds;
- h) Review and approval of the financing needs of project implementation;
- i) Overseeing the use of project resources;

- j) Ensuring effective flow of funds for project implementation;
- k) Providing appropriate training to the financial officers of PMOs in terms of financial management; and
- l) Approve and processing Withdrawal Applications (WAs) and reimbursement of eligible project expenditures on a timely basis.

7. **Project Management Offices (PMOs)** will be established by the PLGs at provincial, municipal, and county levels and located at the appropriate agencies at the respective level. The Provincial PMO (PPMO) and each County PMO (CPMO) will be staffed with qualified and full-time staff in adequate numbers, at a minimum covering the functions of a director, a deputy director, an accountant, a cashier, an M&E officer, a planning/implementation coordinator, a gender focus point. PMOs will focus on planning, coordinating, monitoring and reporting of the project under the guidance of PLG of the same level. Implementation of project activities would remain with relevant technical agencies at county level on the basis of their mandate and technical expertise to ensure close integration and coordination of the project activities with the governmental development activities in the project area, leveraging various concessional government policy instruments to support and complement the project, to achieve more efficient and effective use of resources, better results and impact on the target population and sustainability.

8. The **Provincial PMO (PPMO)**. The PPMO will have the primary responsibility for coordinating and supervising the project implementation, administration of project resources, and monitoring and evaluation. In order to successfully implement an integrated development project, which covers different sectors and involves multiple partners, it is critical the Director of the PPMO has the convening power and experienced in exercising leadership for the project to be successfully implemented. The PPMO will be responsible for coordinating project implementation across the 9 counties. Its specific responsibilities are as follows:

- m) Consolidation of AWPBs;
- n) Establishment of project MIS/M&E system;
- o) Monitoring and supervision of project implementation;
- p) Providing appropriate technical and implementation support to the counties, especially relating to the component one in agribusiness development such as BP development, e-commerce, financing and insurance;
- q) Provision of appropriate training to CPMOs and implementing agencies (IAs) in terms of project implementation and management as well as thematic subjects;
- r) Consolidation of Statements of Expenditures (SOEs) and the preparation of withdrawal applications (WAs);
- s) Guidance and overseeing of procurement under the project;
- t) Project reporting;
- u) Organising project baseline and RIMS surveys; and
- v) Promoting project knowledge management within and beyond project.

9. The prefectural level governments will only provide facilitating and supervisory role to their respective counties, when and as requested by the PPMO. Project resources will be channelled directly from provincial level to county level without passing through the prefecture level.

10. The **County PMOs (CPMOs)** will be responsible for coordinating project implementation across sectors at county level. Given the multi-sectoral nature of the project and the need to mobilize multiple sources of government counterpart financing to comply with the co-financing requirements, it is important to have a powerful convening CPMO and an effective coordination mechanism in each county, in order to enhance internal cohesion of project implementation. The CPMO will be staffed with minimum amount of full-time staff either from the hosting bureau or from other related bureaus, covering at least the function of project Director, planning and implementation officer, financial officer, M&E officer, agribusiness development officer. The CPMOs have the following responsibilities:

- w) Development of AWPBs through participatory approaches;

- x) Monitoring and supervision of project implementation, including those by IFAD missions;
- y) Provision of appropriate training to IAs and VIGs in terms of project implementation;
- z) Overseeing and facilitating the value chain and agribusiness development activities of the project;
- aa) Preparation of SOEs and claim documents and processing of reimbursement by BOFs;
- bb) Facilitate transfer of project funds to implementing agencies (IAs) timely;
- cc) Organising/supervising project procurement;
- dd) Project monitoring and evaluation, reporting, including baseline and RIMS surveys; and
- ee) Promoting project knowledge sharing.

11. **Expert teams** consisting of government officials and/or agribusiness specialists will be established at provincial and county levels to provide capacity building, facilitation and review of business plan and value chain related activities. The latter may be recruited from within or outside of the county as necessary.

12. A **Business Plan Evaluation Committee (BEC)** and BP Approval Committee (BAP) will be established at the county level to facilitate and technical review and approval of the business plans for PPPP financing. The BEC shall be consisted of both government officials and agribusiness specialists, the latter may be recruited/invited from within or outside of the county as necessary, including at least one member each from banking sector and agribusiness practitioners. The BAC will be chaired by the Head of the Leading Group, and will include representatives of other public institutions. The final composition of both the BEC and BAC will be defined in the PIM.

13. At village level, **Village Implementation Groups (VIGs)** will be established in the project-targeted villages to ensure appropriate targeting, participatory planning, implementation, and monitoring of the project activities. The VIG will be headed by the director of the existing village committee and composed of about 8-12 people, including all the village committee members and 3-5 farmer representatives from different categories of household well-being. Of the farmer representatives, women will be no less than 40%. The responsibilities of a VIG include the followings:

- ff) Facilitate targeting of project activities to eligible households within the villages in line with the targeting requirements of the project;
- gg) Identifying project activities prioritized by eligible groups through participatory approach, and reporting to the IAs and PMOs for the development of AWPBs;
- hh) Organizing the target groups to participate in project activities;
- ii) Assisting PMOs monitor project implementation and collecting M&E data as required; and
- jj) Organising the operation and maintenance of community infrastructure built by the project.

14. **Farmers' organizations** such as Water User Associations (WUAs), Farmer Cooperatives (FCs) and their Associations (FAs) will participate in the implementation and monitoring of project activities. WUAs will participate in system planning and design, construction supervision, as well as training. WUAs will gradually take over the responsibility of operation & maintenance (O&M) for improved irrigation and drainage systems under the project. Similarly FAs/FCs will be involved in value chain enhancement activities and monitoring the implementation of project activities, identifying their training needs and facilitating services delivery. Women are expected to play an equal role within the different farmer groups and VIGs.

15. **Implementing agencies.** Implementation of project activities would remain with relevant technical agencies at county level on the basis of their mandate and technical expertise to ensure close integration and coordination of the project activities with the governmental development activities in the project area. The implementing agencies will include Bureaus of Water Resources (BOWRs); Bureaux of Transportation (BOTs); Bureau of Agriculture (BOA); Bureau of Forestry (BOFR); Rural Economic and Cooperative Management Bureau (RECMB). In addition, there are also other technical Bureaux in the project counties who will be responsible for supporting the CPMOs in undertaking the implementation of specific project activities that fall within their respective mandate.

Such bureaus include such as Land Management (BLM), Environment Protection Bureau (EPB), Women Federation (WF), and Bureau of Meteorology (BOM). The detailed responsibilities of each agencies will be elaborated at the appraisal when the intended project activities are becoming more specific.

16. **Involvement/partnership with private sector.** The project will facilitate the interaction among the actors operating in the same value chain and agricultural subsector and will tap into the expertise and market knowledge of the private sector, both at national and local level, to define, select and support the project-supported value chains and pro-poor agribusiness activities. On a competitive and transparent basis, private actors such as e-commerce platforms (e.g. Alibaba-Rural Taobao), financial institutions (e.g. County Rural Commercial Banks, AntsFinance) and Insurance Company (e.g. China Insurance Company) will partner with the project to provide technical advice and guidance in the process of identification, selection and support of agribusiness entities and related BPs. Opportunities to promote partnerships with supermarkets will also be explored. The details on their participation in the project will be spelled out during appraisal.

17. The **Project Implementation Manual (PIM)** will be finalized and adopted before project disbursement, to guide project implementation. The PIM elaborates on the requirements for targeting, planning & reporting, procurement and financial management. It also describes project implementation arrangements within the component and subcomponents, including project management institutions and the roles of various stakeholders. The approval of the PIM by IFAD will be a condition to disbursement.

TORs of KEY PMO STAFF

1. For successful implementation of the Project, a project management system, PMOs, will be established at provincial and county levels and operates under the guidance of respective PLG. The prime responsibilities of a PMO, inter alia, are to consolidate annual work plan and budget (AWPB) at their respective level, coordinate project implementation, manage the project resources, monitor project implementation, report on implementation progress on a six-monthly basis and project impact on required basis, and to ensure that project's implementation strategy is effectively applied in all activities. Generally, the overall responsibilities of the PMO staff are similar to that of a PMO. However, each PMO staff has his/her specific tasks and responsibilities in accordance with the post he/she holds. The main responsibilities of the key PMO staff are as follows:
2. **PMO Director:** The director of each PMO will undertake the overall responsibility of project implementation. The overall responsibility is to coordinate the PMO staff, relevant institutions and implementing agencies to ensure that the project implementation complies with the project Loan Agreement, strategy and requirements for reaching its objectives and goal. His/Her specific responsibilities mainly include the following points:
 - Staff the PMO with qualified personnel in accordance with the requirements set forth in the Loan Agreement, work out the responsibilities of PMO staff, organize performance appraisal of PMO staff by the end of each year through linking the responsibilities with achievements of each PMO staff;
 - Work out management/administration regulations of the PMO to ensure that all PMO staff perform their duties properly and that project property, documentations, data and records are filed and kept properly;
 - Plan and organise necessary trainings and workshops for PMO staff and other relevant project personnel to raise their capacity, awareness, and responsibility senses of project implementation, particularly the trainings on project management, implementation modalities, M&E, gender sensitization, participatory planning, and targeting;
 - Facilitate PMO staff executing their duties properly and ensure that all reports will be submitted to IFAD timely as required;
 - Coordinate relevant institutions and implementing agencies to formulate project implementation plan, particularly AWPBs, in accordance with project strategy and approach, including the identification and selection of target villages and beneficiaries for each activity and the adaptation of project activities to local conditions;
 - Coordinate relevant institutions to ensure timely allocation of project resources to the implementing agencies to carry out the project, including IFAD loan and counterpart funds, and monitor the use of project resources to ensure that the project fund are not misused;
 - Supervise the implementation of AWPBs to ensure that the project is implemented and appropriately targets to the eligible beneficiaries;
 - Coordinate relevant institutions to ensure that women focused activities are well implemented and poor women's participation is fully focused;
 - Plan and organise assessments/evaluations of project outcomes and impact, including the benchmark/baseline, mid-term, and completion surveys, and report the results to IFAD as required;
 - Work out adjustment proposal of implementation and submit it to IFAD for "no objection" when needed, based on the up-to-date situation and results, for achieving project objectives.
3. **M&E Officer:** The M&E officer, under the guidance of project director, will undertake the responsibility of monitoring the project implementation, including project progress, achievements, availability of resources, expenditures, targeting, and gender mainstreaming, and collecting relevant data and reporting to project director to ensure that the project activities

are implemented in accordance with project strategy and with approved AWPBs. The specific responsibilities are as follows:

- Develop project monitoring strategy and action plan, by component and by activity, through consulting with relevant implementing agencies and related village implementing groups, including the methodology, channels, and procedures of data collection;
 - Monitor the physical and financial progress and achievements of the project by component ;
 - Monitor the allocation and flow of project resources including IFAD loan proceeds and counterpart funds, and their uses, to see if the funds are available to implementing agencies on time for carrying out the project and if the funds are used properly;
 - Cooperate with relevant implementing agencies to monitor if the implementation of project targets to the poor and women appropriately in accordance with the project strategy;
 - Assist project director to plan and organise assessments/evaluations of project outcomes and impact, including the benchmark/baseline, mid-term, and completion surveys as well as other irregular assessment activities;
 - Plan and organise M&E training for relevant personnel to improve their capacity in performing M&E activities, including M&E methodology and techniques, RIMS, data collection, data analysis, and reporting;
 - Prepare M&E report and project progress report and submit them to IFAD on time as required, after confirmation and approval of relevant PMO and PLG directors;
 - Report to PMO director regularly with proposals based on the analysis of M&E data to ensure that the project activities are implemented in accordance with the project strategy and approach.
4. **Project Accountant:** The project accountant, under the guidance of project director, will take the responsibility of managing the Project Account, i.e. maintaining a separate account and records, preparing financial statements of the operations, resources and expenditures related to the project, setting up accounting subjects, transferring project resources to relevant implementing agencies, preparing withdrawal application and documents, to ensure that the project resources are well managed and used for project implementation in line with the Loan Agreement and the approved AWPBs. His/Her specific responsibilities are as follows:
- Work out, under guidance of project director, financial management regulation, and set up accounting subjects for the management of project resources;
 - Open a project account under the guidance of project director, maintain a separate account and records and thereafter prepare the financial statements of the operations, resources and expenditures related to the project, and the PMO accountant will submit the financial statements to IFAD timely as required after confirmation and approval of PMO and PLG directors;
 - Well manage the flow and expenditures of project funds by subjects, and properly file and retain the records evidencing project expenditures for annual audit by independent auditors and for inspection by the representatives of IFAD;
 - Prepare withdrawal application and related documents of IFAD loan proceeds on a frequent basis, well manage the funds in the project account, timely transfer of project funds to relevant implementing agencies for carrying out the project;
 - Supervise the use of project resources through cooperation with the M&E officer;
 - Plan and organise necessary trainings or hold workshops for relevant accountants to improve their capacity in the management of project account and in the preparation of financial statements of the operation, resources and expenditures related to the project and withdrawal applications.
5. **Value Chain Facilitator:** The Value Chain Facilitator (VCF) is an important member and function of the project management team both at the provincial and county levels, given that the success of the project is largely footed on the establishment of sustainable market linkages for targeted farmers along with the development of agribusiness in the project area. Under the

overall guidance of the project director(s), the VCF will take the main responsibilities of overseeing project implementation in the areas relating to post production functions, especially in development of fair relations, business development services, support to farmer cooperatives and value chain related knowledge dissemination and management. .

The specific tasks of this function will include, but not limit to:

- support the identification of agribusiness clusters in line with the project targeting strategy;
- finalize/improve the eligibility criteria for agribusinesses and identify/screen the eligible agribusinesses for participation in project;
- develop terms of reference for various advisory/training/studies called for by the project, identify and process the recruitment of service providers, supervise their work to ensure quality of results;
- support the need assessment and business plan development of agribusinesses;
- organize the project support to implement the business plans and related capacity development and business enhancement services;
- facilitate interaction with e-commerce service providers to explore e-commerce for local products/agro-enterprises and coordinate related activities;
- coordinate with banking and insurance institutions to explore and develop value chain financing and insurance arrangements;
- conduct and facilitate training to the agribusinesses, beneficiaries and participating project institutions/township/villages;
- monitor project implementation in relation to post production functions, participation of and project benefit to target groups;
- coordinate and oversee the value chain studies, visits and related activities, initiate and implement follow up actions for developing pro-poor value chains in the project area;
- coordinate the development of workplan and budget relating to the agribusiness elements of the project activities. Contribute to regular project reporting on project progress and achievements;
- support the knowledge management officer of the PMO to capture, document and disseminate related experiences and lessons from implementation. Organize the reporting and publication of learning from the related capacity building, studies and business plan implementation;
- receive training and enhance own capacity to better support the implementation of the project.

Appendix 6: Planning, M&E and learning and knowledge management

A Project Orientation and Review at start-up

1. **Sharing of PDR and technical documents with project staff members.** It is critically important that all project staff members, especially specialists and officers are given the PDR and technical papers (working papers) at the very beginning of the project. It is be responsibility of the Project Director to ensure that these documents are widely shared and senior officials familiarize them thoroughly with these documents. PIM should also be clearly understood by senior staff members.
2. **Orientation meetings for all SPRAD project staff.** All SPRAD project staff members will receive a two-day orientation training at the start of the project. The objective of the training will be to development a clear understanding of project objectives, project components, implementation methodologies of each component/activity, financial arrangements, monitoring and evaluation requirements, etc. Special emphasis will be given on Component 1, that is, business plan development and contract farming improvements, two of the most innovative activities of this project. This orientation will also discuss about IFAD procedures and requirements.
3. **County orientation meetings.** The project will organize meetings, one in each county, with involved district officials, members of the BP selection committee and women federation. The objective is also to explain the objectives, activities, process of implementation, finances, M&E and KM of the project. It will also be important to explain how the project activities match with PDR's institutional set up as well as additional staff members of the project. Besides, Upazila Engineers must have the understanding of engineering detailed features of all infrastructures of the project.
4. **Staff capacity building.** For capacity building of project staff several training courses on relevant activities (TBC) have been planned. All such hands-on training will help project staff members to internalize project activities and procedure and help maintain quality and timely completion of project activities. There will be training on accounting and project management software.

B Planning

5. **AWPB:** Planning for the proposed project will follow the current practices for IFAD-funded projects in China, which are on annual basis through the development of Annual Work Plan and Budgets (AWPBs). AWPB is a planning and management tool for the project implementation. It will include, among other things, the financial and physical progresses that have been made, a detailed description of planned project activities over the period, a procurement plan for at least 18 months, and a plan for implementation of activities by semester. AWPBs will also reflect the recommendations made by the last supervision mission as well as corresponding actions taken and their effect. In addition, AWPBs will link to M&E indicators, stating annual targets and achievements versus overall project targets (%progress) (see below). The PPMO will consolidate the AWPBs developed by each CPMO and submit it to IFAD for "no objection" review for each project fiscal year before its implementation.
6. AWPBs should be drafted by PDR and related implementing partners through a participatory approach, based on the demand of potential beneficiaries. COCAD and the implementing partners at county level should be aware of available resources in the development of AWPBs. Full consultations with the upper bureaus and departments of the same line will be necessary before submitting the draft AWPBs to CPMOs. The CPMOs should consult with relevant agencies in finalising the draft AWPBs prepared by the IAs and submit them to the PLGs for review and clearance, prior to submitting them to the PPMOs. PPMO should consult with relevant departments in consolidating the AWPBs and submit them to the provincial PLG for review and clearance before submitting them to IFAD for "no objection" review. The first AWPB should be developed and submitted to IFAD before start-up of the

project. From the second year on, the PPMO will submit consolidated AWPBs to IFAD for its comments before the 31st October each year. If no comments are provided by IFAD on the AWPBs within 30 days after receipt, the AWPBs will be deemed approved by IFAD. Project implementation should be in compliance with the AWPBs substantially in the form cleared by the PLGs and IFAD. If required, the CPMOs, through the PPMO, may propose adjustment of AWPBs during implementation, which will become effective upon approval by the PPMO and after obtaining no objection from IFAD.

7. It should be noted that the unit costs for activities and modules presented in this report were estimated based on the overall average situation of the project area, with the understanding that: (i) the specific location for each of the project activities has still to be finalized during project appraisal and if necessary, during implementation; (ii) the project activities would be adjusted during implementation in view of the fast evolving domestic rural development and market environment; (iii) adequate flexibility of implementation should be given to the local PMOs and implementing agencies following the lessons learnt from other IFAD-funded projects in the country; and (iv) the estimated average unit costs for the planned activities are indicative rather than prescriptive costs to be used during implementation.

8. **Link with M&E and knowledge management:** Annual work plans and budgets need to be formulated with a view to achieving the project's intended results, and cognizant of existing challenges and opportunities. Therefore, an important basis of formulating AWPBs is the project Logical Framework (logframe) that sets up the project outputs, outcomes, and objectives. Their fulfilment will be monitored and evaluated by the monitoring and evaluation (M&E) system through the measurement of indicators that have been set up correspondingly. M&E results will indicate if the implementation of project activities generate appropriate outputs and outcomes towards the achievement of objectives. Therefore, they will be used as guidance for developing the next AWPB. It is equally important to use insights from the knowledge management system to inform AWPBs: for example, when lessons have been learned about what works and what does not, or if the M&E system indicates that implementation of activities did not result in progress towards the achievement of results, then activities may have to be adjusted, budgets reallocated or implementation modalities improved when formulating AWPBs. Alternatively, the project logframe will need to be revised.

AWPB Outlines:

9. An AWPB includes a narrative report and a set of AWPB Tables. The narrative report will cover the following elements:

- i. **Background:** This section summarizes the most important external factors that will probably have significant impact on the project implementation over the AWPB period. In particular, this Chapter identifies whether any log frame assumption is unlikely to hold true. The main points, among other things, include:
 - **Government policies:** Indicate any upcoming new policies that will become effective over the AWPB period and how they may impact on project implementation. Briefly explain the measures planned to mitigate potential negative effects or to take advantage of potential opportunities.
 - **Target group:** Indicate any changes over the AWPB period as regarding the situation or attitude of project target groups. Briefly explain the measures planned to mitigate potential negative effects or to take advantage of potential opportunities.
 - **Production factors/local economic context:** Discuss major changes in the external economic context with a probable impact on the sustainability or economic rate of return of project's investments. Briefly explain the measures planned to mitigate potential negative effects or to take advantage of potential opportunities.
 - **Responses to recommendations:** List the main recommendations made by the last Supervision Mission or the Management, and indicate the corresponding actions to be taken over the AWPB period to improve the implementation.
- ii. **Achievements to date and implementation focus for upcoming year:** This section

provides an overview of the status of project implementation by components, as a basis to then justify the choice of implementation focuses for the new AWPB period.

- **Achievements to date:** A brief overview of achievements by component for previous year and cumulative years, both physically and financially.
- **Most significant change observed:** Briefly describe the single most significant improvement you observed in the past year. This can consider both achievements in terms of outcomes/outputs, as well as successes in overcoming implementation challenges. Main objective is reflection and learning.
- **Experiences and lessons learned / knowledge management:** Briefly describe the experiences and lessons learned in previous year and based on which attentions or proposals needed to make improvement.
- **Changes in objectives:** Indicate whether there are any substantial changes in objectives and physical targets for the remaining implementation period.
- **Changes in implementation strategy:** Briefly indicate any changes in the project implementation strategy as compared to the previous year. Justify why these changes are required and present what are the expected benefits from these changes in strategy.
- **Focuses in implementation:** Based on the experiences and lessons learned and the necessary changes as discussed in above paragraphs of this section, justify the decision and focuses in choosing project activities for implementation in the new AWPB.

Table 1. Summary of achievements and focuses for the AWPB (Unit: CNY'000)

Components/Activities	Target		Cumulative achievements to date		AWPB for coming year				Focus Level ⁶⁶					
	Unit	amount	Amount	%target (logframe)	IFAD	Govt	Ben	Total	1	2	3	4	5	
Grand Total														

iii. Costs and Financing:

- **Financing:** Describe the costs needed for implementing the new AWPB by financiers and indicate the sources of counterpart funding.
- **Unit costs:** Highlight any major changes in unit costs due to inflation/deflation or changes in adaptations compared to previous years and their probable impact on project budget. Indicate the manner in which these changes are being dealt with in the proposed budget.
- **Flow of funds:** Indicate any foreseeable issues related to the flow of funds, to the timeliness of budget approval and funds availability and to disbursement procedures for all project financiers and suggested measures to overcome these constraints.

iv. Procurement:

- **Procurement plan:** Highlight any major changes in procurement as compared to the

⁶⁶ Focus level: from the least focus 1 to the highest focus 5.

overall agreed Procurement Plan and provide justifications for these changes. Attach updated procurement plan.

- **Procurement process:** Indicate the major procurement methods and any foreseeable issues related to procurement methods and suggest measures to mitigate the constraints.

v. Expected beneficiaries and target group outreach: This section provides information on the number of beneficiaries reached so far, and on the number of new beneficiaries who are planned to be reached in upcoming year (brief description and filling in the following Table).

Table 2. Estimated outreach of beneficiaries by categories

Target group category	Project target number to be reached	Total number that has been reached so far (cumulative)	Share of overall target reached (cumulative % of total)	Additional number that will be reached for the new AWPB
Registered poor Poverty households				
direct beneficiares				
indirect beneficiares				
Women				
Men				
Youth⁶⁷				

vi. Implementation support needs: This section presents the support needs currently identified in project implementation, such as the needs for improving the capacity of PMOs' staff and implementing agencies or the needs for technical support, and highlights feasible proposals throughout the AWPB period; indicate how badly the support is needed. (Fill in the following Table).

Table.3 Implementation support needs

Gaps	Mitigating measures proposed	Implementation support needs		
		Whom is the support needed from?	In which specific area is it needed?	When is it needed?

10. A set of Tables needs to be attached to the narrative report of AWPB. The Tables will at least reflect such elements as outcomes, outputs, project and RIMS indicators, target, estimated cumulative achievement, and plan for next year. The whole set of Tables includes a summary Table by component, a summary Table by expenditures, and a set of separate Tables by component.

C Monitoring and evaluation

11. The project will establish an effective and efficient M&E system from provincial PMO through county PMOs down to the townships. The system will operate in line with IFAD's M&E guideline and building as much as possible on national and provincial existing M&E systems, statistics and databases.

⁶⁷ As per national definition of youth.

