



Investing in rural people

People's Republic of China

**Innovative Poverty Reduction Program: Specialised
Agribusiness Development in Sichuan and Ningxia
(IPRAD-SN)**

Design completion report

Main report and appendices

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Currency equivalents

Currency Unit	=	
US\$1.0	=	CNY6.15

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

ACGC	Agricultural Credit Guarantee Company
ADB	Asian Development Bank
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
COCAD	County level SOCAD
COSOP	Country Strategic Opportunity Programme
CPE	Country Programme Evaluation
CPMO	County level PMO
CVA	Climate Vulnerability Assessment
DA	Designated Account
DHEs	Dragonhead Enterprises
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
GNI	Gross National Income
KM	Knowledge Management
IAs	Implementing Agencies
ICT	Information Communication Technology
IPM	Integrated Pest Management
IPRAD-SN	Innovative Poverty Reduction Program: Agribusiness Development in Sichuan and Ningxia
IPRCC	International Poverty Reduction Centre in China
JiMAAPP	Jiangxi Mountainous Areas Agribusiness Promotion Project
LGOP	Leading Group Office on Poverty Alleviation and Development
LIC	Low income country
LPA	Lead Programme Agency
M&E	Monitoring and Evaluation
M4P	Market for the Poor
MDG	Millennium Development Goals
MIS	Management Information System
MOF	Ministry of Finance
MTR	Mid-Term Review

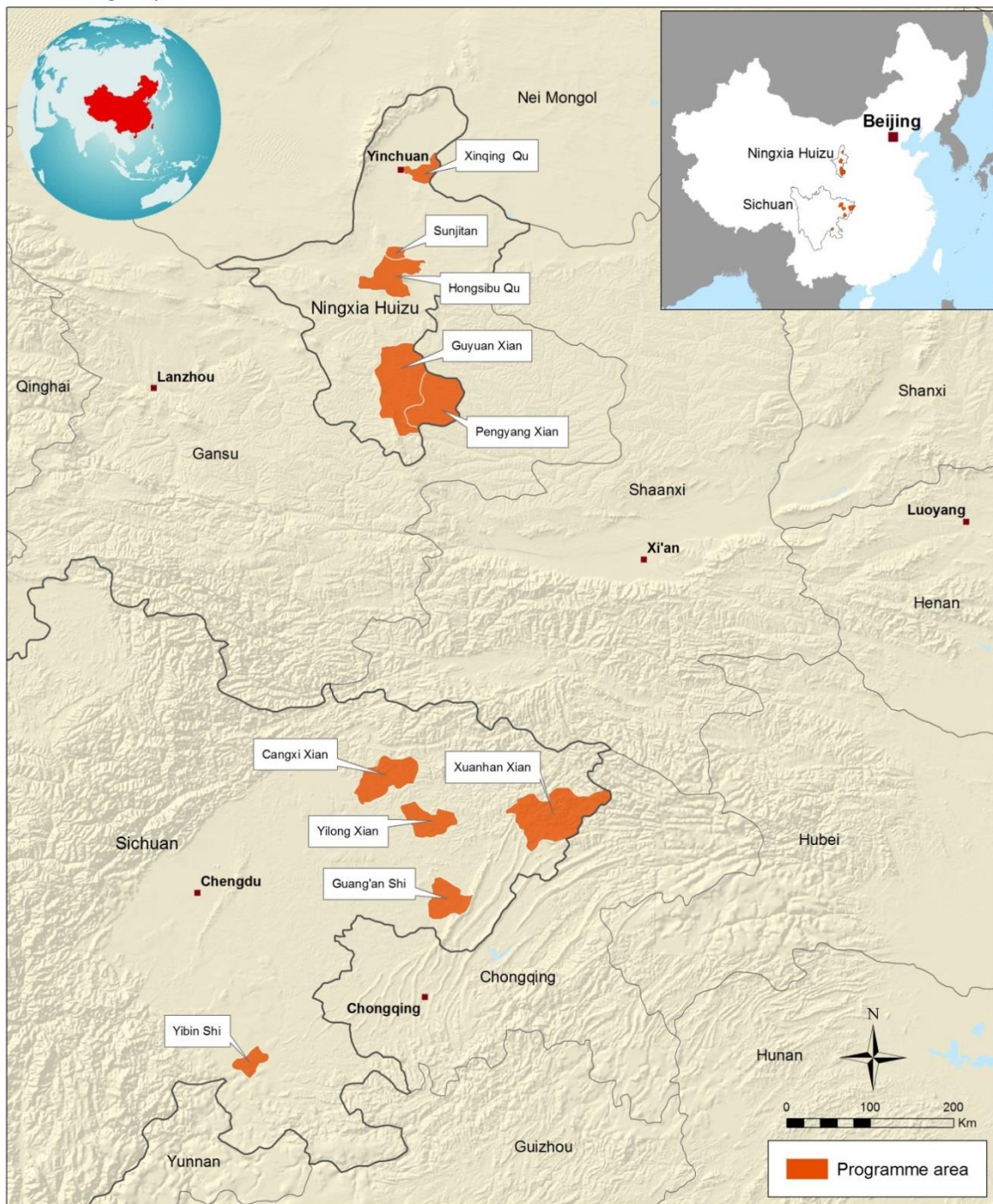
NPMO	National Program Management Office
NPRS	National Poor Registration System
O&M	Operation & Maintenance
PA	Programme Account
PIM	Program Implementation Manual
PLG	Program Leading Group
PMO	Programme Management Office
POCAD	Provincial level SOCAD
PPMO	Province level PMO
QLMAPRP	Qinghai Liupan Mountain Area Poverty Reduction Project
RECMB	Rural Economic and Cooperative Management Bureau
RIMS	Result and Impact Management System
SDGs	Sustainable Development Goals
SECAP	Social Environmental and Climate Assessment Procedures
SOCAD	State Office for Comprehensive Agricultural Development
SSADeP	Shyian Smallholder Agribusiness Development Project
TI	Transparency International
TISO	Township Implementation Support Office
U-MIC	Upper-middle-income country
UNDP	United Nations Development programme
VC	Value chain
VIG	Village Implementation Groups
WA	Withdrawal Application
WF	Women Federation
WUA	Water User Association

Map of the programme area

People's Republic of China

Innovative Poverty Reduction Program: Specialized Agribusiness Development (IPRAD)

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 | 28-09-2017

Executive Summary

As a result of the Government institutional restructuring that followed the National People Congress in March 2018, the Lead Implementing Agency designated at the time of design (i.e. the State Office for Comprehensive Agricultural Development, SOCAD, a government institution under the administrative jurisdiction of the Ministry of Finance) has been relocated to the Department of Cropland Construction and Management of the Ministry of Agriculture and Rural Affairs (MARA). The management functions and implementation responsibilities for the Program have thus been transferred to the Ministry of Agriculture and Rural Affairs, which became the Lead Implementing Agency.

At provincial and county level, the Provincial and County Offices for Comprehensive Agricultural Development (POCADs and COCADs) remain in place, though their responsibility has now shifted under the Departments/Bureaus of Agriculture and Rural Affairs. They will continue to exert management functions and implementation responsibilities at provincial and county level, despite possible renaming of the institution.

As a result of the institutional changes, the following changes have been introduced in the design:

- The Ministry of Agriculture and Rural Affairs (MARA) has become the Lead Implementing Agency. The National Program Management Office will be hosted by the Department of Cropland Construction and Management of MARA;
- Three designated accounts, one maintained by MARA and one by the Departments of Finance of Sichuan and Ningxia respectively, will be opened, in lieu of the one to be maintained by SOCAD initially envisaged at design. IFAD funds will be channelled directly to the three accounts;
- Within these changes, the functions and responsibilities of the implementing agencies remain the same as per design.

I. Strategic context and rationale

A. 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.

3. **Agricultural development context.**

(a) **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.) open-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.

(b) **The key role of cooperatives.** Within this framework, the way farmer and producer organizations (i.e. cooperatives) evolve is critical to enable smallholders to access the high value and remunerative markets and, ultimately, to benefit from these emerging opportunities.

B. Rationale and alignment with government priorities and RB-COSOP

4. **Rationale for the programme.** 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. Both Sichuan and Ningxia provinces are priority areas for poverty reduction. With about 5.1 million people living in poverty, accounting for about 7.25 percent of the total number of poor in the country, Sichuan is in fact the sixth province by number of poor. Similarly, with a poverty rate of about 12 percent and several counties with a poverty rate higher than 20 percent, Ningxia is one of the provinces with the highest poverty incidence. Consistent with the national poverty reduction strategies, about 50 percent of the remaining poor in Sichuan and Ningxia are planned to be brought out of poverty through agribusiness development schemes.

5. **Alignment with national priorities and strategies.** The proposed programme 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 program will support the Sichuan and Ningxia provinces in implementing their provincial poverty reduction strategies and achieving their poverty reduction targets; (ii) promote poverty reduction through agribusiness development, one of the key poverty reduction strategies of the government; (iii) strengthen the capacity of new agribusiness entities (i.e. cooperatives), in line with the priorities of the agricultural sector strategy, and enhance their governance, in line with the cooperatives law, currently under revision; and (iv) promote environmental sustainability, in line with the government's concepts of 'ecological civilization' and 'ecologically-balanced development'.

6. **Alignment with the COSOP 2016-2020.** This is the first operation designed under the current COSOP 2016-2020, and it reflects the strategic shift towards a more *programmatic* approach of IFAD engagement in China (as opposed to the previous *project* approach) envisioned by the new country strategy (ref. section III.A). In line with the current COSOP's thematic focus, the proposed programme also reflects the recent trend of focusing IFAD support on enhancing income opportunities and improving market access, value chains and inclusive financial services. Finally, the proposed programme is in line with, and supports the, COSOP's goal (to reduce rural poverty and enable smallholders in poor priority areas to benefit from the rural transformation process) and the two COSOP' strategic objectives, namely (i) increase smallholders' capacity and opportunities to access markets (and particularly support inclusive and safe value chains; inclusive cooperatives; and inclusive financial services); and (ii) strengthen environmental sustainability and climate resilience.

7. **Alignment with IFAD' Strategic Framework 2016-2025.** The objective and activities of the proposed programme 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 programme 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 programme are also aligned with contribute to the Committee on World Food Security (CFS) recommendations on linking smallholders to markets.

II. Programme description

A. Programme area and target group

9. **Programme area.** The programme will be implemented in ten counties within the Qinba Mountains and Liupanshui Mountains poverty blocks that are either nationally designated poor counties, or have a large number of absolute poor people or include pockets of concentrated poverty (i.e. Cangxi, Xuanhan, Guang'an, Xuzhou (previously Yibin), and Yilong in Sichuan, and Pengyang,

Yuanzhou, Sunjiatan, Hongsipu and Xingqing in Ningxia). Overall, the poverty incidence in the program area in Sichuan and Ningxia (i.e. 15.9 percent and 22.7 percent respectively) is about three times higher than the respective provincial averages, and about four to six times higher than the national average. Ethnic minorities (i.e. mainly Tujia in Sichuan, and Hui in Ningxia) account for approximately 15.5 percent and 40.1 percent of the population in the program area in Sichuan and Ningxia respectively.

10. Targeting strategy.

- (a) **Geographic targeting.** The programme will specifically target poor townships and villages (i.e. townships or villages whose poverty incidence is higher than the average poverty incidence in the county) in the identified programme area, but suitable for crops with market potential and with a potential for increased agricultural production.
- (b) **Target group.** The programme will primarily target poor smallholder farmers with economic potential (e.g. registered poor with either labour power or land who have the potential and are interested in participating in production and/or agribusiness activities), i.e. the poor who are suitable for participating in agribusiness development schemes. It is however expected that all the individuals in the programme area will directly benefit from the programme's investments in public infrastructure schemes.
- (c) **Women and ethnic minorities.** Women empowerment will be pursued by promoting the participation of women in the programme activities, thus enhancing women's awareness, economic capacity, and social status. The programme will also promote the participation of ethnic minorities in the programme activities.

11. **Estimated beneficiaries.** The program is expected to directly benefit 198,847 individuals (92,643 in Sichuan and 106,204 in Ningxia). Women would represent approximately 45.3 percent of the estimated beneficiaries; ethnic minorities would represent approximately 28.7 percent of the estimated beneficiaries. Overall, the programme is expected to directly benefit 38,762 nationally registered poor, i.e. 19.5 percent of the programme area's total population.

B. Programme development objective

12. **Development objective.** The programme aims at bringing and maintaining the target population in the target area out of poverty through the development of inclusive, equitable, and sustainable value chains, and the provision of an integrated package of public infrastructures.

C. Components/outcomes

13. The programme is organized around three complementary components: (a) infrastructure development and climate-smart production; (b) pro-poor value chain development; and (c) programme management and coordination.

- (a) **Component 1: Infrastructure development and climate-smart production.** This component aims at providing the basic conditions for developing the target area through the provision of an integrated package of public, climate-smart infrastructures. The component comprises two subcomponents: **(1.1) infrastructure development**, which aims at enhancing the common infrastructure base in the programme area (e.g. irrigation, drainage and water conservation systems; drinking water sources and supply systems; electricity supply systems; on-farm and off-farm roads); and **(1.2) land improvement and climate-smart production**, which aims at improving the agricultural production systems in the target area, and making them environmentally sustainable and climate-benign or -resilient (e.g. land rehabilitation or improvements; demonstration plots of climate-smart agriculture).
- (b) **Component 2: Pro-poor value chain development.** This component aims at increasing the income of the target population by providing incentives (e.g. capacity, assets, and access to financing) to agribusiness entities (i.e. cooperatives and agro-enterprises) to develop inclusive, pro-poor value chains. The component comprises three subcomponents: **(2.1) capacity development**, which aims at providing the cooperatives in the programme area with the minimal capacity (technical, organizational, awareness) to participate to the programme activities; **(2.2) business plans financing**, which aims at

- supporting agribusiness entities in the programme area to identify and better respond to emerging market opportunities by co-financing competitively selected business plan proposals with a demonstrated impact on poverty reduction; and **(2.3) rural finance**, which aims at enhancing the opportunities of target beneficiaries (individuals and cooperatives) to access financial resources by supporting financial institutions in the programme area to expand their range of financial products and improve their credit risk assessment capacity so to better respond to the demands of the programme's beneficiaries.
- (c) **Component 3: Programme management and coordination.** This component will support the planning, coordinating, monitoring, reporting, and overall management functions of the programme management offices (PMOs) at central, provincial and county levels.

III. Programme implementation

A. Approach

14. **Programme duration.** The programme will be implemented over a period of six years.
15. **Programme approach.** The key features of the programme approach include:
- (a) *Programmatic approach (as opposed to project-approach):* the proposed programme will consist of a national programme managed at central level by a central agency which will implement pilots at provincial level with the objective of testing their applicability/viability in different context and, ultimately, their potential for scaling-up;
 - (b) *Focus on cooperatives development:* the proposed programme will focus on cooperatives as the main entry point to link poor farmers to markets. It will support cooperatives to enhance their governance, strengthen their managerial capacities, make them financially sustainable, and more inclusive and equitable in their distribution-sharing mechanisms;
 - (c) *Market-driven and value chain approach:* the proposed program will adopt a market-driven approach (i.e. support cooperatives to identify and respond to markets' demands, identifying and diversifying market channels), and value-chain approach (i.e. support the entire value-chain, from production, to post-production and marketing);
 - (d) *Business plan approach:* the proposed program will adopt a competitive mechanism to select the cooperatives to be supported and the activities to be financed by the programme, based on business plan proposals submitted by the cooperatives and competitively selected on the basis of pre-determined criteria.

B. Organizational framework

16. **Lead implementing agency.** Consistent with the programmatic approach adopted by the COSOP 2016-2020, the programme introduces a new management modality where the programme management and implementation responsibilities will be given to a national central agency: the State Office for Comprehensive Agricultural Development (SOCAD), a governmental institution under the administrative jurisdiction of the ministry of finance. SOCAD will coordinate and supervise the implementation of the pilot projects in two provinces: Sichuan and Ningxia.

17. **Implementation arrangements.**

- (a) *At central level,* a national programme management office (NPMO) will be established within SOCAD and will be responsible for overall programme coordination, management, supervision, administration of programme resources, monitoring, ensuring adherence to agreed standards, guidelines and procedures, and for providing policy guidance and implementation support to provinces during programme implementation. Particularly, the NPMO will have the overall responsibility in managing the knowledge generated from programme activities, and for making the necessary arrangements for replication and upscaling of best practices within and beyond the project;
- (b) *At provincial and county level,* provincial and county programme management offices (PPMOs and CPMOs) will be established within the existing Provincial and County Offices

for Comprehensive Agricultural Development (POCADs and COCADs) in the two provinces. The Sichuan and Ningxia PPMOs will be responsible for overseeing programme implementation, supervising programme activities and arranging counterpart funds in their respective province. CPMOs will be responsible for day-to-day programme management and implementation coordination within the counties. Whenever necessary, line bureaus will be mobilized to participate in the execution of specific programme activities, in line with their respective mandate. Likewise, farmer or other interest groups' organizations (e.g. water user associations, farmer associations, women federation) will be mobilized to participate in the execution and monitoring of programme activities. Programme leading groups (PLGs) will be established at provincial and county level to act as steering committees to oversee programme planning and implementation, coordinate counterpart funds, and provide strategic guidance on policy matters to implementing agencies.

- (c) *At township and village level*, township implementation support offices (TISOs) will be established within the township government and will be responsible for planning, providing implementation support, monitoring and reporting on programme activities in the programme townships. Village implementation groups (VIGs) will be established in the targeted villages to mobilize household participation, ensure appropriate targeting, and monitor programme activities.

C. Planning, monitoring and evaluation, and learning and knowledge management

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

19. **Monitoring and evaluation (M&E).** The programme is intended to test, pilot and demonstrate innovative approaches that, if successful, could be replicated and scaled-up. For this reason great emphasis is given to monitoring, measuring, documenting and disseminating results and impacts. The programme will establish an M&E system, which will integrate RIMS indicators, from national to village level. Key features of the programme's M&E include: (i) central role of the programme's M&E to adequately underpin the knowledge management functions of the programme; (ii) special attention to assessing the impact on poverty alleviation of the programme, relying on the national poor registration system (*jiandang lika xitong*), and the performance of supported cooperatives, through annual cooperative performance assessments; (iii) emphasis on making M&E data accessible and available, through a user-friendly management information system (MIS) and dissemination through innovative ICT tools; and (iv) the possibility to pilot a result-based allocation system in the programme. Progress against the achievement of results will be measured through comprehensive baseline, mid-term and endline surveys, and through annual outcome surveys in interjacent years.

20. **Knowledge management.** The provincial and county PMOs will be responsible for capturing and documenting experiences, lessons, and successful cases resulting from programme activities. At central level, SOCAD will be responsible for managing the knowledge generated by the programme, and to use it to favour replication of successful practices or to inform policy-making. Exchange of experiences with other projects sharing similar design features, both in China and abroad, will be facilitated.

D. Financial management, procurement and governance

21. **Loan repayment and programme resources responsibilities.** The programme introduces a new financial management modality, where, for the first time for IFAD in the China country program, the loan is lent to the central government, which will bear the responsibility for the loan repayment. A national central agency, SOCAD, will have the primary responsibility for the administration of the programme resources. Project financial management will be based on the well-functioning management system proven through SOCAD's extensive undertaking of own national projects as well as many international projects of the World Bank, DFID, and ADB.

22. **Flow of funds.** Two designated accounts denominated in US\$, one for the loan and one for the grant, will be opened and maintained by SOCAD. IFAD loan and grant funds will be channelled

through these two designated accounts. At provincial and county level, programme accounts denominated in yuan renminbi (RMB) will be opened and maintained by POCADs and COCADs respectively to receive funds for programme implementation. The programme accounts will be funded and replenished as necessary from the resources held in the designated accounts, upon request of the provincial and county PMOs and in accordance with the expenditures incurred under approved AWPBs.

23. **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\$8 million for eligible expenditures incurred as from 13 September 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.

24. **Financing of taxes.** Consistent with the General Conditions, and following an assessment by IFAD which confirmed that the taxes in the programme are not excessive, discriminatory, or otherwise unreasonable, IFAD's financing will be used to finance taxes for an estimated amount of approximately US\$7.6 million.

25. **IFAD client portal.** The programme is to be included in the IFAD client portal pilot.

26. **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.

27. **Governance.** Based on the results of the financial management assessment carried out for this programme, 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 programme. The necessary accounting standards, policies, procedures, asset management, budgeting, audit, reporting, and accounting systems are in place. The overall financial risk for the programme is rated as medium.

E. Supervision

28. 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.

IV. Programme costs, financing, and benefits

A. Programme costs

29. Total programme cost is estimated at US\$183.536 million, including contingencies, but excluding expected resources leveraged from financial institutions (which is estimated to total approximately US\$13 million). Programme costs are organized into three major components: (i) infrastructure development & climate-smart production (36 percent of baseline costs); (ii) pro-poor value chain development (57 percent of baseline costs); and (iii) program management and coordination (7 percent of baseline costs). Investment and recurrent costs amount to 99.5 and 0.5 percent of the programme's total cost respectively.

Table 1
Programme costs by component and financier
 (Thousands of United States dollars)

Component	IFAD loan		IFAD grant		Beneficiaries (cooperatives and enterprises)		Borrower/ counterpart		Total
	Amount	%	Amount	%	Amount	%	Amount	%	Amount
1. Infrastructure development and climate-smart agriculture									
1.1 Infrastructure development	6 775.3	13.5	--	--	--	--	43 318.5	86.5	50 093.8
1.2 Land improvement and climate-smart production	7 256.4	42.8	--	--	--	--	9 710.9	57.2	16 967.3
Subtotal	14 031.7	20.9	--	--	--	--	53 029.4	79.1	67 061.1
2. Pro-poor value chain development									
2.1 Capacity development	9 051.4	99.5	44.9	0.5	--	--	--	--	9 096.4
2.2 Business plan financing	52 321.3	55.5	--	--	22 959.1	24.3	19 076.5	20.2	94 356.9
2.3 Rural finance	908.4	100	--	--	--	--	--	--	908.4
Subtotal	62 281.1	59.7	44.9	--	22 959.1	22.0	19 076.5	18.3	104 361.6
3. Programme management and coordination									
3.1 Programme management	2 674.1	23.8	369.6	3.3	--	--	8 197.6	72.9	11 241.3
3.2 M&E and knowledge management	514.5	59.0	85.5	9.8	--	--	272.0	31.2	872.0
Subtotal	3 188.6	26.3	455.1	3.8	--	--	8 469.6	69.9	12 113.3
Total	79 501.4	43.3	500.0	0.3	22 959.1	12.5	80 575.5	43.9	183 536.0

B. Programme financing

30. **Financing and co-financing.** IFAD will contribute US\$80 million (44 percent of the total cost) to the programme: US\$79.5 million as a loan, and US\$0.5 million as a grant to support and strengthen the coordination functions of the national coordination agency, SOCAD, and particularly its M&E and knowledge management functions. These functions are considered critical to provide SOCAD with the necessary capacity to assess and identify successful approaches and practices that can be replicated nationally through the implementation of national programmes. The government will contribute to the programme in the amount of US\$80.6 million (44 percent of the total cost). Participating cooperatives and enterprises are expected to contribute an estimated amount of approximately US\$22.9 million (12.5 percent of the total cost) as required co-financing for the business plans. Additional resources (estimated at approximately US\$13 million) are expected to be leveraged from financial institutions.

31. **Co-financing ratio.** The ratio of IFAD contribution to Government counterpart funds is 1:1. The ratio of IFAD contribution to total co-financing is estimated to be $\geq 1:1.3$.

32. **Cost per beneficiary.** The estimated programme's cost per beneficiary is approximately US\$911/beneficiary.

Table 2
Programme costs by expenditure category and financier
 (Thousands of United States dollars)

<i>Expenditure Category</i>	<i>Borrower/ Counterpart</i>		<i>IFAD loan</i>		<i>IFAD grant</i>		<i>Beneficiaries (Cooperatives and enterprises)</i>		<i>Total</i>	
	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>	<i>Amount</i>	<i>%</i>
Equipment and Materials	680.0	10.9	5,576.9	89.1	-	-	-	-	6,256.9	3.4
Goods, Services and Inputs /a	24,875.8	100.0	-	-	-	-	-	-	24,875.8	13.6
Consultancies /b Goods, Services and Inputs /c	935.4	5.6	15,307.3	91.4	500.0	3.0	-	-	16,742.7	9.1
Operating costs	0.0	-	16,047.0	52.1	-	-	14,724.1	47.9	30,771.1	16.8
Works /d	886.2	100.0	-	-	-	-	-	-	886.2	0.5
Works /e	51,514.0	100.0	-	-	-	-	-	-	51,514.0	28.1
	1,684.1	3.2	42,570.1	81.1	-	-	8,235.0	15.7	52,489.3	28.6
	80,575.5	43.9	79,501.4	43.3	500.0	0.3	22,959.1	12.5	183,536.0	100.0

a Goods, services and inputs-a include works, goods, materials, and services, financed and directly procured by the government.

b include TA, training, and workshops. c Goods, services and inputs-b include eligible expenditures related to support business plan proposals under subcomponent 2.2 (business plan financing), excluding civil works.

d Civil works financed by government

e Civil works financed by IFAD.

C. Summary benefit and economic analysis

33. Programme benefits have been estimated over a period of 20 years using a discount rate of 6 percent. The results of the economic analysis suggest that the programme is viable with an economic internal rate of return (EIRR) of 17 percent in Sichuan, with a net present value (NPV) of US\$60 million, and of 16 percent in Ningxia, with a NPV of US\$13.8 million, using an opportunity cost of capital of 6 percent. The results of the sensitivity analysis suggest that the programme is relatively robust to output price decreases, input cost increases, and implementation delays.

D. Sustainability

34. There are several elements in the programme that are likely to ensure post-project sustainability of the supported activities and generated benefits: (i) economic viability of the programme, as suggested by the results of the economic analysis; (ii) programme 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 programme area and the target group, to avoid fallback into poverty, after the completion of the programme; (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 programme; (iv) institutional sustainability: the programme places great emphasis on strengthening the institutional capacity of the participating cooperatives, thus setting the ground for their long-term sustainability. In addition, the implementation of programme activities is carried out by permanent government institutions or existing service providers in the programme area; (v) environmental sustainability: programme activities are designed not to harm the environment, and possibly to enhance environmental sustainability, and to reduce the negative impacts of climate change.

E. Risk identification and mitigation

35. The programme 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) challenges in implementing multi-provincial projects: the risk has been mitigated by appointing a central agency responsible for the overall coordination of the programme as the lead implementing agency; (ii) mixed results in promoting poverty reduction by supporting agribusiness entities: the risk has been mitigated by primarily focusing on cooperatives (as opposed to dragonhead

enterprises) as the main entry point to link poor farmers to markets; (iii) interference of the government in the selection of the agribusiness entities/value chains to support: the risk has been mitigated by adopting 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; (iv) the incentive of selecting/supporting the strongest agribusiness entities when the loan repayment responsibility is transferred to the local county authorities, and from them to the beneficiaries: the programme financing is channeled to the provinces through SOCAD as a grant.

V. Corporate considerations

A. Compliance with IFAD policies

36. The programme is in line with IFAD policies, specifically: (i) a specific gender mainstreaming strategy has been designed in compliance with IFAD gender policy; (ii) the programme'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 programme's scaling-up strategy is in line with IFAD's operational framework for scaling-up results; (iv) the design of subcomponent 2.3, rural finance, is in line with the six guiding principles outlined in the IFAD rural finance policy; (v) the design of the programme 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 programme design process.

B. Alignment and harmonization

37. As highlighted in section I.B (rationale and alignment with government priorities and RB-COSOP), the programme overall objective of contributing to poverty reduction through agribusiness and infrastructure development, using cooperatives as the main entry point for its interventions, 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 Sichuan and Ningxia poverty alleviation strategies, among other priorities and strategies. The programme's objective and activities are aligned with and will contribute to Agenda 2030 and the CFS recommendations. The overall programme 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.

C. Innovations and scaling up

38. **Innovations.** The programme is expected to introduce and pilot several innovative elements, including: (i) introducing a market-driven value-chain approach in relatively remote and poor areas; (ii) focus on cooperatives as the main entry point to link poor farmers to markets; (iii) pushing the current SOCAD's comprehensive agricultural development model to higher elevation areas and more remote villages with higher concentrations of poverty in Sichuan; (iv) adapting the current SOCAD's comprehensive agricultural development model to small-scale rainfed agricultural areas in Ningxia; (v) promoting innovative benefit-sharing mechanisms between agro-enterprises and poor farmers; (vi) promoting new marketing channels, including e-commerce and supermarkets; (vii) promoting new rural finance products; and (viii) piloting a result-based allocation system.

39. **Scaling-up.** By appointing a national central agency as the lead implementing agency with a clear responsibility for identifying approaches/practices introduced/piloted by the programme that can be replicated through or mainstreamed in national programs (i.e. SOCAD), the programme has set-up an institutional mechanism within the programme that favours the flow of information from the programme area to the center, and thus setting the basis for upscaling innovations and practices that demonstrated successful.

40. Specifically, the programme aims at piloting different approaches/models of poverty reduction through agribusiness development, with the objective of testing their viability/applicability in different context, and assessing their potential for scaling-up. In Sichuan, the programme will test the applicability of the current SOCAD's comprehensive agricultural development model to higher elevation areas and more remote villages with higher concentrations of poverty. In Ningxia, the programme will test the applicability of the current SOCAD's comprehensive agricultural development model to small-scale rainfed agricultural areas.

D. Policy engagement

41. Several approaches introduced/piloted by the programme have the potential to inform policymaking, including (i) pursuing poverty reduction through agribusiness development using cooperatives as the main entry point to link poor farmers to markets; (ii) supporting cooperative to enhance their governance to respond to the requirements of the cooperative law; and (iii) promote the development of new rural finance products.

Logical Framework

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Goal: Contribute to the national poverty eradication programme in Sichuan and Ningxia Provinces	G.1 Number of registered poor in Sichuan and Ningxia project counties brought above the poverty line	216,836 Ningxia 448,455 Sichuan 665,291 Total	Full eradication of poverty by 2020 in both provinces		National Poor Registration System (NPRS)	Annual	Provincial and country PMO, with poverty alleviation office (LGOP)	Programme goal indicator, measured for the entire counties in which the programme operates (i.e. broader than the project areas)	Sex Youth Ethnic minorities Women-headed households	(A): There will still be poor HH to take out of poverty beyond 2019 due to: <ul style="list-style-type: none"> · poor registered HH not graduating out of poverty · HH "falling back into poverty" · new poor HH (R): Poverty is a dynamic process and zero target can hardly be maintained over time due to fluctuations in rural poverty beyond the provincial eradication target in 2020

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Development Objective: Eradicate poverty in targeted areas through the development of inclusive, equitable and sustainable value chains, and the provision of an integrated package of public infrastructures	DO.1 Number of registered poor people in PRAD project area brought above the poverty line	14,703 Ningxia 24,059 Sichuan 38,762 Total	100,000 registered poor reduction from baseline	Full eradication of poverty in both provinces	National Poor Registration System	Annual	Provincial and country PMO, with poverty alleviation office (LGOP)	Only focusing on the poor in the project areas.	Sex Youth Ethnic minorities Women-headed households	(A): Assuming a 90% effectiveness due to <ul style="list-style-type: none"> poor registered HH not graduating out of poverty (assumed at 5%) HH "falling back into poverty" (assumed at 5%)
	DO.2 Percentage of poor "falling back into poverty"	Below 5%	Below 5%	Below 5%	National Poor Registration System	Annual	Provincial and country PMO, with poverty alleviation office (LGOP)	Compared to previous year	Sex Youth Ethnic minorities Women-headed households	NPRS is equipped to track fall-back cases (R): The "one village-one crop-one enterprise" frequently used model has: <ul style="list-style-type: none"> Monopsony risk Insufficient diversification; Could be unsustainable (excessive reliance on subsidies) and transforms the poor HH in rent earners with little or no connexion with small scale agriculture (generally encouraging them to exit agriculture) Fall back cases might be underestimated due to high priority of poverty eradication at national level
	DO.3 % increase in gross per capita income among people in project area compared to previous year	0%	Exceeds provincial rural average	Exceeds provincial rural average	Household survey; Statistics Bureau	Annual	Provincial PMO	To be obtained from available data sources, to the extent possible, complemented by household survey data	Sex Youth Ethnic minorities Women-headed households	

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Outreach	R.1 Number of persons receiving services promoted or supported by the project [1]	0	65 000	106,204 Ningxia 92,643 Sichuan 198,847 Total	Provincial and County PMO records	Annual	Provincial and county PMO	Refers to the number of individuals who have directly received or used services promoted or supported by the project since project start-up (cumulative reporting).	Sex Youth Ethnic minorities Women-headed households	
	R.2 number of households reached by services promoted or supported by the project [1.a] R.3 % of households reached among households in project area	0	17,000 30%	28,601 Ningxia 24,947 Sichuan 53,548 Total 100%	Provincial and County PMO records	Annual		Relative to the previous indicator, refers to the number of households in which at least one member received direct project support since project start-up (cumulative reporting). If two persons belonging to the same household (e.g. the husband and wife) have received direct project support, then this household should only be counted once.	Sex Youth Ethnic minorities Women-headed households	

	R.4 Number of women-led cooperatives supported by the program	To be determined based on baseline results	At least 2 per province	At least 1 per county	Cooperatives records	Annual	County PMO	A cooperative is considered women-led if the chairperson is a woman, the majority of active members are women, or the majority of ownership shares are held by women	Sector	
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Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Outcome 1: Infrastructure development and climate-smart production	1.1 % of households in project area reporting improved production conditions.	0	50%	100%	Sample survey	Annual	Provincial PMO	Improved production conditions related to infrastructure / hardware (e.g. roads, irrigation, etc).	Sex Youth Ethnic minorities Women-headed households	(A):
	1.2 % of households in the programme area reporting adoption of environmentally sustainable and climate resilient technologies and practices [3.2.2]	To be determined based on baseline results	33%	90%	Ex-ante financial analysis; sample survey	Annually	Provincial PMO	Refers to the percentage of surveyed project beneficiaries who claim that: (a) they have fully mastered these practices; and (b) they are now routinely using these technologies and practices. Examples: reforestation, afforestation, improved rangeland management, watershed management, erosion control, agroforestry; preventing soil erosion and sustaining soil moisture; flood retention zones, storm breaks, groundwater recharge zones, shelter belts.	Sex Youth Ethnic minorities Women-headed households	(R): Insufficient preparedness for climate related hazards (mainly floods and drought).