11. The special features of the SPRAD-SS M&E system will include (these features are discussed in the sections below):

- a) **A consolidation role led by central PDRC to underpin knowledge management** (KM) and facilitate replication/scaling-up of successful experiences, based on strong provincial and county M&E practices. This will require (i) an alignment between project M&E and PDRC/national M&E system as well as MOA's key performance indicators, also to be reflected in the project MIS system; and (ii) ensuring that PDRC has the capacity to carry out central M&E and KM functions and is supportive of scaling-up;
- b) **Special attention to assessing the poverty alleviation impact** of the project, in line with the government's poverty eradication effort. Therefore, the ISPRAD-SS project M&E system is closely linked to the National Poor Registration System (NPRS) managed by the LGOP, and will use data directly from NPRS or collect data with survey instruments based on the NPRS model.
- c) **An emphasis on making M&E data accessible and usable** for project implementers and decision makers, through a user-friendly MIS system⁶⁸ that (i) integrates conventional financial and implementation data from all levels of implementation (village, county, province, central) with results data based on the logframe; (ii) provides management dashboards and customizable data visualizations; and (iii) is readily accessible to PMOs at the central, provincial and county level.
- d) **Investment in the M&E capacity and data analysis**, by recruiting an a third party supporting analytical work on part-time basis at provincial PMO level⁶⁹ who will provide M&E guidance, hands-on technical support and training to provincial and county PMO staff, and provide quality assurance and oversight to essential M&E functions (baseline / midline / endline surveys, annual outcome surveys, cooperatives performance assessment, etc).
- e) **Data collection and information dissemination through innovative ICT**: given the advanced state of China's ICT and mobile infrastructure, and the high levels of cell phone ownership even in rural areas, it was agreed during the appraisal mission that this technology should be leveraged to share important information with farmers (e.g. data on weather or prices) and to collect feedback from beneficiaries.

12. The M&E specialist to be recruited in the PPMO, and designated officers in CPMOs, will be responsible for monitoring project implementation, sharing progress, experience and lessons learnt semi-annually and annually with all stakeholders in order to improve project implementation and finally achieve project objectives. In order to ensure an effective functioning of the M&E system, an M&E start-up workshop for the ISPRAD-SS Project is essential. IFAD's experts or consultants should provide start-up training to the PPMO M&E specialist and designated CPMO M&E staff, the latter will then train relevant officers and staff of implementing partners and VIGs. During project implementation, M&E training will be held on as-required basis, but at least once a year.

13. The project logframe has been set-up based on the project activities that are expected to generate outputs, outcomes and impact towards achieving the development objective. In an effort to reduce the total number of logframe indicators, only impact, outcome and higher-level output (or intermediate outcome) indicators have been included. These indicators form the basis of project M&E and will be subject to adjustment during implementation of the project, as required. Activity implementation and direct output indicators, although not listed in the logframe, are to be included and monitored in the MIS.

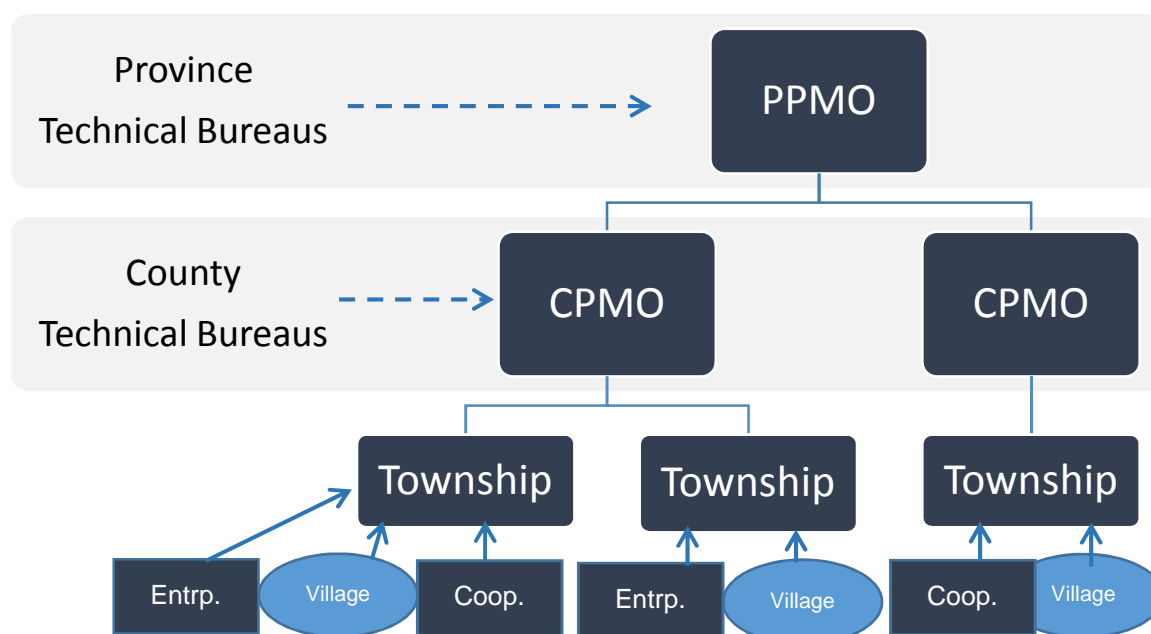
⁶⁸ See Terms of Reference for MIS development attached.

⁶⁹ See Terms of Reference for PPMO M&E Specialist in separate attachment.

14. The designated M&E officers of CPMOs, under the guidance and support of the provincial M&E specialist, will arrange the collection of monitoring data in accordance with agreed indicators. They are responsible for conducting an initial quality review on data collected before reporting to the PPMO, after consolidation at county level. VIG members will assist in collecting the household-level M&E data where required, disaggregated by gender, age, poverty registration status, and by activities. Implementing partners will be involved in the collection of M&E data concerning institutions and staff training. The PPMO will review and consolidate M&E data reported by CPMOs and report semi-annually and annually to IFAD. The PPMO is also encouraged to develop complementary data collection and quality assurance tools and methods as needed.

15. Overview of SPRAD-SS M&E system structure and processes:

16. The structure of the ME reporting is stylised in below figure and will follow the project implementation structure.



17. The PPMO will consolidate information received from CPMO and Townships through the MIS system. Data entry will be most significantly done at Township level. The design team estimates at each township the equivalent of 40 men-day work required (2 month full-time staff), and 20 men-day (1 month) per county. The town-ship ME officer will receive / collect data from Enterprises and Cooperatives and/or validate the information provided by these private sector entities through the MIS system (see below). In addition, township ME officer will collect information from villages, especially regarding the registered poor and their performance, but also regarding agreed indicators to measure performance of activities and investments financed under component 2.

18. Core building blocks of the ME system and approach:

- (i) Implementation progress / output monitoring: routine physical and financial progress monitoring on first level output indicators (that may not be included in the logframe); data to be collected by CPMOs, with technical guidance from PPMO M&E Specialist, and to be consolidated by PPMOs and input into the ISPRAD-SS MIS system.
- (ii) Outcome and impact assessment and evaluation: data to be collected from households in the project area and supported cooperatives through baseline, midline and completion surveys, and annual outcome surveys in the interjacent years, to be implemented by a third party

service provider under the guidance and supervision of the PPMO M&E Specialist. Data to be integrated into the MIS system.

- (iii) Annual cooperatives performance assessment: financial data to be gathered from cooperatives' accounting software; management and business planning assessment to be implemented by a third party, under the guidance and supervision of the PPMO M&E specialist; data to be integrated into the MIS once per year.
- (iv) MIS system: integrated software platform, to be developed by PDRC and accessible to PPMOs and CPMOs; in addition to conventional financial and physical progress data to be entered at all levels of implementation (village, county, province, central), data on all logframe indicators will be integrated and updated according to the frequency specified in the logframe; the MIS will include management dashboards and interactive data visualizations to inform decision making.

i. Monitoring

19. Implementation monitoring will focus on the project outputs, the physical and financial progress of activities. Population and household-based monitoring indicators need to be disaggregated by sex, age, ethnic minorities, and activity area or agricultural sector, where applicable (see new RIMS guidelines)⁷⁰. For this purpose, monitoring data should be collected at the grassroots level or by IAs, depending on the nature of indicators.

20. The framework used for the selection of M&E indicators is the input-process-output-outcome-impact framework. The indicators selected for monitoring will be different depending on the reporting level within the system. It is important to (i) select a limited number of indicators that will actually be used by project implementers and managers; and (ii) use the results and targets of the economic and financial analysis (EFA) as key physical and financial indicators at outcome and project development objective level.

21. **Logframe and MIS data**: It was agreed to have a lean logframe, which is updated and reported annually to IFAD. In addition, the project will collect data through the MIS system on quarterly basis and produce up-dated table prior to supervision mission and/or upon IFAD country office request. The MIS system will allow smooth and fast display of information. It was agreed to use few, very relevant indicator to reduce reporting burden (see table below).

Result hierarchy	Tool of data generation	Frequency	Presentation	Responsibility
Impact Outcome (not directly accessible)	Surveys	3 rounds Y1 – Y3 – Y5	Survey reports; Annual reports; Logframe	Third party (contracted)
Outcome (accessible) Output	MIS system: TPMO collection	Annually reported to IFAD	Logframe	PPMO
Output Financial flow	MIS system: Self-reporting & TPMO collection	Quarterly reporting to PPMO	MIS automated tables / charts	PPMO

⁷⁰ IFAD will provide PDRC with the revised Results and Impact Management System (RIMS) guidelines.

Dashboard

Annual reports

ii. Outcome survey(s)

18. **Data generation, analysis and evaluation:** In concurrence with project management two major activities have been agreed under evaluation and data analysis. *Firstly*, the project will conduct three rounds of **surveys** (base-line, mid-term and end-line). The survey will consist of a set of modules, some of which will require broader data collection, to allow comparison with control group. See Table 1 for more details.

	Survey type	Unit of observation Frequency	Type of Analysis	Main research question to address
1)	HH-survey (poor)	Poor (registered in 2017) Y1 – Y3 – Y5	Panel data	Does project meet its development objective? Do poor benefit from public investments (C2)?
2)	HH-survey (BP- participants)	Poor and non-poor Y1 – Y3 – Y5	Diff-in-Diff	Do the BPs reach the poor and non-poor? What differences exist?
3)	Enterprise- Survey (BP- participants)	Enterprise/ Cooperatives Start of BP – Y3 – Y5	Panel data	Do participating enterprises remain/become profitable? Do they change their engagement with poor/near poor?
4)	Village- survey	Administrative villages Y1 - Y3 - Y5	Panel data	Do villages benefit from public investments? Do villages see change in business attitude?
5)	Gov staff survey	Public servants at all levels Y1 - Y3 - Y5	Panel data	Does the use of BPs add or reduce work-load for civil servants? Is it perceived as feasible measure for rural transformation?

19. **Regarding 1) HH-survey of registered poor:** this survey module will trace the primary target group of the project (the registered poor) and trace their progress over the duration of the project to monitor their graduation out of poverty, as well as the frequency of “falling back”. It will use panel data approach to follow a set of HHs in the project’s townships. In line with below discussion (point 3), some will be sampled as they enter the project through BP approval by the company/private sector winning a BP grant.

20. **Regarding 2) HH-survey poor and non-poor in BP and outside:** The purpose of this module will be to compare if the “treatment” of being included in the BP approach does result in poor and non-poor benefiting from project interventions comparatively more than they would from other government projects. The sampling of this module will need to include a number of households that are out-side the project townships to allow for comparison.

21. **Regarding 3) enterprise/cooperative survey,** since only part of enterprises will be know at start-up, a sub-set of business plan awarded enterprises/cooperatives will receive a questionnaire and follow-up questionnaires in Y3 and Y5 (panel data). Similarly, beneficiaries of the BP approach, in a

sub-set, will receive questionnaires at the moment of approving the BP, and in Y3 and Y5. This shall allow tracing of outcomes/impacts for those participating in BPs. Hence there will be rolling start, with some enterprise that are identified at start-up filling the survey right away, while others do fill it (randomly selected) at the awarding of the business plan, and then do follow-up survey in Y3 and Y5. It is recommended to survey about 20% of the recipients of business plans to cover a variety of enterprises/cooperatives across the project area.

22. **Regarding 4) Village survey:** This module of the survey will monitor outcomes at the community/village level. This include the measurement of investments in public structures under component 2, as well as the spill-over effects from investments in HHs and enterprises/cooperative in component 1 on the wide community. Indicators to measure include status of infrastructure, number of vehicles travelling, as well as other proxis for economic activity/growth at the village/community level. The sample can be a sub-set of villages, potentially 10-20% of project villages.

23. **Regarding 5) Gov staff survey:** This survey will be conducted in three rounds with project staff implementing SPRAD. The main focus will be on understanding their work-load using this project approach, their opinions on the effectiveness and learning on the use of competitive business plans selection to link producers with enterprises and reduce poverty. This shall allow reflection on the pro's and con's of the project approach and be one important input to later discussion on if/how/where to scale-up the SPRAD approach. The sample will probably be about 100 staff from provincial, and county level, as well as few enterprise/cooper personel. Survey can be conducted electronically in 3 rounds, given government staff has to reply (anonymously).

24. **Data analysis and report to dissemination:** *Secondly*, the project will engage a third party on a retainer contract to support the PPMO on a continuous basis for some weeks each year with **data analysis** and report preparation. The third party will ensure analysis of surveys is properly done and presented in a useful and applicable manner, and do further data analysis, as needed. In addition, the third party shall analysis data from the MIS system to understand underlying causes of well-performing townships, villages, companies, etc. and share positive lessons with project management at various levels. Finally, the third party will support the PPMO in preparing the annual report and other knowledge material through technical/analytical input, especially prior to the annual project workshop. The third party will have GIS skills and produce maps on project's progress by geography/administrative unit.

iii. Management Information System (MIS), LogFrame, and Results and Impact Management System (RIMS)

22. A web-based Management Information System (MIS) will be established that is – ideally – integrated with PDRC’s existing systems, to avoid setting up an entirely parallel infrastructure. It was agreed that the MIS would include data for all logframe indicators at the frequencies specified in the logframe, along with the conventional information usually contained in MIS, such as implementation, output and financial data. It is important that all project related data is captured in the MIS, starting from the village and county level upwards, so that no parallel data systems have to be maintained and reconciled (in Excel or other offline mechanisms). The MIS will offer three key features and must be designed accordingly:

- a. User-friendliness: management dashboards that provide a snapshot overview of all key indicators through customizable data visualizations are a standard feature of most modern MIS and should be integrated in the ISPRAD-SS MIS. An example was demonstrated during the appraisal mission and can be seen in figure 1 below. This means that, in addition to tabular data, suitable visualizations need to be developed.

Figure 1: Example of an MIS dashboard that combines financial information with logframe indicators



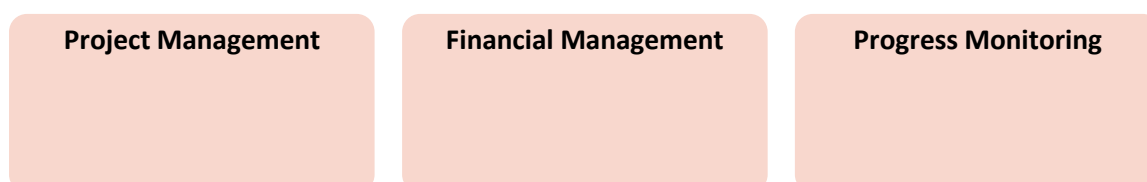
- b. Geo-referencing: all relevant indicators should be visualized on a map that enables the display of data disaggregated by geographic area (see example in figure 2 below). This can easily be done for provincial and county-level summary data. At the village level, where data collection can be easily geo-referenced through GPS (for example, on a smartphone), only village aggregates should be shown on a map (for example, percentage of households who are members in a cooperative), not individual households to ensure the confidentiality of individual data points.

Figure 2: Example of an MIS dashboard showing georeferenced indicators on a map.



- c. Accessibility at all levels of the ISPRAD-SS project: This means that PPMO and CPMO staff can log into the system and see data that is relevant to their province or county. This can be restricted so that county staff can only see data from their own county, or it may be desirable for PDRC to make project data accessible across counties and provinces so they can compare their performance with each other, which can provide strong motivation for better performance.

23. **Management Information System - MIS:** The project will design a MIS tailored to its specific needs, building on positive past experiences from World Bank financed projects. The MIS system will have three sub-systems that integrate information and allow real-time reporting.



24. The three sub-systems will function as following:

- a. **Project Management/ Contract Management:** This system will include information about all out-going contracts of the project, including the related call for proposals, bidding documents and bid evaluation reports for infrastructure and business plans financed under component 2 and component 1, respectively. As a new feature, investments/ activities financed will be georeferenced to allow overlaying information with survey and ME data (see below). The system will also include the engineers approval after physical inspection, which shall trigger the final contract disbursement for infrastructure investments, as well as the progress reports from Coops and Enterprises that trigger instalments/tranches.
- b. **Financial Management:** This system will include the financial reporting and generate Withdrawal Applications (WAs) that can be sent to IFAD. Ideally an easy interface with IFAD's newly design Client Portal is included. Again, financial data will be referenced to location of the activities financed (either geo-referencing or reporting by Administrative Village).

- c. **Progress Monitoring:** Furthermore, the system will collect information on logframe indicators and other project-relevant indicators (see below). These include output level information as well as ready-available outcome level data. In addition, the system will be available to participants of the business proposals (enterprises, coops, etc.) to enter their required data. Township ME officer will enter data and approve correctness of data entered by cooperatives/enterprises. CPMO ME officer will ensure quality from townships through spot-checks. PPMO ME and KM officer will consolidate information and report to IFAD and line-ministries.

25. The MIS system will also include pre-defined charts and tables in a dashboard format to support project management. As such, it will display – per component, sub-component, activity and per geographic unit (county, township, village) – the physical progress and the financial progress vs. planned and vs. overall targets. This shall enhance project managements alertness in case of implementation challenges and/or issues of cost-escalation, under-performance or force-major.

26. The reporting from companies and cooperatives will allow smooth tracking of project's pathway towards set development objective and allow fine-tuning during implementation, supervision or at mid-term.

27. **MIS Manual:** The company hired to develop the MIS system, in collaboration/with inputs from the analytical /ME specialist and FM specialist, will lead the development of a MIS manual, clearly outlining data entry and reporting, as well as roles and responsibilities. This MIS Manual will be one appendix of the Project Implementation Management to be submitted to IFAD for no-objection within 6 month of project start-up.

28. **Training on MIS:** During the first year of implementation three rounds of training at township / county level are proposed to ensure proper knowledge and handling of the MIS. There will be refresher training in year 2 and year 3 of the project implementation. This builds on experience from similar projects where insufficient knowledge on reporting of FM and ME information led to mis-procurements, data quality issues and negatively affected implementation.

Information provided by Enterprises/Cooperatives through MIS

29. The MIS will include information on each business plan.

30. **Application:** The application and supporting documentation will be up-loaded into the MIS system and stored at PPMO level to allow easy referencing and checking. Core data will be entered into the MIS system, rest will be available as pdf/scanned file. Data will include financial data, contract details and monitoring-relevant data, such as number of beneficiaries.

31. **Selection:** The selection committees rankings /scorings on the BP will be recorded in the MIS system, as well as potential notes/follow-up activities/covenants to allow easy follow-up. The MIS-system will allow alerts for follow-up, to ensure CPMO and TPMO are timely and well coordinate.

32. **Self-reporting:** At selection stage, a page for the enterprise/cooperative will be created within the MIS system, requesting the BP applicant to up-load key information online. This information will include the following:

- (a) Business name, location, registration, registered assets, annual turn-over
- (b) Number of shareholders, number of non-shareholder members (coop), etc.
- (c) Main business activities and sector
- (d) Total sales volume of the business in past 12 month; total value of produce sourced from beneficiaries; total value of inputs provided to beneficiaries in past 12month; etc.

33. **Benefit estimation and reporting:** The BP applicant will be asked to report in tabular form on the currently benefiting/supplying farmers and poor-producers, as well as on expected revenue streams going to these direct beneficiaries and poor as anticipated in the business plan (Table 2). It is proposed to use below table format for reporting. Core assumption is that the benefits to the poor /

beneficiaries will accrue through four channels (i) Increased sales – due to higher farm-gate prices due to (better) contracts/lower risk, higher production, better quality (or a combination of the three); (ii) (increased) dividend/bonus – e.g. through higher profit of the company, or because of increased share of poor following project investment in processing/storage; (iii) (increased) rent for land – following project investment in land, and/or increased profitability of the company; (iv) (increased) wage – either from newly created employment, or due to better pay following BP investment.

	Company / Coop Annual turn-over	Supply / Sales at farm-gate	Dividend/ Bonus to farmers	Rent for land	Wage
Today (at time of BP application) (Yuan '0000)					
No of direct beneficiaries engaged (No.)					
No of registered poor (2017 data) benefitting (No.)					
Total value to direct beneficiaries in past 12 month (Yuan '0000)					
Total value to poor beneficiaries in past 12 month (Yuan '0000)					
After 1 year (Yuan '0000)					
No of direct beneficiaries engaged (No.)					
No of registered poor (2017 data) benefitting (No.)					
Total value to direct beneficiaries in past 12 month (Yuan '0000)					
Total value to poor beneficiaries in past 12 month (Yuan '0000)					
End of BP (2 years) (Yuan '0000)					
No of direct beneficiaries engaged (No.)					
No of registered poor (2017 data) benefitting (No.)					
Total value to direct beneficiaries in past 12 month (Yuan '0000)					
Total value to poor beneficiaries in past 12 month (Yuan '0000)					

**Note: More information to be collected in MIS – this is to mainly illustrate how the project will trace the assume impact on smallholders/small producers along the four income stream channels. The BPs will build a “base line estimate” and the incremental increase are used for monitoring progress as well as for EFA up-date during MTR and PCR.*

34. **Spot-checking:** For 10% of the data up-loaded, Township ME officer will go and validate data at company on-site to ensure data quality. CPMO ME will spot-check 5% on-site. This ensures data quality and will be included in BP contracts.

35. **Dash-board function:** The MIS system will be able to easily produce progress tables/graphs by type of business plan, crop, township, county, duration of business plan, etc. This shall allow easy monitoring and analysis of progress towards agreed targets and outreach.

36. The SPRAD-SS logframe has been designed according to IFAD guidelines and already incorporates IFAD core indicators. There are three levels of IFAD core indicators:

- (a) First-level results (outputs): Development projects first achieve financial and physical results, mostly expressed in terms of numbers and percentages. Existing measurement systems tend from the outset to be relatively effective at reporting these results, which, in most projects, are many and constitute the bulk of management information.
- (b) Second-level results (outcomes): Development projects must ensure that financial and physical results are matched by improved functionality and behavioural change. First-level results tend to be quantitative and answer questions such as "what and how much", but second-level results become more qualitative, answering the questions "why and how". These results tend to take more time to realize (than first-level results) and require a different and more complex measuring and reporting system. This level of results, which often requires that quantitative information be complemented by qualitative assessments, is difficult to aggregate. The results also tend to be fewer in number; but they are critical for assessing and managing the quality of project interventions, a key element of management information.
- (c) Third-level results (impact): The previous level of results contributes to impact in terms of achieving the higher-level goal of a development project, with a degree of probability and over time (e.g. increased productivity of irrigated crops leads to increased assets and improved nutrition).

37. Criteria for the selection of results and impact indicators include: measurability, pertinence, accuracy and robustness, sensitivity to change, universal validity, culture neutrality, and scope for aggregation. The design of indicators should also reflect respective sectoral industry standard. Where appropriate, results and impact indicators must be disaggregated by sex, age and ethnic minorities, as this reflects crucial IFAD objectives. Finally, the MIS will need to allow for the inclusion of explanatory text against qualitative results and impact indicators that cannot always be aggregated.

38. Outcome survey is an important tool for the impact evaluation of IFAD-funded projects and it will be carried out three times during the six years of implementation of the project, including a baseline survey, a mid-term survey before mid-term review, and a completion survey for assessment of project impact. Each survey will include, inter alia, all logframe indicators and the RIMS indicators that focus on the improvement of household assets, children's nutritional status, and household food security. The baseline indicators, reflecting the status of project areas at the beginning of project implementation, will be used as references against those measured in subsequent mid-term and completion surveys. As such the same indicators and methodology should be used for all three surveys for consistent and comparable purposes.

D Learning and knowledge management

39. The project knowledge management strategy draws on the experiences of previous and on-going IFAD projects and introduces further developments.

- a) An effective M&E framework will be established to monitor the implementation progress against AWPBs, and outcomes and impact against the project objectives; M&E will monitor and evaluate the results of project implementation against relevant indicators set up in the logframe, which will be used as guidance for development of the following AWPB;

- b) Workshops and meetings, including with PMOs and implementing partners will be held regularly and on as-required basis, to share knowledge, experiences, innovations and success cases during project implementation. So will be the production of project newsletters and cross review of project implementation between counties;
- c) RIMS surveys (baseline, midline, completion) will be carried out regularly to assess the project impact and draw experiences for subsequent implementation and for other IFAD projects;
- d) VIGs and small producers' cooperatives will participate in the project planning and M&E, which will improve their internal planning and management capacity as well as the project's sustainability;
- e) Knowledge sharing among projects will also be achieved through cross-project visits, participation in country wide or region wide knowledge sharing platforms and activities, and study tours;
- f) Documentation of project results and lessons learnt: all counties are to hold annual 'strategic moments of reflections' (SMOR) to identify challenges in project implementation, highlight successes and what worked well, and outline action plans how to address challenges and replicate successes. The learnings from these SMORs can be shared with other counties and with the provincial level, where the PPMO M&E Specialist can collate lessons from across all counties and share them widely (including with PDRC for onward sharing and with other on-going and subsequent IFAD projects).

40. The PPMO and CPMOs will be responsible for capturing and documenting experiences, successful cases and innovations resulting from the project implementation and organise semi-annual and/or annual workshops during the project implementation to disseminate the experiences and innovations for scaling-up. Plans for scaling-up of successful cases and innovations within the project area will be incorporated into the project AWPBs during the project implementation. Local governments will be encouraged to incorporate scaling up of those successful ventures into their own local development plans, either through support to scale up of the innovations locally or through replication/expansion of the innovations outside, by governments or other donors.

41. **Knowledge product/activity to inform decision making:** The national PMO is requested to deliver one relevant knowledge product or event every year that is geared towards informing decision makers. This can take the shape of an analytical piece, e.g. study of project process and/or outcomes, as well as related sector studies. Also stakeholder workshops, including policy makers, can be considered where hands-on solutions to challenges faced during implementation are addressed. Coordination with IFAD ICO, national grants, IFAD strategic partners in country and the technical specialists on policy issues in IFAD HQ (PTA) are strongly encouraged during planning and delivery.

42. To inform decision making at national level, a knowledge management strategy and accompanying plans of actions will be formulated. Besides extracting experiences from the ground, the strategy and planned actions would address knowledge and learning demands of PMOs as well. PMOs will participate and be closely consulted during the formulation process. Each project is also encouraged to contribute rolling out of the planned actions with knowledge management resources included in AWPBs.

43. **Regional knowledge networking:** The project management will actively participate in regional knowledge networking activities in areas related to the project, including: (i) improvement of strategies and approaches on poverty reduction; (ii) enhancement of technology and market access; (iii) partnership development with relevant institutions and agencies; (iv) regular and frequent contributions to IFAD-Asia China window; (v) workshops of knowledge sharing related to poverty reduction and agricultural and rural development in the region, domestically and overseas; and (vi) country and region wide research and development studies and pilot activities where appropriate and useful for the country project. In this regard, related IFAD regional grants could further support

PMOs to participate regional knowledge networking and capacity building activities on thematic topics such as value chain and rural finance innovations.

Knowledge Management:

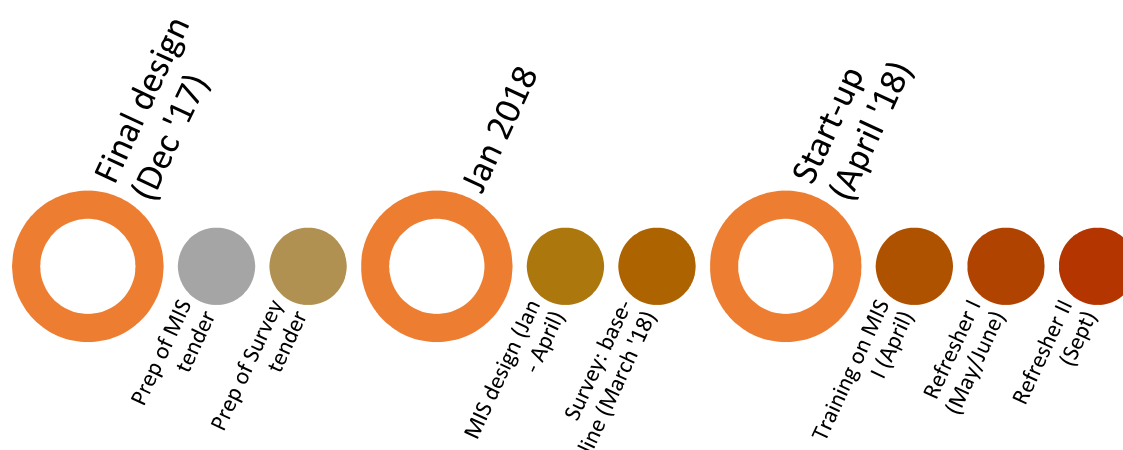
44. **Webpage:** The project shall set-up a simple webpage in Chinese and English, accessible to all stakeholders. All public documents about the project should be made available on the web-page not later than 4 weeks after their finalisation. The PPMO ME specialist is responsible for up-load and timely up-date of the webpage. In addition, the webpage can be used to display advertisements for Business Plan advertisements and other relevant project information.

45. **Publications & annual reports:** The project will produce one annual report, including a short summary of annual progress versus set targets, as well as one thematic focus each year. This focus can be agreed together with the IFAD country office during project supervision or mutual exchange. The report shall serve as Knowledge product, to inform interested stakeholders on projects progress, achievements and lessons learnt. The focus shall be on explain what worked where why and also critically reflect on lessons from failures/challenges. The report shall use information from MIS system and analysis provided from the third party assisting with data analysis, as well as from the base-line survey and other rounds of surveys. It is recommended to use few, high quality pictures to illustrates activities and project context.

46. **Workshops:** Starting from year 2, the project will organise annual project workshops at province or county level (1 workshop per year). The focus shall be to share positive lessons, highlight areas that face challenge during implementation, facilitate cross-learning of counties and share successful information with other interested stakeholders. Ideally the annual reports build one key input to the workshops and inform preparation of coming years AWPB and thematic training/ capacity building interventions.

47. **Video clips:** For communication purposes the project will produce two high-resolution clips/movies. A first short clip (3min) shall be produce in concurrence with the mid-term survey illustrating project strategy and achievements. In preparation of project completion, in the beginning of year 5, a longer version (10min) and a short summary of the longer version (3min) shall be produced, including additional material on successful innovations, lessons learnt and sustainability of project activities.

Timeline



E Scaling up potential

42. The ISPRAD-SS project's priority is to test (and possibly scale up) a sustainable model of poverty reduction through "Agribusiness development" and "improvement of access to rural finance". The scaling-up framework relies on a mix of market-driven forces and government policies. *Champions* would include the International Poverty Reduction Centre in China (IPRCC) under LGOP and PDRC in MOF. *Drivers* relate to a powerful mix of (i) market-driven forces associated to the predominantly small-scale nature of the Chinese agriculture (small producers generate 90% of agricultural production) and the growing demand for safe and quality food; and (ii) policy interventions related to poverty eradication by 2020 (by far the most powerful), food safety legal framework, modernization of agriculture; (iii) a number of national projects promoting value chain development⁷¹ and (iv) the projectmatic approach retained for the ISPRAD-SS project with Ministry of Finance as borrower. *Incentives* relate to (i) for the private sector, smallholders as main providers of raw agricultural products; (ii) For the smallholders, premium price related to safe and quality food and guaranteed market for specific quality and safe food products. The steps for scaling up would include the following steps: (i) successful implementation of ISPRAD-SS sustainable poverty reduction through value chain development; (ii) monitoring and impact evaluation at project level based on project M&E and on the National Poverty reduction System (NPRS); (iii) learning and stock taking at IFAD country project level and at national level; (iv) identification of leveraging measures within government (policy change, mainstreaming into national projects); private sector (local and corporate firms, E-commerce, financial Institutions); development partners; union and federations of cooperatives; and (v) Scaling up through *expanding services* to more clients in a given geographical space, *horizontal replication*, from one geographic area to another, *functional expansion*, by adding additional areas of engagement or roles for a project organization; and *vertical up-scaling*, moving from a local or provincial engagement to a national-wide engagement. *Pathways* for scaling up include the mainstreaming of project activities into government policies of poverty reduction (e.g. innovation in organization of inclusive cooperatives); leveraging private sector and hence market-pull to invest in and work with smallholder commercial producers and poor through cooperatives, agribusiness, rural tourism facilities and e-commerce platforms; as well as strengthening direct consumer-producer linkages through e-commerce. *IFAD's role* will be one of providing the necessary expertise, contribute to the monitoring of results and to the knowledge management process that will catalyse the scaling up process.

49. **Evidence based:** The scaling-up is supposed to build on evidence from the M&E system and surveys conducted. Especially the module 2 and module 5 of above discussed survey shall be instructive in this regard. Also the interaction with private sector measured in module 3, as well as the outcome level indicators from the logframe will inform such discussions between IFAD and the Government of China.

⁷¹ These include (i) Wholesale market development and upgrading; (ii) Direct "farmer to supermarket" purchase project; (iii) Promotion of Farmers' Cooperatives; (iv) China's "Dragon Head Enterprise" Policy Framework; (v) China's Push on Agri-food Industry and Technology Parks; (vi) New Food Safety Law; (vii) Government Sponsored Agri-food Distribution Centres.

Appendix 7: Financial management and procurement arrangements

A. Financial Management

1. The Shaanxi Provincial Department of Finance (DOF) will have the primary responsibility for the administration of project resources. The Department/Bureaux of Finance (DOF/BOFs) at the provincial and county levels respectively will be responsible for the followings: (i) opening and management of the Project Accounts; (ii) administering the project resources including the IFAD loan and counterpart funds; (iii) review and approval of the financing needs of project implementation; (iv) overseeing the use of project resources; (v) ensuring effective flow of funds for project implementation; (vi) providing appropriate training to the financial officers of PMOs in terms of financial management; and (vii) preparing Withdrawal Applications (WAs) and reimbursement of eligible project expenditures on a timely basis.

2. MOF will be the responsible agency for repayment of the loan in subsequent arrangement with Shaanxi province. The loan proceeds will be onlent from the Ministry of Finance (MOF) to DOF of Shaanxi province where the loan proceeds will be further onlent to County BOFs, at the same terms and conditions without additional charges. At county level, the funds will be transferred from BOFs to PMOs and the later will forward the funds to relevant project implementing agencies (IAs) for the project implementation in accordance with expenditures incurred under approved annual work plan and budgets (AWPBs).

3. Counterpart funding will consist of allocations made by the project province and counties/districts. Government will ensure that counterpart funds are contained in the domestic fiscal allocations for the counties, and that they are released for the project on time. The counterpart funding maintain in the Treasury Accounts of the counties will be used to pre-finance the project expenditures as well.

4. Budget allocations will be made to enable the function of the provincial and county PMOs, to cover investment and recurrent expenses, office and training equipment, capacity building, M&E, knowledge management, and agribusiness facilitation services. Modest project support will also be reserved for function at township where existing government staff and facilities will be used. Recurrent costs for all PMOs will be ensured by government counterpart funding, which will cover staff salaries, travel costs, administrative costs, and operation and maintenance of vehicles etc..

5. **Fund flow:** In accordance with the section 4.04(d) of the General Conditions, immediately after entry into force of the Financing Agreement, there shall be a Designated Account (DA) denominated in US dollars to be opened for the IFAD loan, through which IFAD funding shall be channelled. The DA is to be set up at and managed by DOF. DOF will be directly responsible for the management, maintenance and reconciliation of the DA activities. Supporting documents required for IFAD disbursements will be prepared and submitted by CPMOs through PPMO for review and verification before sending to DOF for further disbursement processing.

6. The PPMO and county PMOs are responsible for reviewing the Disbursement Request as well as the supporting documentation required for IFAD disbursements. Disbursement Requests will be prepared and submitted by CPMOs to PPMOs for review and verification before sending the Disbursement Request to DOF for further disbursement processing. Once approved, project resources will be channeled directly from provincial level to county level without passing through the prefecture level.

7. Upon fulfilment of conditions precedent to withdrawal and the Borrower's request, the Fund will make one (or more) withdrawal(s) of up to the ceiling USD 8 million for the loan (will determine after the project costs are provided) , and deposit such amount(s) into the Designated Account; DOF shall submit withdrawal applications to replenish the Designated Account from time to time, based on

expenditures, provided that the amount claimed is not less than 20% of the initial deposit. All withdrawals must be in line with projected expenditures as detailed in the approved AWPBs.

8. PMOs and IAs shall maintain Implementation ledger Accounts in local currency in the Treasury System or commercial banks to receive the proceeds of the IFAD financing and/or the counterpart funding respectively. The County PMOs and BOFs will ensure that funds received at each level are transferred without delay. Separate bookkeeping is maintained by each of the IAs where Project activities will be implemented.

9. **Accounting system:** the installation or adaptation of an accounting system for the IFAD program will be stipulated as condition for withdrawal. PDRC are presently using electronic accounting systems and are also developing their Management Information System (MIS) which would encompass financial, procurement, output monitoring and other management functions. The accounting system should be web-based allowing aggregated reporting at the program level, and if possible direct producing of WA from the system. The MIS system should allow the project to record information on BP identification/preparation/selection process/accounting. Disbursement rules for all project activities will be set up in the Accounting Module under the MIS system to facilitate efficient funds flow and project monitoring. Participating cooperatives and enterprises will have access to the MIS system to record project information. The system will link the project activities with relevant expenditures categories.

10. Retroactive financing would be made available for eligible expenditures related to system installation/adaptation and training.

11. **Financial Management Manual:** (i) The PPMO in consultation with DOF will prepare a financial management (FM) Guideline for the project to regulate the project financial management. The PPMO shall make sure that proper internal controls are defined and described in the FM guideline, as part of the PIM. The PIM will be made a condition to disbursement. The project shall draft and submit to IFAD a progress report for the loan on a biannually basis which shall indicate the financial and physical achievements during project implementation. Annual financial statements should be prepared and delivered to IFAD no later than four (4) months after the end of each Fiscal Year. (ii) Dedicated finance staff should be appointed in the implementing agencies at provincial and county level. This will be a disbursement condition to disburse funds to participating cooperatives and enterprises. Participating enterprises/cooperatives should also have sufficient financial capacity. Capacity building will be provided through the project;

Supporting Documents and Interim Financial Reports

- 1) The IFR facility shall be used as a basis to submit withdrawal applications through Ministry of Finance. Procedure, formats and the contents of the IFR facility are detailed in Annex 3 to this letter.
- 2) The Project shall submit withdrawal applications and IFRs half yearly based on actual payments for incurred expenditures within 45 days after the period. Shall the Project need a liquidity above amount, ad hoc IFRs be prepared to support WA submissions to IFAD at any time.
- 3) IFRs shall be prepared by grouping expenditures in accordance with the loan categories as outlined in Schedule II of the Financing Agreement. IFRs shall be generated automatically by the accounting software system on the basis of the records maintained in the accounting software systems. Original documentation is to be retained by the Borrower/Recipient at a secured location and to be made available for inspection by IFAD missions, appointed external auditors and also upon request by IFAD.
- 4) The IFRs will be subject to external audit verification at the end of each financial year.
- 5) Withdrawal applications under disbursement procedures "Advance Withdrawal" and "Reimbursement" shall be accompanied by a list of all contracts for which prior review by IFAD is required and against which payments occurred in the period. When the amount being withdrawn includes payments against contracts subject to the IFAD's prior review,

the borrower must have received the IFAD's "no objection" to the contract award and have provided a copy of the signed contract to the IFAD. Format for this report is annexed in the IFRs.

- 6) The use of the IFR facility shall be subject to the Project compliance to the following eligibility criteria:
 - a. Timely provision of unaudited IFRs to IFAD;
 - b. Satisfactory financial management rating during Project Supervision;
 - c. Timely provision to IFAD of Audit Report and Audited Financial Statements within six month end of fiscal year.
- 7) Shall these criteria not be met, disbursement based on the SOE facility be adopted, as detailed in Section 4 of the LDH. The Borrower/Recipient still will be accountable for providing IFRs in accordance to Section G of this agreement. The applicable SOE threshold for withdrawal under procedure (i) "Advance Withdrawal" and under procedure (iii) "Reimbursement" will be US\$ 200,000 for all categories cited in Schedule 2 of the Financing Agreement.

12. Withdrawal applications for contracts or invoices with amounts higher than these SOE thresholds must be accompanied by copies of relevant supporting documents evidencing eligible expenditure (refer to Section 3 of the Loan Disbursement Handbook). The SOE and other documentation shall state amounts requested for withdrawal after excluding amounts financed from other financing sources or counterpart funds. Lending terms: The IFAD loan is granted on ordinary lending terms and shall be subject to interest on the principal amount of the Loan outstanding at a rate equal to the IFAD Reference Interest Rate, payable semi-annually in the Loan Service Payment Currency, and shall have a maturity period of eighteen (18) years, including a grace period of five (5) years⁷², starting from the date that the Fund has determined that all of the conditions precedent to withdrawal have been fulfilled. The currency of the loan will be in USD.

13. **Retroactive financing:** As an exception to the General Conditions for Agricultural Development Financing, provision is made for retroactive financing from the IFAD financing of up to US\$ 7million for eligible expenditures incurred as from xxx 2017 up to the entry in force of the financing agreement. Eligible expenditures for retroactive financing are considered those incurred to finance: (i) purchase of essential items (including equipment and procurement of necessary software for the PMOs; (ii) recruitment of project staff; (iii) costs related to tendering, selection, and recruitment of service providers; (iv) costs related to the finalization of the program implementation manual, customization of accounting software to fit IFAD requirement and license fees, start-up trainings and workshops; (v) establishment of the M&E system, including carrying-out of the baseline survey and development of MIS; (vi) exposure visits for knowledge and experiences sharing; (vii) surveys and feasibility studies; (viii) training and technical assistance for cooperatives, including recruitment of service providers, cooperative support field officers, technical advisors for business plans development, brokers/facilitators for linkages with supermarkets; and value-chain officers and monitoring & evaluation officers; and (ix) business plans. Retroactive expenditures are pre-financed by the government at its own risk. Eligible expenditures will be only reimbursed after fulfillment of disbursement conditions.

14. **Financing of Taxes:** The General Conditions of IFAD were amended in 2009 to allow the proceeds of IFAD's financing to be used to finance taxes that are not "excessive, discriminatory or otherwise unreasonable" (section 11.01(c)). The borrower has informed IFAD in writing that it is impractical to exempt the project from all or certain taxes; In Addition, the World Bank's Country Financing Parameters permit the financing of such taxes for a similar project. In view of

⁷² A variation of the standard three year grace period can be requested to the IFAD Executive Board upon submission of the Program for approval as long as the Net Present Value of the repayments of the loan is maintained.

improvement of the efficiency of funds flow and better support to the project implementation, IFAD's financing will be used to finance taxes for an estimated amount of approximately US\$6.6 million.

15. IFAD Client Portal: The IFAD Client Portal (ICP) is an interactive platform which allows IFAD borrowers to securely conduct business electronically with IFAD. China is one of the countries where the ICP is being piloted. The mission confirmed positively that this project can be included in the ICP pilot after assessing the readiness of the project for using the ICP. This implies that the Project will be able to securely submit Withdrawal Applications directly through the portal and obtain internal approvals from the concerned provincial government electronically, without transmitting hard copies to IFAD. In addition, through the ICP, clients will have access to real-time financing information as and when required on country portfolios and operational and financial information relating to projects. The PMO/DOF, whoever is approving the Withdrawal Application to IFAD, would need to have at least one email account on an official mail server.

16. Additional general conditions precedent to withdrawal

The following are designated as additional general conditions precedent to withdrawal

- (a) The Provincial Project Management Office (PPMO) and at least one County PMO, the respective key Project staff shall have been selected;
- (b) The Borrower, through the Lead Project Agency, shall have submitted, and the Fund shall have received, an official document confirming the availability of adequate counterpart funds for the first Project Year;
- (c) The Designated Account shall have been duly opened and the authorized signatories shall have been submitted to the Fund;
- (d) A draft PIM shall have been prepared and is acceptable to the Fund and
- (e) A computerized accounting system acceptable to the Fund shall have been identified and selected by the Provincial PMO.

17. Additional specific conditions precedent to withdrawal

- (a) No withdrawals shall be made in respect of expenditures under the relevant business plan until its Subsidiary Agreement has been approved by the Fund.

18. Program Financing and reporting: The program will be financed, other than IFAD and government contributions, by private sector partners including enterprises, farmer cooperatives, participating financial institutions and beneficiaries..

19. Risk control: In terms of 'inherent' fiduciary risk, China is in the Medium bracket. Based on the assessment of Transparency International (TI), China is at the medium high range of inherent risk⁷³ in terms of governance and accountability. TI Rating for corruption perceptions for China was 40 out of 100 during 2016, from 37 in 2015. With the most recent developments in the country, some improvements on accountability and transparency performance of governments can be anticipated. The new government since beginning of 2013 has embarked on refreshed campaign to fight corruption, promote public fiscal austerity and transparency and reform fiscal budgeting arrangements. The most recent fourth plenary session of the Central Committee of the Communist Party of China in October 2014 further upheld the rule of law, giving prospect of further improvement in TI rating and scorings. It describes the success of recent reform initiatives in improving transparency of budgeting, regulated access to capital finance, and strengthening local finances. China is a highly decentralized unitary state with local governments having a dominant share of public service delivery responsibility. Local governments have significant budgetary discretion, and they have had records of success in delivering on their growth and local economic development mandates. The provincial Government and PPMO has experiences with donor funded projects. PPMO has implemented a few WB/ADB financed projects although it is first time for the PPMO to implement the IFAD project.

⁷³ The Index scores 177 countries and territories on a scale from 0 (highly corrupt) to 100 (very clean).

20. Based on the results of financial management assessment, the current organizational structures of the implementing agencies especially with the Lead Project Agency (LPA) are found appropriate to the existing organization and the Project. The fund flow arrangements are conducive for project implementation, especially in view of the direct fund transfer arrangement from provincial level to county level. The proposed accounting standards, policies, procedures, asset management, budgeting, audit, reporting, and accounting system are in place and mostly effective for the existing organizations. The project can rely on the prevailing structure and system for its fiduciary arrangements in required quality with necessary mitigation actions taken to address identified weaknesses. Specifically, the level of risk can be mitigated if the project management effectively and efficiently undertake the followings:

- a) Establishment of the specific guidelines for financial management, accounting and disbursement, tailored and adapted to the requirements of the project implementation;
- b) Establishment of the PMOs having delegated authority to plan, manage, disburse and control project resources;
- c) Assignment of experienced financial management staff at provincial and county levels; implementation of capacity-building plans to satisfy the efficient management of the project, this is especially important for the county PMOs;
- d) Installation and effective use of computerized information/ accounting software at all levels
- e) Supervision and monitoring during project implementation need to be exercised to ensure that the prescribed guidelines and requirements are being followed and complied with. Support from IFAD and peer IFAD projects in China will be mobilised during the initial phase of the project to ensure fiduciary accountability and implementation efficiency. Annual supervision and implementation support missions both from DOF/PPMO and from IFAD and annual audit by the National Audit Office will also help the project to enhance fiduciary accountability and performance.

B. Procurement

21. The program will follow the IFAD procurement guideline and Procurement Handbook in undertaking procurement activities of the program. The two documents has been made available to PPMO during the design mission. Specific thresholds and prior review requirements will be stipulated in the Letter to The Borrower (LTB) to be sent to the government once the loan is approved and became effective.

22. As provided in Section 7.05 of the General Conditions, procurement of goods, works and services shall be carried out in accordance with the provisions of the Borrower/Recipient's procurement regulations, to the extent such are consistent with the IFAD Project Procurement Guidelines. Each AWPB must contain an 18-month Procurement Plan, which shall identify procedures which must be implemented by the Borrower/Recipient in order to ensure consistency with the IFAD Project Procurement Guidelines.

23. The Fund shall review and provide its no-objection to the **Procurement Plan**. A template will be provided to PPMO soon after the appraisal to guide its preparation of the first procurement plan, which shall include as a minimum:

- a. A brief description of each procurement activity to be undertaken during the period by each and every Project Party;
- b. The estimated value of each procurement activity;
- c. The method of procurement or selection to be adopted for each activity; and
- d. An indication as to whether the Fund shall carry out prior or post review in respect of each and every procurement activity.

24. Any amendments to the Procurement Plan shall be subject to the Fund's 'no objection'.

25. **Procurement Methods & Thresholds:** The procurement thresholds for the application of different methods of procurement for goods, works and services will be in accordance with the

methods of procurement for goods, works and services (non-consulting) and consultancy services as established by the applicable national and or provincial government rules, regulations and/or administrative orders. Such methods need to be aligned with the procurement methods stipulated in the IFAD procurement guideline and handbook. This would imply the non-preference of some government procurement methods in this program, such as "competitive negotiation". In terms of NCB for goods and civil works, IFAD follows the World Bank practices in bid evaluation, e.g. the technically responsive lowest-price bid will be awarded contract. The applicable procurement thresholds would be clearly indicated in the Project Implementation Manual.

26. **Standard Bidding Documents & Standard Contract:** Standard Bidding Documents are of paramount importance for transparency, efficiency, competitiveness and creation of capacity (standardization of procedures). In maximum possibility, the project should apply standard bidding documents for all local open bidding processes. To this end, IFAD will provide suggested templates to the PPMO, which are adapted from the standard template issued by the International Department of the Ministry of Finance for this particular purpose on 4 June 2012 project. Similarly, standard contracts for procurement of goods and services for the project may be developed and applied by the program. The Project will specify the use of these standard documents in the PIM.