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Output 1.1: Infrastructure development	1.1.1 Number of kilometers of rural roads constructed, rehabilitated or upgraded [2.1.5]	0	125 km	97 km Ningxia 149 km Sichuan 246 km Total	Provincial and County PMO records	Biannual	County PMO			(R): Inappropriate O&M of infrastructure systems resulted from inadequate institutional capacity (R): production assets might be insufficient to eradicate poverty (this has proven to be the case for resettlement areas in Ningxia)
	1.1.2 Area under new/rehabilitated irrigation scheme (ha) [1.1.2]	0	1,500 ha	2972 ha Ningxia 550 ha Sichuan 3,522 Total	Provincial and County PMO records	Biannual	County PMO			

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Output 1.2: Land improvement and climate-smart production	1.2.1 % of production/plantation area under climate resilient agricultural technologies and management practices [3.1.4]	To be determined based on baseline results	40%	80%	Provincial and County PMO records	Biannual	County PMO	Refers to the n. of ha of land (over total n. of productive hectares in project area) in which activities were started since project start-up (cumulative reporting), to restore the productive and protective functions of the land, water and natural ecosystems and/or reverse degradation processes. Examples: reforestation, afforestation, improved rangeland management, watershed management, erosion control, agroforestry; preventing soil erosion and sustaining soil moisture; flood retention zones, storm breaks, groundwater recharge zones, shelter belts.		(R): Delays in delivery of training /capacity development cause major delays in adoption of climate resilient practices, reducing progress towards the result

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Outcome 2: Pro-poor value chain development	2.1 % of farming households in project area reporting an increase in production compared to previous year [1.2.4]	To be determined based on baseline results	25%	75%	Sample survey	Annual	Provincial PMO	Refers to the % of beneficiary HHs interviewed (e.g. rain-fed and irrigated farms, livestock owners, etc) who claim that project-supported activities have helped them increase the quantity of key crops harvested as a result of better yields (i.e. quantity of crop harvested per unit of land area) or an increase in cropped area, compared to the previous yr. For cereals, grain and legumes, production is measured in metric tons or kg. May also refer to an increase in livestock production (increased milk production, reduced animal mortality, improved fertility).	Sex Youth Ethnic minorities Women-headed households	(R): Ageing population is a limitation to effective small scale agriculture development

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
	2.2 % of supported cooperatives/enterprises reporting an increase in sales value of at least 10% compared to previous year[2.2.5]	0%	33%	90%	Cooperatives records	Annual	County PMO	Refers to the percentage of producers' organizations interviewed claiming that they have recorded an increase in the value of sales compared to the preceding year, thanks to project activities and other capacity-building support.	Sector Women leaders Ethnic minorities	(R): Lack of capacity to meet market requirement and side-selling on the producer side Lack of competition among buyers causing low producer price, or side-buying (breach in contract);
	2.3 % of supported cooperatives/enterprises reporting a profit [2.2.2]	0	80%	90%	Cooperatives records	Annual	County PMO	Reporting period: past 12 months. Profit is estimated by deducting all expenditures and recurrent costs from total income or sales.	Sector Women leaders Ethnic minorities	

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
	2.4 % of supported cooperatives which distribute profits to members in accordance with cooperative law (minimum 60% of dividends based on transactions, where applicable)	0	40%	80%	Cooperatives records	Annual	County PMO	Applicable to cooperatives which have transactions (i.e. not applicable to cooperatives where members only rent land to cooperatives and there are no transactions)	Sector Women leaders Ethnic minorities	(R): Inequitable distribution of dividends to cooperative members (elite capture and lack of transparency) Insufficient knowledge dissemination of law requirements

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Output 2.1: Capacity development	2.1.1 % of supported cooperative member households reporting new or improved services provided by their organization since becoming a member, where applicable [2.2.4]	0	75%	85%	Sample survey	Annual	Provincial PMO	Examples of better or more diversified services for coop. members include: access to storage, processing, marketing facilities, credit provision, inputs and equipment purchase, TA, grouped sales. Includes new and existing services that were improved due to strengthened organizational capacities, as perceived and reported by the members themselves.		(A): Training curricula and other Capacity Development interventions content are sufficiently based on farmers' capacities; Adequate expertise is available in PRAD area and can be mobilized by the programme at early stages of implementation
	2.1.2 Average percentage of 2015 village registered poor who are members of supported cooperatives	10%	20%	At least 30%	Sample survey	Annual	Provincial PMO	Based on the membership n. of project-supported cooperatives. Denominator: n. of registered poor in the village. Membership to be disaggregated by registered poor, women-headed HHs, ethnic minorities.	Sector Sex Female-headed households Ethnic minorities Youth	

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
	2.1.3 % of smallholder farmers who are members in executive board of cooperatives % of women who are members in executive board of cooperatives	To be determined based on baseline results	20% smallholders 20% women	30% smallholders 25% women	Cooperative records	Annual	County PMO	A farmer with less than 5% shares in the cooperative is considered a smallholder. Denominator: total number of members in cooperative executive boards (by sex and ownership shares)	Sex Youth Ethnic minorities	
	2.1.4 Number of cooperatives supported [2.1.3]	0			County PMO records	Biannual	County PMO	Since project start-up (cumulative reporting); should include number of members.		

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Output 2.2: Business plan financing	2.2.1 % of farming households reporting improved access to post-production facilities (storage, drying, washing, grading, packing, transport) [2.2.6]	0	50%	95%	Sample survey	Annual	Provincial PMO	Compared to the pre-project situation: (a) they can now more easily access the required market, processing or storage facilities; and that (b) these facilities are fully functional.	Sex Youth Ethnic minorities	(A): Adequate expertise is mobilized to ensure appropriate utilization of post-production facilities (R): Production assets might be insufficient to eradicate poverty
	2.2.2 % of supported cooperatives obtaining at least one new certification, including: fair trade, geographic indication recognition, hazard-free/green/organic	0	45%	90%	Survey of PRAD cooperatives	Quarterly	Provincial PMO			(R): Lack of capacity to meet certification requirements; Insufficient collective capacity to enforce Geographic Indication schemes.
Output 2.3: Rural finance	2.3.1 % of supported cooperatives using financial services for productive purposes	To be determined based on baseline results			Survey of PRAD cooperatives	Annual	County PMO	Since project start-up (cumulative reporting).	Sex Youth Ethnic minorities	(R): FIs do not want to change lending practices; FIs make poor loans generating too many defaults; Regulators object to proposed changes to credit risk analysis and or collateral substitutes.

Results Hierarchy	Indicators [RIMS indicator no]	Baseline (2017)	Mid-Term (2020)	End Target (2023)	Source	Frequency	Responsibility	Indicator instructions	Disaggregation required	Assumptions (A) / Risks (R)
Policy and Knowledge Sharing	P.1 Number of relevant knowledge products completed [Policy 1]	0	10	5	Provincial and County PMO records	Annually	SOCAD, Provincial PMO and County PMO	Number of policy analyses, research papers, working papers, studies, strategies, pieces of legislation, by-laws or other knowledge-related material produced as part of the project's goals. This includes annual documentation of lessons learned at county and province level.		(A): from year 2, at least one product per year per county, at least one product per province, and one product from SOCAD. Includes analytical pieces evaluating project activities and informing decision makers.

I. Strategic context and rationale

As a result of the Government institutional restructuring that followed the National People Congress in March 2018, the Lead Implementing Agency designated at the time of design (i.e. the State Office for Comprehensive Agricultural Development, SOCAD, a government institution under the administrative jurisdiction of the Ministry of Finance) has been relocated to the Department of Cropland Construction and Management of the Ministry of Agriculture and Rural Affairs (MARA). The management functions and implementation responsibilities for the Program have thus been transferred to the Ministry of Agriculture and Rural Affairs, which became the Lead Implementing Agency.

At provincial and county level, the Provincial and County Offices for Comprehensive Agricultural Development (POCADs and COCADs) remain in place, though their responsibility has now shifted under the Departments/Bureaus of Agriculture and Rural Affairs. They will continue to exert management functions and implementation responsibilities at provincial and county level, despite possible renaming of the institution.

As a result of the institutional changes, the following changes have been introduced in the design:

- The Ministry of Agriculture and Rural Affairs (MARA) has become the Lead Implementing Agency. The National Program Management Office will be hosted by the Department of Cropland Construction and Management of MARA;
- Three designated accounts, one maintained by MARA and one by the Departments of Finance of Sichuan and Ningxia respectively, will be opened, in lieu of the one to be maintained by SOCAD initially envisaged at design. IFAD funds will be channelled directly to the three accounts;
- Within these changes, the functions and responsibilities of the implementing agencies remain the same as per design.

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 programs, 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.

B. Rationale

5. **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 programs are described in detail in Appendix 2, while some relevant features are presented below. In terms of poverty reduction interventions, the following five poverty reduction pathways are being prioritized at the national level:

- (a) *National Poor Registration System – NPRS (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);

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

6. 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 (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.

7. IPRAD 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, operating and replacement 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.

8. The agricultural sector is in a transition phase characterised by the: (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.

9. There are still about 200-250 million smallholders in China (about 40% of the rural labourers). 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.

10. The Program justification is thus strongly associated with addressing the challenges and risks as well as realizing ways to realise the opportunities associated with the implementation of the poverty eradication programme 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 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 the agricultural transition phase.

11. **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, 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 (FaaS) 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 programme.

12. **Alignment with COSOP 2016-2020.** The IPRED programme 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 program 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 program design will take into account the experiences learned from previous and on-going IFAD projects in China, particularly QLMAPRP, 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 IPRAD programme. 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 the main rural institutions supported by IPRAD. 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 the establishment of a credit guarantee scheme, a pilot warehouse receipt system, technical support for financial institutions and financial literacy for small producers.

(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, IPRAD will invest in land levelling and terracing, water saving irrigation technologies.
- (ii) *Thematic area of focus 2.B: Mainstreaming environmental and climate resilience considerations into the country program activities.* Environmental and climate resilience interventions within IPRAD 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; (ii) improved ground water use through tube well irrigation rehabilitation; (iii) promotion of drought and heat resisting varieties; and (iv) plastic film soil mulching.

II. Program description

A. Program area and target group

13. **Program area.** The program area will be composed of 10 counties located in the two provinces of Sichuan and Ningxia. *In Sichuan*, the program area comprises the counties of Cangxi, Xuanhan, Guang’an, Xuzhou (previously Yibin) and Yilong. *In Ningxia*, the program area comprises Pengyang,

Yuanzhou, Sunjiatan, Hongsipu, and Xingqing. In Ningxia, villages that benefited from the post-2012 resettlement program are not included the program area.

14. Agroecological profile.

- (a) *In Sichuan*, much of the original landscape of the program area was dominated by evergreen broadleaf forests landscapes that have been reduced to small patches on steep hill slopes due to the effects of millennia of human occupation. There remain only some residual examples of these natural ecosystems in the mountains, many of them now conserved through the creation of nature reserves. The Qin Ba mountains to the north of the program area are characterized by deciduous broadleaf forests due to the milder winters and more rainfall and supported warm temperate evergreen broadleaf forests. Much of the remaining intact habitat occurs in the eastern part of this ecoregion. Low mountains in the foothills of the Daba mountains in the northeast support a mixed evergreen and deciduous association of oak species and is listed as one of the world's 200 ecoregions. Higher elevations support warm-temperate conifer forests of Chinese red pine (*Pinus massoniana*) and the higher elevation pine (*P. armandii*). The mountains to the north of the program area run east-west and form a watershed divide between China's Yangtze and Yellow Rivers and separate the Sichuan Basin from the plains and loess plateaus of northern China. The Daba mountains also have a significant effect on the regional climate by moderating winter cold in the Sichuan Basin from that experienced in the plains of the Yellow River to the north. In the programme areas, much of the agriculture is situated on slopes between 5 – 25 degrees but in some cases exceeds 25 degrees at variance with government policy. Altitudes range from 277 m up to 2,458 m in topography ranging from hilly slopes to steep mountains.
- (b) *In Ningxia*, the program area in Yuanzhou County is a lowland agricultural community dependent on the Qingshui River, a tributary of the Yellow River that flows north before joining the Yellow River near Zhongning. The latter is in Peng Yang County located at the base of the Liupan Mountains. These mountains extend from Ningxia across the eastern panhandle of Gansu Province and into western Shaanxi Province. The range is formed by the uplifted western edge of the structural basin that underlies the Loess Plateau (an upland covered with wind-deposited silt) of Shaanxi and that continues northward to form the Helan Mountains west of the Yellow River near Yinchuan, the capital of Ningxia. With an average elevation of 2,000 meters the area is extremely dry, heavily eroded, and deeply dissected by its rivers. Because of their elevation, the mountains receive somewhat more precipitation than the surrounding plateau areas, and some patches of pine forest remain in the higher elevations. The rest of the area, if undisturbed, is covered by grassland. The programme area is temperate continental monsoon climate. Annual average rainfall measures 193.4mm, distributed in June to September, often in the form of rain. Water resources are mainly surface water, groundwater, and the Yellow River.

15. Climatic trend.

- (a) *In Sichuan*, in the past 50 years, the average temperature has been increasing at a rate of 0.1 °C per decade and the increase has been continuous from 1997 to 2008 with 2006 the warmest year in the last 50 years. Similarly, total precipitation decreased approximately 100 mm over the same period of time with five of the last 10 least-rainfall occurring after 1994. The intensity and frequency of extreme weather and climate disasters also appeared to increase significantly in the Province. Most of the areas have experienced more frequent and extreme precipitation events with only western Sichuan Basin showing a decrease. Temperature maxima showed an increased trend in drought throughout the province with the 2006 summer the worst over the last 50 years. Depending on which of the three IPCC emission scenarios are applied annual temperatures are expected to continue to increase about 1.0 °C during 2021 - 2030 period while projections for 2041 - 2050 period range between 1.4 up to 1.8 °C. Projections out to the end of the century project using a climate

model (CMIP5) showed increases in temperature between 3 and 4 °C. Total precipitation is projected to increase more or less continually from 2021 to 2040 at a rate of around 1%, while for the period 2041 to 2050 precipitation will increase from 1 % up to 4% depending on the scenario applied.

- (b) *In Ningxia*, during the 1981–2011 period, average annual air temperature increased by 0.5°C per decade while precipitation and evaporation decreased, but in the case of the former not significantly. Variations in air temperature in North, Middle and South Ningxia areas were consistent with the provincial average (similar trends were noted in changes in temperature minima/maxima over this same period). Evaporation in the three sub-regions declined significantly over this period and appeared correlated with decreased solar radiation. Records show that precipitation declined by 5.2 mm per year over the last 50 years. These trends showed both seasonal and regional patterns with reduced or no rain in spring but increases in autumn and declines in the central dry and southern mountain areas (3.4 mm) but increases in the irrigated plains (3.27 mm). Heavy rainstorm events however increased significantly in the southern mountain areas, causing damaging floods particularly in the autumn months. Extreme drought took place 5 years in a row during the 1990s. Compared with the 1980s, the average annual flow of the Yellow River decreased by 27%. These trends are particularly significant for Ningxia given its dependence on the Yellow River for irrigation and decisions taken by the Yellow River Basin Committee to allocate water among the basin riparian provinces. For 2016, Ningxia's share represented a 26 % decrease from year before following a trend over the last 20 – 30 years (provincial Bureau of Water Resources, personal communication). By 2080, CC emission models project an increase of up to 4.4°C in summer months and an increase ranging between +3.7 - 3.9°C in winter months. These same models predict an increase in rainfall not evenly distributed with increased likelihood of flooding in the eastern portions of the province and increased occurrence of drought in part due to the fact that any increase in precipitation will be more than offset by increased evapo-transpiration associated with increasing temperature.

16. **Poverty profile.** In-depth discussions with provincial and county/district counterparts suggest that 100% of the Program area NPRS registered poor would benefit from the Program's support for a variety of basic rural public infrastructure including roads, drinking water systems, and other investments through Component 1. Because of its demand-driven nature and the use of business plans, the poverty coverage of the Program's investments in farmer cooperatives, pilot agribusiness enterprises, and other investments under Component 2 is more difficult to assess. In Ningxia, it is estimated that some 30% of the Program area NPRS registered poor in Pengyang County would directly participate in, and benefit from, the 9 cooperatives to be supported by the Program. In Sichuan, the provincial and county/district Program staff believed that all or nearly all of the Program area NPRS registered poor would directly benefit from the Program supported cooperatives, pilot enterprises, and other Component 2 investments. The four key channels for the direct benefits to the Program area NPRS registered poor would be income from: (a) profit sharing on the basis of members' volumes of joint marketed output; (b) dividends based on cooperative shareholding arrangements; (c) land rental to the cooperative; and (d) wages from fixed or short term work on cooperative or pilot enterprise production and agro-processing activities.

17. In order to organize and better record the Program's poverty reduction impact, it was agreed that the business plans for each cooperative and pilot enterprise would specify and record the number of Program area NPRS registered poor households and individuals that would directly benefit from Component 2 investments. This listing would include and specify the number of directly benefitting NPRS registered poor through profit sharing from joint marketed output, shareholding profit sharing, land rental income and wages from fixed and short term work. The number of Program area people who might benefit through "daidong" ("brought along") arrangements could also be estimated and reported, but would not be included in the business plan numbers of NPRS registered poor that would directly benefit from Program cooperatives and enterprises. It was agreed that an important objective

of the Program would be to directly benefit at least 30% of the NPRS registered poor in each of the Program area villages through Program Component 2 supported cooperatives and pilot enterprises.

18. **Target groups.** (i) The programme will primarily target poor smallholder farmers with economic potential (e.g. registered poor with either labour power or land who have the potential and are interested in participating in production and/or agribusiness activities), i.e. the poor who are suitable for participating in agribusiness development schemes. It is however expected that all the individuals in the programme area will directly benefit from the programme's investments in public infrastructure schemes; (ii) Women empowerment will be pursued by promoting the participation of women in the programme activities, thus enhancing women's awareness, economic capacity, and social status. The programme will also promote the participation of ethnic minorities in the programme activities.

19. **Target beneficiaries.** The Program would assist an expected 198,847 primary beneficiaries (individuals), including 92,643 in Sichuan and 106,204 in Ningxia. Women would comprise 45.3% of these primary beneficiaries, and ethnic minority people would comprise 28.7%. Overall, the Program would benefit some 38,762 nationally registered poor, or 19.5% of the Program area total population. In both Sichuan and Ningxia, the Program would benefit 100% of the population in all Program area administrative villages. Many of the Program's investments in village access roads, drinking water systems, and other public investments would necessarily benefit all members of the Program villages. However, it should be recognized that the Program does not specifically target (a) those individuals who are poor because they lack labour power, or (b) remote communities with extremely limited natural resources. Such individuals and communities are supported by other well-funded government interventions including the rural social assistance program and through the voluntary resettlement for poverty reduction program.

28. **Targeting strategy.** Consistent with the 2016-2020 COSOP, the IPRAD Program targets economically active rural poor in Sichuan and Ningxia within selected poor counties, townships, and villages. The targeting strategy also (a) seeks to include representative numbers of poor women and ethnic minority people, and (b) complies with SOCAD's focus on rural areas with sufficient potential for increased agricultural production. Overall, the targeting strategy seeks to reach poor communities with good potential for agribusiness development.

20. **Geographical targeting.** The program will target townships and villages in poor areas. The selection criteria for the program townships and villages include, among others: (i) geographical areas are selected among the 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 programme activities¹.

21. At the provincial level, Sichuan and Ningxia are located in western China and are priority areas of the Chinese government's poverty reduction program. Consistent with its large population and 5.8% poverty rate in 2015, Sichuan has the sixth greatest number of poor in the country. Ningxia, by comparison, had a significantly higher poverty rate of 8.7% in 2015 (but a much smaller total population than Sichuan), and is well known for its extreme depth of poverty particularly among the Hui (Muslim) ethnic minority people in the Xihai Region (in the south of Ningxia).

¹ Since the high proportion of ethnic minority population in the project area, the project design pays more attention 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.

22. At the county level, the IPRAD Program comprises mostly nationally designated poor counties within the Qinba Mountains and Liupanshui Mountains poverty blocks. In Sichuan, four of the five Program area counties are nationally designated poor counties (only Yibin is not a nationally designated poor county, but was proposed because of its large population and thus substantial absolute number of poor people). In Ningxia, two of the five Program area counties are nationally designated poor counties (and the remaining three Program counties include pockets of concentrated poverty). As summarized in Table 5, the 2015 county-based poverty rate (the number of nationally registered poor in 2015 as a share of the county total population) ranged from 1.0% to 13.6% in Sichuan and from 1.5% to 23.9% in Ningxia. Ethnic minority peoples comprise 1.9% and 31.6% of the total population in the Sichuan and Ningxia Program counties respectively, and include a concentration of Tujia people in Xuanhan County in Sichuan and Hui people throughout the Ningxia Program counties.

23. Within the 10 Program counties, the Program area comprises 43 of the total 256 townships, some 121 of the total 3,766 administrative villages, and 71 of the total of 1,053 designated poor villages. As shown in Table 1 below, this selection of Program area townships and villages has in most cases resulted in much greater concentrations of Program area poor and ethnic minority people (only in Hongsipu County in Ningxia is the poverty rate in the Program area somewhat less than the County-wide average poverty rate). Overall, the poverty rates of 15.9% and 22.7% in the Program areas in Sichuan and Ningxia respectively are about three times greater than the provincial average poverty rates and much greater than the 2015 national poverty rate of 4.1%. Similarly, ethnic minority people comprise 15.5% and 40.1% of the Program area populations in Sichuan and Ningxia respectively, or much more than ethnic minority peoples' shares (1.9% and 31.6% respectively) of the total population of the Sichuan and Ningxia Program counties.

Table 1: Poverty data in IPRAD program area

Province/country	Population		Registered Poor		Poverty Rate (%)		Women		Ethnic Minorities (EM)		Total			
	Total	Project area	Total	Project area	Total	Project area	Total	Project area	Total	Project area	Total EM	PA EM	Women	PA Women
IPRAD	6,660,231	198,847	620,822	38,762	9	19	3,266,299	90,025	662,325	57,001	10	29	49	45
Sichuan														
Total	4,858,189	92,643	403,986	14,703	8	16	2,381,312	42,528	93,681	14,392	2	16	49	46
Guangan	897,738	12,267	8,885	2,018	1	16	430,649	5,648	2,300	8	0	0	48	46
Xuanhan	1,319,027	29,117	179,360	6,052	14	21	621,790	12,884	69,723	14,348	5	49	47	44
Yibin	903,200	22,031	59,472	2,434	7	11	442,116	10,427	3,830	27	0	0	49	47
Cangxi	649,121	15,541	76,000	2,596	12	17	377,928	7,176	1,491	0	0	0	58	46
Yilong	1,089,103	13,687	80,269	1,603	7	12	508,829	6,393	16,337	9	2	0	47	47
Ningxia														
Total	1,802,042	106,204	216,836	24,059	12	23	884,987	47,497	568,644	42,609	32	40	49	45
Pengyang	251,873	23,081	43,584	4,230	17	18	121,349	11,120	76,698	3,000	30	13	48	48
Yuanzhou	455,620	51,954	106,210	12,029	23	23	224,544	21,833	221,244	21,770	49	42	49	42
Wuzhong	172,031	7,220	8,880	1,594	5	22	84,295	3,624	96,337	4,990	56	69	49	50
Hongsipu	197,350	13,578	47,232	2,573	24	19	94,452	6,253	12,362	4,231	6	31	48	46
Xingqing	725,168	10,371	10,930	3,633	2	35	360,347	4,667	162,003	8,618	22	83	50	45

Source: Ningxia and Sichuan Implementation Plan documents (May, 2017).

24. **Beneficiary targeting.** Within the selected targeted administrative villages, the program 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 section B on rationale). Ethnic minorities will also have preferential access to program interventions. The program would support different sets of activities aiming for the target groups. These will include higher subsidies on productive assets (plantations, greenhouses, livestock infrastructure, postharvest and

processing facilities). As result, at least 30% of the program beneficiaries will be from these two target groups.

25. **Gender Mainstreaming Strategy.** Gender mainstreaming strategy aim at strengthening women's economic power by Program activities, and at promoting women's participation and benefits in the Program design, implementation and management, so that women's economic and social status can be improved, and gender awareness of Program participants can be built. With improvement of economic empowerment by the Program activities, women will be more actively involved in production and marketing activities, which will improve their status in the household. Women's participation in Program activities will be ensured by applying gender-sensitive M&E. Development of measurable M&E indicators will ensure that women's participation in Program activities will be closely monitored. In addition, some additional gender disaggregated information will be collected through the baseline survey.

26. **Women's Participation in the Program Components.** With the existing experience of woman-led cooperatives in the most of the Program counties, it is expected that at least one woman-led cooperative will be developed in each Program county. Based on the present situation of women's cooperative membership, it is expected that the figure will increase to 30% for Program supported cooperatives, and that a woman should be involved in the cooperative leadership board. To improve women's technical capacity, at least 40% (in Ningxia) and 50% (in Sichuan) of Program opportunities for technical training will be provided to rural women. For achieving these objectives, a greater number of female technicians will be required to be engaged in Program activities.

27. **Gender Awareness Building.** Gender awareness building is the base for increasing gender sensitivity and reducing gender conflict in the Program. A gender perspective will be integrated into the training for the PMO staff at all levels at the start of the Program.

B. Development objective and impact indicators

28. The **overall goal** of the IPRAD program is to contribute to the national poverty eradication strategy in Sichuan and Ningxia Provinces. The **development objective** is to bring and maintain the target population in the target area out of poverty through the development of inclusive, equitable, and sustainable value chains, and the provision of an integrated package of public infrastructures. This will be achieved by (i) establishing/improving common infrastructure as well as production and post-production basis/facilities; (ii) strengthening capacity of small producer organizations/cooperative on management, governance, trading and service provision to members; (iii) promoting postharvest and processing improvements and other value adding activities; (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.

29. **Expected contribution towards climate change adaptation and mitigation.** Program 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.

30. **Key impact indicators.** Impact of the program will be measured through the number of poor registered households and individuals taken out of poverty (and not "falling back into poverty") as measured by the National Poor Registration System (ref. Logframe for more details).

C. Outcomes/Components

31. **Expected outcomes.** The main outcomes expected from the program include (i) Common and village infrastructure is improved; (ii) Agricultural production is more climate-smart; and (iii) Pro-poor value chains are developed.

32. **Components.** The program 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) **Component 1: Infrastructure Development and Climate-smart Production**, which includes two sub-components:
 - (i) **1.1 Infrastructure development**; and
 - (ii) **1.2 Land improvements and climate-smart production.**
- (b) **Pro-poor Value Chain Development**, which includes three sub-components:
 - (i) **2.1 Capacity development**;
 - (ii) **2.2. Business Plan Financing**; and
 - (iii) **2.3 Rural finance**
- (c) **Program management and coordination**, which includes two sub-components:
 - (i) **3.1 Program Management**; and
 - (ii) **3.2 Monitoring & Evaluation and Knowledge Mangement.**

Component 1. Infrastructure development and climate-smart production:

33. This component aims at providing the basic conditions for developing the target area through the provision of an integrated package of public, climate-smart infrastructures. The component comprises two subcomponents: (1.1) infrastructure development; and (1.2) Land improvements and climate-smart production. More details are included in Appendix 4.

Sub-component 1.1: infrastructure development

34. **Rationale.** This sub-component aims at improving the common infrastructure (village and farm roads, potable water supply and electricity) as well as irrigation facilities and equipment in the program area. The main opportunities relates to the fact that (i) national and provincial infrastructure improvement programmes implemented in recent years largely improved the external water and road networks, which in turn made further improvement work at field level (last mile) possible and urgent; (ii) the on-going government initiatives on small-scale infrastructure management reform enabled favourable policy environment for establishment and strengthening of management; and (iii) the implementing agency (SOCAD) for the programme is specialised in rural infrastructure establishment and management.

35. **Scope of work.** Major activities under this sub-component would include: (i) improvement and development of irrigation and drainage systems; (ii) improvement and development of water source facilities; (iii) improvement and development of water supply systems; (iv) improvement of electricity supply systems; (v) improvement of on-farm and off farm roads; and (vi) support to infrastructure O&M. More specifically they are:

- (a) **Activity 1: Improvement and development of irrigation and drainage systems.** Most of the existing irrigation and drainage systems in the programme area are deteriorated, with insufficient water supply, low irrigation reliability and efficiency. Some of the proposed production bases have no irrigation or drainage system. This activity would support rehabilitation and development of 205.7 km canals, 3,459 canal structures, 55.5 Km lower pressure pipelines, and 20 pumping stations. These interventions would complete and improve xx ha irrigation area, hence contribute to enhancement of agricultural productivity, agriculture diversification, climate resilience and farmers' income generation.
- (b) **Activity 2: Improvement and development of water source facilities.** Some of the programme areas are lack of water source facilities. This activity would support rehabilitation and construction of water pools (each with storage capacity above 2,000 m³) with a total storage capacity of 1.2 million m³, and water ponds (each with storage capacity lower than 500 m³) with a total storage capacity of 0.38 million m³. These interventions would secure water supply to irrigation and water supply systems.
- (c) **Activity 3: Development and improvement of potable water supply systems.** Farmers in some of the programme area are facing difficulty in accessing safe drinking water. This activity would support rehabilitation and development of 98.2 Km water supply pipelines, which would bring safe drinking water access to rural population and animals.
- (d) **Activity 4: Improvement and extension of power supply systems.** Irrigation systems in some of the programme area are lack of reliable power supply. This activity would support improvement and extension of 20 Km electricity lines and 11 transformation stations. These interventions would bring electricity supply to irrigation systems in programme counties.
- (e) **Activity 5: Improvement of on-farm and off-farm roads.** Access roads in some of the programme areas are not in good condition, either too narrow for machinery access or unpaved, which caused difficulty to production activities in rain season. This activity would support improvement and pavement of 461.6 Km concrete roads and 64 km gravel roads. These interventions would improve access road condition in the programme areas in Sichuan and Ningxia.

- (f) **Activity 6: Support to infrastructure O&M.** Proper institutional arrangement for O&M of infrastructure systems in the programme area is not yet in place and the capacity of relevant O&M organizations yet to be developed. This activity would support (i) establishment and strengthening of 33 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; and (ii) implementation of normative O&M of infrastructure systems improved and developed under the programme during the programme life time through provision of financial support, following the current SOCAD investment policy. These interventions will promote sustainable infrastructure O&M.

36. **Implementation arrangements.** These activities will be implemented at selected sites in the Program counties in Sichuan Province and Ningxia Autonomous Region, based on local infrastructure constraints and the agriculture sector development priorities. The State Office of Comprehensive Agriculture Development (SOCAD) will be responsible for overall supervision and coordination. Its sub-ordinate offices at provincial and prefecture levels will be responsible for direct supervision and coordination of sub-component activities within their respective provinces and prefectures. The sub-ordinate offices at county level will be responsible for detailed implementation of sub-component activities within their respective counties.

37. **Technical standards.** System planning and engineering design of the proposed infrastructure systems will follow the technical guidelines issued by SOCAD and POCAD. Close cooperation will be established with county bureaus of water, transport and power in order to ensure their compliance with government strategies and policies. Qualified experts will be mobilized for technical assistance and training. Procurement of civil works, goods and services will follow relevant government and IFAD guidelines and processes. Suitable infrastructure management organization will be identified/established before the commencement of each infrastructure improvement work, sufficiently involved in the whole process of system planning, design and construction supervision, and take over the O&M responsibility after completion of construction.

38. **Integrating climate considerations.** Sustainable and climate-smart approach will be mainstreamed at each phase of the program cycle. During preparation the impacts of climate change on water availability, water demands, flood and drought frequency and intensity will be assessed and incorporated into system planning. Environmental-friendly practices will be adopted during construction to avoid and mitigate potential negative impacts, including assessment of environmental impacts before implementation, and protection of trees and vegetation.

Sub-component 1.2: Land improvements and Climate smart production

39. **Rationale.** This sub-component aims at improving agricultural production systems on a sustainable manner by mainstreaming environmental interventions and climate adaptation and mitigation measures in the selected value chains to be developed. The justification is associated with meeting the need to expand the production capacity of small producer in the programme area while putting in place a capacity to address climate change challenges and environmental concerns.

40. **Scope of work.** This sub-component would include measures to improve/expand the land as production basis while integrating environmental aspects and climate-smart considerations. The quantification of these investments will depend on the selection of value chains to be developed and the number of participating producers.

- (a) **Activity 1: Land improvements.** In a fully blended manner with the above activity, a range of environmental enhancement interventions will be promoted under the sub-component including (i) water conservation measures; (ii) invest in landscape improvements, land levelling, terracing and field boundary delineation; (iii) promotion of green, pollution free and organic types of certifications (see sub-component 2.3); (iv) establish quality control systems at cooperative level, including providing technical equipment and technical service

support in soil testing and fertilization, pesticide application and residual; (v) promote solar energy and energy saving storage and processing techniques; and (vi) promote recyclable and biodegradable materials for packaging.

- (b) **Activity 2: Climate-smart production.** The activity will integrate the climate-smart dimension of agricultural production through (i) conducting a vulnerability assessment of beneficiaries to climate change and increase awareness among beneficiaries of the risks associated with climate change²; (ii) adopting a “net zero” policy in semi-arid environments for water use; (iii) promoting conservation agriculture (iv) 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); (v) promoting the adoption of integrated pest management (IPM) and fertilization management strategies;; (viii) training government officials and PMO staff on main environmental improvement and climate smart measures;.

41. **Implementation arrangements** These activities will be implemented at selected sites in the Program counties in Sichuan Province and Ningxia Autonomous Region based on local needs. The State Office of Comprehensive Agriculture Development (SOCAD) will be responsible for overall supervision and coordination. Its sub-ordinate offices at provincial and district levels will be responsible for direct supervision and coordination of sub-component activities within their respective provinces and prefectures. The sub-ordinate offices at county level will be responsible for detailed implementation of sub-component activities within their respective counties. The Bureau of Agriculture, Animal Husbandry Bureau and their various affiliated units and stations³ will provide the main implementation support on technical and knowledge dissemination aspects. Other line agencies that will be involved in implementation of the sub-component include the Forestry Bureau, Water Conservancy Bureau, Science, Research and Extension Institutions⁴; Agricultural Technology Service Network Platform; Poverty Alleviation Office as well as crop-specific county level institutions⁵.

Component 2. Pro-poor Value Chain development

42. **Rationale.** This component aims at increasing the income of the target population by providing incentives (e.g. capacity, assets, and access to financing) to agribusiness entities (i.e. cooperatives and agro-enterprises) to develop inclusive, pro-poor value chains. The component comprises three subcomponents: (i) Capacity development; (ii) Business Plan Financing; and (iii) Rural finance support. More details are included in Appendix 4.

Sub-component 2.1: Capacity Development

43. **Rationale.** The objective of the sub-component is to provide the required technical, social and organizational knowledge to improve the management, functioning and overall performance of the main actors in the selected value chains to be developed. The main actors include small producers and their cooperatives, private sector agribusiness (of local and national relevance) and individual

² 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/>.

³ These include Agricultural energy resource offices, agricultural technology service centres, agricultural technology extension stations, plant quarantine inspection stations, soil fertilizer station, cash crop technology extension stations, seed management station (Seed quality supervision and inspection station), tea technology extension station, agricultural products quality and safety supervision and management station, Agricultural mechanization station (agricultural mechanization management station), animal disease prevention and control centre, livestock and poultry breeding improvement station, forage feed station (dairy management station), and county animal husbandry and veterinary station (apiculture management station).

⁴ These include the China Agricultural University, Agricultural College of Beijing University, China Academy of Agricultural Sciences, Sichuan Academy of Agricultural Sciences, Sichuan Agricultural University, Ningxia University, Animal Sciences, Ningxia Academy of Agriculture and Forestry, Ningxia Livestock Workstation.

⁵ Such as the Cangxi County Kiwifruit Industry Bureau and the Xuanhan County Edible Fungus Research Institute.

farmers. Staff in local government and line agencies are also benefiting from the capacity development interventions.

44. The possibility to improve the economic conditions of poor farmers relies largely on production improvements, improved market opportunities and increased product value as well as stronger representation and bargaining power of their organizations within the value chains. These, in turn, require, investments in human and social capital and comprehensive know-how in different areas ranging from production and post-production techniques to finance, accounting, VC governance and basic comprehension of legal contracts, negotiation and market trends. At present, the majority of farmers and their cooperatives in the program area largely lack these skills. This is causing small farmers and less advanced cooperatives to sell their output in raw, unprocessed, undifferentiated form, often to a single buyer with strong bargaining power who sets both the price and contract conditions.

45. In addition, examples of sustainable and well-functioning cooperatives formed by smallholder farmers that provide effective support and services to their members are rare. Official documents confirm that many Chinese cooperatives are dominated by agribusiness companies and/or large enterprises who seek government support and fiscal privileges. These are characterized by a principal-holder structure with only a small number of investors allowed to contribute equity capital and the rest of the members excluded from ownership, leading to elite capture of both rights and benefits. The vast majority of members do not have voting rights and are unable to understand and influence the decision-making process. As a consequence, the governance of many cooperatives is weak, sometimes lacking transparency and fair representation. It is thus evident that building human and social capital among small farmers and their cooperatives is a precondition for value chain development.

46. Individual farmers will be receiving capacity development services as part of the business plan elaborated and implemented by cooperatives. Private sector operators (mostly SMEs) will only be supported for soft activities such as technical assistance, studies, training, and exposure visits. Local government and line agencies staff will receive capacity development for improved implementation performance in areas of producer cooperative strengthening, business plan evaluation and overall value chain development.

47. **Scope of work.** The sub-component will invest in capacity development of cooperatives and their members, facilitation for establishment of market linkages and capacity development of local staff.

- (a) **Activity 1: Capacity development of cooperatives.** The activity will include (i) selection of participating cooperatives according to specific criteria (see appendix 4 and WP 3); (ii) recruiting cooperatives facilitators (2 per county); (iii) providing capacity development on governance, accounting, financial literacy, and legal awareness; and (iv) promoting the establishment of Union/Federation of Cooperatives (to be considered at midterm).
- (b) **Activity 2: Facilitation for establishment of market linkages.** The interventions for facilitation of commercial partnership will include (i) organising workshops at provincial level with potential private sector representatives (from supermarkets, agribusiness, E-commerce, restaurants and catering services, processors, exporters), local Universities and Academy of Science; and (ii) assigning specific staff from either provincial or county PMO to be responsible for these partnerships and to facilitate linkages with other government agencies and public entities that would improve the market intelligence and marketing performance of the targeted cooperatives.
- (c) **Activity 3: Capacity development of local staff.** Capacity development of local staff will be delivered on inclusive value chain development, new cooperative law and other more general matters that will be considered useful during project implementation.

48. **Implementation arrangements** Implementation arrangements for activity 1 (*Capacity development for cooperatives*) are presented in details in appendix 4. Implementation of activity 2 (*Facilitation for establishment of market linkages*) will be the responsibility of provincial and county PMOs with the help of cooperative facilitators (see activity 1 above). Implementation arrangements of activity 3 (*Capacity development of local staff*) will be on an ad hoc basis. These will depend on the menu of capacity development selected by the PMO at provincial and county level. It is also foreseen that PMO and line agencies staff will take advantage of training for cooperatives as mentioned above by joining these sessions on a need basis.

Sub-component 2.2: Business plan financing

49. **Rationale** The objective of the sub-component is to provide support to cooperatives to elaborate, finance and implement business plans conducive to poverty alleviation through value chain development. The justification is associated with the need to (i) make the producer cooperatives the entry point of the poverty reduction in the program area and put these cooperatives in the “driving seat” of their own development; (ii) provide them with a flexible tool (business plans) to finance and implement investments for value chain development with the objectives of economic development and poverty reduction.

50. **Scope of work.** Main activities include financing of (i) Business Plans for Cooperatives; (ii) Pilot Business Plans for Linkages with Supermarkets; and (iii) Innovative Business Plans for Agro-enterprises. Detailed description of each activity and associated cost estimate is provided below.

(a) Activity 1: Financing Business Plans for Cooperatives.

- (i) **Eligible activities.** Eligible activities for business plans would include: (i) Assets (e.g. storages, buildings, private water conservation systems, etc.), equipment (e.g. processing plants, etc.), and one-time inputs (e.g. seedlings), (ii) Soft activities (e.g. technical assistance, services, studies, trainings, participation to exposure visits/fairs, costs related to certification, traceability, branding/marketing, etc.). In the case of Ningxia, certain production-base infrastructures for private use (i.e. sprinkle and drip irrigation, greenhouses and livestock production infrastructures) are allowed. Ineligible activities would include working capital, annual. At least 30% of the registered poor in each of the program area villages will directly benefit from the supported cooperatives and pilot enterprises. Additional conditions applicable would include (i) ownership of the assets and equipment purchased with Program financing must remain with the cooperative; (ii) cooperative co-financing contribution must be new/additional; (iii) land transfer is allowed contingent upon the condition that it is transferred to the cooperative; and (iv) in Ningxia, the beneficiaries of production-base infrastructures for private use must be the program primary target group (i.e. individuals whose income is \leq RMB 5,040).
- (ii) **Financing rules.** Financing rules would include (i) no more than 85% of Program financing to assets, equipment and one-time inputs; (ii) at least 15% of Program financing to Soft activities; and (iii) In the case of Ningxia, 90% of production-base infrastructures for private use, provided that the beneficiaries of these activities are the program primary target group (i.e. individuals whose income is \leq RMB 5,040). Co-financing will be as follows (i) the Program will cover 100% of the costs of the eligible activities in the Business Plans; (ii) cooperatives are expected to cover all the costs in the Business Plans related to labour, working capital, annual inputs and operational/recurrent costs; and (iii) in Ningxia, no more than 90% of production-base infrastructure for private use will be from Program financing and at least 10% from cooperatives. Ceiling for total budget allocation for business plan of no more than 30,000 RMB per cooperative member would apply.

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- (iii) *Main interventions.* Interventions would include: (i) information campaign; (ii) recruitment of cooperative facilitator (already mentioned in sub-component 2.1 above); (iii) formation of technical advisory group; (iv) training and capacity building of cooperatives on technical matters; (v) preparation of cooperative business plans; (vi) screening of the proposals; (vii) field verification; (viii) evaluation and approval; (ix) financing agreement elaboration; (x) implementation of business plans; and (xi) monitoring and evaluation. More details are provided in Appendix 4 and WP 3.
- (b) **Activity 2: Financing Pilot Business Plans for Linkages with Supermarkets:** This activity will be conducted on a pilot basis around two interventions (one in each of the 2 provinces - Ningxia and Sichuan). The elaboration and implementation of business plans for linkages with supermarkets will be guided by the same principles as in the case of cooperative business plans (see above) but with some specificities that are presented below. Specific criteria for selection of cooperatives and supermarkets will apply (see appendix 4 and WP 3).
- (i) *Eligible activities.* Eligible activities for pilot supermarket-oriented business plans would indicatively include: (i) Facilities and equipment for grading, washing and packing, cold storage, transport vehicle, food safety testing and computer and internet access; (ii) required training of farmers; (iii) marketing support including business development (client visit and participating in marketing activities) developing relationship with clients (inviting clients and promotion activities), brand building, certification, traceability; and (iv) facilitation for access to finance for working capital and annual inputs.
- (ii) *Financing rules.* Financing rules would include (i) 100% of eligible activities (and no co-financing required); (ii) budget allocation of no more than 30,000 RMB per cooperative member. Additional conditions applicable would include (i) ownership of the assets and equipment purchased with Program financing must remain with the cooperative; and (ii) land transfer is allowed contingent upon the condition that it is transferred to the cooperative.
- (iii) *Interventions.* For each of the two pilot cooperatives selected, the program will recruit (i) one graduate student as a full-time manager of the pilot cooperative-supermarket partnership, and (ii) one technical and marketing expert to provide the necessary support and services for producing and marketing high-quality and safe products. The programme will support the cooperative on technical matters such as access to seeds or seedlings as well as improved production and post-production (storing, cleaning, grading and packing) practices to complying with production standard. On the cooperative side, the cooperative-supermarket partnership manager will also provide support to enhance the pilot cooperative's capacity in short-distance transport, grading, packing and cold storing of farm products as well as improved communication, connections and trainings for linking with the selected supermarket. Experience and lessons learned will be collected and disseminated for scaling up. The above mentioned rules of general cooperatives business plans would apply to scaled-up cooperative-supermarket business plans.
- (c) **Activity 3: Financing Innovative Business Plans for Agro-enterprises.** This activity will be conducted on a limited scale (one per county). The elaboration and implementation of business plans for agro-enterprises will be guided by the same principles as in the case of cooperative business plans (see above). Selection of eligible agro-enterprises will be on a competitive basis.

- (i) *Eligible activities.* Eligible activities for agro-enterprise oriented business plans will include soft activities only (e.g. technical assistance, services, studies, trainings, participation to exposure visits/fairs, costs related to certification and traceability, branding/marketing, etc.). In the case of Ningxia, certain production-base infrastructure for private use (i.e. sprinkle and drip irrigation, greenhouses and livestock production infrastructures) will be eligible while assets, equipment, working capital, inputs (e.g. seeds, manure, fertilizers, pesticides, etc.), operational/recurrent costs will not be eligible. Eligibility criteria will be the adoption of innovative benefit sharing mechanisms.
 - (ii) *Financing rules:* 100% of eligible costs (i.e. soft activities only); and (ii) in the case of Ningxia, 90% of production-base infrastructures for private use, provided that the beneficiaries of these activities are the program primary target group (i.e. individuals whose income is \leq RMB 5,040). Total budget allocation per business plan will be of no more than one million RMB. Co-financing conditions would include (i) no more than 25% from Program financing and at least 75% from Enterprises; and (ii) In Ningxia, no more than 90% of production-base infrastructures for private use from Program financing; at least 10% from enterprises.
 - (iii) *Implementation arrangements* Implementation arrangements for activity 1, 2 and 3 are presented in details in appendix 4 and 5 and 10.
- (d) **Sub-component 2.3: Rural finance.**
- (i) *Rationale.* The objective of the sub-component is to enhance the opportunities of target beneficiaries (individuals and cooperatives) to access financial resources by supporting financial institutions/credit guarantee companies in the programme area to expand their range of financial products and improve their credit risk assessment capacity so to better respond to the demands of the programme's beneficiaries. Current access to the formal credit remains limited and conditioned by a number of constraints that represent bottlenecks for the targeted beneficiaries. The improved and sustainable credit guarantee mechanisms will help relieve these constraints. The institutional support to the key players of selected credit guarantee companies will improve the sustainability of the agriculture credit guarantee system with innovative services and products.
 - (ii) *Scope of work.* The sub-component will support institutional support to the provincial level agricultural credit guarantee companies. They are equally important and closely associated to help ensure the successful implementation of value chain financing. This sub-component will provide institutional strengthening to facilitate access to existing credit guarantees provided by Sichuan Provincial Agricultural Credit Guarantee Company (SACGC) in Sichuan and the Ningxia Agricultural Credit Guarantee Company (NAIGC) in Ningxia, for loans to smallholders and poor households. In doing so, it will help improve good practice lending processes, increased financial institution capacity to assess credit risk, and employ a wider variety of collateral, leading to an improved capacity to sustainably expand lending to target beneficiaries. More details are provided in appendix 4.
 - (iii) *Institutional support.* The intervention will take place in three areas: product development, technical training and exposure, action research and study. Product development aims at responding to the absence of guaranteed loan products in the three specific areas, namely: (i) guaranteed loan to business in the organizational form of cooperative; (ii) guaranteed loan for agricultural value chain financing; and (iii) e-commerce guaranteed credit. Technical training, exposure, action research and study aim at strengthening the GF company's operational

efficiency and supporting its continued commitment in agricultural value chain financing. More details are provided in appendix 4.

- (iv) *Implementation responsibility.* ACGC will be responsible for implementing the subcomponent.

Component 3: Program Management and Coordination

51. This component will support the planning, coordinating, monitoring, reporting, knowledge management and overall management functions of the programme management offices (PMOs) at central, provincial and county levels. The component comprises two subcomponents: (i) Program Management, which covers the costs related to staff (including the recruitment of value-chain and M&E officers), technical assistance and capacity development for program staff, office equipment, costs of supervision, and costs related to compliance with environmental and social management regulations and requirements, and (ii) Monitoring & Evaluation and Knowledge Management, which covers the costs related to the development of a Program MIS, M&E (including the recruitment of a third-party provider for baseline, mid-term, endline and annual outcome surveys, and regular cooperative performance assessment survey, etc.), and KM activities.

52. **In-loan grant to support/strengthen central SOCAD's coordination functions.** An in-loan grant of USD 0.5 million is included as part of the IFAD financing for this Program⁶. The recipient of the grant will be central SOCAD. The purpose of the grant is to support/strengthen SOCAD's coordination functions, particularly with regard to M&E and knowledge management. These functions are considered critical to provide SOCAD with the necessary capacity to assess and identify successful approaches and practices that can be replicated nationally through the implementation of national programmes. The rationale for this grant lies on the fact that, differently from past projects, this operation will be implemented in two different provinces, but coordinated at central level by a national implementing agency (SOCAD). A key element for the successful implementation of a multi-province, centrally coordinated program is a functioning central M&E system. One of the constraints that affected the implementation of similar national programs is the limited availability of resources within the central agency to adequately play its role of program coordinator and supervisor. While this gap could be addressed by using part of loan for this purpose, experience showed that the Government prefers to borrow for productive investments rather than for 'soft activities' and that central agencies have limited capacity to borrow, as they have limited capacity to generate resources to pay the loan back. To address this constraint, a grant component was proposed to specifically support central agency coordination functions, particularly with regard to M&E. SOCAD is matching the grant amount. The activities implemented under the grant will include (i) TA in the areas of result framework, budget execution, indicators, etc; (ii) trainings to sub-national implementing agencies; and (iii) exposure visits, among other activities.

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

53. The main lessons learned from IFAD country programme and ongoing portfolio⁷ and from other donors (mainly World Bank⁸) are presented below together with indication on how these lessons will be incorporated in the IPRAD Programme.

⁶ The grant meets the 2015 Policy for Grant Funding as it (i) makes a contribution to a national public good related to IFAD's mandate (i.e. knowledge); (ii) focuses on interventions where grant financing has an added value and a comparative advantage over regular loans (i.e. soft activities); (iii) will not be used as a substitute for resources from IFAD's administrative budget; (iv) promotes approaches and technologies with the potential to be scaled up (i.e. MIS); (v) strengthens partners' institutional and policy capacities (i.e. SOCAD's coordination, supervision, monitoring and evaluation capacity, and capacity to generate and manage evidence-based knowledge); (vi) enhances advocacy and policy engagement (as the knowledge generated can be used to inform policy-making); and (iv) generates knowledge for development.

⁷ E.g. ECPRPNS, SSADeP, JiMAAPP, and QLMAPRP.

⁸ These projects include: (i) Guizhou Rural Development Project, under implementation since 2014, (ii) Poverty Alleviation and Agriculture Development Demonstration in Poor Areas Project under implementation since 2015, (iii) Guangxi Rural Poverty

(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: <ul style="list-style-type: none"> (i) The knowledge, experience, lessons, best practices and results of IFAD-funded programs and projects had limited impact/influence on broad national policies, and have been limitedly scaled-up. When successful, scaling-up was largely the result of contextual favourable circumstances during implementation, rather than a systematic approach or strategy to scaling-up during design. (ii) IFAD current delivering model based on a project approach proved non-conducive to inform policy-making and favour scaling-up. IFAD support to China has been so far delivered mainly in the form of area-based projects: loans to provincial governments that implement activities in specific geographic areas (i.e. project approach). Although successful in delivering results on the ground, the drawback of this approach is that such 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 decision to shift from a single-province project to a multi-province program, and to have a national central agency (SOCAD) as implementing agency for the program with the role of coordinating monitoring & evaluation and knowledge management is meant to favour the channeling of knowledge from local to national level, thus ultimately favouring policy influence and scaling-up.
<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 (i.e. Comprehensive Agricultural Development approach), 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 Program 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. The Program is expected to complement and enhance the Government's comprehensive agricultural development approach to agricultural development.
<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 farmers, gave mixed results, and it did not always proved to be an effective approach. 	<ul style="list-style-type: none"> ▪ The proposed Program will focus on cooperatives (rather than dragonhead enterprises) as the main entry point to link poor farmers to markets. It will support cooperatives to enhance their governance, strengthen their managerial capacities, make them financially sustainable, and more inclusive and equitable in their distribution-sharing mechanisms. ▪ The Program will also strengthen the capacity of cooperatives to diversify their marketing channels, including supermarkets, e-commerce operators, etc. and to better respond to the demand and quality requirements of these buyers. ▪ Finally, the Program will also provide incentives to dragonhead enterprises to expand their network of suppliers/vendors to the Program target group (poor households and cooperatives) and be more inclusive.

Alleviation Pilot Project under implementation since 2017, and (iv) Shaanxi Poor Rural Areas Community Development Project under implementation since 2017.

(b) Lessons from ongoing portfolio

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ Challenges in implementing multi-provincial projects: The implementation of the Environmental Conservation and Poverty Reduction Program in Ningxia & Shanxi (ECPRPNS) proved challenging. Supervising a programme which was spread out over such a vast area was time-consuming and cumbersome. Also, without a central coordination mechanism to ensure consistent performance and mutual learning, the programme practically represented two parallel interventions in the two provinces. 	<ul style="list-style-type: none"> ▪ The main difference between the proposed Program and the ECPRPNS is that the proposed Program will be implemented by a central agency (SOCAD) that will be responsible for coordination, monitoring & evaluation, and ensure adequate knowledge management and mutual learning. Supervising a program in two different provinces would be however challenging, time-consuming, and expensive. Different modalities for supervision would need to be experimented.
<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"> ▪ The Program financing is channelled to the provinces through SOCAD as a grant, and not as a loan that has to be repaid. Without the burden of loan repayment, provinces may be less risk adverse in supporting weaker entities. ▪ Clear criteria will be developed to determine the entities that are eligible for Program support.
<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). There is limited availability of providers to outsource implementation responsibilities. 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 Programmes).
<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

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ Limited ability to implement advanced cooperative governance structures given lack of appropriate service providers: A range of on-going projects promote more inclusive and business-maximising cooperatives. However, activities are implemented with mixed results. Often project implementing staff lacks vision on how to innovate the cooperative model and appropriate support capacity cannot be found at county level. 	<ul style="list-style-type: none"> ▪ Start-up period will include intensive consultation with project staff and design team/technical specialists to ensure design vision is translated into implementation modalities, and well understood. ▪ Link with on-going grants, to strengthen implementation capacities.

(c) **Lessons from other donors' efforts in poverty reduction (mainly from the World Bank's poverty reduction projects⁹)**

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ The importance of central and provincial government leadership and support: WB poverty reduction projects have been both highly complex and extremely innovative. The most important lesson from these projects has been that strong central and provincial government leadership and support has been essential to the successful design and implementation of these highly complex and innovative operations. 	<ul style="list-style-type: none"> ▪ Central and provincial leadership and support is being ensured through SOCAD, a central agency under the Ministry of Finance (IFAD's institutional counterpart) with decentralized offices at provincial and local level.
<ul style="list-style-type: none"> ▪ The importance of ownership of the project innovations: The direct involvement of senior government staff in the analysis, design, and operationalization of innovative poverty reduction measures has proven to be very important to the ownership and eventual nationwide adoption of new poverty reduction strategies. 	<ul style="list-style-type: none"> ▪ SOCAD senior staff has been involved and has participated to scoping and design missions. The proposed Program is the result of the dialogue with SOCAD, and reflects a common understanding of the development problems and a common view on how to address these problems.
<ul style="list-style-type: none"> ▪ The importance of strengthening project management systems to ensure successful implementation: Given the above-average complexity of this series of poverty reduction projects, effective project management capacity building has been essential. To address this challenge, each of the first four projects included explicit institution building components which successfully served to strengthen the project management system at all levels (from the Central Project Management Office all the way down to village Work Stations). 	<ul style="list-style-type: none"> ▪ SOCAD has a long experience in implementing donor-funded projects, including from the World Bank and ADB, and including multi-provincial projects. Its capacity to implement the proposed Program is considered appropriate.
<ul style="list-style-type: none"> ▪ Participation and community empowerment: The second set of projects demonstrated that it is possible to reverse the traditional top-down leadership and decision-making style of poverty alleviation programing while at the same time achieving more effective and sustainable poverty alleviation results. The projects developed and demonstrated specific methods to involve beneficiaries throughout the entire process of identifying and selecting activities, contracting, 	

⁹ 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. This series of projects and studies has sought to analyze and address the current key issues and challenges in China's most severely affected poor areas. Following each of the poverty assessments completed in 1992, 2002, and 2009, 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
<p>supervising implementation, and finally operation and maintenance. However, establishing these methods entailed extensive time and resources for careful preparation, trialing, and staff training.</p>	
<p>▪ 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.</p>	<ul style="list-style-type: none"> ▪ The design of the new Program is placing greater emphasis on establishing criteria and a process (selection of business plans on a competitive basis) for identifying potentially viable value chains. ▪ The proposed Program places at the center of its pro-poor value-chain component the development of farmer cooperatives as entry point to provide the poor with an appropriate share of the increased value of output and employment opportunities.
<p>▪ 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.</p>	<ul style="list-style-type: none"> ▪ The proposed Program 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.
<p>▪ Identification of cooperatives that are more likely to be successful: To identify and select cooperatives that are likely to be successful in establishing equitable linkages with poor farmers, it is important to have clarity about their ownership, the shareholding structure and the production arrangements within the cooperative as well as clearly define arrangements about the profit making and future profit sharing.</p>	<ul style="list-style-type: none"> ▪ To ensure that the proposed Program will support cooperatives that are likely to be successful in establishing equitable linkages with poor farmers, a number of safeguard conditions have been included among the criteria for selection/financing of the business plans, including: (i) the five major shareholders of the cooperative that applies to the Program funds should not owe more than 49% of the cooperative' shares; (ii) ownership of the assets and equipment purchased with Program financing must remain with the cooperative, and will be capitalized equally to the accounts of all members, as stipulated by the Cooperative Law; and (iii) land transfer is allowed contingent upon the condition that it is transferred to the cooperative; among other criteria.
<p>▪ Development of Business Plans: Experiences from the four WB-funded Poverty Alleviation Projects showed that (a) rarely farmer cooperatives 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 a cooperative 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</p>	<ul style="list-style-type: none"> ▪ Drawing from the experiences of the four WB-funded Poverty Alleviation Projects (a) the development of the business plans follows a process of solicitation: the Program hires facilitators who interact with the cooperatives and solicit basic ideas together with the cooperatives that will form the basis for the development of a business plan. In addition, to provide the cooperatives with a minimum capacity to participate to the proposed Program, the project will support cooperatives with the purchase of basic equipment such

Lesson	How lesson has been incorporated in the Program
<p>partially successful. Additional and regular training needs to be provided from the project.</p>	<p>as computers, printers, scanners, communications and other basic equipment; (b) the Program provides resources for the recruitment of service providers for the delivery of various trainings and services to cooperatives (e.g. trainings on cooperative awareness, governance, business management, legal awareness, financial literacy, marketing, computer, part-time legal services, part-time accounting support, audit services, etc.) aimed at building the necessary minimal capacity in cooperatives to become eligible and develop business plan proposals.</p>
<ul style="list-style-type: none"> ▪ Cooperative facilitators: Experiences from some of the WB-funded Poverty Alleviation Projects have experienced problems regarding unrealistic expectations placed on the cooperative facilitators hired by the project. 	<ul style="list-style-type: none"> ▪ Drawing from the experiences of the four WB-funded Poverty Alleviation Projects, the role of the cooperatives facilitator is better defined in the proposed Program. It is clarified that the role of the cooperatives facilitator is to assist the leaders and managers to improve their capacity for management. To achieve this outcome the facilitators will receive training on the use of basic management tools (budgeting, planning, financial analysis, risk analysis, market analysis etc.). Their role is then to work side-by-side with the cooperative leaders and managers applying these tools, strengthening the management capacity of the cooperative through a process of "learning by doing".

54. **Adherence to the Social Environmental and Climate Assessment Procedures (SECAP).** A SECAP review note has been prepared (see full note in program life file). The main recommendations of the note include: (i) Environmental and social category B has been confirmed; (ii) In light of recent and projected agriculturally-sensitive climatic trends, in particular increases in temperature, uncertainties over Yellow River flow volumes and the future allocation of water quotas for Ningxia, increase risk of drought and potential impacts of some program activities in the Region, in particular increase in numbers of livestock, the High risk category is confirmed and a Climate Vulnerability Assessment (CVA) is required; and (iii) IFAD policies do not support project activities where a resettlement process is on-going. As a consequence, all communities that were included in the post-2012 environmental resettlement program in Ningxia have been excluded from the program areas.

III. Program implementation

A. Approach

55. **Programmatic approach (as opposed to project-approach).** The proposed programme will consist of a national programme managed at central level by a central agency which will implement pilots at provincial level with the objective of testing their applicability/viability in different context and, ultimately, their potential for scaling-up.

56. **Poverty reduction through agribusiness development (*chanye fupin*).** Poverty reduction through agribusiness development (*chanye fupin*) is an approach that has been adopted by the government for decades. It has mainly been implemented by supporting leading enterprises (i.e. dragonhead enterprises) or commodities in a determined area (i.e. one village-one product) to promote the development of that area, assuming that the benefits generated by the industry would have eventually resulted in poverty reduction. In reality this approach gave mixed results: in some cases it was successful, in other led to overproduction (as the market demand was not adequately taken into consideration when supporting a commodity), in other the benefits generated did not eventually trickle down to the poor. In general the way this approach was implemented did not always

prove to be the most efficient or effective approach to achieve poverty reduction. The proposed Program will test/pilot a different modality of poverty reduction through agribusiness development, as:

- (a) ***It will adopt a market-driven and value chain approach:*** the proposed program will adopt a market-driven approach (i.e. support agribusiness entities to identify and respond to markets' demands, identifying and diversifying market channels), and value-chain approach (i.e. support the entire value-chain, from production, to post-production and marketing);
- (b) ***It will specifically focus on promoting fair, equitable and pro-poor benefit-sharing mechanisms;***
- (c) ***It will focus on different agribusiness entities than DHEs:*** the proposed programme will focus on cooperatives as the main entry point to link poor farmers to markets. It will support cooperatives to enhance their governance, strengthen their managerial capacities, make them financially sustainable, and more inclusive and equitable in their distribution-sharing mechanisms;
- (d) ***It will place emphasis on how to capitalize the new marketing channels:*** the proposed Program will strengthen the capacity of cooperatives to diversify their marketing channels, including supermarkets, e-commerce operators, etc. and to better respond to the demand and quality requirements of these buyers.

57. **Flexibility.** Considering the fluidity of value chain and market dynamics, flexibility in program design and implementation is critical to successful outcomes. Flexibility will be built in through (i) where possible, favouring facilitation rather than direct intervention in response to value chain constraints; (ii) relying on value chain investment defined in business plan elaborated and implemented by cooperatives for enhanced appropriation, market-drivenness and equitable distribution of profits; and (iii) diversifying both on the supply side of small scale agriculture by enlarging the range of crops and animal products developed and on the demand side by trying to build commercial partnership with more than one buyer for any given producer group/cooperative.

58. **Business plan approach.** The proposed program will adopt a competitive mechanism to select the cooperatives to be supported and the activities to be financed by the programme, based on business plan proposals submitted by the cooperatives and competitively selected on the basis of pre-determined criteria. These plans will be following the below principles:

- (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 programs.
- (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.

59. Business plan proposed outline and elaboration/implementation steps are presented in appendix 4.

60. **Diversification**. The program will enlarge the range of options on both demand and supply sides. On the demand side, the program 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. These different buyers are presented in working paper 3. The priority of the program 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 program 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. The typology and frequency of different models of value chains are presented in working paper 3 (tables 2, 3a and 3b) as well as an example of the price structure of these different models for the red-hearted kiwi value chain in Sichuan (working paper 3, table 4).

61. On the supply side, the program will ensure that where feasible, participating producer group/cooperative has 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 appropriate value chains.

B. Organizational framework

62. The IPAD program will be implemented over a period of six years, across 10 counties/districts within one province (Sichuan) and one autonomous region (Ningxia).

63. **Lead implementing agency**. Consistent with the programmatic approach adopted by the COSOP 2016-2020, the programme introduces a new management modality where, the programme management and implementation responsibilities will be given to a national central agency: the State Office for Comprehensive Agricultural Development (SOCAD), a governmental institution under the administrative jurisdiction of the ministry of finance. SOCAD will coordinate and supervise the implementation of the pilot projects in two provinces: Sichuan and Ningxia.

64. **Program leading group (PLG)**. PLGs, established by decree of the appropriate government authorities at province and county levels, will be responsible for overall coordination and administration of the program implementation. PLGs act as steering committees that oversee program implementation and provide strategic direction and guidance to the implementing agencies on policy matters, and programme planning and implementation. They periodically evaluate implementation progress, facilitate inter-departmental coordination, and resolve any conflicts among institutions.

65. **Program management offices (PMOs)**.

(a) **National PMO**. A National PMO (NPMO) will be set up within SOCAD. It will have the primary responsibility of overall program coordination and management support, administration of program resources, monitoring and reporting, as well as ensuring adherence to agreed standards, guidelines, and procedures, and supervising the program

implementation in the two provinces. Particularly, SOCAD will have primary responsibilities among others in: (i) administer the Designated Account and program resources including the IFAD loan and counterpart funds; (ii) overseeing the use of program resources and program procurements; (iii) ensuring effective flow of funds for program implementation; (iv) providing appropriate technical and implementation support to the provinces; (v) coordinating and undertaking knowledge management activities by facilitating intra-knowledge transfer among programme provinces and with domestic and international agencies; (vii) monitoring and evaluation. A special responsibility of the NPMO includes the overall responsibility in managing the knowledge generated from programme activities, and for making the necessary arrangements for replication and upscaling of best practices within and beyond the project.