27. **Procurement in Business Plans (BP)** for value chain promotion: When the BPs are approved, there would be a standard agreement between the program and the company or cooperative that submitted the BP on the financing of the BP. The standard agreement template should be subject to IFAD prior review to ensure safeguards are adequately included in the standard agreement. The Project then finances the BPs approved by the Business Proposal Advisory Committee (BPAC) and the cooperative or companies would undertake the procurement. Such procurements would not be subject to IFAD prior review and they would not be reflected in the program's procurement plan. However, if the amount for reimbursement exceeds the established SOE thresholds, when seeking Withdrawal Application from IFAD the same requirement for supporting document would apply.

28. In order to ensure the strategic alignment of program implementation with its objectives, IFAD would seek the detail of the BP and give prior review to any BP that demands for support of program resources exceeding an amount of RMB xx million, after BPAC approval but before agreement is to be signed for the BP. Any amendment to the agreement which increases the value of the financing above RMB xx million is also subject to prior review by IFAD.

29. The documents to be submitted for prior review include:

- Business plan proposal
- BPAC review/negotiation minutes (including among others BPAC composition, review process, and recommendation)
- BP draft agreements.

30. **Review of Procurement Decisions by IFAD:** Procurement of goods, civil works, services, consultants services and recruitments of individual consultants shall be defined as follows:

Procurement Method	Prior or Post	Comments
Procurement of Goods and Services (Non Consultants)		
NCB Civil Works	Post	Except procurement first contract for each county as per the approved Procurement Plan each year and thereafter any contract valued CNY 7,000,000 equivalent or more
NCB Goods and Services	Post	Except contracts contract valued CNY 1,400,000 equivalent or more
Shopping for goods, civil works and services	Post	All contracts

Procurement Method	Prior or Post	Comments
Direct Contract for goods, civil works and services	Post	Except procurement valued CNY 1,400,000 equivalent and above
Works by Force Account	Post	All contracts
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS), Fixed Budgeted Selection (FBS), Least Cost Selection (LCS) and Consultants Qualification Selection (CQS)	Prior	Except procurement valued CNY 700,000 equivalent and below
Sole Source Selection (SSS)	Prior	Except procurement valued CNY 140,000 equivalent or below
Recruitment of Individual Consultants		
Competitive Selection Process	Prior	Except procurement valued CNY 350,000 equivalent or above
Single Source Selection	Prior	Except procurement valued below CNY 140,000 or equivalent

31. The above mentioned thresholds may be modified by IFAD during the course of Project implementation.

32. All contracts including signed agreements for BP financing must be listed in the Register of Contracts, which should be updated and submitted to the IFAD Country Project Manager on a quarterly basis. The sample form to be used and instructions are detailed in Annex 6 to the LDH. The Program Management should regularly monitor the fulfilment and progress of the contracts in terms of implementation, payment and acceptance check etc.. A separate table could be created to track all BP's submitted and reviewed and approved/rejected. While agreements with company or cooperative are contracts, this still should be traceable through the contract register and individual contract payment monitoring forms.

33. In accordance with paragraph 80 of the IFAD Project Procurement Guidelines, IFAD will undertake to review the provisions for the procurement of good, works and services to ensure that the procurement process is carried out in conformity with the IFAD Project Procurement Guidelines, and the following procurement decisions shall be subject to prior review by the Fund for the award of any contract for goods, works, consultancy and services under the Project:

- a. Procurement of goods, materials and works
 - i. Evaluation Report and Recommendation for Award which includes but not limited to the following details:
 - (a) receipt and opening of bids was conducted in accordance with established rules and procedures;
 - (b) examination of bids;
 - (c) identification and rejection of substantially non-responsive bids;
 - (d) correction of arithmetical errors and currency conversion;
 - (e) adjustment for non-material deviations;
 - (f) evaluation of bids in accordance with the provision of the bid;
 - (g) comparison of bids;
 - (h) identification of the lowest evaluated responsive bid;
 - (i) post-qualification and award recommendation; and
 - ii. Contract and amendments.
- b. Procurement of consultancy services and services
 - i. Technical evaluation report which includes but limited to the following details:

- (a) description of the main events in the selection process (advertising, establishment of the shortlist, expressions of interest, withdrawals of firms before proposal submissions, delays, complaints from firms, extension of proposal submission date, etc.);
 - (b) brief description of meetings and actions taken by the evaluation committee;
 - (c) analysis of strengths and weaknesses of each proposal in relation to the evaluation criteria;
 - (d) summary of the results of the technical evaluation (including detail of scores);
 - (e) annexes detailing technical scores/ranking given to each firm on each evaluation criterion and scores given by each individual member of the evaluation committee;
 - (f) award recommendation;
- ii. Combined (technical and financial) evaluation report and the recommendation for award which includes but not limited to the following details:
- (a) an account of adjustments made to the prices of the proposals;
 - (b) correction of arithmetic errors;
 - (c) currency conversion;
 - (d) adjustment for nonmaterial deviations;
 - (e) determination of the evaluated price;
 - (f) the award recommendation;
 - (g) an annex with the minutes of the public proposals opening; and
- iii. Minutes of Contract Negotiations, Contract and amendments.

34. The PMOs will exercise overall coordination and monitoring on the procurement planning, the conduction of procurements, contract execution and asset management. PPMO will include necessary details in the PIM to guide the PMOs and IAs in the project activities of the program.

Appendix 8: Project cost and financing

Introduction and Assumptions

- Project Life:** The project will be implemented over a period of five years starting from 2018.
- Inflation:** An average of 2.0% domestic inflation was assumed and the same rate was maintained throughout the project implementation period from 2018 to 2023. The foreign exchange inflation was assumed at 1.5% for the project life.
- The project cost estimates are presented in Chinese Yuan (CNY) using October 2017 prices. Physical contingencies are estimated at 5%. These were not applied to the expenditures that relate to the Project Management component and to the financing of business plans in Component 1.2.
- Foreign Exchange (FE) Rate:** An average November 2017 exchange rate of CNY 6.64 to the USD was applied in converting all cost estimates to USD equivalent.
- Taxes and duties:** the tax rates applied to the project costing are: (i) work 11%; (ii) equipment and material 17%; (iii) consultancies 0%; (iv) business plan 0%; (v) goods services and inputs 17%; and (vi) operating cost 0%. All salaries paid by the provincial and county government are tax free. The IFAD loan will include taxes.

PROJECT COSTS AND FINANCING PLAN

- Total project cost is estimated at US\$257 million, including contingencies, but excluding expected resources leveraged from financial institutions. Project costs are organized into three major components: (i) Pro-poor value chain and agribusiness development (67percent of baseline costs); (ii) Public infrastructure and services (29 percent of baseline costs); and (iii) Project management and coordination (2 percent of baseline costs). Investment and recurrent costs amount to 98 and 2 percent of the project's total cost respectively.

Table 1: project costs by component and financier
(million of United States dollars)

	The Government		IFAD		Enterprises & Cooperatives		Beneficiaries		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
A. Pro-poor value chain and agribusiness development													
1. Development of pro-poor Value chains	0,0	-	2,2	100,0	-	-	-	-	2,2	0,9	0,0	2,2	0,0
2. Value chain development fund	0,0	-	63,8	37,8	101,9	60,3	3,3	2,0	169,0	65,8	-	152,1	16,9
3. Value chain rural finance development	4,5	72,4	1,7	27,6	-	-	-	-	6,2	2,4	0,3	5,0	0,9
Subtotal Pro-poor value chain and agribusiness development	4,5	2,5	67,7	38,2	101,9	57,4	3,3	1,9	177,5	69,1	0,3	159,3	17,9
B. Public infrastructure and services													
1. Climate resilience infrastructure development	70,7	100,0	-	-	0,0	-	-	-	70,7	27,5	3,5	59,2	7,9
2. Public services development	-0,0	-	1,3	100,0	-	-	-	-	1,3	0,5	0,0	1,2	-
Subtotal Public infrastructure and services	70,7	98,2	1,3	1,8	0,0	-	-	-	71,9	28,0	3,5	60,5	7,9
C. Project management & coordination													
1. Project management	4,4	72,0	1,7	28,0	-	-	-	-	6,0	2,4	0,1	5,1	0,8
2. Monitoring & Evaluation	-	-	1,0	100,0	-	-	-	-	1,0	0,4	0,0	1,0	-
3. Knowledge management	-	-	0,3	100,0	-	-	-	-	0,3	0,1	-	0,3	-
Subtotal Project management & coordination	4,4	59,3	3,0	40,7	-	-	-	-	7,3	2,9	0,1	6,4	0,8
Total PROJECT COSTS	79,5	31,0	72,0	28,0	101,9	39,7	3,3	1,3	256,7	100,0	4,0	226,1	26,6

- IFAD will contribute US\$72 million (28 percent of the total cost) to the project. The government will contribute to the project in the amount of US\$79.5 million (31 percent of the total cost). Participating enterprises and cooperatives are expected to contribute an estimated amount of approximately US\$101.9 million (40 percent of the total cost) as required co-financing for the business plans.

Beneficiaries contribution will in the order of US\$3.3 million (1.3 percent of the total cost) targeted to acquisition of farm inputs and small equipment. The IFAD loan has a co-financing ratio of 1:2.57.

Table 2: project costs by expenditure category and financier
(million of United States dollars)

	The Government		IFAD		Enterprises & Cooperatives		Beneficiaries		Total		For. Exch.	Local (Excl. Taxes)	Duties & Taxes
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			
I. Investment Costs													
A. Works	67,3	100,0	-	-	0,0	-	-	-	67,3	26,2	3,3	56,6	7,4
B. Equipment and materials	-	-	-	-	-	-	-	-	-	-	-	-	-
C. Government	-	-	-	-	-	-	-	-	-	-	-	-	-
D. Consultancies	0,0	0,2	6,8	99,8	-	-	-	-	6,8	2,7	0,1	6,7	-
E. Business plan	0,0	-	63,8	37,8	101,9	60,3	3,3	2,0	169,0	65,8	-	152,1	16,9
F. Goods, services and inputs	7,6	84,8	1,4	15,2	0,0	-	-	-	9,0	3,5	0,4	7,1	1,5
Total Investment Costs	75,0	29,7	72,0	28,6	101,9	40,4	3,3	1,3	252,2	98,2	3,9	222,4	25,8
II. Recurrent Costs													
A. Operating	4,6	100,0	-	-	-	-	-	-	4,6	1,8	0,1	3,7	0,7
Total Recurrent Costs	4,6	100,0	-	-	-	-	-	-	4,6	1,8	0,1	3,7	0,7
Total PROJECT COSTS	79,5	31,0	72,0	28,0	101,9	39,7	3,3	1,3	256,7	100,0	4,0	226,1	26,6

Attachment 1: Detailed project costs

Detailed table 1: Development of pro-poor business plan

	Unit	Quantities					Total	Unit Cost (RMB '000)	Base Cost (RMB '000)					Total
		2018	2019	2020	2021	2022			2018	2019	2020	2021	2022	
I. Investment Costs														
A. Value chain mapping and meetings														
1. project meetings	person-day	420	420	420	-	-	1,260	0,3	126,0	126,0	126,0	-	-	378,0
B. Pre-screening of potential agribusiness entities														
1. Communication (announcement on newspapers, TV)	set	9	9	9	-	-	27	5,0	45,0	45,0	45,0	-	-	135,0
2. Consultation meeting (consultants, participants)	person-day	190	190	190	-	-	570	0,4	76,0	76,0	76,0	-	-	228,0
3. Site visit	person-day	320	320	320	-	-	960	0,8	256,0	256,0	256,0	-	-	768,0
Subtotal Pre-screening of potential agribusiness entities									377,0	377,0	377,0	-	-	1.131,0
C. Business plan proposal support														
1. Business plan preparation support	set	135	135	135	-	-	405	24,0	3.240,0	3.240,0	3.240,0	-	-	9.720,0
D. Select and approve feasible business plan														
1. Consultation meeting	person-day	311	311	309	-	-	931	0,4	124,4	124,4	123,6	-	-	372,4
2. Site visit	person-day	140	140	140	-	-	420	0,8	112,0	112,0	112,0	-	-	336,0
Subtotal Select and approve feasible business plan									236,4	236,4	235,6	-	-	708,4
E. Business plan implementation support														
1. Legal advice	person-day	-	270	270	270	-	810	0,8	-	216,0	216,0	216,0	-	648,0
2. Cooperative capacity development /a	person-month	60	60	60	-	-	180	5,0	300,0	300,0	300,0	-	-	900,0
3. Consultation meeting	person-day	311	311	309	-	-	931	0,4	124,4	124,4	123,6	-	-	372,4
4. Site visit	person-day	140	140	140	-	-	420	0,8	112,0	112,0	112,0	-	-	336,0
Subtotal Business plan implementation support									536,4	752,4	751,6	216,0	-	2.256,4
Total									4.515,8	4.731,8	4.730,2	216,0	-	14.193,8

1a Based on 1 month support by specialist for an average of 60 coops per year with approved BP

Detailed table 2: Value chain development fund

Unit	Quantities					Total	Unit Cost (RMB '000)	Base Cost (RMB '000)					Total
	2018	2019	2020	2021	2022			2018	2019	2020	2021	2022	
I. Investment Costs													
A. Business plan funding													
Consultancies	lump sum							7.000,0	21.000,0	21.000,0	14.000,0	7.000,0	70.000,0
Goods, services and inputs	lump sum							14.000,0	42.000,0	42.000,0	28.000,0	14.000,0	140.000,0
Works	lump sum							36.000,0	108.000,0	108.000,0	72.000,0	36.000,0	360.000,0
Equipment and material	lump sum							50.000,0	150.000,0	150.000,0	100.000,0	50.000,0	500.000,0
Total								107.000,0	321.000,0	321.000,0	214.000,0	107.000,0	1.070.000,0

Detailed table 3: Value chain rural finance development

	Unit	Quantities					Total	Unit Cost (RMB '000)	Base Cost (RMB '000)					Total
		2018	2019	2020	2021	2022			2018	2019	2020	2021	2022	
I. Investment Costs														
A. technical and institutional support to rural financial institutions														
Briefing meeting	person-day	225	225	-	-	-	450	0,5	101,3	101,3	-	-	-	202,5
Training for financial institution staff	person-day	225	225	-	-	-	450	0,5	101,3	101,3	-	-	-	202,5
Subtotal technical and institutional support to rural financial institutions									202,5	202,5	-	-	-	405,0
B. Capacity development on financial management for project actors														
Capacity development for farmers	lump sum								360,0	180,0	180,0	180,0	-	900,0
Capacity development for cooperatives and enterprises	lump sum								500,0	700,0	700,0	1.000,0	-	2.900,0
Subtotal Capacity development on financial management for project actors									860,0	880,0	880,0	1.180,0	-	3.800,0
C. Commercial lending leveraging														
Loan risk fund	lump sum								2.000,0	7.000,0	8.000,0	6.000,0	4.000,0	27.000,0
D. Agriculture insurance subsidies														
Agricultural insurance subsidies	lump sum								-	900,0	1.800,0	1.800,0	900,0	5.400,0
Technical support and brokering for rural insurance companies	lump sum								-	150,0	300,0	300,0	150,0	900,0
Subtotal Agriculture insurance subsidies									-	1.050,0	2.100,0	2.100,0	1.050,0	6.300,0
Total									3.062,5	9.132,5	10.980,0	9.280,0	5.050,0	37.505,0

Detailed table 4: Climate resilient infrastructure development

Unit	Quantities					Total	Unit Cost (RMB '000)	Base Cost (RMB '000)					Total	
	2018	2019	2020	2021	2022			2018	2019	2020	2021	2022		
I. Investment Costs														
A. Irrigation systems construction/rehabilitation														
PVC pipeline	kilometer	32	39	40	8	-	119	45,0	1.440,0	1.755,0	1.800,0	360,0	-	5.355,0
Service fees	lump sum	-	-	-	-	-	5	124,0	-	80,0	80,0	80,0	30,0	270,0
Pumping station	set	-	3	2	-	-	4	10,0	-	372,0	248,0	-	-	620,0
Service fees	lump sum	-	2	2	-	-	4	10,0	-	20,0	20,0	-	-	40,0
U shape canal lining	kilometer	16	34	33	11	-	94	139,3	2.229,3	4.737,3	4.598,0	1.532,7	-	13.097,3
Masonry canal	kilometer	5,7	-	-	-	-	5,7	350,0	1.995,0	-	-	-	-	1.995,0
Service fee	lump sum	-	-	-	-	-	-	-	100,0	250,0	250,0	160,0	-	760,0
water pond	set	17	36	30	1	-	84	62,9	1.068,6	2.262,9	1.885,7	62,9	-	5.280,0
Tubewell and pumps	set	1	3	-	-	-	4	150,0	150,0	450,0	-	-	-	600,0
Small weir	set	1	1	-	-	-	2	800,0	800,0	800,0	-	-	-	1.600,0
Service fees	lump sum	-	-	-	-	-	-	-	190,0	190,0	-	-	-	380,0
Drinking water supply system rehabilitation /extension	set	30	66	25	2	2	125	341,4	10.240,8	22.529,8	8.534,0	682,7	682,7	42.670,0
Service fee	lump sum	-	-	-	-	-	-	-	510,0	1.130,0	430,0	30,0	30,0	2.130,0
Electricity line	kilometer	41	35	15	-	-	91	70,0	2.870,0	2.450,0	1.050,0	-	-	6.370,0
transformation sub-stations	set	2	4	1	-	-	7	191,4	382,9	765,7	191,4	-	-	1.340,0
Service fee	lump sum	-	-	-	-	-	-	-	150,0	150,0	80,0	-	-	380,0
Concrete road	kilometer	187	170	99	16	-	472	604,1	112.964,6	102.695,1	59.804,8	9.665,4	-	285.130,0
Service fee	lump sum	-	-	-	-	-	-	-	5.660,0	5.160,0	3.000,0	470,0	-	14.290,0
Gravel road	kilometer	62	121	73	15	-	271	102,5	6.353,4	12.399,4	7.480,6	1.537,1	-	27.770,5
Service fee	lump sum	-	-	-	-	-	-	-	320,0	620,0	380,0	80,0	-	1.400,0
Dirt road	kilometer	10	10	10	-	-	30	20,0	200,0	200,0	200,0	-	-	600,0
Slope land terracing	hectare	67	133	67	-	-	267	15,0	1.005,0	1.995,0	1.005,0	-	-	4.005,0
Land levelling	hectare	374	599	389	164	-	1.526	11,1	4.152,5	6.650,7	4.319,1	1.820,9	-	16.943,2
Training on infrastructure O&M	person-day	81	81	81	81	81	405	0,2	16,2	16,2	16,2	16,2	16,2	81,0
Total Investment Costs									152.798,3	167.679,0	95.372,8	16.497,9	758,9	433.106,9
II. Recurrent Costs														
A. operation & maintenance														
Office furniture and equipment	set	76	-	-	-	-	76	5,0	380,0	-	-	-	-	380,0
operation & maintenance cost	lump sum	1	1	1	1	1	5	180,0	180,0	180,0	180,0	180,0	180,0	900,0
Total Recurrent Costs									560,0	180,0	180,0	180,0	180,0	1.280,0
Total									153.358,3	167.859,0	95.552,8	16.677,9	938,9	434.386,9

Detailed table 5: Public service development

Unit	Quantities					Total	Unit Cost (RMB '000)	Base Cost (RMB '000)					Total	
	2018	2019	2020	2021	2022			2018	2019	2020	2021	2022		
I. Investment Costs														
A. Extension service enhancement														
1. Development of climate resilient training material														
Training for development of climate re material	person-month	6	-	-	-	-	6	40,0	240,0	-	-	-	-	240,0
printing	set	1.500	-	-	-	-	1.500	0,1	150,0	-	-	-	-	150,0
Subtotal Development of climate resilient training material									390,0	-	-	-	-	390,0
2. Training of Trainers														
TA	person-month	-	1	1	-	-	2	40,0	-	40,0	40,0	-	-	80,0
Lodging	person-day	-	450	450	-	-	900	0,4	-	180,0	180,0	-	-	360,0
Site rental	person-day	-	9	9	-	-	18	1,0	-	9,0	9,0	-	-	18,0
Subtotal Training of Trainers									-	229,0	229,0	-	-	458,0
3. Introduction of best practices														
Technical Assistance demonstration	person-month	1	1	-	-	-	2	400,0	400,0	400,0	-	-	-	800,0
	set	-	9	9	9	-	27	100,0	-	900,0	900,0	900,0	-	2.700,0
Subtotal Introduction of best practices									400,0	1.300,0	900,0	900,0	-	3.500,0
4. Development of knowldge products														
TA	person-month	-	-	-	2	-	2	40,0	-	-	-	80,0	-	80,0
printing	set	-	-	-	1.500	-	1.500	0,1	-	-	-	75,0	-	75,0
Subtotal Development of knowldge products									-	-	-	155,0	-	155,0
Subtotal Extension service enhancement									790,0	1.529,0	1.129,0	1.055,0	-	4.503,0
B. Support to Farm traceability pilot														
1. Establishment of traceability system for 3 products (pilot)														
Consultant for analysing production and processing stages	person-month	3	3	-	-	-	6	40,0	120,0	120,0	-	-	-	240,0
Meeting for finalising finalising production and processing stages	unit	-	3	-	-	-	3	13,0	-	39,0	-	-	-	39,0
Technical workshop with stakeholders	Event	-	3	-	-	-	3	19,6	-	58,8	-	-	-	58,8
Meeting for research team	Unit	-	1	-	-	-	1	61,5	-	61,5	-	-	-	61,5
computers /a	unit	-	18	-	-	-	18	4,0	-	72,0	-	-	-	72,0
Mobile scanners /b	unit	-	36	-	-	-	36	2,0	-	72,0	-	-	-	72,0
Database establishment (system architecture) for 3 products	product	-	3	-	-	-	3	600,0	-	1.800,0	-	-	-	1.800,0
Subtotal Establishment of traceability system for 3 products (pilot)									120,0	2.223,3	-	-	-	2.343,3
2. Training and awareness raising														
Trainers	person-month	-	2	2	-	-	4	40,0	-	80,0	80,0	-	-	160,0
Travel	person-day	-	15	15	-	-	30	0,4	-	6,0	6,0	-	-	12,0
Venue	day	-	2	2	-	-	4	1,0	-	2,0	2,0	-	-	4,0
Subtotal Training and awareness raising									-	88,0	88,0	-	-	176,0
3. Risk-based inspection of food-borne diseases														
workshop on hazard analysis	event	-	1	-	-	-	1	18,0	-	18,0	-	-	-	18,0
National expertise	person-month	-	9	-	-	-	9	12,0	-	108,0	-	-	-	108,0
lodging	person-day	-	10	-	-	-	10	0,4	-	4,0	-	-	-	4,0
Identification of critical control points	lump sum	-	-	-	-	-	-	-	-	30,0	-	-	-	30,0
Travel	lump sum	-	-	-	-	-	-	-	-	18,0	-	-	-	18,0
Subtotal Risk-based inspection of food-borne diseases									-	178,0	-	-	-	178,0
4. risk-based inspection and laboratory services														
National expertise	person-month	-	-	5	4	-	9	12,0	-	-	60,0	48,0	-	108,0
Local inspection training	lump sum	-	-	2	1	-	3	24,0	-	-	48,0	24,0	-	72,0
Support to sampling and analysis	set	-	-	8	8	8	24	30,0	-	-	240,0	240,0	240,0	720,0
Subtotal risk-based inspection and laboratory services									-	-	348,0	312,0	240,0	900,0
Subtotal Support to Farm traceability pilot									120,0	2.489,3	436,0	312,0	240,0	3.597,3
Total									910,0	4.018,3	1.565,0	1.367,0	240,0	8.100,3

Detailed table 6: Project management

	Unit	Quantities					Total	Unit Cost (RMB '000)	Base Cost (RMB '000)					Total	
		2018	2019	2020	2021	2022			2018	2019	2020	2021	2022		
I. Investment Costs															
A. project management															
Office equipment	set	114	-	-	-	-	114	5,0	570,0	-	-	-	-	-	570,0
Car rental	person-day	265	265	265	265	265	1.325	1,0	265,0	265,0	265,0	265,0	265,0	265,0	1.325,0
Project supervision	person-day	640	640	640	640	640	3.200	0,5	320,0	320,0	320,0	320,0	320,0	320,0	1.600,0
Consultation meeting	person-day	550	550	550	550	550	2.750	0,4	220,0	220,0	220,0	220,0	220,0	220,0	1.100,0
Project implementation support	person-day	153	153	153	-	-	459	2,0	306,0	306,0	306,0	-	-	-	918,0
Training for project management staff	person-day	300	300	-	-	-	600	0,4	120,0	120,0	-	-	-	-	240,0
Gender specialist (province)	person-month	9	9	6	1	-	25	30,0	270,0	270,0	180,0	30,0	-	-	750,0
Gender specialist (counties)	person-month	9	9	9	9	9	45	20,0	180,0	180,0	180,0	180,0	180,0	180,0	900,0
Meetings for compliance with environmental and social guidelines(province)	event	1	1	1	1	1	5	90,0	90,0	90,0	90,0	90,0	90,0	90,0	450,0
Meetings for compliance with environmental and social guidelines (counties)	event	9	9	9	9	9	45	36,0	324,0	324,0	324,0	324,0	324,0	324,0	1.620,0
Value chain specialist	person-month	81	81	81	-	-	243	5,0	405,0	405,0	405,0	-	-	-	1.215,0
Value chain auditing	set	77	77	-	-	-	154	0,6	46,2	46,2	-	-	-	-	92,4
Total Investment Costs									3.116,2	2.546,2	2.290,0	1.429,0	1.399,0	10.780,4	
II. Recurrent Costs															
A. Office staff															
Province	person-year	10	10	10	10	10	50	100,0	1.000,0	1.000,0	1.000,0	1.000,0	1.000,0	5.000,0	
County	person-year	45	45	45	45	45	225	100,0	4.500,0	4.500,0	4.500,0	4.500,0	4.500,0	22.500,0	
Total Recurrent Costs									5.500,0	5.500,0	5.500,0	5.500,0	5.500,0	27.500,0	
Total									8.616,2	8.046,2	7.790,0	6.929,0	6.899,0	38.280,4	

Detailed table 7: Monitoring and evaluation

Unit	Quantities					Total	Unit Cost (RMB '000)	Base Cost (RMB '000)					Total	
	2018	2019	2020	2021	2022			2018	2019	2020	2021	2022		
I. Investment Costs														
A. M&E														
Training on MIS	Training	27	9	9	-	-	45	20,0	540,0	180,0	180,0	-	-	900,0
Survey province level	person-month	1	-	1	-	1	3	1.000,0	1.000,0	-	1.000,0	-	1.000,0	3.000,0
Survey county level	person-month	1	-	1	-	1	3	720,0	720,0	-	720,0	-	720,0	2.160,0
Analysis of outcome survey /a	person-month	2	2	4	2	2	12	20,0	40,0	40,0	80,0	40,0	40,0	240,0
Total									2.300,0	220,0	1.980,0	40,0	1.760,0	6.300,0

la Support to PPMO

Detailed table 8: Knowledge management

	Unit	Quantities					Total	Unit Cost (RMB '000)	Base Cost (RMB '000)					Total
		2018	2019	2020	2021	2022			2018	2019	2020	2021	2022	
I. Investment Costs														
A. knowledge management														
report/publication	set	-	1	1	1	1	4	300,0	-	300,0	300,0	300,0	300,0	1.200,0
workshop	set	1	1	1	1	1	5	50,0	50,0	50,0	50,0	50,0	50,0	250,0
movie clip long	clip	-	-	-	-	1	1	300,0	-	-	-	-	300,0	300,0
movie clip short	set	-	-	1	-	-	1	100,0	-	-	100,0	-	-	100,0
webpage	set	1	-	-	-	-	1	50,0	50,0	-	-	-	-	50,0
Total									100,0	350,0	450,0	350,0	650,0	1.900,0

Appendix 9: Economic and financial Analysis

A. Introduction

1. The project is expected to generate substantial net incremental benefits for farmers, rural entrepreneurs and rural households in the project area. Benefits would directly accrue to poor farmers, women and youth through interventions aimed at: i) diversifying productive activities and reducing risks for rural poor, ii) boosting agriculture through increase in production and productivity; iii) strengthening climate adaptation capacity, iv) facilitating access to market and access to finance v) promoting entrepreneurship and value-addition to agricultural produce. The project would be applying a value chain and market driven approach through the implementation of business plans that will be grounded on public-private-producer partnerships (4Ps) with a number of promoters including agribusinesses, professional cooperatives, E-commerce operators, supermarkets, leading farmers, individual entrepreneurs and other suitable economic actors.

2. The project will lead to increased income of smallholder farmers, household and rural entrepreneurs. Benefits would accrue from: (i) enhanced common infrastructure at village level including roads, electricity and potable water; (ii) improved common production infrastructure such as irrigation and village storage capacity; (iii) diversification of productive activities and sources of income for rural households; (iii) increased food availability for rural poor, (iv) increased volumes and value-added of agricultural outputs; (v) reduced transportation costs and enhanced processing efficiency through innovative technology and improved infrastructure; (vi) reduced post harvest losses; (vii) improved quality of un-processed and processed products, fetching higher farmgate and millgate prices; (viii) diversified market outlets (such as traditional wholesale-retail, E-commerce, supermarket, local and corporate agribusiness) increasing bargaining power of sellers thus contributing to higher farmgate and millgate prices; (ix) increased employment from either hired or family labour or hired labour from agribusinesses and cooperatives; and (viii) tax revenues as a result of increased volume of taxable production.

3. Increase in income would be largely dependent on farmers/household/rural entrepreneurial actors adopting improved technologies which the project will promote through technical assistance, business plans and infrastructure investments, thus improving market access, supporting marketing linkages and generally creating a favourable economic environment that encourages farmers/rural entrepreneurs to produce more competitive products.

4. This appendix presents the Economic and Financial Analysis (EFA) of project's interventions through the use of indicative crop and business plans' models. The analysis builds upon the precautionary principle, accounting for project benefits in a realistic and conservative manner. A cash-flow analysis is carried out to present the "with" and "without" project analysis. The key-indicators of the analysis are Net Present Values (NPVs), Financial and Economic Internal Rate of Return (FIRR - EIRR), Benefit-cost ratio (B/C ratio).

B. Methodology, assumptions and data

5. **Financial analysis.** The primary objective of the financial analysis is to determine the financial viability and incentives for the project target group as a result of their engagement in project activities, and hence to examine project impacts on household incomes, family labour, and cash flow. A number of indicative economic activities were identified during the project appraisal process. The following 5 illustrative models are used in the EFA: (i) tea; (ii) Konjak⁷⁴; (iii) medicinal plants; (iv) Kiwi; and (v) chicken. They represent a value chain approach applied through business plan funding which include the following elements: (i) production enhancement at farm level; (ii) training and capacity development of farmers and business plans promoters (entrepreneurs both corporate or individuals, leading farmers, and other suitable ones); (iii) post-production and processing improvements; and (iv) market linkages and rural finance access.

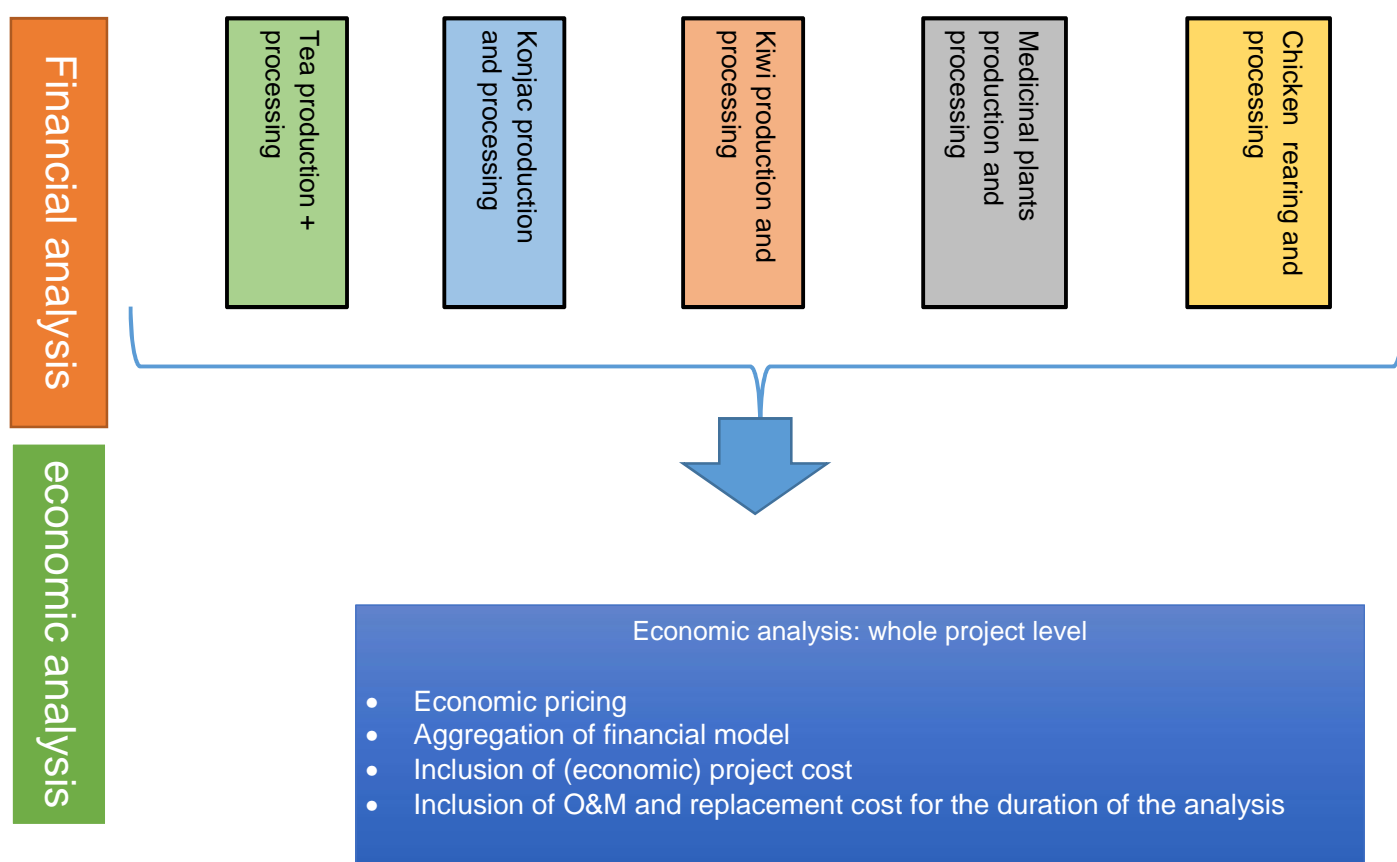
6. These models are constructed in a way to allow assessing the transfer/sharing of benefits within the business plans' actors. These transfers take place from business plans promoters to farmers and poor households through 4 different channels: (a) sales to the agribusiness entity or profit sharing on the basis of

⁷⁴ Konjak is the common name of plant *Amorphophallus konjac*, also known as **konjak, konjaku, konnyaku potato, devil's tongue, voodoo lily, snake palm**.

cooperative members' volumes of joint marketed output; (b) dividends based on shareholding arrangements; (c) land rental to the agribusiness entity; and (d) wages from fixed or short term work on agribusiness entity's production and agro-processing activities.

7. These models will be used as building blocks for the economic evaluation of the entire project once aggregated according to the target population. All the technical assumptions within the models have been elaborated jointly with the team members and the government technical counterparts on the basis of field surveys, national statistics, international and national expert consultation. The diagram in figure 1 provides a logical sketch of the adopted approach and the selected value chains, while summary results from the financial models are presented in figure 1 below.

Figure 1: Linking financial and economic analyses



8. **Project target group and beneficiaries.** Overall the project will benefits women, youth and men directly involved in farm activities proposed by the project as well as indirect beneficiaries employed in the value adding activities and in the related implementation activities of the project. The broad target group for the project will be smallholder farmers including both those registered in the National Poverty Reduction System (NPRS) and those that are living in poor areas of poverty designated counties as well as a (limited) indigenous communities actively engaged in productive activities. The project will have a strong poverty focus and it is estimated that the number of direct beneficiaries will be 280,793 HHs of whom 99,732 HHs are registered as rural poor with production capabilities (*Chanie Fupin*). Indirect beneficiaries are estimated at 209,540 HHs and will include (i) entrepreneurs and staff of business plan entities; (ii) farmers outside of the project area that will sell their products to the business plan entities supported by the project; and (iii) implementing agencies staff benefiting from training and capacity development under the project. The first two categories are accounted for in the economic analysis while the third one is considered as unquantifiable benefit. A summary of project beneficiaries is presented in table 1 below.

Table 1: summary of beneficiary population under SPRAD-DD

I. Population directly benefiting from the project	280,793
- N. of women	131,923
- N. of ethnic minority people	1,729
- N. of poor (achieved)	99,732
II. Population indirectly benefiting from the project	209,540
- N. of women	98,038
- N. of ethnic minority people	791
- N. of poor (achieved)	60,735
III. Poverty rate	22.47%

9. **Key assumptions.** The following source of information gathered during the design mission have been used to set up the analysis: interviews with farmers and entrepreneurs, documents and surveys from the consulting firm hired by the implementing agency (the Provincial Development Reform Commission – PDRC) for conducting economic and financial analysis according to government standards and mission estimates. In particular, business plans' activity models and crop budgets were derived from the estimates of the PDRC feasibility study on economic and financial analysis and adapted to IFAD standards and the project theory of change. These models were discussed with government counterparts before being used for the EFA.

10. **Exchange rate.** The exchange rate used in the analysis is fixed at 1 USD = 6.64 RMB computed as an average of the exchange rate prevailing during appraisal mission.

11. **Numeraire and Prices.** The adopted numeraire for the EFA is the domestic price level expressed in local currency unit. The financial prices for project inputs and products represent average market prices and were collected in the field during the first design, appraisal and post appraisal mission (September and November 2017 and January 2018 respectively). Prices used represent estimates of the average seasonal prices and the analysis is carried out using nominal constant prices.

12. **Labour.** Family labour has been valued both in financial and economic analysis. It has been assumed that farm labour is provided by the households and is valued at RMB 80 per day (USD 12) which is the prevailing market rate in project area.

13. **Duration** of the analysis is set to 20 years

14. **Opportunity cost of capital.** A discount rate of 6% has been used in this analysis to assess the viability and robustness of the investments. In order to consider the profitability of the foreseen investments with market alternatives, the selected value is calculated as an average of the lending, deposit and money market interest rates.

C. The business plan models

15. Nine business plans (one per county in the project area) were presented to the team for a preliminary evaluation and orientation exercise that would inform the elaboration of BP during project implementation. The key features of these nine BP are presented in table 2 and summarized in the text below.

- (a) They all include different types of capacity building for the main value chain actors (producers, processors, cooperatives) as well as production, post-production, processing and marketing support
- (b) Project resources to co-finance business plans will be provided to the selected agribusiness entities in the form of grant (i.e. the recipient agribusiness entity would not have to re-pay the project resources received to co-finance its business plan). The financing rules for the business plans are proposed in the table 3 below

- (c) The ratio of registered poor⁷⁵ to other farmers is 20%
- (d) The average cost per beneficiary HH is 761 US\$
- (e) The average cost per poor beneficiary HH is 2,256 US\$
- (f) Private funding leverage is 280%
- (g) Contract farming is the predominant and most effective benefit sharing tool
- (h) Farm sizes are small (average 1 mu)
- (i) Production benefits mostly relate to increase in output with expansion of cultivated area (raw material supply) playing the predominant role followed by increase in productivity and increase in quality (with associated price increase)
- (j) Processing benefits mostly relate to product diversification, reduced processing costs, cold chain
- (k) Marketing benefits mostly relate to expansion of branding, supermarket and E-commerce channels, certifications (international HAACP and ISO 9000 as well as national green food and organic certifications) and traceability system establishment

16. Among these nine BPs, five were selected to be analysed in more details in the EFA. This selection was based on the availability of data on both production and processing activities within these BP. These 5 BPs relate to tea, kiwi, medicinal plants, konjak, chicken.

⁷⁵ This refers to poor households that are registered in the National Poverty Registration System (NPRS – see main text).

Table 2: Business plan key features

Business plan main features	Tea	Tea	Kiwi	Medicinal plants	Konjak	Chicken	Rice	Mushrooms	Yellow ginger	Wild vegetables
<i>General features</i>										
County	Pingli	Langao	Langao	Zhenba	Mianwan	Dangfen	Hanyin	Xixian	Shanyang	Lanyan
Number of beneficiaries (HH)	6,000	325	1,430	2,500	10,120	9,100	120	263	60,000	1,603
of which "registered poor" (r-H)	1,780	185	430	1,000	3,078	5,300	89	34	5,000	1,250
Number of villages involved	5		10	4	20	70				
<i>Benefit sharing mechanisms (% of beneficiaries)</i>										
Contract farming	60%	75%	30%	80%	75%	80%	80%	90%	70%	90%
Land rental	10%	35%	10%	5%	10%	5%		10%	30% *	5%
Dividends by enterprise/cooperative	24%	21%	10-20%	10%	15%	6%	20%	90% (as coop members)	30% *	
Salaries	6%	45% *	40-50%	5%	0%	5%		90%	30% *	5%
<i>Incremental income generation potential (RMB/year/beneficiary)</i>										
Contract farming	1,500	18,000	5000-7000	2,500	1,600	3,300	800	7,000	7,425	3,600
Land rental	250-300	500	500	400	450	n.a.		800	6600 *	200
Dividends by enterprise/cooperative	700	300	n.a.	500	600	500	120	5,000		
Salaries (part time work for enterprise/cooperative)	3,600	9,000	20000*	10,000	n.a.	26,500			13,000	200

People's Republic of China
Sustaining Poverty Reduction through Agribusiness Development in South Shaanxi (SPRAD-SS)
Design completion report

Business plan main features	Tea	Tea	Kiwi	Medicinal plants	Konjak	Chicken	Rice	Mushrooms	Yellow ginger	Wild vegetables
<u>Size of farm (Mu) or activity (number of livestock)</u>	0,3-0,5	0,3	3-5	0,5	0,5-0,6	30 chicken	1,38	0,65	3	1
<u>Production base benefits</u>	Expansion of area Productivity	Expansion of area Increase in quality	Increase in quality reflected in price	Expansion of area Productivity	Expansion of area Productivity	Expansion of production basis	Price increase in oradominant	Productivity increase	Price increase linked to improved quality Reduction in transport cost	Expansion of area
<u>Processing benefits</u>	Diversification of products: green; red; superior; specialise tea	Reduced processing cost	diversification: vinegar Juice	Improved drying and cutting	Diversification: Noodle Jelly	present: 38 types of processing Future: semicooked chicken ready made; cooked chicken readymade	Reduced cost of processing due to higher technical efficiency of milling	Improved processing for snacks Improved packaging for export	Reduction in processing cost: Cold storage	
<u>Marketing benefits</u>	Branding Supermarket E-commerce	Increased retail network E-commerce HAACP ISO 3000 Green food	Supermarket E-commerce (Jindong)	E-commerce	Expansion of exports to US and Australia Branding (12 new patents) Supermarket E-commerce certifications Present: green food Future: Organic	Supermarket: E-commerce Advertisement in media Certifications: present: HAACP, Green food Future: national level market promotion (presently the brand is strong at provincial level)	Present: have organic certification Expansion of E-commerce from 10% to 30%	Specific market facility to be built in the county (funded by county gov funds) Expansion of E-commerce Green food certification	Excess demand ingredient for traditional medicinal market Present: 3 level certification (safety, environment and quality) Future: Green food certification Traceability system	Expand supermarket marketing Green Food HAACP
<u>Budget:</u>										
Total budget (US\$ million)	3,7	0,5	22,6	0,4	4	25	0,30	0,60	34	2,9
Funding requested from SPRAD-SS (US\$ million)	1,1	0,4	3,0	0,3	3,1	8,5	0,1	0,2	15,1	1,8
...average ratio (average = 280%)	333%	150%	750%	142%	117%	301%	308%	400%	223%	162%
Cost per beneficiary (US\$ per beneficiary HH)	183	1.205	2.106	114	305	933	816	573	251	1.128
Cost per registered poor (US\$ per beneficiary poor HH)	518	2.117	7.005	286	1.003	1.544	1.100	4.429	3.012	1.446
Potential for poverty reduction		90%					56%	100%	90%	90%

* On nucleus farm land

Table 3: Financing rules for business plan

BP expenditure category / Activity	Project funding %	Agribusiness entity funding ⁷⁶ %	Target poor people funding ⁷⁷
I. Training and advisory services	90%		
- On farm technical (extension) advisory services for target poor farmers whenever public extension services not available	90%	10%	-
- Training/capacity building to target poor farmers or poor household member participating in the BP	90% up to a maximum of RMB 700 per poor farmer	10%	-
- Training/capacity building to the agribusiness entity	90% (up to a maximum of RMB 50,000 per agribusiness entity)	10%	-
II. Production inputs	90%		
- Pro-poor kick-start package for target BP poor farmers engaged in contract farming : one-time inputs (e.g. seedlings, piglets, small chicken) provided only once	90%	-	10%
- Pro-poor kick-start package for target BP poor farmers engaged in contract farming : annual inputs (e.g. seeds, fertilisers, animal feed) provided only for the first year	90%		10%
III. Production infrastructure and equipment	50%		
- On-farm individual investments (e.g. irrigation equipment) required by target poor farmers	50% up to a maximum of RMB 3,000 per target poor farmer	-	50%
- Pro-poor contribution for collective productive assets (e.g. chicken or fungus shelter, tea irrigation system)	Amount proportional to the number of target poor household member involved in the BP (RMB 10,000 each) up to a maximum amount of RMB 650,000 or 50% of the total investment	50%	
IV. Post-production infrastructure and equipment	50%		
- Pro-poor contribution for investments on post production equipment (e.g. processing machinery) or infrastructure (e.g. storage facilities)	Amount proportional to the number of target poor household member involved in the BP (RMB 10,000 each) up to a maximum amount of RMB 1,000,000 or 50% of the total investment	50%	-
V. Marketing and branding activities	90%		
- Branding	90% up to a maximum of RMB 10,000	10%	-

⁷⁶ Either with its own funds and/or by borrowing from the financial sector or business partners (VC finance).

⁷⁷ Either with their own funds and/or by borrowing from the agribusiness entity that purchases their products

BP expenditure category / Activity	Project funding %	Agribusiness entity funding ⁷⁶ %	Target poor people funding ⁷⁷
- Trade fair participation	90% up to a maximum of RMB 15,000	10%	-
- Certification cost <u>only</u> for the first year	90% up to a maximum of RMB 50,000	10%	-

D. Financial analysis

17. The financial analysis is conducted using a value chain approach applied to the business plan models described above. This implies that financial returns were estimated to both producers and processors. The linkage between the production and processing stages of these value chains is ensured by the farmgate price of the selected agricultural products which represent the output of small scale farmers and the raw material supply for processors. Business plan subsidized rates as presented in table 2 are accounted for in the analysis.

18. The results of the financial and sensitivity analysis are presented in table 4 and summarized below.

Table 4: results of the financial analysis

	Tea		Kiwi		Medicinal plants		Konjak		Chicken	
	Production	Processing	Production	Processing	Production	Processing	Production	Processing	Production a/	Processing
<u>Base case</u>										
FIRR	10,08%	21,06%	10,03%	16,03%	21,95%	18,32%	13,08%	19,09%	n.a.	19,83%
NPV @ 10% (10,000 RMB)	207	737	62	318	940	290	2.364	521	n.a.	1099
<u>Sensitivity analysis (FIRR)</u>										
10% increase in producer price b/	13,56%	13,28%	14,66%	7,52%	25,52%	16,83%	21,66%	strongly negative FIRR	n.a.	7,60%
20% increase in producer price	16,69%	3,15%	18,62%	-5,97%	28,83%	15,29%	29,70%	strongly negative FIRR	n.a.	-11,81%
10% decrease in producer price	5,99%	27,78%	4,14%	22,91%	18,06%	19,78%	3,57%	49,32%	n.a.	30,54%
20% decrease in producer price	0,84%	33,88%	-5,56%	28,97%	13,80%	21,20%	-7,56%	73,98%	n.a.	40,61%
<u>Benefit sharing mechanisms (% of beneficiaries)</u>										
Contract farming	60%		30%		80%		75%		80%	
Land rental	10%		10%		5%		10%		5%	
Dividends by enterprise/cooperative	24%		10-20%		10%		15%		6%	
Salaries	6%		40-50%		5%		0%		9%	
<u>Incremental income generation potential (RMB/year/beneficiary)</u>										
Contract farming	1.500		5000-7000		2.500		1.600		3.500	
Land rental	250-300		600		400		450		n.a.	
Dividends by enterprise/cooperative	700		n.a.		500		600		500	
Salaries (part time work for enterprise/cooperative)	3.600		20000*		10.000		n.a.		26.500	

a/ Chicken production is a short cycle activity that does not require investment. Hence FIRR can not be calculated

b/ An increase in producer price generates a positive return for producers but a negative one for processors sourcing from these producers. That explain the symmetric behaviour of FIRR between production and processing stages

19. **Results of the financial and sensitivity analysis.** The financial viability has been assessed based on FIRR of the BPs. Results suggest that as structured, the BP are financially viable and show reasonable financial returns in the range of 10-22%. The income redistribution potential between production and processing stages within each of the 5 value chains to which BPs relate has been assessed based on (i) sensitivity analysis on the producer price; (ii) benefit sharing mechanism; and (iii) incremental income generation potential (see table 4 above). The interesting results are summarised in the table 5 below:

Table 5: income redistribution potential of selected VC

Value chains/BP	Income generation potential	Potential for changing income distribution	Implication for project activities
Tea	Relatively low at about 1500 RMB/ producer/ year (equivalent to about US\$225)	High given (i) the margin for an increase in producer price by 10% as shown by the sensitivity analysis	BP is sub-optimal in terms of income distribution but can be improved through better negotiation between producers and processors within contract farming.
Kiwi	Relatively high at about 900US\$/producer/year	Medium given (i) fair benefit sharing mechanism based on sensitivity analysis (an increase in producer price would generate negative returns for processors); and (ii) already high incidence of contract farming	This BP is sub-optimal in terms of income distribution but can be improved through (i) increased frequency of contract farming; and (ii) more equitable negotiation between producers and processors within contract farming.
Medicinal plants	medium at about US\$380/producer/year	High given (i) significant flexibility for increasing producer price without significantly reducing returns to processing (see sensitivity analysis); and (ii) high incidence of contract farming	This BP would benefit from (i) support for contractual negotiation for increasing producer price; and (ii) more equitable negotiation between producers and processors within contract farming
Konjak	Low at about US\$240/producer/year	low given (i) absence of margin for increasing producer price without significantly reducing returns to processing (see sensitivity analysis); and (ii) already high incidence of contract farming	This BP is sub-optimal in terms of income redistribution potential and would benefit from significant investments in productivity and quality of konjak in order to free margins for producer price increase
Chicken	high at about	low given (i) absence of margin for increasing	This BP has acceptable poverty reduction

Value chains/BP	Income generation potential	Potential for changing income distribution	Implication for project activities
	US\$530/producer/year	producer price without significantly reducing returns to processing (see sensitivity analysis); and (ii) already high incidence of contract farming and low possibility of increasing contractual labor	potential associated with the fast financial returns and the very low capital investment needed

Tea:

- (i) *Income generation potential:* is relatively low (reference to contract farming line in table 4 above with 1500 RMB/producer/year equivalent to about US\$225)
- (ii) *Potential for changing income distribution* is high given (i) the margin for an increase in producer price by 10% as shown by the sensitivity analysis (FIRR would be equivalent at around 13% for both producers and processors).
- (iii) *Implication for project activities:* This BP is sub-optimal in terms of income distribution but can be improved through better negotiation between producers and processors within contract farming.