- (b) **Provincial and county PMOs.** Specific implementation responsibilities of the program rest with the provinces, more specifically the programme counties. In both Sichuan and Ningxia, provincial level (POCAD) and county level (COCAD) offices of the SOCAD shall take lead. Programme management offices will be established at provincial (PPMO) and county (CPMO) levels within the POCADs and COCADs offices of the participating province/region. PPMOs and CPMOs will be in charge of day to day program management, focusing on overseeing program designs, implementing and supervising program activities, arranging for counterpart-funding, preparing annual work plans, financial plans, procurement plans, program monitoring and evaluation and reporting. The implementation of program activities in the counties will be carried out by relevant technical agencies wherever possible, building on the prevailing inter-agency partnership model of the SOCAD projects. The Provincial PMO (PPMO) and each county PMO (CPMO) shall be staffed with staff who have experience in program management, financial management, procurement, and monitoring and evaluation, comprising at a minimum the functions of an executive director, an accountant, a cashier, a planning officer, an M&E officer and an implementation coordinator. CPMO consisted of additional staff members seconded from the related technical bureaus (e.g. Water Resources, Agriculture, Forestry, and Finance) will be a desired model in IPRAD. Given the nature of the program, a value chain facilitator will be positioned in the CPMO to facilitate and oversee the program implementation in this respect.

(c) **Local level implementation.**

- (i) At township level, a *Township Implementation Support Office (TISO)* will be established consisting of 3-4 existing staff with the township government, utilising existing facilities on a part-time basis. The main responsibility of TISO is on planning, implementation support, monitoring and reporting of program activities in programme villages.
- (ii) At village level, *Village Implementation Groups (VIG)* would be established in the program-targeted villages, taking advantage of similar existing set-up there, to ensure appropriate targeting, mobilise household participation and monitor programme activities. 3-4 poor beneficiaries and not less than 40% of women representatives in the VIGs shall be maintained. VIG will also facilitate organising the operation and maintenance of community infrastructure built by the program, where relevant.

66. **Farmers' organizations** such as Water User Associations (WUAs), Farmer Cooperatives (FCs) and their Associations (FAs) will participate in the implementation and monitoring of program 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 program. Similarly FAs/FCs will be involved in value chain enhancement activities and monitoring the implementation of programme activities, identifying their

training needs and facilitating services delivery. Women are expected to play an equal role within the different farmer groups and VIGs.

67. **Other implementing agencies.** Implementation of programme activities would remain with relevant technical agencies at county level on the basis of their mandate and technical expertise as detailed in Appendix 5 to ensure close integration and coordination of the program activities with the governmental development activities in the program area, leveraging various concessional government policy instruments to support and complement the program, to achieve more efficient and effective use of resources, better results and impact on the target population and sustainability. The implementing agencies will include Department/Bureaux of Finance (DOF/BOF); 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 program counties who will be responsible for supporting the CPMOs in undertaking the implementation of specific program 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).

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

68. **Planning.** Planning for the proposed program 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 program 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 program 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 program 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 programme fiscal year before its implementation.

69. **AWPBs.** 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. The CPMOs should consult with relevant agencies in formulating the draft AWPBs prepared by the IAs and submit them to the PLGs for review and clearance, prior to submitting them to the upper PMOs. PPMO should consult with relevant departments in consolidating the AWPBs and submit them to the provincial PLG for review and clearance before sending to SOCAD for consolidation and submission to IFAD for "no objection" review. The first AWPB should be developed and submitted to IFAD before start-up of the program. From the second year on, the PPMO will submit consolidated AWPBs to IFAD for its comments before the 31st October each year. If there are no comments on the AWPBs from IFAD within 30 days after receipt, the AWPBs will be deemed approved by IFAD. Programme 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.

70. An important basis of formulating AWPBs is the programme Logical Framework (logframe) that sets up the programme outputs, outcomes, and objectives. Their fulfilment will be monitored and evaluated (M&E) through the measurement of indicators that have been set up correspondingly. M&E results will indicate if the implementation of program activities gives appropriate outputs and outcomes towards achieving the objectives. Therefore, they will be used as guidance on developing the next AWPB. Adjustment of activities or implementation modalities will be necessary when formulating AWPB if M&E results have indicated that implementation of the activities could not result in the achievement of program objectives, or otherwise, the programme log frame will need to be revised. This close linkage among log frame, AWPB and M&E will constitute part of the program's knowledge management.

71. It should be noted that the unit costs for activities and activity packages presented in this report were estimated based on the overall average situation in the program area, with the understanding that: (i) the specific location for each of the program activities has still to be finalized at implementation level; (ii) the program activities would be adjusted during implementation in view of the fast evolving domestic rural development and market environment; (iii) adequate flexibilities 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 activities designed are indicative rather than actual costs to be used for implementation.

72. **Monitoring and evaluation.** The programme will establish an effective and efficient M&E system from national level (within central SOCAD) to provincial PMO through county PMOs down to the VIGs. 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.

73. The special features of the IPRAD M&E system will include (these features are discussed in more details in appendix 6):

- (a) A consolidation role led by central SOCAD 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 program, in line with the government's poverty eradication effort;
- (c) An emphasis on making M&E data accessible and usable for programme implementers and decision makers, through a user-friendly MIS system¹⁰ 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 at implementation level, by recruiting an M&E specialist in each provincial PMO¹¹ 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.
- (f) The option of testing/piloting a performance-based allocation system in the program (and related M&E requirements).

74. **Logframe.** The programme log frame has been set-up based on the program objectives and activities that are required to result in outputs, outcomes and impact towards achieving the objectives. Program indicators, including output, outcome and impact levels, are set up in the log frame. They form the basis of program M&E and will be subject to adjustment during implementation of the program, as required.

75. The M&E officers of CPMOs will arrange the collection of M&E data in accordance with agreed indicators and report to the PPMO after consolidation at county level. VIG members will assist collecting the household-level M&E data to avoid repeat counting, particularly in terms of participants

¹⁰ See Terms of Reference for MIS development attached.

¹¹ See Terms of Reference for PPMO M&E Specialist in separate attachment.

by gender and by activities, beneficiary households by activities, and other indicators as required. M&E data concerning institutions and staff training will be collected by the IAs. The PPMO will consolidate M&E data reported by CPMOs and report semi-annually and annually to IFAD.

76. **Implementation monitoring** will focus on the programme 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)¹². For this purpose, monitoring data should be collected at the grassroots level (VIG) or by IAs, depending on the nature of indicators. In general, the state of benefits and participation at the levels of households and individual beneficiaries will be undertaken through the grassroots recording and reporting by VIGs and producer cooperatives. Cooperative-level capacity development and related improved performance will be recorded and reported by implementing partners, and through an annual survey of all programme-supported cooperatives.

77. **Evaluation** is an instrument for assessing changes caused by interventions or timing. It will focus on the outcomes and impact of the programme. Outcome and impact indicators for the programme are set up based on the criteria of measurability, pertinence and sensitivity to change, while following the principles of: (i) building on existing indicators; (ii) harmonizing with other frameworks such as the National Poor Registration System and the Sustainable Development Goals (SDG); (iii) minimizing the number of indicators to be collected; (iv) relating to programme components; and (v) addressing the programme strategic needs.

78. There are generally four types of programme evaluations that are used for different purposes and carried out at different stages, i.e. formative evaluation, process evaluation, outcome evaluation, and impact evaluation. Outcome evaluation will be conducted annually and impact evaluation will be conducted three times during the programme implementation, including the baseline survey at appraisal, and subsequent surveys prior to Mid-Term Review and that at project completion.

- (a) **Outcome evaluation:** The evaluation is specifically designed to attribute the short to midterm changes to the intervention itself. At the very least, this type of evaluation has to be able to plausibly link observed outcomes to a well-defined programme, and to demonstrate that changes are not the result of non-programme factors. The primary data collection method will be the annual outcome surveys.
- (b) **Impact evaluation:** True impact evaluation, able to attribute long-term changes to a specific programme, would require the establishment of an experimental programme design with a control group. Since this was not considered feasible for this programme, data on impact indicators taken in conjunction with process and outcome evaluations will be considered to be sufficient to indicate the overall impact. The main instruments for assessing the impact of a programme are the baseline survey before implementation, the mid-term survey before mid-term review, and the completion survey at completion. Each survey will include, inter alia, the RIMS indicators and emphasize the improvement of household assets. It should be stressed that baseline indicators that reflect the poverty status of programme area before programme implementation will be used as references against those measured in succeeding mid-term and completion surveys. As such, the same sampling approach and data collection instruments need to be used for all three surveys for consistent and comparable purposes.

It should be noted that the existing National Poor Registration System (NPRS) provides an excellent basis for impact evaluation of the IPRAD Programme. This system 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

¹² IFAD will provide SOCAD with the revised Results and Impact Management System (RIMS) guidelines.

at the village level).

79. A strong link between the results of the ex-ante financial analysis and the M&E system will be established. The crop/animal productivity increase of participating farms and the incremental net benefit of participating households associated with improved production and post-production systems will be assessed in the financial analysis. These two measures will become key indicators to assess the increased productivity and profitability of participating households (thus increased income of participating households and in turn, the poverty impact of the programme). These indicators will be tracked in the logframe and as part of the M&E through bi-annual surveys.

80. **Annual cooperative performance assessment.** Data on the cooperatives' financial performance will come from the management and accounting software, to be used by all programme-supported cooperatives¹³. In addition, it is important to understand the management practices, business planning processes and pro-poor profit sharing mechanisms of each supported cooperative, with a view to (a) providing feedback to the cooperative management to help them improve their business practices, and (b) obtaining performance monitoring data for logframe indicators. Therefore, a third party will be tasked with carrying out an annual performance assessment of all supported cooperatives, with guidance and supervision from the PPMO M&E Specialist.

81. **Results and Impact Management System (RIMS):** The IFAD RIMS is not separate from M&E. RIMS indicators are the core indicators of M&E system and they should be fully integrated within the same system. There are three levels of RIMS 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 levels 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).

82. RIMS 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 program, including a baseline survey, a mid-term survey before mid-term review, and a completion survey for assessment of program impact. Each survey will include, inter alia, 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 program areas at the beginning of program implementation, will be used as references against those measured in subsequent mid-term and completion surveys. As such the

¹³ The China Ministry of Agriculture provides a free software package that is readily available for download for all registered cooperatives.

same indicators and methodology should be used for all three surveys for consistent and comparable purposes.

83. **Baseline/RIMS survey:** In conformity with the updated procedure for IFAD-funded projects, the baseline/RIMS survey of the program area will be elaborated with IFAD's technical support during January-February 2017 (before the design completion mission scheduled in March 2017). The survey will follow the methodology of IFAD and its draft report will be made available to the design completion mission.

84. **Monitoring Information System.** A web-based Management Information System (MIS) will be established that is – ideally – integrated with SOCAD'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.

85. **Result-based allocation.** It is proposed that a result-based allocation system be piloted under the IPRAD programme. During the appraisal mission it was discussed that, for administrative reasons, a result-based allocation will be implemented once at mid-term of the programme at the provincial level, based on the differential performance of the provinces as recorded in the MIS. The exact modalities how to implement this will be proposed by SOCAD.

86. **Use of ICT for data collection and information dissemination.** It is proposed that an ICT platform will be developed or adapted centrally under SOCAD's leadership, so both programme provinces can use the same ICT infrastructure, with support from the PPMO M&E Specialists.¹⁴ The two main functions of this platform will be (i) to send information via text message, and to receive and analyse information submitted by farmers or cooperatives via text messages, and (ii) to send and receive the same information through an interactive voice response (IVR) system, to cater for beneficiaries who may be illiterate but can make phone calls. The required technology is readily available and there are many examples from other countries where such ICT platforms are being used for similar purposes; therefore, the setup costs are expected to be relatively low.¹⁵

87. **Learning and knowledge management.** The program 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 programme objectives;
- (b) Workshops and meetings, including PMOs and implementing agencies, will be held regularly and on as-required basis, to share knowledge, experiences, innovations and success cases during program implementation. So will be the production of programme newsletters and cross review of program implementation between counties;
- (c) Ensure the linkages among programme M&E, AWPBs and log frame for improving program planning. M&E will monitor and evaluate the results of program implementation against relevant indicators set up in the logframe, which will be used as guidance for development of the following AWPB;
- (d) RIMS/baseline surveys will be carried out regularly to assess the program impact and draw experiences for subsequent implementation and for other IFAD projects;

¹⁴ See technical specifications / TOR for the ICT platform in separate attachment.

¹⁵ For example, RapidPro (<https://app.rapidpro.io/>) is a widely used platform, supported by UNICEF; other private providers are Voto Mobile (<https://www.votomobile.org/our-platform/>) or Farmerline (<http://farmerline.co/>) with services more specific to the agricultural sector.

- (e) Eligible rural cooperatives will participate in the program planning and M&E, which will improve their internal planning and management capacity as well as the program'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 programme results and lessons learnt for sharing with other on-going and subsequent IFAD projects.

88. The PPMO and CPMOs will be responsible for capturing and documenting experiences, successful cases and innovations resulting from the programme implementation and organize semi-annual and/or annual workshops during the program implementation to disseminate the experiences and innovations for scaling-up. Plan for scaling-up of successful cases and innovations within the program area will be incorporated into the programme AWPBs during the program 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.

89. **Regional knowledge networking:** The programme management will actively participate in regional knowledge networking activities in areas related to the program, 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 program.

90. **Scaling-up:** The IPAD programme'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 SOCAD in MOF. *Drivers* relates 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 high 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 programs promoting value chain development¹⁶ and (iv) the programmatic approach retained for the IPAD program 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 *pathway* for scaling up would include the following steps: (i) successful implementation of IPAD sustainable poverty reduction through value chain development; (ii) monitoring and impact evaluation at programme level based on programme M&E and on the National Poverty reduction System (NPRS); (iii) learning and stock taking at IFAD country programme level and at national level; (iv) identification of leveraging measures within government (policy change, mainstreaming into national programs); 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 program organization; and *vertical up-scaling*, moving

¹⁶ These include (i) Wholesale market development and upgrading; (ii) Direct "farmer to supermarket" purchase program; (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.

from a local or provincial engagement 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.

91. **Innovations:** The Program will introduce operational and institutional innovations. The former category will include (i) piloting geographic indication as a marketing tool for specific regional products; and (ii) using and taking advantage of electronic platforms (including internet, mobile phones, and branchless banking) for e-commerce, rural finance, agricultural extension and Programme monitoring and evaluation.

92. In terms of institutional innovation, the Program will (i) adopt a programmatic approach by intervening in more than one province through a central implementing agency (SOCAD) that will facilitate knowledge management and scaling up. This process will likely take place through (a) *learning from repetition* whereby the same value chain development model is implemented in different Program areas; and (b) learning from differences whereby different value chain models are implemented in Program areas presenting similar conditions; (ii) contribute to diversifying SOCAD model by putting greater emphasis on value chain development and income generating activities as well as pushing CAD model to higher elevation areas less suited for large scale, commercial agriculture; and (iii) introduce a result-based approach implying designing the interventions according to a result framework and using this framework for disbursement (i.e. each disbursement tranche is linked to attaining a specific set of outputs/outcomes). This clearly requires a monitoring system to track implementation performance.

D. Financial management, procurement and governance

93. The programme introduces a new financial management modality, where, for the first time for IFAD in the China country program, the loan is lent to the central government, which will bear the responsibility for the loan repayment. A national central agency, SOCAD, will have the primary responsibility for the administration of the programme resources.

94. **Counterpart funding.** Counterpart funding will consist of allocations made by the central government, program provinces and counties/districts. Government will ensure that counterpart funds are contained in the national allocations for SOCAD/POCAD at central and provincial levels, and that they are released for the program on time. First, government counterpart funding are distributed to Program Accounts at provinces/counties/districts accessible by the relevant PMOs. The counterpart funding maintained in the Treasury Account will be used to pre-finance the loan covered programme expenditures as well.

95. **Budget allocations.** Budget allocations will be made to enable the function of the national, provincial and county PMOs, to cover investment and recurrent expenses, office and training equipment, capacity building, M&E, knowledge management, and agribusiness promotion. Modest program support will also be provided for program support 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 travel costs, administrative costs, and operation and maintenance of vehicles.

96. **Flow of funds.** Two designated accounts denominated in US\$, one for the loan and one for the grant, will be opened and maintained by SOCAD. IFAD loan and grant funds will be channelled through these two designated accounts. At provincial and county level, programme accounts denominated in yuan renminbi (RMB) will be opened and maintained by POCADs and COCADs respectively to receive funds for programme implementation. The programme accounts will be funded and replenished as necessary from the resources held in the designated accounts, upon request of the provincial and county PMOs and in accordance with the expenditures incurred under approved AWPBs.

97. SOCAD 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 PPMOs for review and verification before sending to NPMO for further disbursement processing. The Designated Accounts will be administered following finalization of the Fund arrangements.

98. 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 NPMO for further disbursement processing.

99. Upon fulfilment of conditions precedent to withdrawal and at the Borrower's request, the Fund will make one (or more) withdrawal(s) of up to the ceiling of USD 10 million for the loan, and deposit such amount(s) into these Designated Accounts; SOCAD 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.

100. PMOs and IAs shall maintain Implementation ledger Accounts in local currency in the Treasury System to receive the proceeds of the financing and/or the counterpart funding. The COCADs will ensure that funds received at each level are transferred without delay.

101. The counterpart funding maintained in the Treasury Account will be used to pre-finance the programme expenditures and reimbursement will be made from DA to the Treasury Account. Separate bookkeeping is maintained by each of the PMO where Program activities will be implemented.

102. **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 risk¹⁷ in terms of governance and accountability. TI Rating for corruption perceptions for China was 37 out of 100 during 2015, from 36 in 2014. 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. SOCAD and POCAD have rich experiences with donor funded projects. SOCAD at the national level implemented several WB financed projects although it is first time for SOCAD to implement the IFAD project.

103. 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 programme 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. Financial Management (FM) risk assessment of overall programme is rated medium. The programme 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 programme management effectively and efficiently undertake the followings:

¹⁷ The Index scores 177 countries and territories on a scale from 0 (highly corrupt) to 100 (very clean).

- (a) Establishment of the specific guidelines for financial management, accounting and disbursement, tailored and adapted to the requirements of the programme implementation;
- (b) Establishment of the PMOs having delegated authority to plan, manage, disburse and control programme 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 programme, 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 program 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 program to enhance fiduciary accountability and performance.

104. **Procurement.** 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.

105. 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 USD 1,000,000 equivalent or more
NCB Goods and Services	Post	Except contracts contract valued USD 200,000 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 USD20,000 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 USD 100,000.00 equivalent and below
Sole Source Selection (SSS)	Prior	Except procurement valued USD 20,000 equivalent or below
Recruitment of Individual Consultants		
Competitive Selection Process	Prior	Except procurement valued USD 50,000 equivalent or above
Single Source Selection	Prior	Except procurement valued below USD 20,000 or equivalent

E. Supervision

106. The program will be under the direct supervision of IFAD. In order to facilitate the program's implementation and ensure the achievement of program objectives, IFAD and the Government will perform programme 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 program 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 program implementation. For the first supervision of the program, the focuses will be on reviewing adherence to the programme 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 program 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 program 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 program, review sustainability and exit arrangement, and draw experiences and lessons for later IFAD and government supported projects.

F. Risk identification and mitigation

107. The main programme risks and related mitigation measures are presented in the table below:

Table 2: Main risks and mitigations

Risk	Risk Level	Mitigation Measure	Residual Risk Level
<p>Unsustainable poverty reduction. This risk is central to IPRAD design and its mitigation represents one of the main rationale of the program:</p> <ul style="list-style-type: none"> Poverty is a dynamic process and a zero target cannot be maintained over time. There will be fluctuations in rural poverty beyond the provincial eradication target in 2019 generated by cases of (i) new poor; and (ii) graduated poor "<i>falling back into poverty</i>" The frequently promoted "<i>one village-one enterprise</i>" model has monopsony risk, is insufficiently diversified; could be unsustainable (excessive reliance on subsidies) and transforms the poor HH in <i>rent earners</i> with little or no connexion with small-scale agriculture (which generally encourages them to exit agriculture) Some existing commercial ventures are financially unviable as they rely heavily on public funding/subsidies for both capital and operational expenditures. Risk is that private firms go out of business or absorb large amount of public funds for functioning The share of individual graduated from poverty but "<i>falling back</i>" could be underestimated 	High	<ul style="list-style-type: none"> The IPRAD program's priority is to test (and possibly scale up) sustainable models of poverty reduction through "Agribusiness development" and "improvement to access to rural finance". Central to the design of the Program is risk diversification on both supply (larger range of pro-poor crops to be developed) and demand sides (multiple market linkages established; and improved capacity of cooperatives to meet sophisticated market requirements) The National Poor Registration system (NPRS) will be closely monitoring poverty eradication. In the case of IPRAD, a specific attention will be placed on cases of falling back given that this will become one of the main indicators of the program impact 	Low
<p>Elite capture in cooperatives</p> <ul style="list-style-type: none"> Insufficient compliance due to lack of knowledge dissemination on Cooperative Law requirements Inequitable distribution of dividends to cooperative members Lack of transparency in cooperative management Low number of cooperatives in the programme area (this is mainly the case in Ningxia Autonomous province); Insufficient integration of registered poor in the targeted cooperatives; 	High	<p>IPRAD will:</p> <ul style="list-style-type: none"> Disseminate and increase awareness of the new Cooperative Law that requires transparency and equitable distribution of benefits among cooperative members Enforce eligibility criteria for program support to cooperative which will include proved compliance with Coop Law requirements Provide training to cooperative on governance and improved management Facilitation for the creation of new cooperatives by the program area with the clear objective of economic development and poverty eradication Incentives for integrating registered poor in the cooperative including (i) minimum number of registered poor as eligible criteria for support; (ii) use of government interest free loan for productive purposes (and not to be transferred as cooperative equity) 	Low
<p>Production assets (irrigated land, orchards, livestock, animal sheds and shelters) made available to program beneficiaries might be insufficient to eradicate poverty (this has proven to be the case for resettlement in Ningxia)</p>	Medium (overall); High in the case of resettlement areas	<p>IPRAD will ensure that sufficient financial and technical resources are allocated to registered poor by:</p> <ul style="list-style-type: none"> specific targeting of registered poor in production basis establishment; use of financial analysis to define a minimum package (in terms of production assets) for poverty reduction and enforce access to this package; and in the case of resettlement areas, above-average investment in quality and diversification (both supply and production) of existing agricultural produce 	Low

Risk	Risk Level	Mitigation Measure	Residual Risk Level
Lack of enforcement capacity following breach in contract (side selling by producers and lack of respect of contract conditions by buyers)	Medium	IPRAD will provide: <ul style="list-style-type: none"> • Capacity development of cooperative and members on trust building in commercial partnerships • Legal support for contract enforcement by cooperatives 	Low
Lack of capacity to meet market requirement	Medium	Technical knowledge dissemination and TA support provided by IPRAD	Low
Risk that an untransparent Appraisal Committee/ Government interference in the development/ selection of the business plans will impede competition	Medium	<ul style="list-style-type: none"> • SOCAD has long experience of delivering government support to agribusiness and agro-industry development, and has developed a set of procedures to ensure transparency and fair competition, including public disclosure, examination, auditing and grievance processes. The IPRAD will follow the requirement of the project in establishing Appraisal committees while taking advantage of the SOCAD rules and regulations. • Slow sequencing is mainly ensured through a process of reviewing and revising of business plans involving technical and business experts combining local farmer perceptions with outside expertise. The program will make sure that the expert group involves sufficient non-government staff e.g. from the agribusiness community, Bank loan appraising officers, agricultural insurance companies and so on. • It is worth highlighting that the approval committee is not involved in the shaping and design of the BPs. This keeps the risk of Government influence low. 	Low

IV. Program costs, financing, benefits and sustainability

A. Program costs

42. Total programme cost is estimated at US\$183.536 million, including contingencies, but excluding expected resources leveraged from financial institutions (which is estimated to total approximately US\$13 million). Programme costs are organized into three major components: (i) infrastructure development & climate-smart production (36 percent of baseline costs); (ii) pro-poor value chain development (57 percent of baseline costs); and (iii) program management and coordination (7 percent of baseline costs). Investment and recurrent costs amount to 99.5 and 0.5 percent of the programme's total cost respectively.

Table 1
Programme costs by component and financier
 (Thousands of United States dollars)

Component	IFAD loan		IFAD grant		Beneficiaries (cooperatives and enterprises)		Borrower/ counterpart		Total
	Amount	%	Amount	%	Amount	%	Amount	%	Amount
1. Infrastructure development and climate-smart agriculture									
1.1 Infrastructure development	6 775.3	13.5	--	--	--	--	43 318.5	86.5	50 093.8
1.2 Land improvement and climate-smart production	7 256.4	42.8	--	--	--	--	9 710.9	57.2	16 967.3
Subtotal	14 031.7	20.9	--	--	--	--	53 029.4	79.1	67 061.1
2. Pro-poor value chain development									
2.1 Capacity development	9 051.4	99.5	44.9	0.5	--	--	--	--	9 096.4
2.2 Business plan financing	52 321.3	55.5	--	--	22 959.1	24.3	19 076.5	20.2	94 356.9
2.3 Rural finance	908.4	100	--	--	--	--	--	--	908.4
Subtotal	62 281.1	59.7	44.9	--	22 959.1	22.0	19 076.5	18.3	104 361.6
3. Programme management and coordination									
3.1 Programme management	2 674.1	23.8	369.6	3.3	--	--	8 197.6	72.9	11 241.3
3.2 M&E and knowledge management	514.5	59.0	85.5	9.8	--	--	272.0	31.2	872.0
Subtotal	3 188.6	26.3	455.1	3.8	--	--	8 469.6	69.9	12 113.3
Total	79 501.4	43.3	500.0	0.3	22 959.1	12.5	80 575.5	43.9	183 536.0

B. Programme financing

43. **Financing and co-financing.** IFAD will contribute US\$80 million (44 percent of the total cost) to the programme: US\$79.5 million as a loan, and US\$0.5 million as a grant to support and strengthen the coordination functions of the national coordination agency, SOCAD, and particularly its M&E and knowledge management functions. These functions are considered critical to provide SOCAD with the necessary capacity to assess and identify successful approaches and practices that can be replicated nationally through the implementation of national programmes. The government will contribute to the programme in the amount of US\$80.6 million (44 percent of the total cost). Participating cooperatives and enterprises are expected to contribute an estimated amount of approximately US\$22.9 million (12.5 percent of the total cost) as required co-financing for the business plans. Additional resources (estimated at approximately US\$13 million) are expected to be leveraged from financial institutions.

44. **Co-financing ratio.** The ratio of IFAD contribution to Government counterpart funds is 1:1. The ratio of IFAD contribution to total co-financing is estimated to be $\geq 1:1.3$.

45. **Cost per beneficiary.** The estimated programme's cost per beneficiary is approximately US\$911/beneficiary.

Table 2
Programme costs by expenditure category and financier

(Thousands of United States dollars)

Expenditure Category	Borrower/ Counterpart		IFAD loan		IFAD grant		Beneficiaries (Cooperatives and enterprises)		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Equipment and Materials	680.0	10.9	5,576.9	89.1	-	-	-	-	6,256.9	3.4
Goods, Services and Inputs /a	24,875.8	100.0	-	-	-	-	-	-	24,875.8	13.6
Consultancies /b	935.4	5.6	15,307.3	91.4	500.0	3.0	-	-	16,742.7	9.1
Goods, Services and Inputs /c	0.0	-	16,047.0	52.1	-	-	14,724.1	47.9	30,771.1	16.8
Operating costs	886.2	100.0	-	-	-	-	-	-	886.2	0.5
Works /d	51,514.0	100.0	-	-	-	-	-	-	51,514.0	28.1
Works /e	1,684.1	3.2	42,570.1	81.1	-	-	8,235.0	15.7	52,489.3	28.6
	80,575.5	43.9	79,501.4	43.3	500.0	0.3	22,959.1	12.5	183,536.0	100.0

a Goods, services and inputs-a include works, goods, materials, and services, financed and directly procured by the government.

b include TA, training, and workshops. c Goods, services and inputs-b include eligible expenditures related to support business plan proposals under subcomponent 2.2 (business plan financing), excluding civil works.

d Civil works financed by government

e Civil works financed by IFAD.

C. Summary benefits and economic analysis

108. 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 increased income.

109. In line with the implementation arrangement and loan agreement, the Financial and economic analysis of the program are conducted separately by provinces and presented in supporting documents. The result of the financial analysis in Sichuan and Ningxia are summarised in the table below¹⁸.

Table 4: Summary of financial analysis at household level for Ningxia

作物(Crop) (mu)	平均面积(Avg size) (mu)	净收入(Net income) (RMB/Yr)	净收益(Net income) (RMB/Yr)	FIRR
玉米(Maize)	3.00	102	1,039	NA
小麦(Wheat)	3.00	129	598	NA
马铃薯(Potato)	3.00	155	506	NA
牧草(Forage grass)	5.00	NA	629	20%
枸杞(Lycium chinense)	3.00	129	217	16%
黄花菜(Daylily)	3.00	129	635	17%

¹⁸ The "new" mentioned in the without project column refers to the program interventions that are new production activities developed from barren or un-utilised land. Under that same column, the "negative net income" reflects farmers' labor (either wage labour or family labor) that has been accounted for as production costs.

Table 5: Summary of financial analysis for Sichuan

Crop (mu)	Avg size (mu)	With out project	With project (full development)	
		Net income (CYN/Yr)	Net income (CYN/Yr)	FIRR
Rice	2.0	436	608	NR
Maize	2.0	564	614	NR
Vegetables	2.0	435.6	2240	NR
Orange	1.5	423	966	18%
Tea tree	1.5	423	463	29%
Mulberry	1.5	423	506	26%
Kiwi	1.5	423	1376	22%

110. Programme benefits have been estimated over a period of 20 years using a discount rate of 6 percent. The results of the economic analysis suggest that the programme is viable with an economic internal rate of return (EIRR) of 17 percent in Sichuan, with a net present value (NPV) of US\$60 million, and of 16 percent in Ningxia, with a NPV of US\$13.8 million, using an opportunity cost of capital of 6 percent. The results of the sensitivity analysis suggest that the programme is relatively robust to output price decreases, input cost increases, and implementation delays.

D. Sustainability

111. Sustainability of the program can be rated high, attributing to three key factors: (i) the existence of the highly visible poverty reduction policy, in which the programme is fully embedded; (ii) the fact that the program focuses strongly in improving the sustainability of poverty reduction interventions through value chain development; and (iii) the programmatic approach whereby interventions are multi-province and are implemented by a central institution such as SOCAD within MOF which will ensure a significant scaling up potential.

112. **Institutional sustainability:** Implementation of the program 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 program-related activities in the program area. The capacity development of small producer cooperatives represents a strong institutional sustainability element and at the same time a major implementation challenge. A significant effort will be placed in building this social capital in the program area and the success of this effort will influence the positive outcomes and impact of the program.

113. **Technical sustainability:** Staff of the program-involved technical service agencies at all levels will receive regular training on updated technology and knowledge with the project support and other governmental projects. Sustainable technical services to the project beneficiaries will be foreseeable since they are part of the duty and mandate of those agencies. The close collaboration between PMOs and technical agencies in programme implementation will further strengthen the sustainable technical services to the project beneficiaries. Strengthened market linkage between upstream small producers and enterprises established by the programme will also provide a good basis for sustainable technical services.

114. **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 program beneficiaries during the programme implementation will offer trainings on environment-friendly practices, which will also contribute to the improvement of environment.

Appendix 1: Country and rural context background

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 reform¹⁹, a gradual market liberalization, and the opening-up to international trade and foreign investments, among other reforms²⁰. 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\$7,590 in 2014. 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 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 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 2014 was 1,368 million, an increase of about 14.00 million over 2012. The rural population was 617 million, about 45% of the total population, a decrease of 8% over 2010. The annual population growth rate was 0.49%. Migrant population was 236 million.

4. **China's remarkable progress in poverty reduction²¹ and human development²².** Thanks to the economic reforms, as well as to the implementation of extensive national poverty reduction programs, China has made remarkable progress in reducing poverty, hunger²³ and inequality²⁴ over

¹⁹ **China' second land reform.** China' 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.

²⁰ **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*.

²¹ **China's progress towards meeting the Millennium Development Goals (MDGs).** 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.

²² **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 2015, with the current value of 0.727 in the Human Development Index (HDI), China ranked 90th out of 188 countries in 2015, and since 2014 is within the High Human Development Countries category. This value represents a 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.

²³ **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

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 line²⁵, 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 areas²⁶ has been accompanied by broad-based improvements in nutritional status¹⁰, longevity and other health indicators, and educational attainment of its people.

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 favored this process include investments in water infrastructures, particularly irrigation; market liberalization, which favored 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 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 labor which facilitated China's overall industrialization process, and generated demand for the intermediate products of manufacturing in the rest of economy. These labor 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 labor from agriculture production, further promoting land circulation and consolidation and,

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).

²⁴ **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.

²⁵ Based on **international poverty line** of US\$1.90 per day expressed in 2011 purchasing power parity (PPP).

²⁶ **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.

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.

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.

Appendix 2: Poverty, targeting and gender

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

Year	Number of Rural Poor (million)	Annual Reduction (million)	Total Population (million)	Poverty Rate** (%)
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).²⁷ Zhang reports that 72% of the poor resided in China's nationally designated 148,000 poor villages in 2005.²⁸ 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."²⁹

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 59.4% in 1981 to just 0.4% by 2012, and it is widely believed that the comprehensive social security

²⁷ See pages 13 and 59 of NBS' *2011 Poverty Monitoring Report of Rural China* (Beijing: China Statistics Press, 2012).

²⁸ See Zhang Lei, *The Evolution of Poverty Reduction Policies in China 1949–2005* (Beijing: China Financial and Economic Publishing House, 2007).

²⁹ 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).

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).³⁰ 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.³¹

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 often 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 are 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

³⁰ See Arthar Hussain, *Urban Poverty in China: Measurement, Patterns and Policies* (SES Papers 34. Geneva, Switzerland: International Labour Office, 2003).

³¹ 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.³²

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-2017.³³

³² 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.

³³ 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*). 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 Sichuan, for example, some 5 counties are scheduled to eliminate poverty in 2016, and all 88 of the province's 88 nationally designated poor counties are to overcome poverty by 2019.

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.”

17. 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

18. 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.”