Kiwi:

- (i) *Income generation potential:* is relatively high at about 900US\$/producer/year
- (iv) *Potential for changing income distribution* is medium given (i) fair benefit sharing mechanism based on sensitivity analysis (an increase in producer price would generate negative returns for processors); and (ii) already high incidence of contract farming
- (v) *Implication for project activities:* This BP is sub-optimal in terms of income distribution but can be improved through (i) increased frequency of contract farming; and (ii) more equitable negotiation between producers and processors within contract farming.

Medicinal plants:

- (i) *Income generation potential* is medium at about US\$380/producer/year
- (vi) *Potential for changing income distribution* is high given (i) significant flexibility for increasing producer price without significantly reducing returns to processing (see sensitivity analysis); and (ii) high incidence of contract farming
- (vii) *Implication for project activities:* This BP would benefit from (i) support for contractual negotiation for increasing producer price; and (ii) more equitable negotiation between producers and processors within contract farming.

Konjak:

- (i) *Income generation potential* is low at about US\$240/producer/year
- (viii) *Potential for changing income distribution* is low given (i) absence of margin for increasing producer price without significantly reducing returns to processing (see sensitivity analysis); and (ii) already high incidence of contract farming
- (ix) *Implication for project activities:* This BP is sub-optimal in terms of income redistribution potential and would benefit from significant investments in productivity and quality of konjak in order to free margins for producer price increase

Chicken:

- (i) *Income generation potential* is high at about US\$530/producer/year
- (x) *Potential for changing income distribution* is low given (i) absence of margin for increasing producer price without significantly reducing returns to processing (see sensitivity analysis); and (ii) already high incidence of contract farming and low possibility of increasing contractual labor
- (xi) *Implication for project activities:* This BP has acceptable poverty reduction potential associated with the fast financial returns and the very low capital investment needed

D. Economic analysis

20. The objectives of the economic analysis are: (i) to examine the overall project viability; (ii) to assess the project's impact and the overall economic rate of return; and (iii) to perform sensitivity analyses upon risks and variables affecting project's results.

21. **Key Assumptions.** Production and activity models considered in the financial analysis are used as building blocks for determining the viability of the whole project, once addressing for market distortion and opportunity costs for inputs and outputs. The economic analysis of the project hinges on the following assumptions: (i) project life has been assumed at 20 years in light of investments lifecycle; (ii) project inputs and outputs are valued at their economic parity prices estimated upon international prices as reported by the World Bank commodity outlook, and on the basis of custom duties and taxes rates gathered by the design team; (iii) an economic discount rate of 8% has been calculate as the weighted average of saving interest rates, long term bonds yields and the real interest rate; (iv) family labor is valued at its opportunity cost; (v) the shadow exchange rate factor (SERF) of 1.01 is calculated upon international trade statistics and applied for the conversion of commodity prices when detailed conversion factor is not available; (vi) conversion factors for main inputs and outputs are calculated starting from international prices and on the basis of import and export taxes and duties in China; and (vii) the shadow exchange rate (SER), estimated upon international trade data, is equal to RMB 6,72 (see table 6 below).

Table 6: estimation of shadow factors (billion Yuan and %)

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Average
Total imports of G&S	M	782,012,463,231	949,016,596,643	1,146,434,468,353	1,029,523,130,340	1,380,920,299,730	1,825,942,709,575	1,943,247,351,628	2,202,215,725,194	2,241,602,753,714	2,502,281,683,028	1,549,009,375,742	1,923,217,725,640
Total exports of G&S	X	961,731,387,733	1,257,332,326,433	1,496,317,007,222	1,249,723,537,737	1,603,944,177,443	2,035,852,448,437	2,175,082,012,376	2,355,594,737,798	2,452,902,033,661	2,360,152,452,309	2,157,922,466,130	2,195,351,474,601
Weighted average of import tariff rate	m	4.24%	4.19%	3.71%	3.58%	3.69%	3.57%			3.21%	3.41%	3.54%	3.6%
Import duties	Tm	33,191,248,442	39,852,833,743	42,514,573,755	36,835,434,036	50,935,959,393	65,222,069,932			71,955,449,357	68,277,803,562	68,959,353,590	49,481,540,927
Export duties	Tx												
Total international commerce	M-X	1,744,543,851,020	2,206,350,222,070	2,641,801,469,236	2,279,316,662,347	2,984,864,477,174	3,863,801,158,032	4,118,329,363,004	4,473,809,913,982	4,734,504,814,375	4,562,434,441,337	4,145,901,544,842	4,089,669,215,541
	M-Tm	816,003,711,732	969,835,490,383	1,188,215,047,333	1,096,432,964,436	1,433,576,258,731	1,819,170,778,527	1,943,247,351,628	2,202,215,725,194	2,313,558,233,071	2,370,559,493,590	2,116,969,375,292	1,999,799,337,898
	X-Tx	961,731,387,733	1,257,332,326,433	1,496,317,007,222	1,249,723,537,737	1,603,944,177,443	2,035,852,448,437	2,175,082,012,376	2,355,594,737,798	2,452,902,033,661	2,360,152,452,309	2,157,922,466,130	2,195,351,474,601
	SCF	0.962	0.962	0.984	0.984	0.983	0.983		1.000	1.000	0.985	0.984	0.989
	QER (Q/USD)	9.159	9.141	9.699	10.300	9.500	8.770	9.387	10.461	11.865	13.389	15.308	
	SER	9.331	9.303	9.555	10.358	9.246	8.520	9.387	10.461	12.047	13.599	15.530	

Average SCF	0.99
Average SERF	1.01
Official exchange rate (2017)	6.64
SER (2017)	6.72

22. **Project Economic Costs.** The economic analysis includes the investment and incremental recurrent costs of project components. Project financial costs have been converted to economic values by removing taxes, duties and subsidies. In order to avoid double counting, the final aggregation considered only those costs that were not included in the financial models, such as (a) all investments costs deducted from taxes; (b) the recurrent costs of the project for the whole duration of the analysis; (c) the operating costs of project funded activities beyond PY5; and (d) the use of a conversion factor of 0,99 to correct market costs to economic costs into the project costs.

23. **Benefits Estimation.** The incremental benefits stream comprises the economic net values of all the models developed in the financial analysis.

24. **Economic Profitability.** The project is an economically viable investment. The project economic NPV of the net benefit stream, discounted at 8%, is RMB 103 million (USD 15.5 million) producing an EIRR of 8.7% for the base case scenario. The estimated economic returns might be underestimated as a consequence of (i) the BP selected for the EFA are mostly slow return crops (plantation crops such as tea, kiwi, konjak, medicinal plants); and (ii) a number of benefits such as improved living conditions resulting from village infrastructure (potable water, electricity and village roads), long term impact of "climate smart" agricultural conditions and improved food safety (to mention the main ones) were not quantified.

25. **Sensitivity Analysis.** The section presents of variations in project benefits and costs. Project results were tested to sensitivity analysis so as to measure variations due to unforeseen factors. These variations apply to total project benefit and costs. Results of the sensitivity analysis are presented in the table 7 below.

Table 7: summary of sensitivity analysis

Base case	8,7%
Total project cost increase by 10%	7,8%
Total project cost increase by 20%	7,0%
Total project cost decrease by 10%	9,6%
Total project cost decrease by 10%	10,6%
Total project benefits increase by 10%	9,5%
Total project benefits increase by 20%	10,3%
Total project benefits decrease by 10%	7,7%
Total project benefits decrease by 20%	6,6%
Benefits lagged 1 year	7,4%
Benefits lagged 2 years	6,6%

26. The sensitivity analysis has been paired with the risk analysis so as to identify how - and the extent to which - project risks would ultimately have an impact on the overall profitability of the project. The results are presented in table 8 below.

Table 8: sensitivity analysis on project risks

Risk	Risk Level	Mitigation Measure	Residual Risk Level	Comparative sensitivity analysis result (Proxy)
Limited attention to post-production/marketing: China's agricultural development strategies have mainly focused on production/productivity enhancement, with emphasis on infrastructure development, with limited attention to post-production/marketing. Limited attention to post-production/marketing also resulted in cases of local overproduction, which led to drops in price of commodities and farmers' income.	M	The proposed project will place great emphasis to post-production and to developing agricultural value chains that promote equitable organizational arrangements, different channels/opportunities to farmers to link with market opportunities, and increased incomes for the target households.	L	Benefits reduced by 10% = EIRR of 7.7%
Poverty reduction through direct support to dragonhead enterprises gave mixed results: The Government approach of promoting poverty reduction by directly supporting dragonhead enterprises, under the assumption that the	H	The key criteria for the selection of the enterprises to be supported by the program include: (i) outreach of target group (poor farmers), and (ii) establishment of fair contractual	M	Benefits reduced by 20% = EIRR of 6.6%

Risk	Risk Level	Mitigation Measure	Residual Risk Level	Comparative sensitivity analysis result (Proxy)
benefits generated by the dragonhead enterprises would trickle down to poor farmers, gave mixed results, and it did not always proved to be an effective approach.		arrangements with the primary target group.		
Insufficient poverty coverage by business plans (BPs): Business plans can include only a small number of registered poor because: Density of poverty is low (on average around 20% of rural households are registered poor in the project area) as the project is dealing with residual poverty pockets; Registered poor are not easily integrated in business ventures; The consequence is that a significant number of BPs must be implemented to achieve the poverty eradication target	H	Include a minimum quota of registered poor in BPs Increase the number of beneficiaries per BPs Provide technical assistance to project beneficiaries on gap to bring them up to standard	M	Costs increased by 20% = EIRR of 7.0%
BP can be driven by weak and/or unsuited enterprises and cooperatives	M	Due diligence and creditworthiness check at the stage of initial BP proposal (prior to full BP elaboration)	L	Costs increase by 10%. EIRR of 7.8%
Market potential of proposed VC to be promoted under BP is low	H	Market intelligence check by large operators such as e-commerce or supermarkets involved in partnerships	M	Benefits reduced by 20% = EIRR of 6.6%
The perverse incentive of repayment responsibilities: Experiences from other IFAD-funded projects showed that in those cases where the loan repayment responsibility is transferred to the local county authorities, and from them to the beneficiaries (agro-enterprises, cooperatives, or poor households) a perverse incentive is created whereas local authorities have an incentive to select among the entities to support those who could offer the highest likelihood of repayment, and not necessarily those who best capacity to achieve the project objectives/target beneficiaries.	H	It is agreed that project resources to co-finance business plans will be provided to the selected agribusiness entities in the form of grant (i.e. the recipient agribusiness would not have to re-pay the project resources received to co-finance its business plan).	L	No impact on EIRR
Limited understanding of value-chain development approach, and experience/capacity to implement it, has limited progress and performance in this area in ongoing projects: PMOs have strong capacity and experience in implementing agricultural production/productivity enhancement projects, but limited in value chain development. The concept of value chain development is new, and not entirely understood (for instance, PMOs have difficulties in determining what could be considered eligible for financing under value-chain development activities). This has hampered progress and performance in this area.	H	Greater support at start-up has to be provided to have project staff and implementing partners familiarizing with the concept of value-chain development and program implementation manual. TA is provided to facilitate successful implementation of the component. Linkages with ongoing or future initiatives aimed at strengthening the capacity of service providers to provide the required services will be pursued (e.g. with Regional Grant for Scaling Up of Pro-poor Value Chain Projects).	M	Benefit lagged 1 year. EIRR of 7.4%

E. Linkages between EFA and the project result framework

27. The EFA is supporting the definition and implementation of the project result framework. The EFA is being used to define the target of the key indicators of outcome of component 1 = “% increase in gross per capita income among poor beneficiaries through inclusion in business plans”.

Appendix 10: Draft project implementation manual

Will be completed before EB approval

Appendix 11: Compliance with IFAD policies

I. Compliance with IFAD policies

A Compliance with IFAD's strategic framework

1. The SPRAD-SS project is in line with the goal of IFAD's strategic framework for 2016-2025 which is to enable rural households and communities to gain increasingly remunerative, sustainable and resilient livelihoods that help them permanently move out of poverty and food insecurity. SPRAD-SS aligns fully with the three strategic objectives (SO) of the SF which are:

- *SO 1: Increase rural peoples' productive capacities* which includes access to natural resource, agricultural technologies and production services, inclusive financial services and nutrition.
- *SO 2: Increase rural peoples' access to markets* which includes diversified rural enterprise and employment opportunities, rural business environment, rural producers' organizations, rural infrastructure.
- *SO 3: Strengthen the environmental sustainability and climate resilience of rural peoples' economic activities* which includes environmental sustainability and climate change adaptation.

B Compliance with IFAD's Country Strategy (COSOP)

2. The SPRAD-SS project is the first investment operation to be designed under the current 2016-2020 COSOP, and it well reflects the recent trend of focusing IFAD support towards enhancing income opportunities and increasing resilience, giving more emphasis to improving access to markets and value-chains, and resilience to climate change. The proposed project serves well the Strategic Objectives 1 and 2 of the 2016-2020 COSOP, as described below, particularly in relation to improved access to physical assets, market, financial services and capacity development for income generation to contribute to the poverty eradication impact. The project design will take into account the experiences learnt from previous and on-going IFAD projects in China, particularly LMAPRP, SSADEP and JIMAAPP, including participatory planning, targeting, gender mainstreaming, M&E, and management and coordination of implementation.

- a) The alignment with **strategic Objective 1: "Increase smallholders' capacity and opportunities to access markets"** is presented below according to the three thematic areas:
 - i. **Thematic area of focus 1.A: Support inclusive and safe value chain development.** This is the main focus of the SPRAD-SS project. Public, semi-public and private goods will be provided/facilitated for village, production and market infrastructure and facilities, establishment of production basis (plantations, greenhouses, land levelling and terraces), knowledge dissemination for good agricultural practices (production, postharvest and processing), marketing and business support services and facilitation of intra-value chain dialogue with the goal to enhance performance and inclusiveness.
 - ii. **Thematic area of focus 1.B: Support inclusive cooperatives.** Cooperatives will be important rural entities supported by SPRAD-SS (although enterprises might play a greater role). They will receive capacity development for improved governance and management and for enlarging the range of quality services to members including business advice, planning and direct marketing. Cooperatives will be trained in financial education and management and in legal expertise for contract design and enforcement.
 - iii. **Thematic area of focus 1.C: Support inclusive financial services.** Access to rural finance will be improved through (i) technical support for financial institutions (for risk evaluation and innovative financing practices); (ii) support to the Village Mutual Funds (VMFs); (iii) financial literacy for project beneficiaries; and (iv) innovative insurance projects for Farmers.

- b) The alignment with **Strategic Objective 2: Strengthen environmental sustainability and climate resilience** is presented below according to the two thematic areas:
- i. **Thematic area of focus 2.A: Support sustainable land management at household and landscape level, and agro-biodiversity conservation.** In this thematic area, SPRAD-SS will invest in land levelling, terracing and water saving irrigation technologies.
 - ii. **Thematic area of focus 2.B: Mainstreaming environmental and climate resilience considerations into the country project activities.** Environmental and climate resilience interventions within SPRAD-SS will include (i) improving canal irrigation efficiency through canal development and rehabilitation (including structure, pipeline and pumping stations), water savings irrigation through drip and sprinkler systems, water conservation through pools, ponds and storage points; and (ii) promotion of drought and heat resisting varieties.

C Compliance with IFAD's policies

3. The proposed project is in line with IFAD's Policies. The project aims at reducing poverty in targeted areas through the development of inclusive, equitable and sustainable value chains. It will achieve this by (i) establishing/improving common infrastructure as well as production and post-production basis/facilities; (ii) strengthening capacity of small producer cooperative on management, governance and service provision to members; (iii) promoting postharvest and processing value adding; (iv) enhancing the opportunities for small producers cooperatives to access markets including through innovative systems such as E-commerce, certified trade and food safety measures; and (v) improving access to rural finance specifically for value chain development.

4. The project will take a value-chain approach to poverty alleviation, focused on creating sustainable commercial linkages between the targeted producers and potential markets that generate enough revenue to lift people out of poverty. The value chain approach has distinctive features in terms of both i) the scope used in the analysis and ii) the tangible and non-tangible considerations used in designing and implementing interventions. These include the following: (i) a market system perspective; (ii) focus on end markets; (iii) understanding the role of value chain governance; (iv) recognition of the importance of relationships among value chain actors; (v) facilitating changes in actor behavior mainly through capacity development and incentive system; and (vi) empowering small producers and their cooperatives. This approach seeks to address systemic constraints and therefore the project will aim to address system problems such as the need for new services, standards, advocacy, formal and informal rules and skills development.

5. The main policies relevant to the SPRAD-SS project are discussed below and summarised in table 1 below.

Targeting- Reaching the Poor and Gender Mainstreaming

6. The project activities, implementation arrangements and M&E system have been designed in compliance with the **IFAD targeting strategy** as well as the **Framework for Mainstreaming Gender in PMD operations**. The appendix on poverty targeting and gender outlines the project approach to these two important aspects. The target group for the project has been clearly defined and the selection of the project area is in keeping with poverty criteria. The project design addresses the production and marketing issues confronting smallholder producers. Detailed discussions were held with them during the Project design to ensure that the project components and activities were consistent with their needs and constraints. The project will make special provision for the participation of women and will specify targets for coverage of women, provision of assets, skills training and market linkages and provision of gender disaggregated data will be included in the log-frame, in each component and in the targeting strategy. The participation of women will also be carefully monitored throughout the implementation process.

Private Sector Development and Partnership Strategy (2005)

7. IFAD outlined its strategy for private-sector development and partnership in April 2005 and in 2011.⁷⁸ IFAD intends to deepen its engagement with the range of private sector providers with the aim of creating markets for its target groups; improving their access to inputs, services, knowledge and technology; and increasing income-generating or job-creating opportunities for its target populations. This strategy recognizes that in most developing countries, the private sector is now responsible for a majority of employment and income-generating opportunities, and has become the driving force for poverty reduction.

8. In the SPRAD-SS project, a prominent role is given to the private sector that will be the object of partnerships with small producers and their cooperatives. Private sector actors likely to engage in these partnerships include agribusiness (both local dragonhead enterprises and international corporate firms based in China), supermarkets, Eco-tourism and E-commerce platforms. The priority of the project will be to establish linkages with the largest number of buyers for each participating producer group/cooperative in order to reduce single buyer risk (monopsony) and broaden the set of production and marketing skills of these groups/cooperatives.

Environment and Natural Resources Management Strategy (2011)

9. IFAD's new ENRM strategy approved in May 2011⁷⁹ is at the core of delivering IFAD's poverty reduction and sustainable agriculture mandate because of its target group's reliance on the environment and natural resources for their livelihoods. The goal of the ENRM policy is "to enable poor rural people to escape from and remain out of poverty through more-productive and resilient livelihoods and ecosystems." The purpose is "to integrate the sustainable management of natural assets across the activities of IFAD and its partners. In addition, the strategy highlights the need to maximize the positive environmental impact of value chains, assess the downside risks and build on its comparative advantage of working through community-based approaches. IFAD recognizes that poor rural people face a series of interconnected natural resource management challenges. They are in the front line of climate change impacts; the ecosystems and biodiversity on which they rely are increasingly degraded.

10. In the case of the SPRAD-SS project, the natural resource and production basis will be improved and enlarged with a strong focus on environmental sustainability by (i) investing on land and landscape management through land leveling and terracing; and (ii) promotion of water saving technologies and a adopting a "net zero" policy in semi-arid environments for water use.

Rural Finance Policy (2009) Decision Tools (2010) and Technical Note (2011)

11. The SPRAD-SS project design team reviewed IFAD's six guiding principles outlined in its rural finance interventions namely: (i) support access to a variety of financial services; (ii) promote a wide range of financial institutions, models and delivery channels; (iii) support demand-driven and innovative approaches; (iv) encourage – in collaboration with private sector partners – market-based approaches that strengthen rural financial markets, avoid distortions in the financial sector and leverage IFAD's resources; (v) develop and support long-term strategies focusing on sustainability and poverty outreach; and (vi) participate in policy dialogues that promote an enabling environment for rural finance.

12. The SPRAD-SS project will improve the access to credit for small producers involved in the value chains that the project will contribute to develop. The justification is associated with the (i) addressing the main constraints of credit access including collateral availability and use as well as information asymmetries introduced in the lending process leading to credit rationing is which the result of an moderately strong credit risk aversion on both the part of FIs and households; and (ii) realising the opportunities for rural credit providers represented by the higher visibility and central role that small scale agriculture will play in the government poverty reduction strategy.

⁷⁸ Private-Sector Strategy. Deepening IFAD's engagement with the private sector. IFAD. February 2012.

⁷⁹ IFAD's Environment and Natural Resource Management Policy: Resilient livelihoods through the sustainable use of natural assets. May 2011.

IFAD Climate Change Strategy (2010)

13. IFAD's climate change strategy⁸⁰ recognizes that the speed and intensity of climate change are outpacing the ability of poor rural people and societies to cope. IFAD recognizes that climate-related risks, and potential opportunities, can be addressed more systematically within its Projects and policy advice. The goal of this strategy is to maximize IFAD's impact on rural poverty in the context of climate change.

14. The SPRAD-SS project will engage in mainstreaming climate smart measures in the establishment and enlargement of the production basis through (i) conducting a vulnerability assessment of beneficiaries to climate change and increase awareness among beneficiaries of the risks associated with climate change⁸¹; (ii) adopting a "net zero" policy in semi-arid environments for water use; (iii) promoting the adoption of climate-friendly inputs (e.g., drought and pest-resistant crop varieties, soil organic matter incorporation, soil mulching , and appropriate crop rotations); (iv) promoting the adoption of integrated pest management (IPM) and fertilization management strategies; (v) training government officials and PMO staff on main environmental improvement and climate smart measures.

⁸⁰ Climate Change Strategy. IFAD. May 2010.

⁸¹ This could be conducted using the Self-evaluation and Holistic Assessment of Climate Resilience of farmers and Pastoralists (SHARP) Methodology developed by FAO. SHARP is an approach to measure resilience in climate change adaptation projects (mainly in sub-Saharan Africa), through the use of an Android tablet application. More information can be obtained on line at <http://www.fao.org/in-action/sharp/en/>.