19. **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.³⁴ 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.³⁵ For example, using data from the 2002 China Household Income Project, Bjorn Gustafsson and Ding Sai conclude that the main

³⁴ 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).

³⁵ Wang Sangui, et al. *Trend, Causes and Strategies to Minority Poverty* (Guizhou Social Science. Vol 276, No. 12, December 2012. 85-90).

causes of rural ethnic minorities' greater incidence of poverty are spatial.³⁶ 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,³⁷ 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).³⁸

20. **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.

21. **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.³⁹ The 2016 Poverty White Paper notes that the 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.

22. **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

³⁶ 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).

³⁷ 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).

³⁸ 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).

³⁹ 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).

status than other rural children. 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 Sichuan and Ningxia

22. Plans for poverty reduction work at the provincial and county levels in Sichuan and Ningxia closely follow the guidance of the 2011 Outline, new Five-in-One-Batch approach, and national poverty reduction program under the Thirteenth FYP. In particular, agribusiness enterprise development (*chanye fupin*) plays the lead role in both Sichuan and Ningxia’s poverty reduction programs through 2020. Sichuan, for example, plans to lift a total of 1.05 million poor above the poverty line in 2017 and, of these, some 551,900 (or about 53% of the total) would be assisted through agribusiness enterprise development schemes. Similarly, Ningxia’s Thirteenth FYP calls for lifting some 300,000 (or nearly 52%) of the remaining 582,000 rural poor out of poverty through the agribusiness enterprise development approach by 2020. The IPRA D Program’s primary focus on rural poverty reduction through specialized agribusiness development therefore exactly matches the main thrust of Sichuan and Ningxia’s Thirteenth FYP for rural poverty reduction.

23. Sichuan’s Thirteenth FYP calls for completely overcoming rural poverty and for all designated poor villages and counties to graduate from the poverty lists (that is, to “lose their poverty hats”) by end-2019:

Table 3: Sichuan’s Annual Plans to Overcome Rural Poverty by 2019

Number to Overcome Poverty:	2016	2017	2018	2019	2020	Total
People (million)	1.057	1.050	1.000	0.696	0	3.803
Villages	2350	3700	3500	1951	0	11501
Counties	5	16	37	30	0	88

Source: Sichuan’s Thirteenth FYP for Rural Poverty Reduction.

In 2017, some 1.05 million of Sichuan’s poor are planned to escape poverty through agribusiness enterprise development (551,900 poor, or 53%), voluntary resettlement (256,153 poor, or 24%), assistance with health care expenses (342,072 poor, or 33%), minimum rural income guarantee payments (315,183 poor, or 30%), and natural disaster relief (7,606 poor, or 1%). Many of these poor will receive more than one form of assistance.

24. Similar poverty reduction plans are observed in the Program area counties in Sichuan. Xuanhan 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. As of end-2015, Xuanhan County had some

179,000 registered poor (more than any other county in Sichuan) in 211 poor villages. Of these, some 14,866 (or 8.3% of the total) were poor due to dilapidated housing conditions, 39,722 (22.2%) were due to inconvenient transport, 62,178 (34.7%) were due to weak production capacity, 47,818 (26.7%) were due to illness or health problems, 1,416 (0.8%) were due to natural disasters, and 13,000 (7.3%) were due to the burden of high educational expenses. The major planned solutions to poverty in Xuanhan County include production (62,178 poor, or 34.7%), voluntary resettlement (14,866 poor, or 8.3%), health subsidies (26,388 poor, or 14.7%), welfare allowances (21,430 poor, or 12.0%), disaster relief (1416 poor, or 0.8%), support for educational expenses (13,000 poor, or 7.3%), and tourism development (39,722 poor, or 22.2%). Xuanhan County plans to completely eradicate poverty by 2020 with all 211 poor villages and the County itself graduating from the nationally designated poverty lists.

25. Each of the nationally registered poor in Xuanhan County in Sichuan 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 2016-2020, 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 Xuanhan County 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.

26. In Ningxia, the Regional government's Thirteenth FYP for rural poverty reduction has established a plan to eliminate poverty by 2018 for the remaining 582,000 poor, and for all nine poor counties (out of 22 counties) and all 800 poor villages to fully graduate from the list of nationally designated poor counties and villages:

Table 4: Ningxia's Annual Plans to Overcome Rural Poverty by 2018

Number to Overcome	2016	2017	2018	2019	Total
Poverty:					
People (million)	0.193	0.193	0.194	0	0.580
Villages	249	300	251	0	800

Source: Ningxia's Thirteenth FYP for Rural Poverty Reduction.

This will be achieved through agro-industry development (300,000 poor), voluntarily resettlement (82,000 poor), education support (40,000 poor), ecological restoration subsidies (40,000 poor), and social protection (150,000 poor). Given the limited natural resource base, especially in the southern and middle parts of Ningxia, voluntarily resettlement (within and across counties) and subsidies for ecological restoration are considered to be effective measures to reduce poverty in Ningxia. During the Twelfth FYP (2011-2015), about 320,000 poor people were resettled on a voluntary basis for poverty reduction. However, about 60% of these voluntary settlers remain below the poverty line and, of these, some 60% are ethnic minority people.

Returning to Poverty

27. **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 Sichuan and Ningxia, the Appraisal 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. In Sichuan, the Program counties stated that, on an annual basis, less than 3% 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 and the return of illness. Those returning to poverty are returned to the NPRS list of registered poor and in most or all cases are supported through some form of rural welfare support (*nongcun doudi*). Ningxia reported that, on an annual basis, less than 5% of those individuals who have exited poverty subsequently return to poverty, and that these poor are also returned to the NPRS list of registered poor. The duration of continuing support for those returning to poverty does not appear to be exactly reported in the State Council statements, but the Sichuan county staff believed that such support would continue for a period of six years from 2020 or from the year of exiting poverty.

PROJECT TARGETING

Targeting Strategy

29. Consistent with the 2016-2020 COSOP, the IPRAD Program targets economically active rural poor in Sichuan and Ningxia within selected poor counties, townships, and villages. The targeting strategy also (a) seeks to include representative numbers of poor women and ethnic minority people, and (b) complies with SOCAD's focus on rural areas with sufficient potential for increased agricultural production. Overall, the targeting strategy seeks to reach poor communities with good potential for agribusiness development.

30. At the provincial level, Sichuan and Ningxia are located in western China and are priority areas of the Chinese government's poverty reduction program. Consistent with its large population and 5.8% poverty rate in 2015, Sichuan has the sixth greatest number of poor in the country. Ningxia, by comparison, had a significantly higher poverty rate of 8.7% in 2015 (but a much smaller total population than Sichuan), and is well known for its extreme depth of poverty particularly among the Hui (Muslim) ethnic minority people in the Xihai Region (in the south of Ningxia).

31. At the county level, the IPRAD Program comprises mostly nationally designated poor counties within the Qinba Mountains and Liupanshui Mountains poverty blocks. In Sichuan, four of the five Program area counties are nationally designated poor counties (only Yibin is not a nationally designated poor county, but was proposed because of its large population and thus substantial absolute number of poor people). In Ningxia, two of the five Program area counties are nationally designated poor counties (and the remaining three Program counties include pockets of concentrated poverty). As summarized in Table 5, the 2015 county-based poverty rate (the number of nationally registered poor in 2015 as a share of the county total population) ranged from 1.0% to 13.6% in Sichuan and from 1.5% to 23.9% in Ningxia. Ethnic minority peoples comprise 1.9% and 31.6% of the total population in the Sichuan and Ningxia Program counties respectively, and include a concentration of Tujia people in Xuanhan County in Sichuan and Hui people throughout the Ningxia Program counties.

32. Within the 10 Program counties, the Program area comprises 43 of the total 256 townships, some 121 of the total 3,766 administrative villages, and 71 of the total of 1,053 designated poor villages. As shown in Table 5, this selection of Program area townships and villages has in most cases resulted in much greater concentrations of Program area poor and ethnic minority people (only in Hongsipu County in Ningxia is the poverty rate in the Program area somewhat less than the County-wide average poverty rate). Overall, the poverty rates of 15.9% and 22.7% in the Program areas in Sichuan and Ningxia respectively are about three times greater than the provincial average poverty rates and much greater than the 2015 national poverty rate of 4.1%. Similarly, ethnic minority people comprise 15.5% and 40.1% of the Program area populations in Sichuan and Ningxia respectively, or much more than ethnic minority peoples' shares (1.9% and 31.6% respectively) of the total population of the Sichuan and Ningxia Program counties.

Table 5: IPRAD Program Area Demographics and Poverty (2015/16)

Program	Population		Registered Poor		Poverty Rate (%)		Women		Ethnic Minorities	
	Total	Program Area	Total	Program Area	Total	Program Area	Total	Program Area	Total	Program Area
	Total	6660231	198847	620822	38762	9.3	19.5	3266299	90025	662325
Sichuan										
Total	4858189	92643	403986	14703	8.3	15.9	2381312	42528	93681	14392
Guangan	897738	12267	8885	2018	1.0	16.5	430649	5648	2300	8
Xuanhan	1319027	29117	179360	6052	13.6	20.8	621790	12884	69723	14348
Yibin	903200	22031	59472	2434	6.6	11.0	442116	10427	3830	27
Cangxi	649121	15541	76000	2596	11.7	16.7	377928	7176	1491	0
Yilong	1089103	13687	80269	1603	7.4	11.7	508829	6393	16337	9
Ningxia										
Total	1802042	106204	216836	24059	12.0	22.7	884987	47497	568644	42609
Pengyang	251873	23081	43584	4230	17.3	18.3	121349	11120	76698	3000
Yuanzhou	455620	51954	106210	12029	23.3	23.2	224544	21833	221244	21770
Wuzhong	172031	7220	8880	1594	5.2	22.1	84295	3624	96337	4990
Hongsipu	197350	13578	47232	2573	23.9	18.9	94452	6253	12362	4231
Xingqing	725168	10371	10930	3633	1.5	35.0	360347	4667	162003	8618

Source: Ningxia and Sichuan Implementation Plan documents (May, 2017).

Program Area and Target Groups

33. The Program would assist an expected 198,847 primary beneficiaries (individuals), including 92,643 in Sichuan and 106,204 in Ningxia. Women would comprise 45.3% of these primary beneficiaries, and ethnic minority people would comprise 28.7%. Overall, the Program would benefit some 38,762 nationally registered poor, or 19.5% of the Program area total population.

34. In both Sichuan and Ningxia, the Program would benefit 100% of the population in all Program area administrative villages. Many of the Program's investments in village access roads, drinking water systems, and other public investments would necessarily benefit all members of the Program villages. However, it should be recognized that the Program does not specifically target (a) those individuals who are poor because they lack labour power, or (b) remote communities with extremely limited natural resources. Such individuals and communities are supported by other well-funded government interventions including the rural social assistance program and through the voluntary resettlement for poverty reduction program.

35. **Program Area Revisions.** The Program targeting strategy has yielded a Program area comprising a relatively high concentration of nationally NPRS registered poor and ethnic minority people within communities with good potential for agribusiness development. Since the September, 2016 Detailed Design Mission, the Program areas in Ningxia and Sichuan were adjusted according to the principles agreed upon by IFAD, SOCAD and the Program provinces. Most importantly, the Appraisal Mission confirmed that all post-2012 environmental resettlement communities and households were excluded from the Program areas. In Ningxia, this adjustment led to (a) the removal of Zhongning County, (b) significant revisions of the Program villages within Hongsipu, Wuzhong, and Xingqing counties/districts, and (c) the expansion of the number of poor villages and households in Pengyang and Yuanzhou counties/districts. In Sichuan, there were modest changes to the Program areas in four of the five Program counties/districts (there was no change in Cangxi): in Xuanhan, the villages in an environmental protection zone were dropped; in Guangan, the Program area was revised to increase the ratio of registered poor; in Yibin, the original Program area was revised to consolidate Program activities within a reduced number of townships and villages; and in Yilong, the number of Program townships was reduced from 7 to 5.

36. The Program area has been basically finalized and all targeting issues have been resolved. The Appraisal mission observed that there are no longer any remaining NPRS registered poor in two

villages (namely, Shijiayao and Wujiagou) in Wuzhong in Ningxia. Ningxia POCAD staff explained that all the NPRS registered poor in these two villages had lifted themselves out of poverty by end-2016, and agreed to replace these two villages with other villages with an appropriate share of NPRS registered poor.

37. **Program Poverty Coverage.** The Appraisal Mission had detailed discussions with provincial and county/district Program staff regarding the expected coverage rates for Program area NPRS registered poor. The provincial and county/district Program staff were confident that 100% of the Program area NPRS registered poor would benefit from the Program's support for a variety of basic rural public infrastructure including roads, drinking water systems, and other investments through Component 1. For example, Xuanhan County has carefully estimated the number of NPRS registered poor and the number of ethnic minority people in each Program area village that would benefit from each Program-supported investment in basic rural public infrastructure.

38. It was less clear what poverty coverage rates could be expected from the Program's investments in farmer cooperatives, pilot agribusiness enterprises, and other investments through Component 2. In Ningxia, the Appraisal Mission estimated that perhaps some 30% of the Program area NPRS registered poor in Pengyang County would directly participate in, and benefit from, the 9 cooperatives to be supported by the Program. In Sichuan, however, the provincial and county/district Program staff believed that all or nearly all of the Program area NPRS registered poor would directly benefit from the Program supported cooperatives, pilot enterprises, and other Component 2 investments. The four key channels for the direct benefits to the Program area NPRS registered poor would be income from: (a) land rental to the cooperative; (b) wages from fixed or short term work on cooperative or pilot enterprise production and agroprocessing activities; (c) profit sharing on the basis of members' volumes of joint marketed output; and (d) dividends based on cooperative shareholding arrangements. The Appraisal Mission's visit to Mashanyu Village in Yilong County confirmed that 100% of Village households (that is, all 299 households including the remaining 9 NPRS registered poor households) would directly benefit from the proposed citrus production cooperative through at least two of these income channels.

39. In order to organize and better record the Program's poverty reduction impact, it was agreed that the business plans for each cooperative and pilot enterprise would specify and record the number of Program area NPRS registered poor households and individuals that would directly benefit from Component 2 investments. This listing would include and specify the number of directly benefitting NPRS registered poor through land rental income, wages from fixed and short term work, profit sharing from joint marketed output, and shareholding profit sharing. The number of Program area people who might benefit through "daidong" (brought along) arrangements could also be estimated and reported, but would not be included in the business plan numbers of NPRS registered poor that would directly benefit from Program cooperatives and enterprises. It was agreed that an important objective of the Program would be to directly benefit at least 30% of the NPRS registered poor in each of the Program area villages' through Program Component 2 supported cooperatives and pilot enterprises.

40. **Resettlement.** In accordance with IFAD safeguards policies, program interventions cannot take place in villages where a resettlement process is ongoing. Consequently, the list of target villages in Ningxia was revised to exclude villages that were involved in the Ecological Resettlement Program activities initiated in 2012 under the 12th Five Year Plan. While the Program cannot include any post-2012 resettlement communities, it does target a number of pre-2012 resettlement communities in the Ningxia Program area. While Ningxia's pre-2012 poverty reduction through voluntary resettlement programs have greatly improved the well-being of the upland poor from South Ningxia and substantially reduced their poverty rates, some of the pre-2012 settler communities still have poverty rates exceeding Ningxia's overall poverty rate.⁴⁰ The IP RAD Program components are perfectly suited to improving the productivity and income levels of these settler communities

⁴⁰ See IP RAD Working Paper: Resettlement in Ningxia.

41. **Targeting in Xuanhan County.** Similar to the ratios for the overall IPRAD Program, the Xuanhan County (in Sichuan) Program area comprises 10 of the County's 54 townships and 16 of the County's 480 villages. As shown in Appendix 3, the Program area in Xuanhan comprises the Northeast and Southern blocks. Each block comprises five townships, and the Northeast block includes all four of the County's Tujia ethnic minority townships. As shown in Appendix 4, all 10 of the Program area townships in Xuanhan County have poverty rates which exceed the County average. The result of this exemplary selection process establishes two Program area blocks with a concentration of poor and ethnic minority people. The Program area villages have a poverty rate of 23% and ethnic minority people comprise 48.8% of the Program area villages' total population, or considerably more than the County-wide poverty rate of 13.6% and ethnic minority peoples' share of total population of 5.3%.

42. **The demographics, poverty numbers and rates, per capita income, and per capita grain production figures for each of the Xuanhan Program area's 16 villages are presented in Table 6 below.** Most importantly, these figures indicate a wide disparity in poverty rates between the Program area villages in Xuanhan. In particular, Qinjia and Lishi villages have poverty rates of 88.5% and 80.3% respectively. These rates are far greater than any of the other villages and of the Program area as a whole, and this disparity dramatically evidences the need to ensure that all Program area villages receive adequate shares of IPRAD Program investment and support during implementation.

Table 6: Xuanhan County Program Villages Key Statistics

Village	Population		Poverty Rate (%)	Per Capita Income (yuan)	Per Capita Grain Production (kg/year)
	Total	Poor			
Huali	2648	605	22.8	2667	400
Gaotai	4012	701	17.5	2741	410
Jiaoling	1573	405	25.7	3206	420
Pingxi	1281	265	20.7	4569	450
Huanglian	499	143	28.7	4870	455
Qinjia	390	345	88.5	2250	389
Lishi	697	560	80.3	3550	396
Zhaoyang	878	227	25.9	4867	352
Songlin	1150	292	25.4	4600	363
Yueliang	1264	343	27.1	2439	405
Longdong	1588	391	24.6	2528	416
Zhongshi	2525	300	11.9	3389	453
Junba	2369	394	16.6	5342	356
Niubei	2836	637	22.5	4288	438
Nanya	816	199	24.4	2335	436
Chazi	2120	325	15.3	6945	658
Total	26646	6132	23.0	3805	431

Source: Provincial PMO.

Note: The Xuanhan Programme area's 10 townships include a total of 80 villages.

43. Program area maps as well as county and village demographics, poverty numbers and rates, per capita income, and per capita grain production figures are available in the II PRAD Program files for all five of the Sichuan Program counties. Maps and data tables for the Ningxia Program counties will also be added to the IPRAD Program files now that the Program area in Ningxia has been finalized.

GENDER MAINSTREAMING

44. **Gender and Poverty in China.** As of end-2015, women comprised about half of the 56 million rural poor population in China.⁴¹ 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 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.⁴² The development of the Accurate Poverty Targeting policy (see paragraph 11 above) required targeting of poor households, but women's poverty is hidden below the household targeting unit within the relations within the household.⁴³ 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.⁴⁴ 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.

45. **Gender Analysis of the Program Area.** There was a total of 3.27 million females in all ten project counties in 2015/16 and, of these, some 73% were in Sichuan. Within the Program area, there were a total of 90,025 females and, of these, about 53% resided in the Ningxia Program area. According to data collected by the COCADs and summarized in Table 7 below, female laborers in the Program counties comprised 45% of the counties' laborer population in Sichuan and 47% in Ningxia, and the figures were slightly lower in the Program area villages. However, the average education level of female laborers was obviously lower than that of male laborers. In the Program counties of both provinces, female laborers comprised less than 30% of all laborers with high school education and above, but they comprised close to 60% of those laborers with middle school education and below.

⁴¹ 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. P5-8

⁴² 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

⁴³ 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. P81-84

⁴⁴ A.J. Wang. Rural Poverty Measurements from a Social Gender Perspective. Journal of Wuhan University of Technology (Social Science Edition), 2013, 26(5).

Table 7: Female Laborers and Education Levels (2016)

	% of Female Laborers		% of Female among Laborers with High School Education and Above		% of Female among Laborers with Middle School Education and Below	
	Program Counties	Program Area	Program Counties	Program Area	Program Counties	Program Area
Sichuan						
Total	45	43	29	23	58	24
Cangxi	42	46	10	10	20	33
Xuanhan	40	44	30	30	47	9
Guangan	60	45	48	32	NA	45
Yibin	49	38	49	26	49	27
Yilong	42	45	NA	5	49	11
Ningxia						
Total	47	42	25	32	59	37
Pengyang	40	40	40	35	40	42
Yuanzhou	55	39	31	27	67	35
Wuzhong	49	51	32	39	53	53
Hongsipu	43	45	12	23	81	27
Xingqing	49	49	40	40	35	35

45. **Women and Poverty.** According to the Ningxia Women's Federation, women accounted for 46% of the 382,000 poor in the Autonomous Region in 2016. In comparison with poor men, poor women have higher illiteracy rates and lower level of vocational skills. As shown in Table 8 below, in the Program counties and Program villages, the figure was slightly higher, and women comprised the majority of the poor population and poor laborers.

Table 8: Women and Poverty in the Program Area (2016)

	% of women among poor population		% of women among poor laborers	
	Program Counties	Program Area	Program Counties	Program Area
Sichuan				
Total	NA	NA	NA	NA
Cangxi	61	62	29	49
Xuanhan	NA	NA	NA	NA
Guangan	NA	NA	NA	NA
Yibin	46	46	44	44
Yilong	NA	NA	NA	NA
Ningxia				
Total	48	50	47	47
Pengyang	43	43	49	42
Yuanzhou	55	61	47	51
Wuzhong	49	52	52	52
Hongsipu	42	50	51	45
Xingqing	20	20	20	20

46. **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). In Ningxia, the objective was set as 30% of women's membership in Village Committees, and 10% of women among village heads. However, as shown in Table 9 below, the limited data from project counties indicate a less optimistic situation. Due to the significant male labor migration rate, women got some space to join the community decision under men's absence. According to women in Yunwuzhai Village in Yilong County, they were involved in the community meeting during the husband was absent for urban labor work, and excluded when the husband was in home especially during Chinese New Year. At household level, very few women were registered as household head.

Table 9: Female Decision Maker of Community and Household (2016)

	% of Women among Village Heads		% of Female Household Heads	
	Program Counties	Program Area	Program Counties	Program Area
Sichuan				
Total	NA	NA	NA	NA
Cangxi	10	28	4	10
Xuanhan	NA	NA	NA	NA
Guangan	NA	NA	NA	NA
Yibin	13	17	1	2
Yilong	NA	NA	NA	NA
Ningxia				
Total	2.1	4.0	3.3	2.6
Pengyang	NA	NA	0.7	0.6
Yuanzhou	1.3	4.5	1.1	1.4
Wuzhong	7.2	NA	18.0	8.2
Hongsipu	NA	NA	15.5	5.2
Xingqing	4.8	14.3	0.2	6.3

47. **Labor Migration.** Working in the non-agriculture sectors in urban areas is an important means to increase farmers' incomes and to reduce poverty. However, in most cases, males of poor families are the ones to migrate to the urban areas to work, while the female remains 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 Program area are similar to those of other poor areas of China. More than half of the Program area rural households had laborers migrating out in all five counties in Sichuan and in two counties in Ningxia, and more than half of the rural laborers migrated to urban areas. However, Table 10 shows that women only took a small share of labor migration out of the Program area in both provinces. Therefore, the majority of female laborers have stayed in the agricultural sector in the Program area villages, and this is consistent with the Cangxi Women's Federation report that women comprise some 70% of the total labor force in the agricultural production in that County.

Table 10: Labor migration situation (2016)

	% of Households with Migrating Laborers		% of Migrating Laborers among Total Laborers		% of Females among Migrating Laborers	
	Program Counties	Program Area	Program Counties	Program Area	Program Counties	Program Area
Sichuan						
Total	60	48	63	59	NA	NA
Cangxi	73	35	60	48	7	10
Xuanhan	50	53	49	62	NA	NA
Guangan	56	44	69	50	NA	NA
Yibin	50	35	74	57	25	35
Yilong	73	75	74	79	NA	NA
Ningxia						
Total	27	48	54	56	16	12
Pengyang	48	47	47	41	3	3
Yuanzhou	34	57	54	50	6	5
Wuzhong	65	64	NA	NA	32	45
Hongsipu	66	0.4	27	17	19	17
Xingqing	3	53	39	NA	7	7

48. **Womens' Workload.** Male labor migration greatly increases women's workloads in the village since women remaining in their rural homes have to take on a great deal of household work and agricultural activities. With excessive workloads, lack of recreational opportunities, and limited public services, those women remaining in the villages are vulnerable to health problems which can push them deeper into poverty. In Yunwuzhai Village of Yilong County, for example, women had to take on all the agricultural activities including plantation of paddy rice, maize and sweet potato, and raising pigs and chicken, which used to be shared by male laborers. Without enough male laborers, women's workload greatly increased. In many cases it has become necessary to hire laborers for ploughing and harvesting, and the increased costs of hired labor has resulted in a loss of profitability in crop production. Meanwhile, inconvenient irrigation systems and road conditions often further increased women's heavy workload for channeling water and transporting farm inputs and products.

49. **Access to Technology.** Although comprising the majority of agricultural laborers remaining in the village, rural women represent less than half of those taking advantage of technical training in the Ningxia Program counties and in two Program counties in Sichuan. As shown in Table 11, in the Program villages, less than 40% of women participated in technical training in 2016. Women also do not represent an appropriate share of the technical extension system staff at the township and village levels. Technicians are close to the farmers at this level, yet less than one quarter of local level technicians are women. This hampers access for rural women to technical support, especially for Hui women in Ningxia.

Table 11: Women's Access to Technology (2016)

	% of Female Employees in Technical Institutes	% of Female Technicians		% of Female Farmer Technicians		% of Women in Technical Training	
		Program Counties	Townships in program counties	Program Counties	Program Area	Program Counties	Program Area
Sichuan							
Total	NA	NA	NA	NA	NA	NA	NA
Cangxi	20	33	16	11	15	33	37
Xuanhan	NA	NA	25	25	25	NA	NA
Guangan	NA	NA	NA	NA	NA	NA	NA
Yibin	15	17	16	6	13	33	30
Yilong	NA	NA	NA	NA	NA	NA	NA
Ningxia							
Total	33	39	24	26	25	42	37
Pengyang	24	31	17	25	25	20	20
Yuanzhou	25	33	22	NA	NA	65	65
Wuzhong	42	51	46	39	23	52	52
Hongsipu	26	31	22	NA	NA	38	40
Xingqing	53	63	32	24	25	35	35

50. **Access to Credit.** It is generally very difficult for farmers in the Program area to access credit, and the situation is even worse for women who are mostly without the title of household head. A survey conducted by the Yilong Women's Federation revealed that 80% of the interviewed women considered capital as the greatest obstacle to initiating their business activities. As shown in Table 12 below, among the limited numbers of borrowers, women account for only a very small share of those receiving credit, especially in the Ningxia Program area. However, the situation appears to be better in the Sichuan Program area.

Table 12: Women's Access to Credit in Program Counties (2016)

	% of Female Credit Receivers from Agricultural Bank	% of Female Credit Receivers from Postal Savings Bank	% of Female Credit Receivers from Rural Credit Cooperative
Sichuan			
Total	37	9	23
Cangxi	6	NA	NA
Xuanhan	56	22	23
Guangan	NA	NA	23
Yibin	NA	NA	NA
Yilong	19	2	NA
Ningxia			
Total	3	13	4
Pengyang	1	1	1
Yuanzhou	NA	NA	NA
Wuzhong	2	37	15
Hongsipu	30	37	3
Xingqing	NA	NA	2

51. **Access to Product Markets.** According to an interview of rural women in Yunwuzhai Village, although women are the primary laborers in agricultural production, they: have less power in the product markets; normally wait for the broker to come to buy their products; and without enough market information, have a weak bargaining position in the trading process. Although they comprise the majority of agricultural laborers, women have a lesser chance of participating in farmers' cooperatives primarily because the male household head is most typically registered as the member. The data in Table 13 below show that women comprised less than 20% and 10% of the cooperative membership in the Sichuan and Ningxia Program areas respectively. However, according to the Sichuan Women's Federation, woman-led cooperatives account for 15% of the total in the province. In addition, the data also show that there are woman-led cooperatives in nine of the ten Program counties, which suggests the possibility of promoting women's participation in the Program's cooperative development. However, according to the Yilong Women's Federation, external measures of awareness building and credit provision will be required to achieve greater effectiveness.

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

	% of Women-led Cooperatives among All		% of Women's Membership in Cooperatives	
	Program Counties	Program Area	Program Counties	Program Area
Sichuan				
Total	12	17	13	20
Cangxi	15	67	12	37
Xuanhan	9	NA	11	19
Guangan	10	25	10	11
Yibin	18	8	10	14
Yilong	8	17	29	30
Ningxia				
Total	8	7	10	8
Pengyang	14	13	6	9
Yuanzhou	NA	3	9	8
Wuzhong	14	NA	27	NA
Hongsipu	7	NA	1	NA
Xingqing	11	11	0.5	7

52. **Gender Mainstreaming Strategy.** Gender mainstreaming strategy is to strength women's economic power by Program activities, and to promote women's participation and benefits in the Program design, implementation and management, so that women's economic and social status can be improved, and gender awareness of Program participants can be built. With improvement of economic empowerment by the Program activities, women will be more actively involved in production and marketing activities, which will improve their status in the household. Women's participation in Program activities will be ensured by applying gender-sensitive M&E. Development of measurable M&E indicators will ensure that women's participation in Program activities will be closely monitored. In addition, some additional gender disaggregated information will be collected through the baseline survey.

53. **Women's Participation in the Program Components.** With the existing experience of woman-led cooperatives in the most of the Program counties, it is expected that at least one woman-led cooperative will be developed in each Program county. Based on the present situation of women's cooperative membership, it is expected that the figure will increase to 30% for Program

supported cooperatives, and that a woman should be involved in the cooperative leadership board. To improve women's technical capacity, at least 40% (in Ningxia) and 50% (in Sichuan) of Program opportunities for technical training will be provided to rural women. For achieving these objectives, a greater number of female technicians will be required to be engaged in Program activities.

54. **Gender Awareness Building.** Gender awareness building is the base for increasing gender sensitivity and reducing gender conflict in the Program. A gender perspective will be integrated into the training for the PMO staff at all levels at the start of the Program.

MONITORING AND EVALUATION

55. **M&E.** In line with the strategies of gender mainstreaming and targeting of the Program, related M&E indicators will be developed before Program 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 Program components/activities by gender;
- Participants in different sector of trainings by gender;
- Participants in different Program components/activities by household category;
- Participants in different sector of trainings by household category;
- Participants in different Program 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 Program-supported farmer cooperatives against overall;
- Membership by household category in Program-supported farmer cooperatives.

56. The Program M&E system will take full advantage of the NPRS data on the poor in the Program area. These data are updated annually, and it will therefore be possible to carefully determine the changes in the number of poor in the Program 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 Program area poor during implementation. It should also be possible to examine the questions regarding the location and other characteristics of the poor throughout Ningxia and Sichuan (see paragraph 3 above).

Attachment 1. Targeting checklist for Program 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 Sichuan and Ningxia 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 Program 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 programmes, geographic areas (and within these, communities) with high concentrations of poor people	The Program 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 Program would be to directly benefit at least 30% of the NPRS registered poor in each of the Program area villages' through Program Component 2 supported cooperatives and pilot enterprises.
4.3 Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups	The Program 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, organisational 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 Program is to empower women, the poor, and ethnic minority people in agricultural and value chain development. Their full participation is designed in all the Program activities and leadership development through the Program implementation.

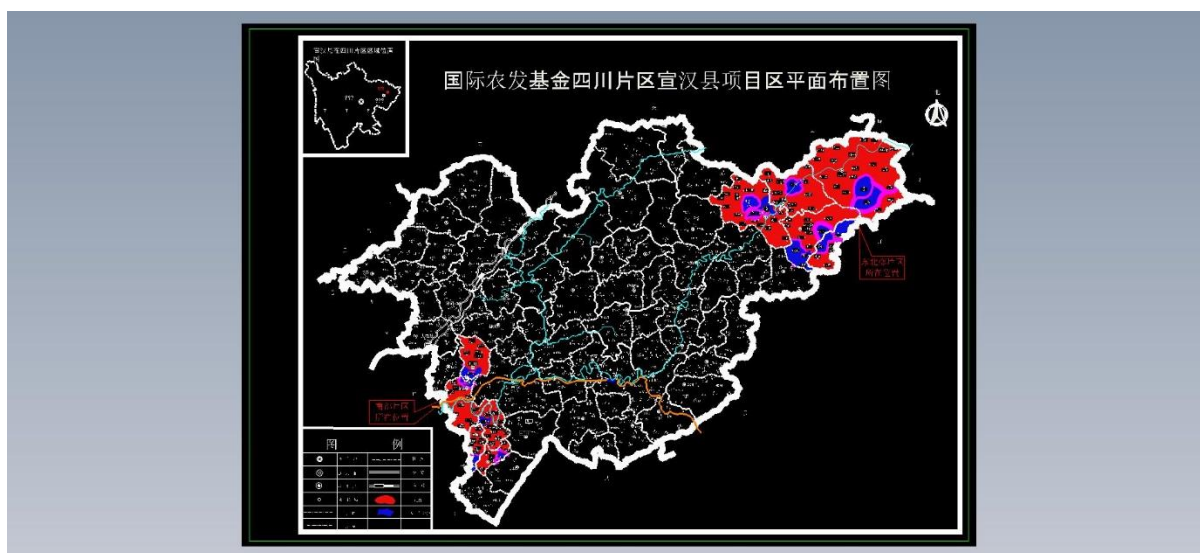
<p>4.5 Enabling measures –to strengthen stakeholders’ and partners’ attitude and commitment to poverty targeting, gender equality and women’s empowerment, including policy dialogue, awareness-raising and capacity-building</p>	<p>Provincial and county Comprehensive Agricultural Development offices are keen to extend their successful approach to more remote and poorer townships and villages. Targeting and gender awareness are included in the Program management training for the Program staff in the start-up of the Program implementation.</p>
<p>4.6 Attention to procedural measures - that could militate against participation by the intended target groups</p>	<p>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.</p>
<p>4.7 Operational measures - appropriate project/programme management arrangements, staffing, selection of implementation partners and service providers</p>	<p>Targeting responsibilities are explicitly mentioned in TORs for all PMO staff. Program coordinator will be responsible for seeing that gender and poverty targeting is effective. Accountability for Program targets will be a selection criterion of the implementation partner and service provider.</p>
<p>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?</p>	<p>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.</p>

Attachment 2. Gender checklist for Program design (TBC at Appraisal)

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 Program area, as well as rural women's role, development difficulties, and needs relevant to Program 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 Program will expand women's economic empowerment through provision of technical training, and improve their marketing access through participating cooperatives and enterprises.
Strengthen women's decision-making role in the household and community, and their representation in membership and leadership of local institutions;	The Program strengthens women's decision-making role in the household and community by ensuring their participation in farmers' cooperative membership and leadership.
Achieve a reduced workload and an equitable workload balance between women and men.	Workload reduction is not included in the Program objectives, but improvement of 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	Specific targets for women's active participation were considered in the design, and the targets for Program activities were set.
5.3 Ensuring that project/programme management arrangements (composition of the project management unit/programme coordination unit, project terms of reference for staff and implementing partners, etc.) reflect attention to gender equality and women's empowerment concerns	Women will represent at least 30% of the members of the Village Implementation Groups (VIG) in Ningxia. PMO staff will be provided with gender awareness training at the start-up of the Program.
5.4 Ensuring direct project/programme outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited	In order to ensure proper outreach to women, promoting more female technicians engaged in Program activities will be required.
5.5 Identifying opportunities to support strategic partnerships with government and others	This is not included in the Program objectives.

development organizations for networking and policy dialogue	
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.	The percentage of women among beneficiaries has been specified and indicated in the logframe, and all relevant logframe indicators are sex-disaggregated.

Attachment 3. Xuanhan County Program Area Map



Attachment 4. Xuanhan County Program Area Basic Statistics

宣汉县基本情况统计表 Xuanhan County Basic Statistics

序号 Number	乡镇 (个) Township	乡镇总人口 (人) Total Population	贫困户人数 (人)) Poor Population	贫困率% Poverty Rate (%)	农村人口人均收入 (元) Rural Per Capita Income (Yuan)	乡镇人均粮食产量 (公斤) Township Per Capita Grain Production (kg)
全县 合计 County Total	54	1319027	179360	13.6	7480	437.5
1	君塘镇 Juntang	17092	2609	15.3	8342	362.0
2	明月乡 Mingyue	11900	1642	13.8	7893	470.4
3	庙安乡 Miaoan	6540	1092	16.7	7012	477.3
4	天宝乡 Tianbao	7121	1346	18.9	6830	716.9
5	东林乡 Donglin	11059	1604	14.5	7047	490.7
6	樊哙镇 Fankuai	28012	4511	16.1	6866	433.9
7	三墩土家族乡 Sandun	15244	2329	15.3	6770	437.2
8	渡口土家族乡 Dukou	7736	1306	16.9	6380	421.3
9	漆树土家族乡 Qishu	7164	1287	18.0	6475	389.4
10	龙泉土家族乡 Longquan	11354	1962	17.3	6473	472.6
11	东乡镇	155137	6812	4.4	8453	127.6
12	红岭乡	16867	2779	16.5	8063	658.0
13	清溪镇	46316	7113	15.4	7437	483.6
14	普光镇	29197	3889	13.3	7818	388.8
15	三河乡	14751	2514	17.0	7429	605.3
16	老君乡	19010	3212	16.9	6962	581.1
17	柳池乡	28577	4179	14.6	7596	531.8
18	黄石乡	15851	2671	16.9	7084	535.0
19	天生镇	23529	3291	14.0	7741	350.5
20	七里乡	18398	2849	15.5	7737	396.4
21	柏树镇	24401	2956	12.1	7731	581.2
22	芭蕉镇	29138	4215	14.5	7396	487.4
23	南坝镇	102905	10641	10.3	8135	325.5
24	下八镇	34984	5685	16.3	7557	497.0
25	凉风乡	10376	1932	18.6	7223	492.9
26	上峡乡	15837	2597	16.4	7352	568.2
27	塔河乡	22426	3596	16.0	7407	539.7
28	五宝镇	27994	4923	17.6	7054	390.4
29	天台乡	11737	1960	16.7	7137	417.2
30	茶河乡	32629	5446	16.7	7227	509.3
31	丰城镇	22814	2644	11.6	7360	589.0
32	桃花乡	22120	3750	17.0	7236	624.7
33	观山乡	7126	1227	17.2	7228	574.4
34	南坪乡	5929	1078	18.2	6896	580.4
35	凤林乡	7003	1250	17.8	7149	547.8
36	土黄镇	37822	5517	14.6	7297	328.0
37	华景镇	30978	4157	13.4	7359	449.2
38	白马乡	17599	2690	15.3	7155	558.2
39	漆碑乡	11831	1778	15.0	7028	495.2
40	黄金镇	29198	4429	15.2	7451	493.1
41	厂溪乡	30022	4823	16.1	7124	563.7
42	新华镇	24856	3205	12.9	7103	502.1
43	石铁乡	9808	1825	18.6	6730	552.0
44	大成镇	36838	5437	14.8	8021	549.5
45	隘口乡	14558	2453	16.8	7135	525.8
46	马渡乡	17184	3128	18.2	6999	422.4
47	胡家镇	40122	3860	9.6	8186	318.3
48	毛坝镇	26578	4128	15.5	7577	525.3
49	花池乡	14004	2365	16.9	7416	537.3
50	凤鸣乡	16138	3242	20.1	6681	564.5
51	红峰乡	19832	3162	15.9	7058	673.4
52	土主镇	13670	1758	12.9	7997	707.6
53	双河镇	39427	5089	12.9	8137	489.7
54	庆云乡	20288	3417	16.8	7146	431.4

Source: Provincial PMO.

Note: The first 10 townships are in the Programme area, and townships 7-10 are Tujia ethnic minority townships.

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.

(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: <ul style="list-style-type: none"> (iii) The knowledge, experience, lessons, best practices and results of IFAD-funded programs and projects had limited impact/influence on broad national policies, and have been limitedly scaled-up. When successful, scaling-up was largely the result of contextual favourable circumstances during implementation, rather than a systematic approach or strategy to scaling-up during design. (iv) IFAD current delivering model based on a project approach proved non-conducive to inform policy-making and favour scaling-up. IFAD support to China has been so far delivered mainly in the form of area-based projects: loans to provincial governments that implement activities in specific geographic areas (i.e. project approach). Although successful in delivering results on the ground, the drawback of this approach is that such 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 decision to shift from a single-province project to a multi-province program, and to have a national central agency (SOCAD) as implementing agency for the program with the role of coordinating monitoring & evaluation and knowledge management is meant to favour the channeling of knowledge from local to national level, thus ultimately favouring policy influence and scaling-up.
<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 (i.e. Comprehensive Agricultural Development approach), with limited attention to post-production/marketing. Limited 	<ul style="list-style-type: none"> ▪ The proposed Program 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. The Program is expected to

Lesson	How lesson has been incorporated in the Program
attention to post-production/marketing also resulted in cases of local overproduction, which led to drops in price of commodities and farmers' income.	complement and enhance the Government's comprehensive agricultural development approach to agricultural development.
<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 farmers, gave mixed results, and it did not always proved to be an effective approach. 	<ul style="list-style-type: none"> ▪ The proposed Program will focus on cooperatives (rather than dragonhead enterprises) as the main entry point to link poor farmers to markets. It will support cooperatives to enhance their governance, strengthen their managerial capacities, make them financially sustainable, and more inclusive and equitable in their distribution-sharing mechanisms. ▪ The Program will also strengthen the capacity of cooperatives to diversify their marketing channels, including supermarkets, e-commerce operators, etc. and to better respond to the demand and quality requirements of these buyers. ▪ Finally, the Program will also provide incentives to dragonhead enterprises to expand their network of suppliers/vendors to the Program target group (poor households and cooperatives) and be more inclusive.

(b) Lessons from ongoing portfolio

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ Challenges in implementing multi-provincial projects: The implementation of the Environmental Conservation and Poverty Reduction Program in Ningxia & Shanxi (ECPRPNS) proved challenging. Supervising a programme which was spread out over such a vast area was time-consuming and cumbersome. Also, without a central coordination mechanism to ensure consistent performance and mutual learning, the programme practically represented two parallel interventions in the two provinces. 	<ul style="list-style-type: none"> ▪ The main difference between the proposed Program and the ECPRPNS is that the proposed Program will be implemented by a central agency (SOCAD) that will be responsible for coordination, monitoring & evaluation, and ensure adequate knowledge management and mutual learning. Supervising a program in two different provinces would be however challenging, time-consuming, and expensive. Different modalities for supervision would need to be experimented.
<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"> ▪ The Program financing is channelled to the provinces through SOCAD as a grant, and not as a loan that has to be repaid. Without the burden of loan repayment, provinces may be less risk adverse in supporting weaker entities. ▪ Clear criteria will be developed to determine the entities that are eligible for Program support.
<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). There is limited availability of providers to outsource implementation responsibilities. This has hampered 	<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 Programmes).

Lesson	How lesson has been incorporated in the Program
progress and performance in this area.	
<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
<ul style="list-style-type: none"> ▪ Limited ability to implement advanced cooperative governance structures given lack of appropriate service providers: A range of on-going projects promote more inclusive and business-maximising cooperatives. However, activities are implemented with mixed results. Often project implementing staff lacks vision on how to innovate the cooperative model and appropriate support capacity cannot be found at county level. 	<ul style="list-style-type: none"> ▪ Start-up period will include intensive consultation with project staff and design team/technical specialists to ensure design vision is translated into implementation modalities, and well understood. ▪ Link with on-going grants, to strengthen implementation capacities.

(c) **Lessons from other donors' efforts in poverty reduction (mainly from the World Bank's poverty reduction projects⁴⁵)**

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ The importance of central and provincial government leadership and support: WB poverty reduction projects have been both highly complex and extremely innovative. The most important lesson from these projects has been that strong central and provincial government leadership and support has been essential to the successful design and implementation of these highly complex and innovative operations. 	<ul style="list-style-type: none"> ▪ Central and provincial leadership and support is being ensured through SOCAD, a central agency under the Ministry of Finance (IFAD's institutional counterpart) with decentralized offices at provincial and local level.
<ul style="list-style-type: none"> ▪ The importance of ownership of the project innovations: The direct involvement of senior 	<ul style="list-style-type: none"> ▪ SOCAD senior staff has been involved and has participated to scoping and design missions. The

⁴⁵ 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. This series of projects and studies has sought to analyze and address the current key issues and challenges in China's most severely affected poor areas. Following each of the poverty assessments completed in 1992, 2002, and 2009, 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
<p>government staff in the analysis, design, and operationalization of innovative poverty reduction measures has proven to be very important to the ownership and eventual nationwide adoption of new poverty reduction strategies.</p>	<p>proposed Program is the result of the dialogue with SOCAD, and reflects a common understanding of the development problems and a common view on how to address these problems.</p>
<p>▪ The importance of strengthening project management systems to ensure successful implementation: Given the above-average complexity of this series of poverty reduction projects, effective project management capacity building has been essential. To address this challenge, each of the first four projects included explicit institution building components which successfully served to strengthen the project management system at all levels (from the Central Project Management Office all the way down to village Work Stations).</p>	<p>▪ SOCAD has a long experience in implementing donor-funded projects, including from the World Bank and ADB, and including multi-provincial projects. Its capacity to implement the proposed Program is considered appropriate.</p>
<p>▪ Participation and community empowerment: The second set of projects demonstrated that it is possible to reverse the traditional top-down leadership and decision-making style of poverty alleviation programing while at the same time achieving more effective and sustainable poverty alleviation results. The projects developed and demonstrated specific methods to involve beneficiaries throughout the entire process of identifying and selecting activities, contracting, supervising implementation, and finally operation and maintenance. However, establishing these methods entailed extensive time and resources for careful preparation, trialing, and staff training.</p>	
<p>▪ 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.</p>	<p>▪ The design of the new Program is placing greater emphasis on establishing criteria and a process (selection of business plans on a competitive basis) for identifying potentially viable value chains.</p> <p>▪ The proposed Program places at the center of its pro-poor value-chain component the development of farmer cooperatives as entry point to provide the poor with an appropriate share of the increased value of output and employment opportunities.</p>
<p>▪ 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.</p>	<p>▪ The proposed Program 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.</p>

Lesson	How lesson has been incorporated in the Program
<ul style="list-style-type: none"> ▪ Identification of cooperatives that are more likely to be successful: To identify and select cooperatives that are likely to be successful in establishing equitable linkages with poor farmers, it is important to have clarity about their ownership, the shareholding structure and the production arrangements within the cooperative as well as clearly define arrangements about the profit making and future profit sharing. 	<ul style="list-style-type: none"> ▪ To ensure that the proposed Program will support cooperatives that are likely to be successful in establishing equitable linkages with poor farmers, a number of safeguard conditions have been included among the criteria for selection/financing of the business plans, including: (i) the five major shareholders of the cooperative that applies to the Program funds should not owe more than 49% of the cooperative' shares; (ii) ownership of the assets and equipment purchased with Program financing must remain with the cooperative, and will be capitalized equally to the accounts of all members, as stipulated by the Cooperative Law; and (iii) land transfer is allowed contingent upon the condition that it is transferred to the cooperative; among other criteria.
<ul style="list-style-type: none"> ▪ Development of Business Plans: Experiences from the four WB-funded Poverty Alleviation Projects showed that (a) rarely farmer cooperatives 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 a cooperative 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"> ▪ Drawing from the experiences of the four WB-funded Poverty Alleviation Projects (a) the development of the business plans follows a process of solicitation: the Program hires facilitators who interact with the cooperatives and solicit basic ideas together with the cooperatives that will form the basis for the development of a business plan. In addition, to provide the cooperatives with a minimum capacity to participate to the proposed Program, the project will support cooperatives with the purchase of basic equipment such as computers, printers, scanners, communications and other basic equipment; (b) the Program provides resources for the recruitment of service providers for the delivery of various trainings and services to cooperatives (e.g. trainings on cooperative awareness, governance, business management, legal awareness, financial literacy, marketing, computer, part-time legal services, part-time accounting support, audit services, etc.) aimed at building the necessary minimal capacity in cooperatives to become eligible and develop business plan proposals.
<ul style="list-style-type: none"> ▪ Cooperative facilitators: Experiences from some of the WB-funded Poverty Alleviation Projects have experienced problems regarding unrealistic expectations placed on the cooperative facilitators hired by the project. 	<ul style="list-style-type: none"> ▪ Drawing from the experiences of the four WB-funded Poverty Alleviation Projects, the role of the cooperatives facilitator is better defined in the proposed Program. It is clarified that the role of the cooperatives facilitator is to assist the leaders and managers to improve their capacity for management. To achieve this outcome the facilitators will receive training on the use of basic management tools (budgeting, planning, financial analysis, risk analysis, market analysis etc.). Their role is then to work side-by-side with the cooperative leaders and managers applying these tools, strengthening the management capacity of the cooperative through a process of "learning by doing".

Appendix 4: Detailed program description

1. The program 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: Infrastructure Development and Climate-Smart Production

2. This sub-component aims at improving the access to public goods and services (common/village infrastructure, access to climate change adaptation practices) in the targeted programme area through a combination of physical improvement, institutional strengthening and technical assistance in order to promote sustainable and climate resilient agricultural production. It includes two subcomponents: (1.1) Infrastructure development; and (1.2) Land Improvement & Climate-Smart Production

Sub-component 1.1: Infrastructure development

3. **Objective, justification and theory of change.** This sub-component aims at improving the common infrastructure (village and farm roads, potable water supply and electricity) as well as irrigation facilities and equipment in the program area.

4. The main opportunities relates to the fact that (i) national and provincial infrastructure improvement programmes implemented in recent years largely improved the external water and road networks, which in turn made further improvement work at field level (last mile) possible and urgent; (ii) the on-going government initiatives on small-scale infrastructure management reform enabled favourable policy environment for establishment and strengthening of management; and (iii) the implementing agency (SOCAD) for the programme is specialised in rural infrastructure establishment and management.

5. The theory of change linking this subcomponent to the Program Development Objective is as follows: improved public infrastructure conditions and management will (i) improve the overall quality of life; (ii) enlarge the production basis (iii) reduce production and marketing costs. This together with the measures proposed in component 2 in turn will (iv) increase returns to agricultural production and small producer income; hence, (v) reduce rural poverty, migration to urban areas and retain youth and skilled producers in rural activities.

6. **Activities.** Major activities under this sub-component would include: (i) improvement and development of irrigation and drainage systems; (ii) improvement and development of water source facilities; (iii) improvement and development of water supply systems; (iv) improvement of electricity supply systems; (v) improvement of on-farm and off farm roads; and (vi) support to infrastructure O&M.

7. Total base cost of the production infrastructure improvement sub-component is estimated at CNY 307.2 million. Detailed description of each activity and associated cost estimate is provided below.

Activity 1: Improvement and development of irrigation and drainage systems

8. Most of the existing irrigation and drainage systems in the programme area are deteriorated, with insufficient water supply, low irrigation reliability and efficiency. Some of the proposed production bases have no irrigation or drainage system. This activity would support rehabilitation and development of 205.7 km canals, 3,459 canal structures, 55.5 Km lower pressure pipelines, and 20 pumping stations. These interventions would contribute to enhancement of agricultural productivity, agriculture diversification, climate resilience and farmers' income generation.

9. Total base cost of this activity is estimated as CNY 50 million, which will be shared between IFAD Loan and Government co-financing. Cost estimates for improvement and development of

irrigation and drainage systems are based on data provided in the programme proposal prepared by the government and filed verification conducted during the detailed design and appraisal missions. Average unit cost is estimated as: 233,000 CNY/km for canal development, 189,000 CNY/km for canal rehabilitation, 1,000 CNY/place for hydraulic structure construction, 85,000 CNY/km for low pressure pipelines and 120,000 CNY/place for pumping stations. These are subject to adjustments during project implementation.

10. Ownership of the irrigation and drainage systems improved and developed under the programme will belong to the beneficiary villages, water users' associations or farmers' cooperatives depending on the decision of respective county project management offices made during the programme implementation, based on the size and benefiting scope of the systems. Improved and developed irrigation and drainage systems will be handed over to the identified owners at the completion of construction, who will be responsible for O&M of the systems, with continuous technical and financial supports from government departments and respective irrigation management agencies.

Activity 2: Improvement and development of water source facilities

11. Some of the programme areas are lack of water source facilities. This activity would support rehabilitation and construction of water pools (each with storage capacity above 2,000 m³) with a total storage of 1.2 million m³, and water ponds (each with storage capacity lower than 500 m³) with a total storage of 0.38 million m³. These interventions would secure water supply to irrigation and water supply systems.

12. Total base cost of this activity is estimated as CNY 33.3 million, which will be shared between IFAD Loan and Government co-financing. Cost estimates for development and improvement of water source facilities are based on data collected during the detailed design and appraisal missions. Average unit cost is estimated as: CNY 17.3/m³ for water pool and CNY 33.6/m³ for water pond. These are subject to adjustments during programme implementation.

13. Ownership of the water source facilities improved and developed under the programme will belong to the beneficiary villages, water users' associations or farmers' cooperatives depending on the decision of respective county project management offices made during the programme implementation, based on the size and benefiting scope of the systems. Improved and developed water sources facilities will be handed over to the identified owners at the completion of construction, who will be responsible for O&M of the systems, with continuous technical and financial supports from government departments and respective irrigation management agencies.

Activity 3: Development and improvement of water supply systems

14. Farmers in some of the programme area are facing difficulty in accessing safe drinking water. This activity would support rehabilitation and development of 98.2 Km water supply pipelines. These interventions would bring safe drinking water access to rural population and animals.

15. Total base cost of this activity is estimated as CNY 3.76 million, which will be shared between IFAD Loan and Government co-financing. Cost estimates for development and improvement of water supply systems are based on data collected during the detailed design and appraisal missions. Average unit cost is estimated as CNY 38,000/km for water supply pipelines, which is subject to adjustment during programme implementation.

16. Ownership of the water supply systems improved and developed under the programme will belong to respective beneficiary villages, who will be responsible for O&M of these systems with continuous technical and financial supports from government departments.

Activity 4: Improvement and extension of electricity supply systems

17. Irrigation systems in some of the programme area are lack of reliable power supply. This activity would support improvement and extension of 20 Km electricity lines and 11 transformation stations. These interventions would bring electricity supply to irrigation systems in programme counties.

18. Total base cost of this activity is estimated as CNY 2.65 million, which will be shared between IFAD Loan and Government co-financing. Cost estimates for electricity supply systems are based on data collected during the detailed design and appraisal mission. Average unit cost is estimated as: CNY 101,000/km for electricity lines and CNY 57,000/place for transformation stations. These are subject to adjustments during programme implementation.

19. Ownership of the power supply systems improved and developed under the programme will belong to the owners of respective irrigation systems, who will be responsible for O&M of these systems, with continuous technical and financial supports from government electricity and water agencies.

Activity 5: Improvement of access roads

20. Access roads in some of the programme areas are not in good condition, either too narrow for machinery access or un-paved, which caused difficulty to production activities in rain season. This activity would support improvement and pavement of 461.6 Km concrete road and 64 km gravel road. These interventions would improve access road condition in the programme areas in Sichuan and Ningxia.

21. Total base cost of this activity is estimated as CNY 209.9 million, which will be shared between IFAD Loan and Government co-financing. Cost estimates for access roads are based on data collected during the detailed design and appraisal missions. Average unit cost is estimated as: CNY 445,000/km for concrete road and CNY 68,000/km for gravel road. These are subject to adjustments during programme implementation.

22. Ownership of the on-farm roads improved under the programme will belong to the owners of respective production bases, who will be responsible for O&M of these systems with continuous technical and financial supports from government departments.

Activity 6: Support to infrastructure O&M

23. Proper institutional arrangement for O&M of infrastructure systems in the programme area is not yet in place and the capacity of relevant O&M organizations yet to be developed. This activity would support (i) establishment and strengthening of 33 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; and (ii) implementation of normative O&M of infrastructure systems improved and developed under the programme during the programme life time through provision of financial support, following the current SOCAD investment policy. These interventions will promote sustainable infrastructure O&M.

24. Tailor-designed training modules and materials will be developed and used for these training activities based on need assessment to be conducted at the beginning of programme implementation. Support to normative O&M will be mainly implemented during the 3rd - the 6th project year.

25. Total base cost of this activity is estimated as CNY 2.57 million, which will be shared between IFAD Loan and Government co-financing. Cost estimates for these interventions are based on data collected during the detailed design and appraisal missions. Average unit cost for O&M organization is estimated as: CNY 50,000 for each, which is subject to adjustment during programme implementation.

26. **Implementation arrangements.** These activities will be implemented at selected sites in the Programme counties in Sichuan Province and Ningxia Autonomous Region, based on local infrastructure constraints and the agriculture sector development priorities. The State Office of Comprehensive Agriculture Development (SOCAD) will be responsible for overall supervision and coordination. Its sub-ordinate offices at provincial and prefecture levels will be responsible for direct supervision and coordination of sub-component activities within their respective provinces and

prefectures. The sub-ordinate offices at county level will be responsible for detailed implementation of sub-component activities within their respective counties.

27. System planning and engineering design of the proposed infrastructure systems will follow the technical guidelines issued by SOCAD and POCAD. Close cooperation will be established with county bureaus of water, transport and power in order to ensure their compliance with government strategies and policies. Qualified experts will be mobilized for technical assistance and training. Procurement of civil works, goods and services will follow relevant government and IFAD guidelines and processes. Suitable infrastructure management organization will be identified/established before the commencement of each infrastructure improvement work, sufficiently involved in the whole process of system planning, design and construction supervision, and take over the O&M responsibility after completion of construction.

28. A step-wise participatory process will be adopted for implementation of this sub-component, including: (i) participatory need assessment on infrastructure development based on local development plans on poverty reduction, value chain development, agriculture production and their requirements on infrastructure services; (ii) identification/establishment and training of infrastructure management organizations; (iii) system planning, engineering survey and design of infrastructure systems; (iv) consultation and finalization of system planning and engineering designs, including discussion and agreement on the O&M responsibilities of infrastructure management organizations; (v) implementation of construction and supervision; (vi) inspection of construction completion and handing-over of O&M responsibilities to infrastructure management organizations; (vii) implementation of normative O&M by infrastructure management organizations; and (viii) facilitation of women's involvement in each of the above steps.

29. Sustainable and climate-smart approach will be mainstreamed at each phase of the program cycle. During preparation the impacts of climate change on water availability, water demands, flood and drought frequency and intensity will be assessed and incorporated into system planning. During implementation, suitable adaptation and mitigation options will be incorporated into system design and O&M, including adopting adaptive technical models and engineering design, applying energy-saving technologies and equipment, and supporting capacity building on effective water resources management. During evaluation, climate change related indicator, such as coverage of irrigation service, irrigation efficiency and reliability will be carefully evaluated and reported. Costs for environment protection and soil and water conservation during the implementation of infrastructure interventions have been estimated and budgeted following the requirement of relevant government policies. Environmental-friendly practices will be adopted during construction to avoid and mitigate potential negative impacts, including assessment of environmental impacts before implementation, and protection of trees and vegetation.

30. **Target group and expected benefits.** The primary beneficiaries will be those farmers who are directly supported by the infrastructure systems to be improved, and involved in agribusiness and value chain development activities implemented under the programme, especially the registered poor farmers in the programme area. The smallholder farmers, women and the ethnic minorities will be the most benefited.

31. Expected benefits include improvement and development of irrigation area and 525.6 km access roads in the targeted programme area, which will improve irrigation reliability and efficiency, support agricultural production and diversification, and enhance resilience to climate change and climate variations.

32. **Risks.** Major risks to infrastructure improvement activities include inappropriate O&M of infrastructure systems resulting from inadequate institutional capacity; damage of infrastructure systems due to floods, landslides or soil erosion; and inefficient use of irrigation water due to inappropriate irrigation practices. The programme designed activities on: incorporating climate change considerations into infrastructure improvement to enhance the resilience to nature disasters and climate change impacts; identification/establishment and strengthening of infrastructure management

organizations to enhance institutional capacity in infrastructure O&M; and technical training to disseminate water-saving irrigation technologies. Possible risks and measures for mitigation are summarised in Table 17 of WP 1.

Sub-component 1.2: Land Improvement and Climate-Smart Production

33. **Objective and justification.** This sub-component aims at improving agricultural production systems on a sustainable manner by mainstreaming environmental interventions and climate adaptation and mitigation measures in the selected value chains to be developed. The justification is associated with meeting the need to expand the production capacity of small producer in the programme area while putting in place a capacity to address climate change challenges and environmental concerns.

34. The theory of change linking the subcomponent to the Program Development Objective is as follows: (i) the enlarged production basis will take place in a sustainable and climate smart manner; (ii) this additional capacity will be oriented towards crops and livestock products that have good marketing potential and are suitable for small producers (in terms of establishment cost, time of entry into production, net benefits); and (iii) in conjunction with other factors such as access to knowledge, capacity development, commercial partnerships and funding, this will in turn generate increased income from farms and reduce poverty.

35. **Activities.** This sub-component would include measures to improve/expand the land as production basis while integrating environmental aspects and climate-smart considerations. The quantification of these investments will depend on the selection of value chains to be developed and the number of participating producers. The budget envelope estimated for this sub-component is CNY xxx million. Detailed description of each activity and associated cost estimate is provided below.

Activity 1: Land improvements

36. In a fully blended manner with the above activity, a range of environmental enhancement interventions will be promoted under the sub-component including (i) water conservation measures; (ii) invest in landscape improvements, land levelling, terracing and field boundary delineation; (iii) promotion of green, pollution free and organic types of certifications (see sub-component 2.3); (iv) establish quality control systems at cooperative level, including providing technical equipment and technical service support in soil testing and fertilization, pesticide application and residual; (v) promote solar energy and energy saving storage and processing techniques; and (vi) promote recyclable and biodegradable materials for packaging.

Activity 2: Climate-smart production

37. The sub-component will integrate the climate-smart dimension of agricultural production through (i) conducting a vulnerability assessment of beneficiaries to climate change and increase awareness among beneficiaries of the risks associated with climate change⁴⁶; (ii) adopting a “net zero” policy in semi-arid environments for water use; (iii) promoting conservation agriculture (iv) 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); (v) promoting the adoption of integrated pest management (IPM) and fertilization management strategies; (vi) training government officials and PMO staff on main environmental improvement and climate smart measures;

⁴⁶ 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/>.

Implementation arrangements

38. These activities will be implemented at selected sites in the Program counties in Sichuan Province and Ningxia Autonomous Region based on local needs. The State Office of Comprehensive Agriculture Development (SOCAD) will be responsible for overall supervision and coordination. Its sub-ordinate offices at provincial and district levels will be responsible for direct supervision and coordination of sub-component activities within their respective provinces and prefectures. The sub-ordinate offices at county level will be responsible for detailed implementation of sub-component activities within their respective counties. The Bureau of Agriculture, Animal Husbandry Bureau and their various affiliated units and stations⁴⁷ will provide the main implementation support on technical and knowledge dissemination aspects. Other line agencies that will be involved in implementation of the sub-component include the Forestry Bureau, Water Conservancy Bureau, Science, Research and Extension Institutions⁴⁸, Agricultural Technology Service Network Platform; Poverty Alleviation Office as well as crop-specific County level institutions⁴⁹.

39. Funding mechanism for these facilities and equipment will include elements of (i) subsidies by the IPRAD programme; and (ii) contribution by beneficiaries both in nature (own labour) and monetary (own savings and/or loans). The different allocation of shares in these funding schemes will be defined on a case-by-case and will be elaborated during the design completion mission.

40. **Target group and expected benefits.** This sub-component will benefit an expected 198,847 primary beneficiaries (individuals), including 92,643 in Sichuan and 106,204 in Ningxia selected from the 10 counties (5 from Ningxia and 5 from Sichuan respectively). The primary beneficiary group will be those farmers directly involved in agribusiness and value chain development activities implemented under the programme. The poor smallholder farmers, women and the ethnic minorities within the programme area will benefit the most.

41. Expected benefits of this sub-component include increased production associated with additional cropping and plantation area, additional animal husbandry facilities, increased soil fertility and productivity associated with soil and water management, and enhanced climate change adaptation capacity resulting in long term maintenance of productive basis. This increase in production capacity is a response to market demand and requires the ability to successfully commercialise the increased output (hence component 2).

42. **Risks.** Main risks are related to (i) in case where productive assets are subsidized to rural poor who in turn entrust them to private enterprises for management in exchange of a dividend: these subsidized productive assets might not sufficient to ensure exit from poverty (this is more frequent in the case of resettlement); (ii) insufficient preparedness for climate related hazards (mainly floods and drought). In the case of the former, the mitigation measure will consist of using accurate financial analysis to determine the minimum asset to which registered poor producer has to have access in order to ensure a sufficient increase in income to exit poverty. Minimum productive asset packages will be made available to registered poor through differentiated and specific targeting which might entail higher level of government subsidies for the establishment cost of these assets. In the case of the latter, *disaster risk management* will be used. This is a process that focuses on preventing, mitigating, preparing for and responding to shocks in the short and medium term. It serves to handle threats such as such as increased frequency and intensity of extreme weather events and changing

⁴⁷ These include Agricultural energy resource offices, agricultural technology service centers, agricultural technology extension stations, plant quarantine inspection stations, soil fertilizer station, cash crop technology extension stations, seed management station (Seed quality supervision and inspection station), tea technology extension station, agricultural products quality and safety supervision and management station, Agricultural mechanization station (agricultural mechanization management station), animal disease prevention and control center, livestock and poultry breeding improvement station, forage feed station (dairy management station), and county animal husbandry and veterinary station (apiculture management station).

⁴⁸ These include the China Agricultural University, Agricultural College of Beijing University, China Academy of Agricultural Sciences, Sichuan Academy of Agricultural Sciences, Sichuan Agricultural University, Ningxia University, Animal Sciences, Ningxia Academy of Agriculture and Forestry, Ningxia Livestock Workstation.

⁴⁹ Such as the Cangxi County Kiwifruit Industry Bureau and the Xuanhan County Edible Fungus Research Institute.

patterns of pests and diseases. It includes risk assessment, prevention, mitigation, preparedness and early warning.

Component 2: Pro-poor Value Chain development

43. This component aims at developing the value chain through capacity development, support for private and cooperative investments and access to rural finance. It includes 3 sub-components including (i) SC 2.1 Capacity development; (ii) SC 2.2 Business Plan Financing; and (iii) SC 2.3 Rural finance support.

Sub-component 2.1: Capacity development

44. Objective, justification and theory of change. The objective of the sub-component is to provide the required technical, social and organizational knowledge to improve the management, functioning and overall performance of the main actors in the selected value chains to be developed. The main actors include small producers and their cooperatives, private sector agribusiness (of local and national relevance) and individual farmers. Staff in local government and line agencies are also benefiting from the capacity development interventions.

45. The possibility to improve the economic conditions of poor farmers relies largely on production improvements, improved market opportunities and increased product value as well as stronger representation and bargaining power of their organizations within the value chains. These, in turn, require, investments in human and social capital and comprehensive know-how in different areas ranging from production and post-production techniques to finance, accounting, VC governance and basic comprehension of legal contracts, negotiation and market trends. At present, the majority of farmers and their cooperatives in the program area largely lack these skills. This is causing small farmers and less advanced cooperatives to sell their output in raw, unprocessed, undifferentiated form, often to a single buyer with strong bargaining power who sets both the price and contract conditions.