Table 1: Summary of compliance of the proposed project with IFAD's policies

Major policies	Design of the proposed project	Status of compliance
Project objective	The project objective is to reduce poverty in targeted areas through the development of inclusive, equitable and sustainable value chains	Yes
Gender focus	Gender mainstreaming strategy has been partly designed for the project, M&E indicators for women's participation in planning, implementation and management of the project will be developed.	Yes
Poverty focus	The project targeting strategy has been developed to contribute to the government high priority poverty eradication effort in rural areas, focusing on agribusiness development and improving access rural finance. Criteria for selection of beneficiary villages and households are aligned with the national poor registration system (NPRS)	Yes
Participatory	Participatory approach for the planning and for selection of value chain to be developed beyond the start-up phase of the project has been included in the design.	Yes
Scaling-up	The project has a strong focus on scaling up ensured by (i) the national level institutional framework (the Ministry of Finance is the borrower and PDRC is the implementing agency); and (ii) if successful in piloting sustainable poverty reduction models through value chain development, the project scaling up potential will be significant given the fact that it operates within the high priority and visible poverty eradication effort of the government and the government itself will be the driver and facilitator of the scaling up	Yes
Climate change	The project will engage in mainstreaming climate smart measures in the establishment and enlargement of the production basis through (i) conducting a vulnerability assessment of beneficiaries to climate change and increase awareness among beneficiaries of the risks associated with climate change; (ii) adopting a "net zero" policy in semi-arid environments for water use; (iii) promoting the adoption of climate-friendly inputs (e.g., drought and pest-resistant crop varieties, soil organic matter incorporation, soil mulching, and appropriate crop rotations); (iv) promoting the adoption of integrated pest management (IPM) and fertilization management strategies; (v) training government officials and PMO staff on main environmental improvement and climate smart measures.	Yes
Environment impact	Under the project, the natural resource and production basis will be improved and enlarged with a strong focus on environmental sustainability by (i) investing on land and landscape management through land leveling and terracing; and (ii) promotion of water saving technologies and a adopting a "net zero" policy in semi-arid environments for water use.	Yes
Innovation	The project is designed with innovative approach, such as promoting certification, food safety, geographic Indication, Fairtrade and E-commerce among small producers and their cooperatives. Warehouse receipt system will also be piloted in the project	Yes

II. Adherence to the Social Environmental and Climate Assessment Procedures (SECAP)

15. A SECAP review note has been prepared (see separate document). The main recommendations of the note include:

Appendix 12: Contents of the Program Life File

1. Design team. The project was designed by a team led by Matteo Marchisio (Country Program Manager, Asia and Pacific Division, IFAD) and comprising Carlo Bravi (Senior Economist/Team Leader, FAO/TCI); Marco Camagni (Lead Technical Specialist and Lead Advisor, Rural Markets and Enterprises, IFAD); Sun Yinhong (Country Program Officer, IFAD); Philipp Baumgartner (Program Officer, IFAD); Sunae Kim (Environmental and Safeguard Specialist, IFAD); Zhijun Chen (Irrigation and rural infrastructure engineer, FAO/TCI); Li Guangyong (Rural Engineer); Longyao Zhang (Rural Finance Specialist); Alan Piazza (Poverty Reduction Specialist); Cai Kui (Gender Specialist); Liu Xueming (Senior Economist, FAO/TCI); Zhe Yuan (Economist, FAO/TCI).

2. In-house Country Program Management Team (CPMT). The design team benefited from the support of an extended in-house Country Program Management Team which included, in addition to the IFAD staff who were part of the Design Team: Fabrizio Bresciani (Regional Economist, APR); Nicole Carta (Senior Partnership and Resource Mobilization Officer, Private Sector & Foundations, PRM); Enrique Hennings (Lead Technical Specialist, Rural Markets & Enterprises, PTA); Francesco Rispoli (Senior Technical Specialist, Inclusive Rural Financial Services, PTA); Mawira Chitima (Lead Technical Specialist, Water & Rural Infrastructures, PTA); Beatrice Gerli (Gender & Targeting Specialist, PTA); Juliane Friedrich (Senior Technical Specialist - Nutrition, PMD); Sheila Mwanundu (Lead Technical Specialist, ECD); Roshan Cooke (Regional Climate and Environment Specialist, ECD); Irene Li (Senior Finance Officer, FMD); and Charles Forrest (Senior Legal Officer, LEG).

3. Preparation process. The design process followed the following steps and milestones:

- April 2016 **Scoping Mission**
- July 2016 **Operational Strategy and Policy Guidance Committee (OSC)**
- September 2017 **Design Mission**
- October 2017 **First CPMT Meeting**
- November 2017 **Quality Enhancement**
- November 2017 **Appraisal Mission**
- January 2018 **Post-appraisal Mission**
- January 2018 **Second CPMT Meeting**
- February 2018 **Quality Assurance**
- March 2018 **Negotiations**
- April 2018 **IFAD Executive Board Approval**

4. Program Life File: The following program design related documents are available in the Program Life File:

1. Cost tables
2. Economic and Financial Analysis
3. Working papers
4. SECAP Note
5. Baseline survey (to be completed)
6. Concept note included in COSOP 2016-2020;
7. Aide Memoires of the Design, Appraisal and Post-Appraisal missions
8. Minutes of the CPMT meetings
9. QE Overall & Detailed Comments and Panel Report
10. QA Compliance Note and QA Project Report

5. Knowledge base: Other relevant documents include:

- (1) Results-Based Country Strategic Opportunities Program (RB-COSOP) for China 2016-2020;
- (2) Country Program Evaluation September 2016

Review note: Social Environmental and Climate Assessment Procedures (SECAP)

Review Note on China: Sustainable Poverty Reduction through Agribusiness Development in Shaanxi (SPRAD-Shaanxi) Project

I. Major landscape characteristics and issues (social, natural resources and climate)

A. Project Areas

1. Shaanxi. Shaanxi served as the political, economic and cultural center in ancient China until the end of the 19th century. For more than 1,100 years, 13 dynasties built their capitals in Shaanxi. Among those 13 dynasties are three major dynasties of the Qin, Han and Tang. The Chinese characters were also created here. Its capital city, Xi'an was the historical, eastern departure point of the Silk Road which traversed Central and West Asia and then to Africa. Nowadays, the permanent residents of the province numbered 38 million in 2017 (ranking the 16th among the 31 provinces, municipalities and autonomous regions in China excluding Hong Kong, Macau and Taiwan). Shaanxi is the third largest producer of coal, natural gas and crude oil in PRC, and also has abundant reserves of salt and non-metal minerals. With the rich reserves of coal, natural gas and oil, Shaanxi has become an important energy production base. Shaanxi has long been a center for technical education, and this has expanded into the economic field through research and production in aviation, aerospace, equipment manufacturing, electronics and agriculture. Out of the total population in Shaanxi, 73% is based on agriculture and about 58% is located in the rural areas. The leading agricultural products of Shaanxi in China include grain, vegetables, cured tobacco, apple and Chinese chestnut. Being one of the 15 export bases of pharmaceutical products in China, Shaanxi is experiencing a growing production of Traditional Chinese Medicine (TCM)⁸².

2. Target Areas. The project's targeting strategy is to focus on economically active registered rural poor in southern Shaanxi within selected poor counties, townships and villages in the period 2016-2020. Shaanxi is located in western China and has long been a priority area of the Chinese government's poverty reduction program. The Project will be implemented in 9 nationally-designated poor counties within the three municipalities of Hanzhong, Ankang, and Shangluo in the Qinba Mountains poverty block in south Shaanxi province. Project's 9 counties are: Zhenba, Nanzheng, Xixiang and Mianxian counties in Hanzhong prefecture; Hanyin, Pingli and Langao counties in Ankang prefecture, and Danfeng and Shanyang counties in Shangluo prefecture. The geographical target areas was selected based on the number of registered poor households⁸³ and potential to develop viable pro-poor value chains.

B. Socio-Cultural Context

3. Poverty. The Government of China is determined to eradicate rural poverty by 2020 and to sustain this achievement in the years following 2020. Poverty reduction through agribusiness development (Chanye fupin) is one of the main poverty reduction strategies promoted by the Government. Under the ongoing 13th five-year plan (2016-2020), Shaanxi province, a priority area of the Chinese government's poverty reduction program, aims at bringing 3.2 million individuals officially registered as poor out of poverty by 2019. Particularly, remaining pockets of poverty are concentrated (29 counties out of 56 designated poor counties) in the Qinba Mountains area in Southern Shaanxi. In 2015, Shaanxi's rural poverty population was about 3.17 million people and the rural poverty rate was

⁸² Sales of TCM in China in 2012 was almost US\$ 119 billion, one third of Chinese pharmaceutical market and it comprises almost 44% of the pharmaceutical retail market segment. <http://www.who.int/phi/publications/2081China020517.pdf>

⁸³ Government's National Poverty Registration System (NPRS) in identifying poor individuals and poor communities.

12.43%. This comprises about 6% of China's total number of rural poor in 2015. The poverty rate in Shaanxi was more than double the national average of 4.1% (when measured as a share of total population). Shaanxi has a total of 56 designated poor counties, and 29 of these are located in the Qinba Mountains poverty block where steeply sloped and heavily dissected mountains constrain crop production and are subject to frequent natural disasters. Shaanxi's 13th Five Year Plan for Poverty Reduction aim to graduate all designated poor villages and counties from the lists of poor villages and counties by the end of 2019.

4. **Ethnicity.** Ethnic minority peoples represent less than 1% of the total population in the Shaanxi project counties, and include small numbers of Miao, Hui (in the northwestern region adjacent to Ningxia), Manchu and Mongolian. Ethnic minority people comprise only 0.6% of the nine counties' rural population, and only 0.7% of the program area population. Most of the project area ethnic minority population is concentrated in Pingli, Xixiang, and Langao counties⁸⁴.

5. **Nutrition.** Committed for the improvement of the health sector, China has vastly enhanced child health and nutrition. The share of malnourished (measures by the proportion of the underweight population) children under 5 years-old has dropped from 13.4% to 1.4% and infant mortality rate decreased from 50.3% to 9.5% between 1990 and 2013⁸⁵. Still, child undernutrition and nutrient imbalances in China's rural areas remain as an issue. In 2008, in rural areas of China, 34% of children under six months-of-age had anemia, and 21% of children under two years-of-age were stunted⁸⁶. Recent studies also suggest that malnutrition arising from micronutrient imbalances is a particularly serious issue in rural China⁸⁷. In rural Shaanxi Province, anemia was common among infants six to eleven months of age, with a prevalence of 54.3% in 2014⁸⁸, which is twice as high as the 2011 average for East and Southeast Asia⁸⁹. 90% of the anemia in children in China under six years-of-age results from iron-deficiency⁹⁰. There are studies which show that feeding practice is highly relevant to anemia and that either iron supplementation or home fortification systems (including other micronutrients) is recommended in rural settings.

6. **Resettlement.** The Spatial transformation of China can be characterized in four different types: i) at the outskirts of cities, rural land cleared out and sold out in parcel by the local government to property developers, or used to establish development zones/industrial park; ii) rural restructuring through land consolidation which results in concentration of rural settlements to address the problem of land fragmentation, cropland abandonment and rural following; iii) rural restructuring for environmental conservation as seen from the Grain-for-Green project, environmental resettlement, forced reallocation of people from natural reserves and ecologically fragile areas; and iv) poverty alleviation resettlement (PAR)⁹¹.

7. **Poverty alleviation resettlement (PAR)** is one of the key poverty reduction measures in China⁹². In 1994, the Seven Year Poverty Reduction Project established the guidelines which introduced the development-oriented-resettlement method for the extremely small number of villages and households living in the areas with adverse survival and development condition. Later in 2001, the Development-oriented Poverty Reduction Program for Rural China (2001-2010) highlighted the promotion of voluntary resettlement as one of important measures in reducing poverty and solving subsistence problems, and emphasized to continue to implement the resettlement project. In fact,

⁸⁴ Project's Working Paper on Targeting, Poverty and Gender.

⁸⁵ Ministry of Foreign Affairs of the People's Republic of China, United Nations System in China. Report on China's Implementation of the Millennium Development Goals (2000–2015). 2015; 1–97.

⁸⁶ Ministry of Health. China Health Statistics Yearbook. Beijing: China Xiehe Medical University Press; 2009. Chinese.

⁸⁷ Luo R, Shi Y, Zhou H, Yue A, Zhang L, Sylvia S, et al. Micronutrient Deficiencies and Developmental Delays in Infants: Evidence from Rural China. 2015; In press.

⁸⁸ Luo R, Shi Y, Zhou H, Yue A, Zhang L, Sylvia S, et al. Anemia and Feeding Practices among Infants in Rural Shaanxi Province in China. *Nutrients*. 2014; 6(12):5975–5991. <https://reap.fsi.stanford.edu/sites/default/files/nutrients-06-05975.pdf>

⁸⁹ Stevens, G.A et al. Global, regional, and national trends in haemoglobin concentration and prevalence of total and severe anaemia in children and pregnant and non-pregnant women for 1995–2011: A systematic analysis of population-representative data. *Lancet Glob. Health* 2013.

⁹⁰ Ai Yue, Lauren Marsh, Huan Zhou et al. Nutritional deficiencies, the absence of information and caregiver shortcomings: a qualitative analysis of infant feeding practices in rural China. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4830571/>

⁹¹ Kevin Lo, Longyi Xue and Mark Wang. Spatial restructuring through poverty alleviation resettlement in rural China. *Journal of Rural Studies* 47 (2016) 496-505.

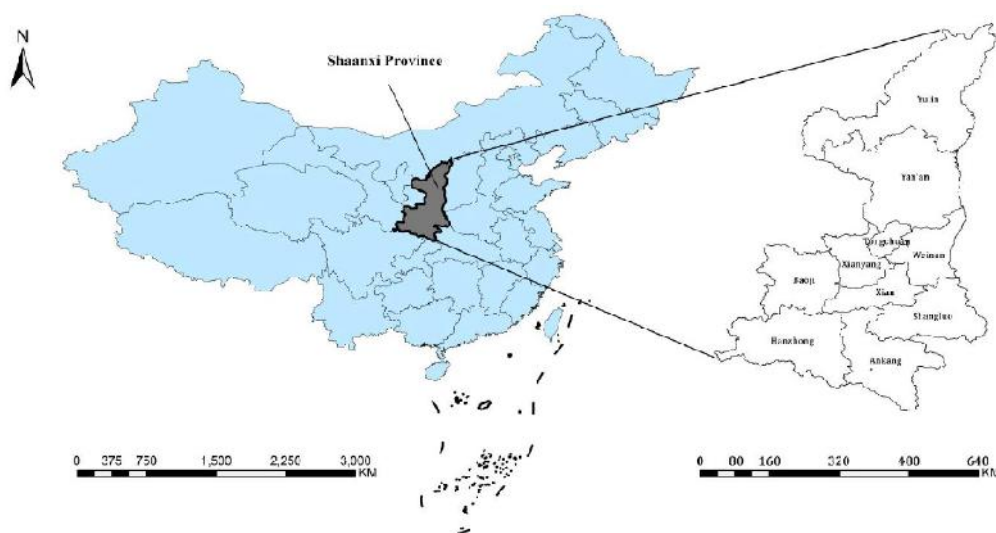
⁹² Other measures include promoting tourism in poor but scenic areas, helping poor households to gain access to microcredit loans, and pairing work units and institutions with poor villages to assist residents.

many scholars agree that it is a rational choice to select a moving-out choice, considering all the factors such as the remoteness, steep and deep mountains, highly scattered residents, and high exposure to natural disaster risks⁹³. At the same time, research done in Inner Mongolia finds that while income increased after moving pastoralists, costs of moving also increased mostly due to water shortages. Other studies also point out that resettlers in Shanxi and Shaanxi provinces were often misinformed about resettlement details. In particular, long-distance settlers often have higher income but also higher costs and lack of sufficient employment. The success of the project would rely on how to move out – including identifying target migrants, where to migrate for and what measure to take to ensure improved livelihoods for the migrants.

C. Environment Context – Natural Resource Management

8. **Location.** Shaanxi Province is located in northwestern China. It has a total area of 205,800 km² covering about 2.1% of the total area of China. The province borders the largest number of different provinces (seven provinces of Gansu, Ningxia, Inner Mongolia, Sichuan, Chongqing, Henan and Hubei). In Shaanxi province, there are 10 districts. The population of Han nationality accounts for more than 99.4% in total.

Figure 1. Location of Shaanxi Province and its districts



(Source: xxxx)

9. **Geography.** Shaanxi stretches across basins of the Yellow River (northern side of the province), the Yangtze River (southern side of the province) bounded by the Qingling (or Qin) Mountains. The Qinling mountain range, which divides northern and southern China, is the major water sources of Yellow and Yangtze Rivers. The southern slopes are a water source for PRC's South to North Water Transfer Project, contributing over 50% of the water stored in the Danjiangkou Reservoir on the Yangtze River. The northern slopes supply water to the Yellow River system, which flows to the dry northern parts of the country.

10. The Qingling mountain range (see Figure 2) rises more than 2,000 meters above sea level. It divides two major drainage zones – one belongs to the Yellow River and the other to the Yangtze River. Over 90% of it is located within the Shaanxi province. This range has a major climatic influence on northern PRC as it is an important boundary between the relatively harsh environments of the north and the more productive lands of the south. Currently the mountains support 5.1 million residents or about 14% of the Shaanxi population. The main peaks of the mountain is in the northern part, and the terrain towards the south is gradually gentle and becomes hills at the rim of the Hanchong

⁹³ <http://conferences.ifpri.org/2020chinaconference/pdf/012LiuMei.pdf>

basin⁹⁴. The Daba range (see Figure 2) on the Shaanxi-Sichuan border is the boundary range between the Hanzhong and Sichuan basins. It runs about 300 km long, 1500-2000 above sea level and it is 1000-1500 m higher than the Hanzhong basin. The Hanshui Valley, located between the Daba and Qinling ranges, is interspersed with canyons and basins, of which the Hanzhong Basin is a known farming area. The Hanshui River (see Figure 3), the longest tributary of the Yangtze River, rises in the southwest, flows past the Qinba Mountain Area then eastward to Hubei where it merges with the Yangtze⁹⁵.

Figure 2. Qinling Mountain Range (left) and Daba Mountain Range (right)



(Source: Wikipedia)



(Source: Li Qiao and S. Shen, 2012⁹⁶)

Figure 3. Hanshui River Basin



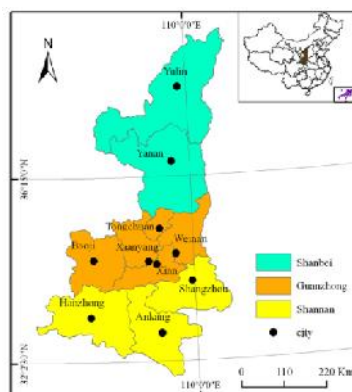
11. **Terrain.** The terrain of Shaanxi is largely divided into three areas (see Figure 4): i) the Loess Plateau in the Northern Shaanxi Plateau; ii) the Guanzhong Plain in the middle; and iii) the Southern Shaanxi Mountain Area (or known as the Qinba Mountain Area). Each region's climatic and landforms are detailed in Table 1. In summary, the north (Shanbei plateau) is characterized by grassland, rainfed summer crops and sparse woods. In the central areas of irrigated croplands (Guanzhong plain), winter wheat and maize are key agricultural products. In the south (Shannan), the main crops are maize, wheat and rice in combination with economic forest, sparse woods, and mixed needle- and deciduous broadleaved types. The project focuses on the Shannan Mountainous area.

Figure 4 Three sub-regions of Shaanxi by terrain

⁹⁴ Min Anchang and Han Qingang. Situation Analysis of Shaanxi Province. China Climate Change Partnership Framework - Enhanced strategies for climate-proofed and environmentally sound agricultural production in the Yellow River Basin (C-PESAP, Northwest Agriculture and Forestry University, Shaanxi, PRC.

⁹⁵ <http://www.china.org.cn/english/travel/42185.htm>

⁹⁶ Li Qiao and Shu-Zhong Shen. Late Mississippian (early carboniferous) branchiopods from the western Daba Mountains, Central China. Nanjing Institute of Geology. August 2012.



(Source: xxxx)

Table 1. Climatic and Landform Characteristics of Three Areas of Shaanxi

	Shanbei (plateau)	Guanzhong (plain)	Shannan (Mountainous area)
Terrain	Loess plateau (south) and Maowusu Desert (north). Except for scattered stony and rocky mountains, most of it is covered with a deep layer of loess. Sparse vegetation and erosion.	River terraces, loess tableland (Weihe Plain and mesa). With fertile soil, abundant farm produce, large population and convenient communications, the area is one of the country's important industrial-agricultural centers.	Mountains and hills, known as the Qinba Mountain Area (two mountains of Qinling and Daba, and the Hanshui Valley between them) – major agricultural zone (major rice and rape production). This Qinba Mountain area is one of the 11 poorest regions in the PRC targeted for concentrated interventions under 2011-2020 national poverty reduction strategy.
Dialect	Jin dialect	Zhongyuan dialect	Southwest dialect
Sea-level elevation	400 – 2000 m	207-3754 m	400 – 3000 m
Climate	A temperate, arid/semi-arid, continental monsoon climate	Northern temperate and continental monsoon (semi-humid)	Subtropical and continental monsoon. More temperate winter and long, hot, humid summer.
Mean temperature	10 °C	12 °C	14 °C
Annual precipitation	400 (north) ~ 600 mm (south)	500 (north) ~ 700 mm (south)	700 (north) ~ 900 mm (south)
Population	About 4.2 million in 2010	Most populated of the three sub-regions. More than 12 million in 2010	More than 7.2 million in 2010. In 2016, it reached more than 9.1 million.

12. Shannan comprises of three prefectures of Hanzhong, Ankang and Shangluo (project target areas). Hanzhong, with total population of 3.76 million, covers 27,246 km², accounting for 13.2% of Shaanxi province. Ankang, with total population of 2.95 million, covers 23,529 km², occupying 11.4% of Shaanxi. Shangluo with total population of 2.42 million, covers 19.29 km², occupying 9.36% of Shaanxi.

13. Biodiversity. The Qinling Mountains is a temperate broadleaf and mixed forest and features high levels of endemic biodiversity, supporting many endangered Chinese rare and/or endemic plant and animal species. Over 15 animal species have been listed in the national priority protection wildlife list, including the Giant Panda (*Ailuropoda melanoleuca*), Golden Takin (*Budorcas taxicolor*), Golden Snub-Nosed Monkey (*Rhionopithecus roxellana*), Brown-Eared Pheasant (*Crossoptilon*

mantchuricum), Crested Ibis (*Nipponia nippon*), Red Panda (*Ailurus fulgens*), Clouded Leopard (*Neofelis nebulosa*) and Giant Salamander (*Andrias davidianus*). The Qinling Mountain contains the highest Giant Panda population density in the PRC, taking account approximately 20% of PRC's total wild panda population. It also includes the only known wild population of one of the world's rarest birds, the Crested Ibis (the national bird of Japan).

14. The mountains are also characterized by a vertical spectrum of vegetation types. Seventy per cent of all vegetation types in the PRC are found in the Qinling. Many important plant species are endemic (1,428 species), relic, rare or endangered, including the Ginkgo, one of the oldest tree species in the world. The endangered species include Chinese Mountain Larch (*Larix chinensis*), Oneflower Kingdonia (*Kingdonia uniflora*), the cultivated Paeone (*Paeonia suffruticosa*), the Mao-tai Maple (*Acer miaotaiense*) and the Chinese Fir (*Cunninghamia lanceolata*) are listed as protected species by PRC. Except Ginkgo which is cultivated or semi-cultivated, all the other 44 species endangered flora are all wild species. High-value herbs (such as Himalayan mayapple, syringa pinnatifolia, trillium, tuber of elevated gastrodia, eucommia, paeonia rockii hybrids and dwarf peony) and important medicinal plants (such as Chinese goldthread, dysosma versipellis and magnolia officinalis) are found in Shaanxi. Trees with ornamental values (*Davidia involucrata* and *Davidia involucrata* var), quality tree species for lumber and high-mountain afforestation (*Abies chensiensis*, *Picea neoveitchii*, *Ormosia hosiei* Hemsl et Wils, *Larix chinensis*), or value for chemical industry (*Eucommia*, mandrel) also inhabit in this province⁹⁷.

15. Land and Land-use. Two thirds of Shaanxi's total arable land is arid, and 80 percent of arable land is in regions plagued by soil erosion and a vulnerable ecological environment. A high percentage of arable land is on slopes or made up of middle-to low-yield crop fields.