46. In addition, examples of sustainable and well-functioning cooperatives formed by smallholder farmers that provide effective support and services to their members are rare. Official documents confirm that many Chinese cooperatives are dominated by agribusiness companies and/or large enterprises who seek government support and fiscal privileges. These are characterized by a principal-holder structure with only a small number of investors allowed to contribute equity capital and the rest of the members excluded from ownership, leading to elite capture of both rights and benefits. The vast majority of members do not have voting rights and are unable to understand and influence the decision-making process. As a consequence, the governance of many cooperatives is weak, sometimes lacking transparency and fair representation. It is thus evident that building human and social capital among small farmers and their cooperatives is a precondition for value chain development.

47. Individual farmers will be receiving capacity development services as part of the business plan elaborated and implemented by cooperatives. Private sector operators (mostly SMEs) will only be supported for soft activities such as technical assistance, studies, training, and exposure visits. Local government and line agencies staff will receive capacity development for improved implementation performance in areas of producer cooperative strengthening, business plan evaluation and overall value chain development.

48. The theory of change linking this subcomponent to the Programme Development Objective is as follows: (i) building human and social capital will improve the bargaining power, organizational performance, access to information and awareness of small producers and their cooperatives on market and consumer preferences and different types of marketing linkages; (ii) in conjunction with the improvement of other factors (mostly related to access to infrastructure, equipment, technical advice and funding), this will generate higher producer prices, lower production cost and better quality

inputs, increased quantities and improved quality of output; and (iii) in the presence of favourable marketing conditions and of equitable distribution of additional returns among cooperative members, this will generate increased income as well as additional jobs and thus poverty reduction.

49. Activities and cost estimate. Activities and cost estimates are presented below.

Activity 1: Capacity development for cooperatives (Base Cost: CNY xxxx million)

50. *Selecting cooperative eligible for IPRAD support.* Partnering cooperatives will be selected based on a set of criteria including:

- Cooperatives must be properly registered in compliance with the 2006 National Law on farmer's cooperatives (Farmers Professional Co-operatives Law, 24th Session of 10th National People's Congress- Oct. 31, 2006);
- The institutional structure of the cooperatives must be in place and functioning. Specifically this means that the cooperative must have a Board of Directors, Supervision Committee and general assembly in place and operating;
- At the time of applying for project support cooperatives must have a membership not less than 50 members;
- At least 10% of the registered members must be registered poor according to the National Poor Registration System (NPRS);
- More than half of the members have invested in the cooperative; the investment share of enterprises and large investors must be no greater than 30% of the total registered capital of the cooperative.
- Members are able to exercise their rights in the decision making process;
- The cooperative provides a fair distribution of financial returns to all members in accordance with its charter and the cooperative law;
- The cooperative must agree to implement a formal accounting system, preferably using the accounting software designed specifically for cooperatives and available to all registered cooperatives for free through the Ministry of Agriculture;
- Cooperatives must agree to provide the CPMO an annual audited financial report, and to give the PMO's full access to the financial information of the cooperative.

51. *Cooperative Facilitators.* A mentoring program for all cooperatives involved in the IPRAD will be implemented which will include (i) compliance with the law on farmers' cooperative and its application; (ii) support for implementation of practices such as improving coop governance and inclusiveness for poor farmers as well as using equitable criteria for distributing financial returns among members; (iii) educational activities for all cooperative members on advantages of operating as a cooperative and of collective action; rights and obligations of cooperative members;

52. To support the cooperatives improve their governance and overall operations, each county will hire at least two officers to be responsible for supporting cooperative development (Cooperative Facilitators). These persons will be responsible for supporting the establishment of new cooperatives, assisting cooperatives develop business plans to apply for project support, and maintaining regular contact with each cooperative throughout the duration of the project. A draft terms of reference for cooperative facilitators is attached.

53. *Governance.* To ensure the cooperatives act in the best interests of vast majority of members rather than a small number of investors, cooperatives leaders and managers will be asked to attend short courses and intensive training sessions on coop governance, accounting principles, good practices in the coop management (e.g. transparency, control, inclusiveness) and for delivering effectively quality services to members. Moreover, the county PMO and cooperative promoters/developers will play a check and balance role to hold the management of cooperatives

accountable and follow up on implementation of the key provisions of Farmers Cooperative Law, e.g., minimum shares of profits distribution to members based on patronage and sound booking keeping for all members for assets capitalized by government subsidies and support programs.

54. *Promoting the establishment of Union/Federation of Cooperatives.* Experience both internationally and in China has proven the value of cooperation between cooperatives through higher level groupings of cooperatives in the form of federations or unions. However, a precondition for the establishment of effective second-tier organizations is the existence of strong and sustainable primary level organizations. Until strong and sustainable cooperatives have been established the creation of federations or cooperative unions should not be encouraged. Support for the establishment of second-tier organizations should be considered during the mid-term review of the project and appropriate support considered at that time.

55. *Accounting* All cooperatives receiving project support will be required to maintain a formal accounting system in accordance with the accounting guidelines for cooperatives issued by the Ministry of Finance (农民专业合作社财务会计制度(试行) 2007年12月20日 财会[2007]15号). Cooperatives should be encouraged to use the accounting software developed by the Ministry of Agriculture and available free of charge to all registered cooperatives. Cooperatives should have their own qualified accountant (contracted on a part time or full time basis, as required). If necessary the project will provide training and support to cooperative accountants for setting up accounting systems and training on using the financial software.

56. *Financial literacy.* Educational sessions on basic accounting principles and financial literacy (i.e. how to take a loan and be able to repay) will be delivered to farmers; this will be especially targeted to persons with lower education and women who mostly lack concepts and practical expertise in these fields.

57. *Legal Awareness Training and Legal Support.* The sub-component will deliver training to cooperative leaders and managers on various legal issues which are commonly encountered in the course of cooperative operations, including issues related to contract law, labour law, land use laws, protection of brand-names and trademarks etc. To assist cooperatives in recognizing and protecting their legal rights each county office will sign an agreement with a law firm which will provide advice on legal issues to cooperatives on an as-needed basis. This should be an advisory service only and would not cover legal costs should cooperatives become involved in litigation over disputes with third parties.

Activity 2: Facilitation for establishment of market linkages (Base Cost: CNY xxx million)

58. This activity will facilitate and promote the establishment of commercial partnerships linking producers and their cooperatives with buyers. Market analysis suggests that there is a variety of partnership models depending on the number of actors and steps involved in the value chains. These commercial partnerships have been selected based on their potential to improve the income generation for small producers. Interventions have a number of common features including (i) need to meet stringent market requirements from buyers; (ii) the need to reach some level of scale in order to reduce the impact of transaction, investment, maintenance, compliance and enforcement costs; and (iii) need to be client-oriented and seek commercial feedback.

59. Two relevant (and potentially replicable) examples of marketing support were observed in the Pengyang county in Ningxia region during design fieldwork. These consist of:

- a) Support to pepper marketing through a public-private partnership between the “*Broker Association*” of the county-level Union of pepper cooperatives and a government agency named “*Supply and Marketing cooperative*”. The allocation of responsibility between the two actors is as follows: (i) the government-funded Supply and Marketing Cooperative provides market scouting among medicinal firms in urban areas, setting of market standards and

sharing of market information; and (ii) the Broker association which includes 30 members⁵⁰, is responsible for planning and delivering of produce according to agreed standards.

- b) Support to marketing of medical herb cooperative using experts selected from retired staff of the provincial Academy of Science and/or graduate students from the local University. These experts are contracted on an ad-hoc basis or part time and carry out market scouting on behalf of the cooperative. Market information and potential contracts are passes on to cooperative management.

60. The interventions for facilitation of commercial partnership will include (i) organising workshops at provincial level with potential private sector representatives (from supermarkets, agribusiness, E-commerce, restaurants and catering services, processors, exporters), local Universities and Academy of Science; and (ii) assigning specific staff from either provincial or county PMO to be responsible for these partnerships and to facilitate linkages with other government agencies and public entities that would improve the market intelligence and marketing performance of the targeted cooperatives.

Activity 3: Capacity development of local staff (Base Cost: CNY xxxx million)

61. Capacity development of local staff will be delivered on inclusive value chain development, new cooperative law and other more general matters that will be considered useful during project implementation.

Implementation arrangements

62. Implementation arrangements for activity 1 (*Capacity development for cooperatives*) are presented below.

Cooperative capacity development activities	Potential service providers	Procurement Responsibility (province, county or cooperative)
General management knowledge and skills	Certified SYB, IYB, EYB trainers	County
Cooperative governance and cooperative awareness	National or international NGOs, Economic Management Station of Dept. of Agriculture, Academy of Social Sciences at national or provincial levels.	Province
Financial management (Accounting)	Local accountancy firms, staff of Agriculture Bureau Economic Management Station	County
Technical service and training	Agriculture extension services, specialized research institutes, private service providers	County and cooperative
Financial Literacy	Local accountancy firms, staff of Agriculture Bureau Economic Management Station	Province or county
Marketing	University, educational institution, private commercial service provider	Province
Training on legal awareness	University, college, law firm	Province
Legal advisory support	Local law office with relevant experience (esp. in commercial law)	County
Computer use training (esp. spreadsheets)	Local training provider	County
Leadership/Governance training	National or international NGOs, Academy of Social Sciences at	Province

⁵⁰ These are cooperative leaders and leading farmers and they receive a commission of 0.03-0.06 Yuan per kg of pepper marketed through the Association.

Cooperative capacity development activities	Potential service providers	Procurement Responsibility (province, county or cooperative)
	national or provincial levels.	
Production management	Academic or research organization, extension services.	Cooperative or county

63. Implementation of activity 2 (*Facilitation for establishment of market linkages*) will be the responsibility of provincial and county PMOs with the help of cooperative facilitators (see activity 1 above).

64. Implementation arrangements of activity 3 (Capacity development of local staff) will be on an ad hoc basis. These will depend on the menu of capacity development selected by the PMO at provincial and county level. It is also foreseen that PMO and line agencies staff will take advantage of training for cooperatives as mentioned above by joining these sessions on a need basis.

65. Target group and expected benefits. This sub-component will benefit an expected 198,847 primary beneficiaries (individuals), including 92,643 in Sichuan and 106,204 in Ningxia selected from the 10 counties (5 from Ningxia and 5 from Sichuan respectively). The primary beneficiary group will be those farmers directly involved in agribusiness and value chain development activities implemented under the programme. The poor smallholder farmers, women and the ethnic minorities within the programme area will benefit the most. In addition, local government staff (provincial, county and township level) as well as private agribusiness operators will benefit from capacity development and knowledge sharing interventions.

66. Expected benefits/outcomes of this sub-component include (i) enhanced capacity of farmers and cooperatives on organization, governance, planning, technical aspects, marketing, financial management, computer skills and legal aspects; (ii) existence of Union of Cooperatives taking collective roles on input provision, marketing and delivery of technical support; and (iii) improved practices in agricultural production, marketing and processing.

67. Risks. The main risks of the sub-component are associated with (i) low number of cooperatives in the programme area (this is mainly the case in Ningxia Autonomous province); (ii) insufficient integration of registered poor in the targeted cooperatives; (iii) lack of suitable service provision for cooperative capacity development; (iv) insufficient compliance with cooperative law requirements (despite capacity development) due to lack of enforcement mechanisms; and (v) unequitable income distribution within the cooperatives hampering poverty reduction.

Sub-component 2.2: Business Plan financing

68. Objective, justification and theory of change. The objective of the sub-component is to provide support to cooperatives to elaborate, finance and implement business plans conducive to poverty alleviation through value chain development.

69. The justification is associated with the need to (i) make the producer cooperatives the entry point of the poverty reduction in the program area and put these cooperatives in the “driving seat” of their own development; (ii) provide them with a flexible tool (business plans) to finance and implement investments for value chain development with the objectives of economic development and poverty reduction.

70. The theory of change linking the subcomponent to the Programme Development Objective is as follows: (i) registered rural poor households will be encouraged and supported to join the cooperatives; (ii) cooperatives' capacity will be strengthened in order to improve their overall management and governance as well as to produce pro-poor business plans; (iii) implementation of business plan will ensure value chain development and additional income generation for all members of the cooperatives (including registered poor) through higher individual producer prices and equitable

sharing of cooperative profit and dividends; and (iv) this will lead to poverty reduction in the program area.

71. **Activities and cost estimate.** Main activities include financing of (i) Business Plans for Cooperatives; (ii) Pilot Business Plans for Linkages with Supermarkets; and (iii) Innovative Business Plans for Agro-enterprises. Detailed description of each activity and associated cost estimate is provided below.

Activity 1: Financing Business Plans for Cooperatives

72. The elaboration and implementation of business plans for cooperatives will be guided by the following principles:

- **Business and market driven process:** Cooperative investment plans should respond to promising business opportunities and should be market driven. They should respond to 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 programs.
- **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 of information will be provided to all potentially interested enterprises operating in the food business sector.
- **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.
- **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.
- **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.
- **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.

73. Main features of business plans are presented below and summarised in attachment 1 to this appendix.

74. Selection modality of business plans will be on a competitive basis (no minimum allocation per county). The proposed outline and guidance for cooperative business plans is presented in attachment 2 to this appendix.

75. Eligible activities for business plans would include: (i) Assets (e.g. storages, buildings, private water conservation systems, etc.), equipment (e.g. processing plants, etc.), and one-time inputs (e.g. seedlings), (ii) Soft activities (e.g. technical assistance, services, studies, trainings, participation to exposure visits/fairs, costs related to certification, traceability, branding/marketing, etc.). In the case of Ningxia, certain production-base infrastructures for private use (i.e. sprinkle and drip irrigation, greenhouses and livestock production infrastructures) are allowed. Ineligible activities would include working capital, annual inputs (e.g. seeds, manure, fertilizers, pesticides, etc.), operational/recurrent costs.

1. Financing rules would include (i) no more than 85% of Program financing to assets, equipment and one-time inputs; (ii) at least 15% of Program financing to Soft activities; and (iii) In the case of Ningxia, 90% of production-base infrastructures for private use, provided that the beneficiaries of these activities are the program primary target group (i.e. individuals whose income is ≤ RMB

5,040). Co-financing will be as follows (i) the Program will cover 100% of the costs of the eligible activities in the Business Plans; (ii) cooperatives are expected to cover all the costs in the Business Plans related to labour, working capital, annual inputs and operational/recurrent costs; and (iii) in Ningxia, no more than 90% of production-base infrastructure for private use will be from Program financing and at least 10% from cooperatives. Ceiling for total budget allocation for business plan of no more than 30,000 RMB per cooperative member would apply.

76. Additional conditions applicable would include (i) ownership of the assets and equipment purchased with Program financing must remain with the cooperative; (ii) cooperative co-financing contribution must be new/additional; (iii) land transfer is allowed contingent upon the condition that it is transferred to the cooperative; and (iv) in Ningxia, the beneficiaries of production-base infrastructures for private use must be the program primary target group (i.e. individuals whose income is \leq RMB 5,040).

77. Outreach objective. At least 30% of the registered poor in each of the program area villages will directly benefit from the supported cooperatives and pilot enterprises.

78. Program interventions would include:

- Information campaign: In the first step the county PMOs would implement an information campaign providing general information about the project and the options for receiving project support. This campaign will target all farmers and cooperatives in the villages of the project areas, as well as potentially interested food business operators interested to develop partnerships with cooperatives in the project areas. The information will be provided through posters and village level meetings and the government web-site.
- Recruitment of Cooperative Facilitator (CF): The county PMOs would recruit at least two cooperative facilitators per county with the task to mobilize local farmers, provide information, help with the formation of cooperatives, help the provision of training and facilitate the preparations and implementation of investment proposals (business plans).
- Formation of Technical Advisory Groups (TAG): Each county forms a TAG. The TAG would consist of experts in the agricultural and business sector and would include members from the government line departments, research institutions, business community and local banking institutions. The role of the TAG will be to provide a technical and financial/business advisory role by reviewing and making suggestions for improving investment proposals. The composition should not only include technical experts but also business expertise. The members should also not only include government staff.
- Training and Capacity Building of Cooperatives: Under the facilitation of the CFs training in cooperative formation and management would be provided. This training should be provided as a first round training in a series of training modules and should be implemented by a professional service provider contracted by the Provincial PMO.
- Formulation of Ideas and Concepts by Cooperatives: Interested cooperatives would formulate their business ideas, which would be shared using the facilitation service of the CFs with the TAG. The county PMOs would organize the TAG meetings to discuss these first level informal concepts and ideas.
- Preparation of Cooperative Investment Plans: Selected members of the TAG relevant to the expertise required will help the cooperative formulating a full investment proposal. If considered appropriate the TAG will propose to the county PMO hiring additional technical assistance (technical consultant) to help with the proposal preparation. Project TA funds would be available for this service.
- Screening of the Proposal: The county PMO will check the investment proposal for format, completeness, consistency with the project requirements, etc. and eventually request additional information.

- **Field Verification:** The county PMO will carry out a field verification, verifying that the key information provided in the investment proposal is correct and the cooperative meets the standards set by the project. The county PMO officer will use a checklist and confirm the information before sending the investment proposal to the Provincial PMO for evaluation and approval.
- **Evaluation and Approval:** The provincial PMO will set up a small evaluation and approval committee (composition has yet to be decided), which will evaluate and approve or reject the Cooperative Investment Proposals. Rejected proposals would get one second chance to be revised and improved.
- **Financing Agreement:** After the investments proposals have been approved by the PPMO the county PMOs would prepare a financing agreement to be signed between the cooperative and the PMO. This agreement would state the rights and obligations of both sides and state the commitment and agreed indicators and their targets of the cooperative. The financing agreement would include a table (indicators, annual targets, final target) with the key physical, financial, economic and social indicators (output and outcome indicators) and committed targets (e.g. number of beneficiaries, cooperative members, poor members, areas to be developed, milestones to be achieved like product certification). Key information of the finance agreement would be publicized in the village.
- **Implementation:** The implementation responsibility would be with the cooperative and would cover a period of 2-3 years. However, the CF would continue to help the cooperative, identify implementation issues, additional training needs, etc. and liaise with the county PMO to provide timely assistance.
- **Monitoring and Evaluation:** The implementation of the investment proposal and the provisions in the financing agreement including the set indicator and targets would be monitored on a regular basis by a third party monitoring agency. The results of this monitoring would be shared with all project entities in semi-annual meetings.
- A proposed outline of the business plan is presented in attachment 1.

Activity 2: Financing Pilot Business Plans for Linkages with Supermarkets

79. This activity will be conducted on a pilot basis around two interventions (one in each of the 2 provinces - Ningxia and Sichuan). The elaboration and implementation of business plans for linkages with supermarkets will be guided by the same principles as in the case of cooperative business plans (see above) but with some specificities that are presented below.

80. **Selection of cooperatives.** In addition to the eligibility criteria mentioned in activity 1 above, cooperative eligible for this activity will be selected according to the following additional criteria: (i) the cooperative shall be capable of producing competitively in terms of quality and cost as well as be capable of supervising product quality and food safety; (iii) the products shall be competitive either nationally or regionally and have clear natural and/or cultural comparative advantages⁵¹; (iv) the head of the cooperative should have a strong capacity of organizing, managing, centralizing resources and market development; (v) legal rights and interests of cooperative members, in particular those of poor farmer members should be protected; (vi) the cooperative must have a certain production volume so that it can meet the supermarket long-term need; (vii) the cooperative shall have washing, grading, packing, food safety testing and cold storage capacity as well as a certain amount of working capital.

⁵¹ For example, the red-hearted kiwi fruit, lemon, prickly ash, citrus and off-seasonal vegetables produced in the project area of Sichuan; minor grains and beans, potato, raspberry, vegetables suitable to grow in the low-temperature Liupan mountain area, wolfberry, and daylily (*Hemerocallis citrina* Baron, "Huanghuacai" in Pinyin) in Ningxia

81. Selection of Supermarkets. Supermarket eligible for this activity shall (i) have a large scale of operations, and an interest in sourcing directly from farmer cooperatives (ii) have a sense of (corporate) social responsibility and an interest in contributing to the poverty eradication strategy of the government; (iii) have an interest in providing support under the form of technical support to meet the quality standards and preferential conditions for the cooperatives in terms of payment (Annex 1 of WP 3 presents the requirements for establishing commercial partnerships with supermarkets). This partnership can be developed through (i) direct contact by cooperative with a supermarket; (ii) meeting between the cooperative and the supermarket facilitated by the provincial or county-level PMOs; (iii) expert recommendation; and (iv) cooperative tutor and/or the market manager intermediation.

82. Pilot activities. For each of the two pilot cooperatives selected, the program will recruit (i) one graduate student as a full-time manager of the pilot cooperative-supermarket partnership, and (ii) one technical and marketing expert to provide the necessary support and services for producing and marketing high-quality and safe products. The programme will support the cooperative on technical matters such as access to seeds or seedlings as well as improved production and post-production (storing, cleaning, grading and packing) practices to complying with production standard. On the cooperative side, for every delivery to the supermarket, the marketing manager of the cooperative shall check in person on the eligibility of the products, the suitability for long-distance transport, the time of delivery, the volume requested, as well as the reliability of the transport service supplier. The program will also provide support to enhance the pilot cooperative's capacity in short-distance transport, grading, packing and cold storing of farm products as well as improved communication, connections and trainings for linking with the selected supermarket. Experience and lessons learned will be collected and disseminated for scaling up.

83. Scaling up. Future supermarket-oriented business plans (beyond the two pilot interventions) will follow the same rules as the cooperative business plans.

84. Eligible activities for pilot supermarket-oriented business plans would indicatively include: (i) Facilities and equipment for grading, washing and packing, cold storage, transport vehicle, food safety testing and computer and internet access; (ii) required training of farmers; (iii) marketing support including business development (client visit and participating in marketing activities) developing relationship with clients (inviting clients and promotion activities), brand building, certification, traceability; and (iv) working capital, annual inputs, recurrent costs.

85. Financing rules would include (i) 100% of eligible activities (and no co-financing required); and (ii) budget allocation of no more than 30,000 RMB per cooperative member.

86. Additional conditions relate to (i) ownership of the assets and equipment purchased with Program financing must remain with the cooperative; and (ii) Land transfer is allowed contingent upon the condition that it is transferred to the cooperative

Activity 3: Financing Innovative Business Plans for Agro-enterprises

87. This activity will be conducted on a limited scale (one per county). The elaboration and implementation of business plans for agro-enterprises will be guided by the same principles as in the case of cooperative business plans (see above). Selection of eligible agro-enterprises will be on a competitive basis (no more than one per county).

88. Eligible activities for agro-enterprise oriented business plans will include soft activities only (e.g. technical assistance, services, studies, trainings, participation to exposure visits/fairs, costs related to certification and traceability, branding/marketing, etc.). In the case of Ningxia, certain production-base infrastructures for private use (i.e. sprinkle and drip irrigation, greenhouses and livestock production infrastructures) will be eligible while assets, equipment, working capital, inputs (e.g. seeds, manure, fertilizers, pesticides, etc.), operational/recurrent costs will not be eligible. Eligibility criteria will be the adoption of innovative benefit sharing mechanisms.

89. Additional conditions: Enterprise co-financing contribution must be new/additional; (ii) Land transfer is not allowed; and (iii) In Ningxia, the beneficiaries of production-base infrastructures for private use must be the program primary target group (i.e. individuals whose income is ≤ RMB 5,040).

90. Financing rules: 100% of eligible costs (i.e. soft activities only); and (ii) in the case of Ningxia, 90% of production-base infrastructures for private use, provided that the beneficiaries of these activities are the program primary target group (i.e. individuals whose income is ≤ RMB 5,040). Total budget allocation per business plan will be of no more than one million RMB. Co-financing conditions would include (i) no more than 25% from Program financing and at least 75% from Enterprises; and (ii) In Ningxia, no more than 90% of production-base infrastructures for private use from Program financing; at least 10% from enterprises.

Implementation arrangements

2. Implementation arrangements for activity 1 (*Financing Business Plans for Cooperatives*) are summarised in the table below.

Activity	Implementation responsibility
Information campaign	County PMO
Recruitment of Cooperative Facilitator (CF)	County PMO
Formation of Technical Advisory Groups (TAG)	County PMO
Training and Capacity Building of Cooperatives	Provincial PMO
Formulation of Ideas and Concepts by Cooperatives	Cooperatives with support from CF, county PMO and TAG
Preparation of Cooperative Investment Plans	TAG with support from consultants
Screening of the Proposal	County PMO
Field Verification	County PMO
Evaluation and Approval	Provincial PMO
Financing Agreement	County PMO
Implementation	Cooperatives
Monitoring and Evaluation	Third party monitoring agency

3. Implementation arrangements for activity 2 (*Financing Pilot Business Plans for Linkages with Supermarkets*) are summarised below

Activity	Implementation responsibility
Recruitment of cooperative-supermarket partnership manager	County PMO
Recruitment of technical and marketing expert	County PMO
Support for access to improved inputs and technical assistance for transport, grading, packing and cold storing of products	Cooperative-supermarket partnership manager

91. Implementation arrangements for activity 3 (*Financing Innovative Business Plans for Agro-enterprises*) will follow the same mechanisms as the cooperative business plans as presented above.

92. Target group and expected benefits. This sub-component will benefit an expected 198,847 primary beneficiaries (individuals), including 92,643 in Sichuan and 106,204 in Ningxia selected from the 10 counties (5 from Ningxia and 5 from Sichuan respectively). The primary beneficiary group will be those farmers directly involved in agribusiness and value chain development activities implemented under the programme. The poor smallholder farmers, women and the ethnic minorities within the programme area will benefit the most.

93. Outreach objective is at least 30% of the registered poor in each of the program area villages will directly benefit from the supported cooperatives and pilot enterprises.

94. Expected benefits/outcomes of this sub-component include (i) stable and equitable commercial partnership established between cooperatives and buyers; (ii) enhanced capacity of cooperatives to address food safety and deal with different types of certification, Geographic Indication and Fairtrade; and (iii) enhanced entrepreneurship capacity of cooperatives, farmers, entrepreneurs and local government staff. This set of outcomes is likely improve the overall capacity of small farmers and their cooperatives to meet the market requirements.

95. Risks. Main risks relate to (i) lack of competition among buyers causing low producer price, or side-buying (breach in contract); (ii) low quality, lack of capacity to meet market requirement and side-selling on the producer side; (iii) lack of contract enforcement capacity; (iv) lack of capacity to meet certification requirements; and (v) insufficient collective capacity to enforce Geographic Indication schemes.

Sub-component 2.3: Rural finance

96. **Objective, justification and theory of change.** The objective of the sub-component is to provide technical and institutional support to leverage credit from the improved agriculture credit guarantee for the targeted cooperatives and agribusinesses. The program will support the poor and disadvantaged households for improved access to credit for market-driven value chain development. Current access to the formal credit remains limited and conditioned by a number of constraints that represent bottlenecks for the targeted beneficiaries. The improved and sustainable credit guarantee mechanism will help relieve these constraints. The institutional support to the key players of selected credit guarantee companies will improve the sustainability of the agriculture credit guarantee system with innovative services and products.

97. The theory of change linking the subcomponent to the Program Development Objective is as follows: (i) technical assistance will support good practice lending processes, increased capacity to assess credit risk, and employ a wider variety of financial products. This will lead to improved capacity to sustainably expand lending to target beneficiaries. The outcome of support will help to create sustainable sources of credit to smallholder and poor households, and cooperatives (target beneficiaries) and to support production and post-production agricultural activities. This will improve target beneficiary income and asset development. It will also strengthen value chains by improving the quantity and quality of supply to enterprise and alternative markets channels.

98. **Activities.** The sub-component will provide institutional support to the provincial level agricultural credit guarantee companies. They are equally important and closely associated to help ensure the successful implementation of value chain financing. Total base cost of the rural finance strengthening sub-component is estimated at CNY xxx million. The program will provide technical support to improve access to agricultural credit guarantee through the current services of the Sichuan Provincial Agricultural Credit Guarantee Company (SACGC) in Sichuan and the Ningxia Agricultural Credit Guarantee Company (NAIGC) in Ningxia, which will adapt their existing agricultural guarantee products and procedures to leverage greater credit supply from their partner FIs in the selected project counties. The product characteristics and procedures for accessing credit guarantee are outlined in the following paragraphs.

99. A set of agricultural credit guarantee products, which are of mixed characteristics of individual and portfolio credit guarantee models, will be adapted based on the GF current practices. Typically, a credit guarantee agreement will be reached in advance between the GF and the lending institutions to cover the project segment of value chain beneficiaries or participants under the prescribed terms and conditions. Based upon the list of recommended borrowers by the county PMO (COCAD), the GF and its mandated agent operators will undertake screening of potential borrowers and recommend candidate to the lending institution under the agreed framework of the guarantee scheme. The partner FI will award guaranteed loans to borrowers who meet with the criteria; it may also undertake its own credit assessment on the applicant if necessary. The loan is contracted directly between the credit institution and the guaranteed borrower. If the borrower defaults, the guarantee fund is bound to repay the credit institution its guaranteed share of the credit.

100. The project GF will operate on an arrangement between the two provincial-level credit guarantee companies and their partner FIs to guarantee the specific segment of potential borrowers benefiting from and (successfully) participating in the IPRAAD activities related to climate-smart production, improved post-production infrastructures and facilities, capacity development, and market and business development.

101. *Criteria* to be met by borrowers of guaranteed loans will include:

- a) Private agri-businesses (legally registered and non-registered), including micro and small enterprises in the forms of either cooperative or agri-sector companies, and individual farmer entrepreneurs such as family farms and family-based agri-entrepreneurs participating in enhanced production and value chain development of the project under components 1 and 2.
- b) No default indebtedness towards any financial institution or individual, excluding ongoing loan repayments with record of on-time repayment;
- c) Commitment to the IPRAAD's inclusiveness of the disadvantaged groups such as the poor, women, youth and ethnic minorities by demonstrating actions already taken and/or a simple but concrete action plan in either membership/share participation or employment creation for those disadvantaged groups; and
- d) Agreement of complying with all the loan contract obligations and conditions of the partner lending institution.

102. *Guaranteed loan purposes*: agribusiness connected or working on connecting to project-identified value chains, in the areas of production, processing, packing and packaging, storage, marketing and trade promotion, and transport;

103. *Guaranteed loan amount*: Individual maximum loan size will not exceed CNY 2 million. Loan amount exceeding CNY 2 million will only be taken into consideration if the segment of loans larger than CNY 2 million will not constitute more than 35% of the overall guaranteed credit portfolio under the programme framework.

104. *Guaranteed loan term*: 50% of the guaranteed portfolio for short-term (≤ 12 months) and the remaining for medium term (> 12 months - ≤ 36 months).

105. *Guaranteed loan repayment schedule*: As per lending FI's common application.

106. *Guaranteed loan interest rate*: As per lending FI's common application and in preference at market rate.

107. *Multiplier*: 1:5 or higher.

108. *Guarantee fee charge*: Maximum 2% based on the disbursed loan capital under guarantee.

109. *Risking sharing*: The GF will cover in maximum 80% of the losses and the lending institutions should cover 20% or higher depending on the portfolio risk assessment and the agreement between the GF and the lending institution. The GF will actively search for third party participation in sharing and reducing the proportion attributed to itself.

110. *Loss compensation under the risk sharing framework*: Guaranteed loan losses will be compensated by the participating GFs based on the percentage of risk sharing agreed with the partner lending FI or with the lending FI and a third-party guarantee participant.

111. *Programme portfolio GF*: SACGC in Sichuan and NAIGC in Ningxia will commit respectively a total of USD 2.6 million approximating CNY 18 million as programme value chain portfolio GF. Possible increase can be assessed at MTR, based on the GF performance and agreement between the Government and IFAD.

112. *Leveraging other GF programmes*. As both the public and private sectors tend to increase their investments in agri-sector development and value chain financing, either in the form of GF or others such as grants or subsidized interest cost. The project GF should remain open in building business alliance with those investment programmes to help further increase and improve the credit access of the project beneficiaries.

Activities on Institutional support

113. The intervention will take place in three areas: product development, technical training and exposure, action research and study. The financing of actions and activities under this intervention will be shared between IFAD loan proceeds and guarantee companies' matching resources to further demonstrate the latter's ownership of institutional strengthening, and proactivity. GF companies' contributions will be mostly accounted in the forms of participating staff's salary, equipment and materials and easily accountable operating expenditures.

114. **Product development** aims at responding to the absence of guaranteed loan products in the three specific areas, namely:

- guaranteed loan to business in the organizational form of cooperative,
- guaranteed loan for agricultural value chain financing, and
- e-commerce guaranteed credit.

115. *In PY1*, the GF company will establish a multi-disciplinary development team to undertake the internal preparation. An internal consensus should be reached among staffs, board members and veteran managers, and shareholders in order to minimize the resistance to changes and maximize the operational empowerment through product development.

116. *National study tour* will be organized, including 2-3 senior managers and 4-5 product development specialists of GF companies, one POCAD representative, and two representatives from the partner lending institutions. The exposure should take place in provinces where FIs are successful in guaranteed lending to agribusiness entities registered under both cooperative and company forms, and rural and urban micro and SME lending. A concise but well-focused analysis should be produced within three months after the study tour to help guide the drafting of Terms of Reference (ToRs) for the further technical design.

117. *In PY 2, National consulting* firms or individual consultants should be hired to undertake the prototype design and development based on the results of study tour analysis, unless the GF companies' own technical capacities can fulfill the due tasks. Operating logistics should be ensured and cost and financial analysis needs to be included in the design and development.

118. As part of the internal capacity building, the GF company's department of product development and senior technical managers should actively participate in the prototype design and development led by external consultants. The process should undergo the initial terms⁵² of the prototypes, their preliminary terms, and adjusted terms for introductory then full-scale roll-out.