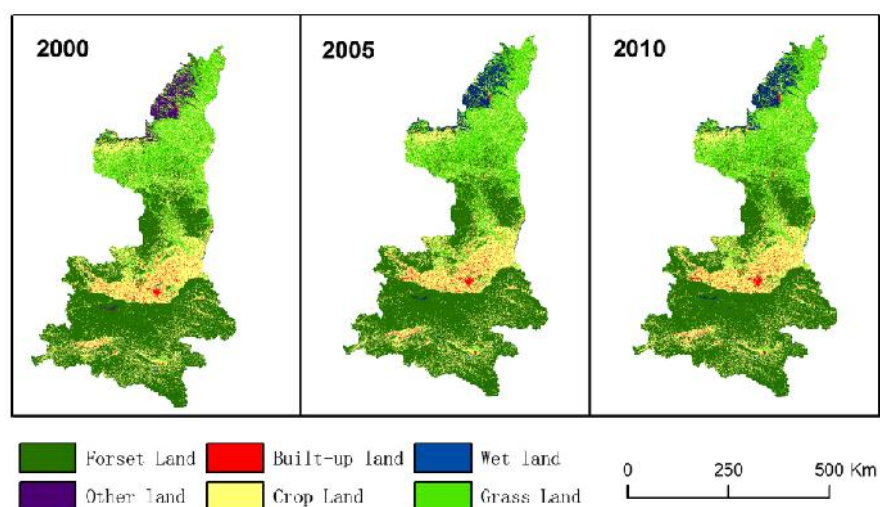
16. In China, land-use rights were distributed to individual farmers with leases of 15 years following the land reform of 1982. Its negative impact on environment, however, raised concerns over land use policies, particularly in the area of the Loess Plateau. As a result, in 1999, the nation-wide Slope Land Conversion Project or known as the Grain for Green Policy was introduced with a budget of over US\$ 40 billion. Its objective was to stop soil erosion and eventually reduce sedimentation in major rivers by converting crop cultivation on slopes to tree and grass plantation. By end 2003, the total land conversion reached 13.3 Mha in China⁹⁸. At the provincial level, this Grain for Green Policy was named the Cropland Conversion Project. In the Shanbei, most cropland was transformed into grassland. In the Shannan area, the reduced cropland (by almost 500 km²) was converted into forestland (by approx. 460 km²). It appears that increases in grassland and forestland resulted in a sustained reduction in cropland. However, others also claim that while a total of 44,000 ha of cropland was converted to other land uses in Shaanxi, almost 57,000 ha of new land areas were taken up for crop production between 1999-2000 resulting in a net increase of crop areas⁹⁹.

⁹⁷ Situation analysis of Shaanxi province. <http://www.fao.org/fileadmin/templates/cpesap/Data/Shaanxi/SASShaanxi200810.pdf>

⁹⁸ Xie, C., Zhao, J., Liang, D., Bennet, J., Zhang, L., Dai, G. and Wang, W. Livelihood impacts of the conversion of cropland to forest and grassland program. Australian Centre for International Agricultural Research (ACIAR) Project. Research report No.3.

⁹⁹ M. Ostwald, E. Simelton, D. Chen, and A. Liu. Relation between vegetation changes, climate variables and land-use policy in Shaanxi Province, China. Geografiska Annaler Series Physical Geography, November 2007.

Figure 5. Land use in Shaanxi



17. The total arable land in the Shannan area is xxx mu (xxx ha) and the project county comprises of xx % of the total arable land.

	Hanzhong				Ankang			Shangluo	
	Zhen ba	Nanzheng	Xixiang	Mianxian	Hanyin	Pingli	Langao	Danfeng	Shanyang
Forest land									
Arable land (mu)	433,455	437,967	380,000	462,493	500,628	382,299	391,500	181,352	359,619
Arable land (ha)	28,897	29,197	25,333	28,333	33,375	25,487	26,100	12,090	23,975
Population	66,349	95,121	159,000	257,225	149,334	31,209	25,843	26,000	68,000
Poverty ratio (%)	26.1	15.1	21.1	11.1	23.1	38.9		39.6	25.7

18. **Agricultural production:** Shaanxi's agricultural production varies throughout the province of which size is roughly the same as Senegal or Kyrgyzstan. **In southern Shaanxi**, a large rice and wheat production area is located in the Hanzhong Basin region. Cash crops including tea, tung oil, citrus and other fruits are also grown in the Hanzhong basin. In cooler Qin Mountain ranges, maize and winter wheat are grown. **In northern Shaanxi**, it is more common to find rice, winter wheat, tobacco, cotton, millet, barley, corn and kaoliang. In the upper Wei and Jing valleys, millet, oats, buckwheat, hemp, sesame, sugar beets, and rapeseed are grown. The Loess Plateau is also the top apple production base. **In mid Shaanxi**, between the northern slopes of the Qinling Mountains and the southern areas of the Weihe River, which is the largest tributary of the Yellow River, the area is recognized as the best place for kiwi production, making Kiwi Shaanxi's second most competitive fruit produce¹⁰⁰ followed by apple. In an effort to improve agricultural productivity and halt soil erosion, particularly north of the Qinling Mountain, the use of agricultural terraces, planting of trees and grasses, and extension and repair of irrigation networks were enhanced.

19. Overall, the processing of agricultural products share 5.5% of Shaanxi's gross industrial output in 2015, following coal mining and pressing (11%), processing of petroleum and nuclear fuel (7%), extraction of petroleum and natural gas (6.9%), smelting and pressing of non-ferrous metal (6.8%),

¹⁰⁰ Zhang Zhengbin and Duan Ziyuan. Agricultural Supply-side reform on the loess plateau. China Today 12 October 2016. http://www.chinatoday.com.cn/english/society/2016-10/12/content_728849.htm

production and supply of electricity heat (6.1%) and manufacture of non-metallic mineral products (6.0%)¹⁰¹.

20. Fruit production and processing: Since 2011, Shaanxi has overtaken the lead in China's fruit production in terms of both area and output from Shandong province. Fruit industry in Shaanxi has long been recognized as the most competitive industry with best economic benefits and minor risks. Apple produce accounts 1/4 of the total in China and 1/7 of the total in the world, and apple juice and kiwifruit output accounts 1/3 that of the world respectively¹⁰². Apple and kiwifruit are core produce in Shaanxi among other fruits including citrus, fresh jujube, grape, pear, peach, cherry and pomegranate.

21. In Shaanxi, the first local regulation on fruit industry in China was issued, and Shaanxi Province Modern Fruit Industry Development Plan (2015-2020) was approved. Fruit value chain has improved by constructing 51 processing plants, setting up 130 Shaanxi fruit stores nationwide, developing fruit brands. There are 43 counties identified as apple-growing bases, 10 counties as pear-growing bases, six counties as kiwi-growing bases, and two counties as major sites for oranges production. In those countries designated as fruit-growing bases, over 80% of farmers' incomes are based on the fruit business. To overcome environmental constraints, agricultural production technology is also improved. For example, local farmers are promoting high-density apple orchards using dwarfing rootstock, a technology that is known to increase efficiency. Shaanxi has also developed environmentally-friendly fruit products and promoted organic apple-production, and established 19 research centres in an effort to develop new greener technologies. Provincial-level standards for building and managing orchards are established, and budget for enhancing cold-chain logistics and construction of refrigerated storages at the fruit store level is allocated.

22. Tea production: As early as the Han dynasty, Qinba mountains in Shaanxi was one of seven big tea production areas in China. Tea production in Shaanxi continues to grow thanks to improved production management and establishment of a standardized demonstration area. In 2015, there was more than 1.95 million mu of tea plantation areas in Shaanxi province with annual output of more than 70,000 tons of tea. The area has the geographical advantages of (a) average annual temperature of 12-14°C, annual rainfall of 1,000mm which is concentrated October; (b) the right soil PH value around 4.08 for tea tree growth; (c) fertile tea garden soil; and (d) high-level containment of zinc and selenium. Furthermore, Qinba mountains biosphere reserve assures the image of clean water, fresh air and pollution free tea production. For instance, Hanzhong areas were noticed for its rare high aroma of tea.

23. Despite such opportunities, sales of tea produce are required to find new strategies due to rising production costs and intensifying competition. Most tea plantations require agricultural input such as nitrogen, phosphorus and potassium fertilizer. Some analysis points out that shortage of rural labour force and thus increasing labour cost for processing and production management is driving the costs of tea production in Shaanxi high.

24. Forests and protected areas.

25. Water resources. In China, more than 60% of all water usages accounts for agricultural purposes. Still water efficiency is low as the utilization coefficient of agricultural irrigation water remains at 0.5 – 0.53 in comparison to that of 0.7-0.8 in developed countries¹⁰³. Surface water is decreasing in rural China, leading to more groundwater being used for agricultural irrigation. Currently, about 30% of irrigation water comes from groundwater sources. Water conservancy facilities are not up-to-date in rural China and cannot meet with the demand of increasing agricultural production and improving rural living standards. Most public investment on water conservancy facilities is used for industrial and domestic purposes, as well as flood control¹⁰⁴. Contrastingly over

¹⁰¹ <http://china-trade-research.hktdc.com/business-news/article/Facts-and-Figures/Shaanxi-Market-Profile/ff/en/1/1X000000/1X06BVMt.htm>

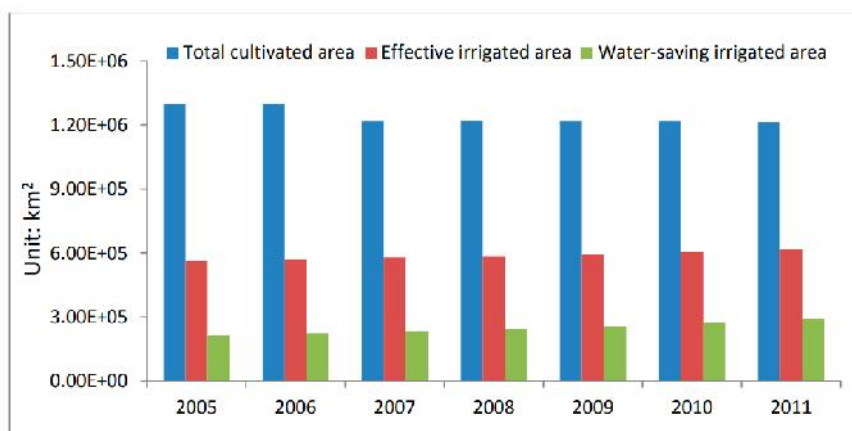
¹⁰² Shaanxi China News. 17 April 2017 <http://en.shaanxi.gov.cn/news/shaanxinews/75980.htm>

¹⁰³ Xiaoman Yu, Yong Geng, Peter Heck and Bing Xue. A review of China's Rural Water Management, Sustainability 2015.

¹⁰⁴ Ke, L.S. Our irrigation and water conservancy facilities supply mechanism: Change, difficulties and innovation—Based on Thought of drought and flood disaster in Southern China. Res. Agric. Mod. 2010, 31, 534–537

half of the arable land is not equipped with water conservancy facilities but relying on natural rainfall for their irrigation¹⁰⁵ (see Figure 6).

Figure 6. Comparison of total arable land, effective irrigation land and water-saving irrigation land (2005-2011)



26. (Source: China Statistics Yearbook on Environment)

27. In Northwest China, the amount of regional water resources generally had a decreasing trend but has recovered slightly since 2000. Between 1961 and 2007, the runoff of the upper Yellow River and the upper Yangtze River decreased significantly from 1961 to 2007. For example, compared with the 1980s, the average annual flow of the upper Yangtze River, the upper Yellow River and the upper Lancang River decreased by 24%, 27% and 13% respectively in the 1990s. The water level of Qinghai lake declined by 3.37 m in three decades¹⁰⁶. However, the following two factors helped improve water resources in the Yellow and Yangtze Rivers: First, the areas and quantity of peat swamp land in the Three River Source Region have increased in recent 10 years. The lake wetland in the source region of the Yellow River by 10% from 2003 to 2006, and the wetland area in the source region of the Yangtze River has increased at an average rate of 23.76 km² per year¹⁰⁷. Second, precipitation in the upper Yellow River has been increasing continuously, and the flow has also increased since 2003. For the Yellow River, the average flow has increased 15.6% in 2003-2009 compared to 1991-2002. For the Yangtze River, the flow increase was above 37% during the same period¹⁰⁸.

28. In 2009, Yangtze water protection institution organized a conference on joint water protection and pollution prevention in water source areas engaging Hanzhong, Ankang and Shangluo (project prefectures) of Shaanxi as well as Nanyang of Henan Province and Shiyan of Hubei Province. This resulted in Shangluo Declaration which established a multi-department, multi-level river basin consultation mechanism and an information exchange platform. It successfully advanced in promoting joint water quality monitoring, enforcing law and investigating illegal activities and responding to water pollution incidents.

29. In terms of the total volume of water resources, it is estimated to be 45.5 billion m³ in the whole province, but water resources are not distributed evenly, and rivers contain a large amount of silts. The water available, per capita, in Shaanxi is only 54 percent of the national average, and water resources available per mu¹⁰⁹ of arable land is only 69 percent of the national average. The water shortage has resulted in escalating water conflicts between agriculture and industry. Shannan (project

¹⁰⁵ Liu, S.C. Current issues and countermeasures for water conservancy infrastructure in agricultural irrigation. *Macroeconomics* 2011, 8, 40–44

¹⁰⁶ Liu, X.-Y., 2001: Analysis on the change trend of water level of Qinghai Lake. *Arid Zone Research* (in Chinese), 18(3), 58-62, 2001.

¹⁰⁷ Li, L., F.-X. Li, X.-D. Zhu, et al., 2009: Quantitative identification of driving force on wetland shrinkage over the source region of the Yellow River. *Journal of Natural Resources* (in Chinese), 24(7), 1246-125.

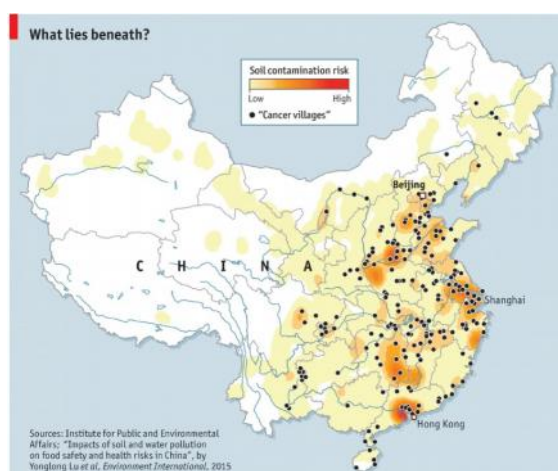
¹⁰⁸ Climate change impacts and adaptation strategies in Northwest China. <http://www.cma.gov.cn/en/Special/20140507/2014040707/201405/P020140507544821280803.pdf>

¹⁰⁹ 15 mu is equal to one hectare.

areas) covers 1/3 land of the whole province, but has more than 70% water resources. Guanzhong and Shanbei cover 2/3 land of the whole province, but only has less than 30% water resources.

30. Soil quality. Poverty alleviation through intensifying agriculture could lead to environmental degradation. For example, nitrogen from fertilizers has led to soil acidification; fertilizers and effluent from dairy farm into water has resulted in eutrophication and lower fish yields; and soil erosion has reduced river channel volume and increased the incidence of flooding. This makes farming conditions even more challenging over time¹¹⁰.

Figure 7. Impacts of soil and water pollution on food safety and health risks in China



D. Climate Change Context

31. Policy Framework - Climate Change Mitigation and Adaptation. Since 1998, the responsibility of handling climate change has transferred from China Meteorological Administration to NDRC. This transfer implies that climate change has shifted from a scientific issue to a development issue. Within NDRC's Department of Climate Change, work on climate change adaptation is undertaken by the Division of Foreign Affairs most likely because of the strong implications of adaptation in China in climate change negotiations¹¹¹.

32. In China where the cadre system of steering local leaders and holding them accountable is the primary means of controlling and monitoring the state-level actions, provincial policies are goal-oriented and features flexibility. This cadres system enables provincial governments to be more open to adopt innovative practices to achieve the goal. Following the National Leading Group on Climate Change, Provincial Leading Groups on Climate Change were also formed in selected provinces to ensure implementation of national climate policy, and design and implement provincial-level actions on climate change, energy saving and pollution control. Prefectural and county governments are required to set up their own leading groups with similar functions¹¹².

33. Mitigation: China's Intended Nationally Determined Contribution (INDC) puts forward two goals: reducing CO₂ emissions per unit of GDP (i.e. carbon intensity) by 60-65% below 2005 level; and increasing its forest carbon stock volume by around 4.5 billion m³ from 2005 levels, resonating China's national climate change strategy. It is suggested that the latter goal would require an increase in forest cover of 50-100 million hectares of forest. China also confirms its goal of increasing the share of non-fossil fuels in primary energy consumption to around 20 percent by 2030. This would mean that 800 to 1,000 gigawatts to be deployed in non-fossil capacity, equivalent to US's total current electricity capacity¹¹³.

¹¹⁰ <https://www.forbes.com/sites/sarahsu/2016/08/19/china-wipe-out-poverty/#2b8a57317d7a>

¹¹¹ Xiangbai He. Legal methods of mainstreaming climate change adaptation in Chinese Water Management. Springer January 2016.

¹¹² B. J. Richardson. Local Climate Change Law: Environmental regulations in cities and other localities. Edward Elgar Publishing, January 2012.

¹¹³ WRI. <http://www.wri.org/blog/2015/07/closer-look-chinas-new-climate-plan-indc>

34. Adaptation: China's 2013 National Climate Change Adaptation Strategy outlines the broad strategy for adaptation in forestry, infrastructure, coastal zones, agriculture and other sectors. For agriculture, specific strategies include soil fertility improvements, water-saving irrigation, changes to cropping boundaries, and the use of heat- and drought-tolerant crop varieties. An early warning disaster system is also planned, as are activities to increase village disaster-preparedness. The 2013 Strategy also identifies resettlement as a climate change adaptation strategy, particularly in the Loess Plateau. Provincial governments also have adaptation plans, while county and district governments will be largely responsible for implementing specific initiatives¹¹⁴.

35. Provincial and prefectural climate trends. Southern Shaanxi's unique and complex climatic situations are influenced by the high Qinling range that divides cold dry north and warm humid south. The upward movement of warm Asian monsoon is blocked by the Qinling range. In Shaanan, mean temperatures in January are from 3-4 °C, and the annual frost-free growing season is from 260 to 280 days. The summer and autumn temperature is lower than the middle Yangtze region but in general the climate is hot and moist. Total precipitation in the Shaanan areas is between 20 - 40 inches (500 and 1,000 mm). 40-70% of it is concentrated between May and October. The driest part of the year is spring and early summer, when irrigation is necessary.

36. In Ankang, the annual temperature is between 15-17 °C with the extreme low temperature being -16.4 °C and extreme high temperature 42 °C. Average annual precipitation is 1050 mm. In Shangluo, the average annual temperature is between 7.8 – 13.9 °C with extreme low temperature being -21°C and extreme high temperature 40.8°C.

37. According to the IPCC's Fifth Assessment Report (Working Group II), North China is projected to experience changes to crop productivity, increased flood risk, more frequent and intense heatwaves, and changes in the geographical distribution of vector-borne diseases. Glaciers on the Qinghai-Tibet plateau are retreating rapidly, while sea-level rise threatens Shanghai's drinking water. Shaanxi Province has been experiencing climate change impacts including rising temperature and declining precipitation. Extreme weather events such as drought, floods, heavy precipitation, snow, sudden frost and hail have become more frequent and intense¹¹⁵. However, the natural hazard data has shown no relation to the total annual precipitation since serious droughts have also been reported for years with normal or above normal rainfall amount.

38. Climate change led to changes in crop growth duration and planting structure, northward movement of planting region, and more serious plant diseases and insect pests. It has also caused earlier seeding for spring crop, later seeding for autumn crop, accelerated crop growth, and reduced mortality for winter crop. The growth duration of wheat, corn and other determinate growth habit crops was shortened while that of cotton, potato and other indeterminate growth habit crops was prolonged. For example, the growth duration of winter wheat in Shaanxi was reduced by an average of 5 days¹¹⁶. The linear trends of annual precipitation are relatively weak. The most significant seasonal trends occurred during spring (March–May) and winter (December–February) for both mean temperature and for precipitation.

39. In Guanzhong, the sown period of wheat is postponed for nearly 10 days, harvest period advanced 5~7 days, and growth period shortened around 15 days. Wheat reports wild winter growth or even abnormal jointing. The dry and hot wind at the beginning of summer makes the wheat droop, leading to a dramatic reduction in output. The flowering period of apple is advanced for more than half of a month, increasing the probability of spring cold and low temperature for fruit trees. As a result of high temperature in summer, fruits are smaller in size than in normal years¹¹⁷.

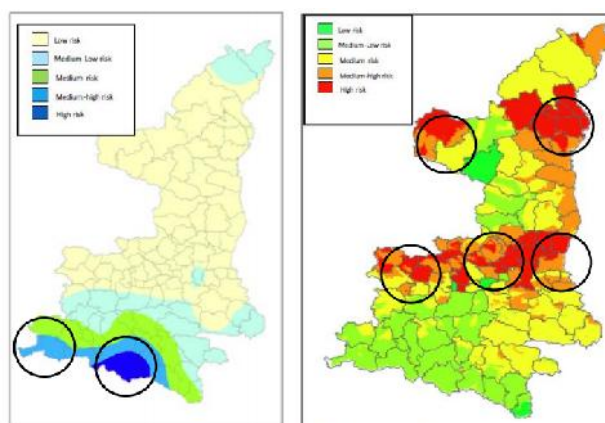
¹¹⁴ CPI analysis. <https://cpianalysis.org/2017/03/15/adapting-to-climate-change-in-rural-china/>

¹¹⁵ Shaanxi DRC 2011

¹¹⁶ <http://www.cma.gov.cn/en/Special/2014Special/20140507/2014040707/201405/P020140507544821280803.pdf>

¹¹⁷ <http://www.fao.org/fileadmin/templates/cpesap/Data/Shaanxi/SASShaanxi200810.pdf>

Figure 8. Distribution of flood and heavy rain risk areas



E. Key Issues

40. Water loss and soil degradation: In the Qinling-Daba mountainous areas in the south, water loss and soil degradation are primary environmental concerns. Over 80% of the farmland in these areas is slope land whose gradient is 15°~25°. Each year, the annual water loss in the slope land is up to 300~450m³/ha, and the annual soil loss 75~150t/ha, which leads to the massive loss of organic substance, N, P and other nutrients. As a result, the soil in farmland gets increasingly infertile, and the ability to preserve water and nutrients drops. For example, the average soil organic matter content level in Shaanxi is less than 1% compared to 2.5-4% level in the European countries. To improve soil fertility, currently the Provincial Fruit Industry Administration is promoting the use of wheat straw and corn straw as fertilizer and providing subsidies on purchasing straw shredders. Training on how to use organic fertilizers is also being organized for local farmers.

41. Improved adoption of agricultural and food technology for food quality: It was reported that Chinese consumers spend an average of 31 percent of their disposable income on food compared to the United States consumers' average of 10 per cent of that. Other studies also show that Chinese consumers are more likely to place a premium on safe and secure food. At the same time, foreign food and agricultural companies that are investing in local production in China are more concerned about meeting consumers expectation on the quality and taste standards. Growing food products up to the anticipated standards takes a longer time and harder to manage compared to meeting food safety requirements¹¹⁸. In Shaanxi there are pilot cases where integrated nutrient management is pursued, enhanced use of organic agricultural wastes and better conservation of organic carbon. Researcher-producer-farmer cooperation in scaling up such practices would improve agricultural productivity, Shaanxi brand images and quality of agricultural products.

42. Income diversification and social safety nets for highland based smallholder farmers: Non-Timber Forest Products (NTFPs) include a broad range of goods such as charcoal, fuelwood, game, fruit, nuts, medicinal herbs, forage and mushrooms. Unlike timber, NTFPs tend to require little or no capital requirements but available in an open-access setting. NTFPs are likely to be seasonal thus rarely the primary source of household income but plays as safety nets. The net benefits of NTFPs are often too low to articulate property rights or when they have high values, the poor are marginalized from accessing them. Another down side is that an increase in NTFPs can lead to collapse of the resource base or to intensive production in the form of plantation outside forests that out compete NTFPs. It is important to preserve the role of forests and complement the NTFPs with providing other forms of economic and social insurance¹¹⁹.

¹¹⁸ <https://fruitworldmedia.com/index.php/featured/zespri-dropped-new-zealand-kiwifruit-slogan/>

¹¹⁹ W. Sunderlin, A. Angelsen and S. Wunder. Forests and Poverty Alleviation. CIFOR 2004.

II . Potential project's social, environmental, and climate change impacts and risks

A. Social impacts and risks

B. Environmental impacts and risks

C. Climate change impacts and risks

III . Environmental and social category (A, B, C) [to be prepared during the appraisal – when target areas and component 2 activities are specified] At the moment, we are targeting category B and screening proposals that are subject to Category A.

IV . Climate risk category (High, Moderate, Low) [to be confirmed upon the final selection of project target counties]

43. In line with IFAD's Social, Environmental and Climate Assessment Procedures, climate change risks and predicted impacts directly relevant to the proposed project areas are relatively low and do not a priori pose significant threats in the short and medium-terms. Climate risks would be between *moderate* to *low* depending on the historical exposure to natural disasters, particularly flooding and landslide, in project areas.

V . Recommended features of project design and implementation

VI . Analysis of alternatives

VII . Institutional Analysis

A. Institutional Framework

B. Capacity building

C. Additional Financing

VIII . Monitoring & Evaluation

IX . Further information required to complete screening, if any

X . Budgetary resources and schedule

XI . Record of consultations with beneficiaries, civil society, general public etc.