119. *Field pilot testing* should take place in at least two project counties in each province, preferably from which partner lending FI representatives joined the above-mentioned study tour, once the

⁵² The three parts of a product: core, actual and augmented.

prototype development is completed. The GF company and POCAD should ensure that the field testing will undergo under actual market conditions, observing the actual use of the product and procedure in the target market, collecting feedbacks both from pilot partner lending FIs and product end-users to make related corrections and improvements. The pilot testing should last for at least six months, and preferably for 12 months to be valuable to draw some conclusions on the compatibility of the prototypes in question. National consultants can be hired to assist and monitor the field-testing, if necessary. The financial viability of the products piloted, competitive considerations and institutional factors should be revisited and the results need to be positive before moving to the full-scale implementation.

120. *In PY3, Roll-out of the new products* should take place and the GF company and POCAD will include the products and services successfully tested in its IPRED guaranteed lending portfolio, promoting the new products in the non-project area where possible. The new product launch should be a calculated and controlled introduction. The GF company's technical team along with the partner lending FIs will develop and implement an integrated marketing strategy, which should address the key issues of marketing mix such as product design, price, placement, promotion and people involved. Similarly, an integration plan should be developed to assist the new product launch.

121. In accordance with the new product or service roll-out, staff training will be conducted to prepare the operational fields and ensuring the proper functioning of related procedures.

122. *At the end of PY3 or 4, a workshop of dissemination* will be organized to share the results of new product and service development; senior officials from National ACG Association, related central and provincial regulatory agencies, senior managers from other provincial ACGCs should be invited to share the outcomes.

123. *A publication* should be prepared to document the process and results of the product development, and to be forwarded to the related regulating agencies.

124. **Technical training and exposure, action research and study** aim at strengthening the GF company's operational efficiency and supporting its continued commitment in agricultural value chain financing.

125. *In PY 1, technical training* will be conducted by GF company in association with its partner institutions for technical staff of its own and from the partner lending FIs involving in the IPRED-GF implementation. Technical details of the guarantee lending and its operational procedures need to be well explained to and understood by the involved staff of all levels. Repeat training will take place in PYs 2 and 4 for the sake of technical update and continued knowledge and skill learning and sharing.

126. *In PY 2*, technical training will also be conducted by the GF company in association with partner institutions for the potential guaranteed loan borrowers; The training will be centred on financial management of agri-business and loan utilization management.

127. *In PY 2 and 4 respectively, at least two case studies* will be conducted with thematic focus on agricultural value chain financing and another topic closely related to agricultural credit guarantee. External consultancy can be hired to assist the conduct of case studies. The ToRs of the selected case studies will be submitted to POCAD and IFAD for comments and No-Objection before operation starts. Results of the case studies will be published as part of the IPRED knowledge management and disseminated to relevant stakeholders through available knowledge sharing platform.

128. During the project implementation period and where applicable, the GF company and its partner FIs will actively participate in learning and experience sharing of IFAD Knowledge Management under the framework of country and regional platforms.

129. **Implementation responsibility.** ACGC will be responsible for implementing the subcomponent.

46. **Target group and expected benefits.** The programme beneficiaries will be twofold: The primary beneficiaries will be private agri-businesses (legally registered and non-registered), including

micro and small enterprises in the forms of either cooperative or agri-sector companies, and individual farmer entrepreneurs such as family farms and family-based agri-entrepreneurs participating in enhanced production and value chain development of the project under components 1 and 2. The Sichuan Provincial Agricultural Credit Guarantee Co. (SACGC) in Sichuan and the Ningxia Agriculture Investments Guarantee Co. Ltd. (NAIGC) in Ningxia will also benefit from the project's technical assistance for their institutional strengthening, especially in the area of improved operational efficiency through development of innovative products and services in support of agribusiness and value chain financing.

130. Expected benefits will include increased access to credit allowing for needed on-farm and post-production investments by target group.

131. **Risks.** Main risks will include (i) Targeting deviation of the guaranteed lending and project-supported VC agri-businesses fail to access to formal credit; (ii) Lack of GF adaptability to agricultural VC financing; and (iii) Delay of implementation under other technical components lead to absence of eligible borrowers.

Component 3: Program management and coordination

132. Program management and coordination will include the establishment and operation of programme management offices (PMOs) at central, province, municipal, and county levels. Program implementation will be substantially decentralised to the county level, with the provincial PMO performing overarching functions of planning, coordinating, monitoring and reporting. For their appropriate functioning, programme support to the PMOs will include office and training equipment, capacity building, planning and management workshops, monitoring and evaluation (M&E), baseline/RIMS surveys, gender sensitive trainings, study tours, knowledge management, and innovation development. The costs for provincial and municipal PMOs will be fully covered by government counterpart financing, for which special commitment will be made by the MOF/BOFs. Costs for county PMOs are 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.

Attachment 1 to Appendix 4: Business plans' main features

	1. Business Plans by Cooperatives	2. Pilot Business Plans to link cooperatives and supermarkets	3. Innovative Business Plans by agro-enterprises
Eligibility criteria	<ul style="list-style-type: none"> Demonstrated impact on poverty reduction (e.g. outreach, benefit-sharing mechanisms, etc.) 	<ul style="list-style-type: none"> Demonstrated impact on poverty reduction (e.g. outreach, benefit-sharing mechanisms, etc.) 	<ul style="list-style-type: none"> Demonstrated impact on poverty reduction (e.g. outreach, benefit-sharing mechanisms, etc.) Innovative nature of benefit-sharing mechanisms
Eligible activities for Program funding	<ul style="list-style-type: none"> Assets (e.g. storages, buildings, private water conservation systems, etc.), equipment (e.g. processing plants, etc.), and one-time inputs (e.g. seedlings) Soft activities (e.g. technical assistance, services, studies, trainings, participation to exposure visits/fairs, costs related to certification and traceability, branding/marketing, etc.) In the case of Ningxia, certain production-base infrastructures for private use (i.e. sprinkle and drip irrigation, greenhouses and livestock production infrastructures) are allowed 	<ul style="list-style-type: none"> Assets (e.g. storages, buildings, private water conservation systems, etc.), equipment (e.g. processing plants, etc.), and one-time inputs (e.g. seedlings) Soft activities (e.g. technical assistance, services, studies, trainings, participation to exposure visits/fairs, costs related to certification and traceability, branding/marketing, etc.) Working capital, annual inputs, recurrent costs 	<ul style="list-style-type: none"> Soft activities only (e.g. technical assistance, services, studies, trainings, participation to exposure visits/fairs, costs related to certification and traceability, branding/marketing, etc.) In the case of Ningxia, certain production-base infrastructures for private use (i.e. sprinkle and drip irrigation, greenhouses and livestock production infrastructures) are allowed
Ineligible activities for Program funding	<ul style="list-style-type: none"> Working capital, annual inputs (e.g. seeds, manure, fertilizers, pesticides, etc.), operational/recurrent costs 		<ul style="list-style-type: none"> Assets, equipment Working capital, inputs (e.g. seeds, manure, fertilizers, pesticides, etc.), operational/recurrent costs
Financing rules	<ul style="list-style-type: none"> No more than 85% of Program financing to assets, equipment and one-time inputs At least 15% of Program financing to Soft activities In the case of Ningxia, 90% of production-base infrastructures for private use, provided that the beneficiaries of these activities are the program primary target group (i.e. individuals whose income is ≤ RMB 5,040) 	<ul style="list-style-type: none"> 100% of eligible costs 	<ul style="list-style-type: none"> 100% of eligible costs (i.e. Soft activities only) In the case of Ningxia, 90% of production-base infrastructures for private use, provided that the beneficiaries of these activities are the program primary target group (i.e. individuals whose income is ≤ RMB 5,040)
Additional conditions	<ul style="list-style-type: none"> Ownership of the assets and equipment purchased with Program financing must remain with the cooperative Cooperative co-financing contribution must be new/additional 	<ul style="list-style-type: none"> Ownership of the assets and equipment purchased with Program financing must remain with the cooperative Land transfer is allowed contingent upon the condition that it is 	<ul style="list-style-type: none"> Enterprise co-financing contribution must be new/additional Land transfer is not allowed In Ningxia, the beneficiaries of production-base infrastructures for private use must be the

	1. Business Plans by Cooperatives	2. Pilot Business Plans to link cooperatives and supermarkets	3. Innovative Business Plans by agro-enterprises
	<ul style="list-style-type: none"> Land transfer is allowed contingent upon the condition that it is transferred to the cooperative In Ningxia, the beneficiaries of production-base infrastructures for private use must be the program primary target group (i.e. individuals whose income is ≤ RMB 5,040) 	transferred to the cooperative	program primary target group (i.e. individuals whose income is ≤ RMB 5,040)
Co-financing requirements	<ul style="list-style-type: none"> The Program will cover 100% of the costs of the eligible activities in the Business Plans Cooperatives are expected to cover all the costs in the Business Plans related to labour, working capital, annual inputs, operational/recurrent costs) In Ningxia, no more than 90% of production-base infrastructures for private use from Program financing; at least 10% from cooperatives 	<ul style="list-style-type: none"> 100% Program 	<ul style="list-style-type: none"> No more than 25% from Program financing, At least 75% from Enterprises In Ningxia, no more than 90% of production-base infrastructures for private use from Program financing; at least 10% from enterprises
Ceilings	<ul style="list-style-type: none"> No more than 30,000 RMB/cooperative member 	<ul style="list-style-type: none"> No more than 30,000 RMB/cooperative member 	<ul style="list-style-type: none"> No more than 1,000,000 RMB
Selection modality	<ul style="list-style-type: none"> On a competitive basis (no minimum allocation per county) 	<ul style="list-style-type: none"> By the supermarket, based on the capacity of the cooperative to meet the required volumes/ quality standards One pilot per Province 	<ul style="list-style-type: none"> On a competitive basis (no more than one per county)
Outreach objective	<ul style="list-style-type: none"> At least 30% of the registered poor in each of the program area villages will directly benefit from the supported cooperatives and pilot enterprises. 		

Attachment 2 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 (Attachment 1).

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.*

(see Sample Table: Attachment 2)

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 were 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 programs, 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?

Appendix 5: Institutional aspects and implementation arrangements

A. Program Management and Coordination Arrangements

1. The IPRAD program will be implemented over a period of six years, across 10 counties/districts within one province (Sichuan) and one autonomous region (Ningxia).
2. Somewhat different from the ongoing projects of the China portfolio, the IPRAD Programme will introduce new management modality, which expects loan borrowing and debt repayment by central government and overall programme management and coordination by a national level entity, namely the State Office for Comprehensive Agricultural Development (SOCAD). Such arrangement responds to the call by the IFAD China COSOP for enhanced country program impact through better knowledge management and institutionalization of the replication and scaling agenda of the partnership.
3. SOCAD, a department within the MOF, and with offices at the provincial (POCADs) and county levels (COCADs) throughout the country, is tasked to develop policy and programming for integrated agricultural development with central fiscal financing. SOCAD through its national system also manages, implements and supervises these programs. The agriculture related technical agencies at provincial and especially at county levels provide supporting and sometimes implementation role for SOCAD programs and projects. Thus SOCAD has both the fiscal availability and managerial capacity and experience for domestic projects in the agricultural sector, and it has also gained donor projects experience (e.g. World Bank) by managing World Bank project since 2014.
4. For IPRAD, a **National PMO (NPMO)** will be set up within SOCAD. It will have the primary responsibility of program coordination and management support, administration of programme resources, monitoring and reporting, as well as ensuring adherence to agreed standards, guidelines, and procedures, and supervising the program implementation in the two provinces.
5. Particularly, SOCAD will have primary responsibilities among others in: (i) administer the Designated Account and program resources including the IFAD loan and counterpart funds; (ii) overseeing the use of program resources and program procurements; (iii) ensuring effective flow of funds for program implementation; (iv) providing appropriate technical and implementation support to the provinces; (v) coordinating and undertaking knowledge management activities by facilitating intra-knowledge transfer among programme provinces and with domestic and international agencies; (vii) monitoring and evaluation.
6. Specific implementation responsibilities of the program rest with the provinces, more specifically the program counties. In both Sichuan and Ningxia, provincial level (POCAD) and county level (COCAD) offices of the SOCAD shall take lead.
7. Program management offices will be established at provincial (**PPMO**) and county (**CPMO**) levels within the POCADs and COCADs offices of the participating province/region. In GuangAn of Sichuan however, the prefecture Bureau of Finance and POCAD will provide coordination and financing support to the program implementation in GuangAn District, acting somewhat as a prefecture PMO.
8. PPMOs and CPMOs will be in charge of day to day program management, focusing on overseeing program designs, implementing and supervising programme activities, arranging for counterpart-funding, preparing annual work plans, financial plans, procurement plans, program monitoring and evaluation and reporting. The implementation of program activities in the counties will be carried out by relevant technical agencies wherever possible, building on the prevailing inter-agency partnership model of the SOCAD projects.
9. The Provincial PMO (PPMO) and each county PMO (CPMO) shall be staffed with staff who have experience in program management, financial management, procurement, and monitoring and evaluation, comprising at a minimum of an executive director, an accountant, a cashier, a planning

officer, an M&E officer and an implementation coordinator. CPMO consisted of additional staff members seconded from the related technical bureaus (e.g. Water Resources, Agriculture, Forestry, and Finance) will be a desired model in IPRAD. Given the nature of the programme, a value chain facilitator will be positioned in the CPMO to facilitate and oversee the program implementation in this respect.

10. The responsibilities of **PPMO** will include, among others:

- (a) Consolidation of AWPBs and coordinate program implementation;
- (b) Establishment of programme M&E system and undertaking program monitoring and supervision;
- (c) Training and coaching of CPMOs and implementing agencies (IAs) in terms of program implementation and management;
- (d) Support the financial management of the program, including processing reimbursement of programme expenses and withdrawal of funds;
- (e) Undertaking and overseeing procurement under the program;
- (f) Programme reporting;
- (g) Organising program baseline and RIMS surveys;
- (h) Promoting program knowledge management.
- (i) Supporting county PMOs in identifying eligible target groups and enterprises, cooperatives for participating in the program, as well as reviewing and arranging support to business proposals that promotes pro-poor value chain development.

11. **CPMOs** at county level are the key driving force for the successful implementation of the programme in the counties. Their responsibilities include, among others:

- (a) Development of AWPBs through participatory approaches;
- (b) Coordination and supervision of program implementation;
- (c) Provision of appropriate training to IAs, township program Facilitators (TPFs) and village implementing groups (VIGs) and other partners in terms of programme strategy and implementation requirements;
- (d) Preparation of claim documents for reimbursement;
- (e) Transfer or monitoring the transfer of program funds to implementing agencies (IAs) on time;
- (f) Organising and/or monitoring of program procurement;
- (g) Undertaking program M&E and reporting; and
- (h) Promoting program knowledge capturing and sharing;
- (i) Applying eligibility criteria to identify target groups and enterprises, cooperatives for participating in the program; Facilitate pro-poor value chain development through fostering partnership and capacity building among these groups.

12. At township level, a **Township Implementation Support Office (TISO)** will be established consisting of 3-4 existing staff with the township government, utilising existing facilities on a part-time basis. The main responsibility of TISO is on planning, implementation support, monitoring and reporting of program activities in programme villages. Specifically the TISO will:

- (a) Oversee the implementation of program activities in the township;
- (b) Identify and ascertain eligibility of participating enterprises, cooperatives and villages in line with program targeting strategy;
- (c) Facilitate village-level mobilization and validate activities to be implemented in line with programme objective;
- (d) Review activity prioritization of the township and extent of poverty coverage;
- (e) Coordinate the township technical stations/centres and other participating partners in program implementation;
- (f) Consolidate the M&E data collected by VIGs, enterprises and cooperatives and report to CPMOs; and
- (g) Liaison with target villages, farmer cooperatives and enterprises within the township.

13. At village level, **Village Implementation Groups (VIG)** would be established in the programme-targeted villages, taking advantage of similar existing set-up there, to ensure appropriate

targeting, mobilise household participation and monitor programme activities. 3-4 poor beneficiaries and not less than 40% of women representatives in the VIGs shall be maintained. VIG will also facilitate organising the operation and maintenance of community infrastructure built by the program, where relevant.

14. **Farmers' organizations** including Water User Associations (WUAs), Farmer Cooperatives (FCs) and their Associations (FAs) and FCs will also participate in the implementation and monitoring of program 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 program. Similarly FAs/FCs will be involved in value chain enhancement activities and monitoring the implementation of program 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. Given that SOCAD/POCAD/COCAD are internal entities of the Finance Ministry/Department/Bureau of the same level, they will, in de facto, undertake majority of the fiduciary roles of the program under the overall leadership of the later, such as: (i) opening and management of the Program Accounts; (ii) administering the program resources including the IFAD loan and counterpart funds; (iii) reviewing and approval of the financing needs of program implementation; (iv) overseeing the use of program resources; (v) ensuring effective flow of funds for programme 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.

16. **Programme Leading Groups (PLGs):** At the provincial/county level, PLGs will be established to provide overall guidance and coordination of the program 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 Program Management Office's (PMO) operations; (ii) coordination of counterpart funds for carrying out the program; (iii) review and approval of program Annual Work Plan and Budgets (AWPB); and (iv) coordination of implementing agencies in implementation. PLG comprising representatives from local government and line bureaus including Finance, Water Resources, Agriculture, Forestry, Environmental Protection, Poverty Alleviation, will be established at the provincial and county levels to provide leadership, policy guidance, and strategic directions to the PMOs within their respective jurisdiction. PLGs will convene meetings as and when required, but at least once a year, to receive reporting from PMOs on the programme implementation status and prevailing issues and provide guidance for further implementation.

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

B. Program Institutional and Implementation Arrangements

18. The IPRAD program will be implemented over a period of six years in 10 counties/districts of two province/region. The lead program implementing agencies are SOCAD at the national level, POCADs at the provincial/regional level, and COCADs at the county/district level. The SOCAD system is under the administrative jurisdiction of the Finance ministry/department/bureau at the respective levels. Line technical bureaus at county level will participate in the execution of specific programme activities in line with their mandate.

19. PLGs, established by decree of the appropriate government authorities at province and county levels, will be responsible for overall coordination and administration of the program implementation. PLGs act as steering committees that oversee programme implementation and provide strategic direction and guidance to the implementing agencies on policy matters, and program planning and implementation. They periodically evaluate implementation progress, facilitate inter-departmental coordination, and resolve any conflicts among institutions.

20. The **National PMO** will be set up within SOCAD. It will have the primary responsibility of program coordination and management support, administration of program resources, monitoring and reporting, as well as ensuring adherence to agreed standards, guidelines, and procedures, and supervising the program implementation in the two provinces.

21. To facilitate the success of the program in pursuing effective models in agribusiness led rural poverty reduction, provisions will be made for SOCAD to acquire technical/advisory services from national agencies or other sources as appropriate and during implementation. Such engagement is considered helpful especially when scaling up and replication of program success is envisaged which may also generates policy contributions. Third party monitoring and evaluation will also be considered for IPRAD either at national or at local level.

22. Program management training for the NPMO and PPMOs will be organized by SOCAD, and training for CPMOs will be organized by PPMOs. Domestic study tours will be organized by PPMOs. Overseas training and study tours will be organized by SOCAD while financing will be covered by program budget for participating institutions. Office equipment for provincial and county PMOs will be procured by the concerned PMOs.

23. Specific implementation responsibilities of the program rest with the provinces, more specifically the program counties. In both Sichuan and Ningxia, provincial level (POCAD) and county level (COCAD) offices of the SOCAD will be the Program Management Offices (PMO). PMOs will focus on planning, coordinating, monitoring and reporting of the program, while implementation of program activities in the counties will be carried out by relevant technical agencies wherever possible, building on the prevailing inter-agency partnership model of the SOCAD projects.

24. Budget allocations will be made to enable the function of the provincial and county PMOs, to cover investment and recurrent expenses relating to vehicles if necessary, office and training equipment, capacity building, M&E, knowledge management, and agribusiness promotion. Modest programme support will also be provided for program support 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. Village implementing groups (VIGs) will also be financially supported to carry out their responsibilities under the program which will include the household mobilization, coordination and monitoring of program activities in the villages.

25. **Department/Bureaux of Finance (DOF/BOF):** Given that POCAD and COCAD are offices embedded in the Department/Bureaux of finances at the same level, the responsibilities of DOF and BOFs will mainly be supporting the POCAD/COCAD in managing both the IFAD and domestic resources of the program financing. Therefore their role will include the following:

- (a) Management of the flow of funds to the PMOs and implementing agencies;
- (b) Review and approve the financing needs of program implementation;
- (c) Ensure transfer or on-lending of the loan proceeds and supervise their use;
- (d) Manage program accounts and other tasks related to financial management including the preparation and submission of withdrawal applications;
- (e) Oversee the program implementation and supervise the assets built by the programme in accordance with applicable rules and regulations.

26. The program has two major components, namely Support to Production and Strengthening Post-Production Functions. It covers a number of activities including the improving production infrastructures especially irrigation facilities, establishment of product bases, improvement of post

production facilities and infrastructures, support farmer cooperatives, development of business services, value addition and marketing support. Implementation of these activities, including related trainings for beneficiaries and the development of operation and maintenance mechanisms of programme outputs, will remain with the CPMOs and implementing agencies at county level. Promotion of post-production functions especially relating to non-tangible investments will be under the overall coordination of the CPMOs. The implementation responsibility for related sub-component activities and the related implementation responsibilities are outlined as follows.

27. **Bureaus of Water Resources (BOWRs).** The county BOWRs will undertake the responsibility of supporting COCAD in implementing the activities for improvement of production infrastructures, especially relating to constructing or rehabilitating of water and irrigation schemes, as well as the operation and maintenance of the schemes and facilities, particularly those on a large scale. Their responsibilities include, inter alia, (i) the identification of eligible villages suitable for carrying out the interventions, within the list of selected villages confirmed by the CPMOs; (ii) detail design of the works by site in cooperation with the TISOs and VIGs ; (iii) organising the construction of the infrastructure; (iv) facilitating the formation of interest groups for the operation and maintenance of programme works; and (v) reporting to the CPMOs on the progress and results of activity implementation.

28. Qualified experts will be mobilized from BOWRs for technical assistance and training. Civil and consultancy works will be implemented by qualified construction and consultancy contractors, selected following government tendering procedures in compliance with relevant IFAD guidelines. The WUAs and IMGs will be established before the commencement of specific infrastructure improvement activities, be sufficiently involved in system planning, design and construction supervision and take over the O&M responsibilities after the completion of construction.

29. **Bureaux of Transportation (BOTs).** The county BOTs will be delegated with the responsibility of implementing the on-farm roads for production purpose and village roads construction for better market access, under the coordination of CPMOs. Their responsibilities include, inter alia, (i) the identification of eligible villages suitable for carrying out the activities, within the list of selected villages confirmed by CPMOs; (ii) detail design of the works by site; (iii) organising the implementation of the roads construction; (iv) facilitating the formation of interest groups for the operation and maintenance of the programme works; and (v) reporting to CPMOs on the progress and results of activity.

30. Qualified experts will be mobilized from BOTs for necessary technical guidance and training. Civil works will be implemented by qualified construction contractors, selected following government tendering procedures in compliance with relevant IFAD guidelines. The IMGs will be established before the commencement of specific infrastructure improvement activities, be sufficiently involved in system planning, design and construction supervision and take over the O&M responsibilities after the completion of construction.

31. **Bureau of Agriculture (BOA).** The county BOAs will be responsible for production base establishment relating to crop and livestock production activities, under the coordination of the CPMOs. Their responsibilities include, inter alia, (i) the identification of eligible townships/villages/cooperatives with given criteria; (ii) identification of target households for carrying out the activities, together with VIGs; (iii) identification and adjustment of the productive activities to fit local conditions and overall sector planning; (iii) technical support and follow-up services to beneficiaries of activities; (iv) facilitating the formation of beneficiary groups by trade and linking them with relevant farmer cooperatives, and; (v) reporting to CPMOs on the progress and results of activity implementation.

32. Technical services for production activities are provided through their technical service network, including the Agro-Technical Extension Stations, Soil and Fertilizer Stations, Plant Protection Stations, Cash Crop Working Stations, Agricultural Industrialization Offices, Green Food Development Office, Seed Administration Stations, and Seed Companies.

33. **Bureau of Forestry (BOFR).** The county BOFRs will be responsible for the production base establishment relating to agro-forestry produces, as well as the support to development of farmer cooperatives in agro-forestry produces in the program area, under the coordination of the CPMOs. Their responsibilities include, inter alia, (i) the identification of eligible townships/villages/cooperatives with given criteria; (ii) identification of target households for carrying out the activities, together with VIGs; (iii) identification and adjustment of the activities to fit local conditions and sectoral development planning; (iii) technical support and follow-up services to beneficiaries of activities; (iv) facilitating the formation of beneficiary groups by trade and linking them with relevant farmer cooperatives,; and (v) reporting to CPMOs on the progress and results of activity implementation.

34. Both BOA and BOFR will support the programme in adopting climate smart and environmental sustainable agricultural practices, by integrating in the agricultural practices (i) the adoption of climate-friendly inputs (e.g, drought and pest-resistant crop varieties, soil organic matter incorporation, soil mulching, and appropriate crop rotations), (ii) increased awareness among beneficiaries of the risks associated with climate change, and (iii) provision of technical assistance (TA) and training to beneficiaries at the household and cooperative levels to adopt soil conservation and water-saving measures.

35. **Rural Economic and Cooperative Management Bureau (RECMB).** The RECMB is the main agency responsible for supporting cooperatives and cooperative development in the programme areas, RECMB is usually affiliated to the Bureau of Agriculture.

36. The RECMB at the county level will be responsible for supporting the COCADs in implementing the programme activities relating to supporting farmer cooperatives in the program areas. The specific role of RECMB will mainly focus on supporting farmer cooperatives in business planning and operation, cooperative governance and management, promotion of food quality and safety, as well as product branding and marketing. Cooperative infrastructure improvements and added-value facilities/equipment will be procured by CPMOs following government tendering procedures in compliance with relevant IFAD guidelines. Technical services maybe acquired following relevant procurement regulations from competent providers with involvement of RCEMB.

37. RECMB will implement all training activities for cooperative promoters, cooperative leaders, managers and members. The RECMB cooperative promoters will receive training through the programme to strengthen their own capacities for supporting both the economic and social aspects of cooperative operations, and in turn will work directly with cooperatives to strengthen their management, governance and overall operations. The program will supplement the skills of promoters with additional training in participatory/adult education training methods, gender awareness, poverty awareness, business management skills and supply chain understanding.

38. In addition, there are also other technical Bureaux in the program counties who will be responsible for supporting the CPMOs in undertaking the implementation of specific programme activities that fall within their respective mandate. Such bureaus include such as Land Management (BLM), Environment Protection Bureau (EPB), Women Federation (WF), Bureau of Meteorology (BOM). The program will call for the participation of such technical institutions when finalizing the PIM and when the CPMOs making their respective operational manual.

Summary of Implementation Arrangements

Components Activities	Responsibilities	Relevant Institutions
Construct or rehabilitate production infrastructure	<ul style="list-style-type: none"> - Identification of eligible villages with given criteria for carrying out the activity, within the list of selected villages confirmed by CPMO; - Detail design of the works by site; - Organize implementation of the activity; - Facilitate the formation of interest group for O&M of programme works; - Report to CPMO on the progress and results of implementation. 	<ul style="list-style-type: none"> - CPMO - BOWR

Pavement of village roads	<ul style="list-style-type: none"> - Identification of eligible villages with given criteria for carrying out the activity, within the list of selected villages confirmed by CPMO; - Detail design of the works by site; - Organize implementation of road construction; - Facilitate the formation of interest group for the operation and maintenance of program works; and - Report to CPMO on the progress and results of implementation. 	<ul style="list-style-type: none"> - CPMO - BOT
Production base establishment	<ul style="list-style-type: none"> - Identification of eligible villages within the list of selected villages confirmed by CPMO; - identification of target households for carrying out the activities, together with VIGs; - Identify and adjust of the activities to fit local conditions and sectoral policy; - Technical support and follow-up services to beneficiaries of activities; - Facilitate the formation of beneficiary group by trade and link them with relevant farmer cooperatives, or facilitate the establishment and operation of new farmer cooperatives wherever no cooperative is reachable by the beneficiaries, if needed; and - Report to CPMO on the progress and results of implementation. 	<ul style="list-style-type: none"> - CPMO - BOA - BOFR
Environmental smart agriculture	<ul style="list-style-type: none"> - the adoption of climate-friendly inputs (e.g, drought and pest-resistant crop varieties, soil organic matter incorporation, soil mulching, and appropriate crop rotations) - increasing awareness among beneficiaries of the risks associated with climate change, - provision of technical assistance (TA) and training to beneficiaries at the household and cooperative levels to adopt soil conservation and water-saving measures. 	<ul style="list-style-type: none"> - BOA - BOFR
Provision of post production facilities	<ul style="list-style-type: none"> - Identification of eligible farmer cooperatives and beneficiaries to be supported by the program, with given criteria; - Organize procurement equipment and facilities; - Supervise the cooperatives' services to the program target groups; - Monitor and evaluate results of program support 	<ul style="list-style-type: none"> - CPMO
Support to farmer cooperatives	<ul style="list-style-type: none"> - Identification of eligible farmer cooperatives to be supported by the program, with given criteria; - Provision of infrastructure and facility for cooperatives; - Facilitate cooperatives to enhance their capability of internal management and services. - Supervise the cooperatives' services to the program target groups; - Provide training and business development services for pro-poor value chain development - Coordinate training to be delivered by other agencies and private service providers to strengthen cooperative operations 	<ul style="list-style-type: none"> - CPMO - RECMB
Business Development Service	<ul style="list-style-type: none"> - Identification of eligible cooperatives or enterprises to be supported by the program, with given criteria; - Identify/assess capacity needs; - Provide entrepreneurship training and technical services to cooperatives; - Follow up on business development linkage with program supports 	<ul style="list-style-type: none"> - CPMO
Rural financial service for value chain development	<ul style="list-style-type: none"> - Identify needs for rural financial services - Identify of eligible cooperatives and enterprises to be supported by the programme in rural financial service - Development and implement appropriate RF schemes - Monitor and evaluation performance of RF schemes 	<ul style="list-style-type: none"> - CPMO

TORs of KEY PMO STAFF

1. For successful implementation of the Program, a programme 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 program implementation, manage the program resources, monitor program implementation, report on implementation progress on a six-monthly basis and program impact on required basis, and to ensure that program'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 program implementation. The overall responsibility is to coordinate the PMO staff, relevant institutions and implementing agencies to ensure that the program implementation complies with the programme 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 program property, documentations, data and records are filed and kept properly;
 - Plan and organise necessary trainings and workshops for PMO staff and other relevant program personnel to raise their capacity, awareness, and responsibility senses of program implementation, particularly the trainings on program 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 program implementation plan, particularly AWPBs, in accordance with program strategy and approach, including the identification and selection of target villages and beneficiaries for each activity and the adaptation of program activities to local conditions;
 - Coordinate relevant institutions to ensure timely allocation of program resources to the implementing agencies to carry out the program, including IFAD loan and counterpart funds, and monitor the use of program resources to ensure that the program fund are not misused;
 - Supervise the implementation of AWPBs to ensure that the program 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 program 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 program objectives.
3. **M&E Officer:** The M&E officer, under the guidance of programme director, will undertake the responsibility of monitoring the program implementation, including program progress, achievements, availability of resources, expenditures, targeting, and gender mainstreaming, and collecting relevant data and reporting to programme director to ensure that the program

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

- Develop program 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 program by component ;
 - Monitor the allocation and flow of program 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 program and if the funds are used properly;
 - Cooperate with relevant implementing agencies to monitor if the implementation of programme targets to the poor and women appropriately in accordance with the program strategy;
 - Assist programme director to plan and organise assessments/evaluations of program 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 program 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 programme activities are implemented in accordance with the program strategy and approach.
4. **Programme Accountant:** The program accountant, under the guidance of program director, will take the responsibility of managing the Program Account, i.e. maintaining a separate account and records, preparing financial statements of the operations, resources and expenditures related to the program, setting up accounting subjects, transferring program resources to relevant implementing agencies, preparing withdrawal application and documents, to ensure that the program resources are well managed and used for program implementation in line with the Loan Agreement and the approved AWPBs. His/Her specific responsibilities are as follows:
- Work out, under guidance of program director, financial management regulation, and set up accounting subjects for the management of program resources;
 - Open a program account under the guidance of program director, maintain a separate account and records and thereafter prepare the financial statements of the operations, resources and expenditures related to the program, 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 program funds by subjects, and properly file and retain the records evidencing program 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 program account, timely transfer of program funds to relevant implementing agencies for carrying out the program;
 - Supervise the use of program 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 program account and in the preparation of financial statements of the operation, resources and expenditures related to the program and withdrawal applications.

5. **Value Chain Facilitator:** The Value Chain Facilitator (VCF) is an important member and function of the program management team both at the provincial and county levels, given that the success of the program is largely footed on the establishment of sustainable market linkages for targeted farmers along with the development of agribusiness in the program area. Under the overall guidance of the program director(s), the VCF will take the main responsibilities of overseeing program 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 program targeting strategy;
- finalize/improve the eligibility criteria for agribusinesses and identify/screen the eligible agribusinesses for participation in program;
- develop terms of reference for various advisory/training/studies called for by the program, 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 program support to implement the business plans and related capacity development and business enhancement services;
- conduct and facilitate training to the agribusinesses, beneficiaries and participating program institutions/township/villages;
- monitor program implementation in relation to post production functions, participation of and program 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 program area;
- coordinate the development of workplan and budget relating to the agribusiness elements of the program activities. Contribute to regular program reporting on program 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 program.

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

A Planning

1. **AWPB:** Planning for the proposed programme 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 programme implementation. It will include, among other things, the financial and physical progresses that have been made, a detailed description of planned programme 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 programme fiscal year before its implementation.

2. AWPBs should be drafted by SOCAD 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 programme. 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 deem approved by IFAD. Programme 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.

3. 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 programme area, with the understanding that: (i) the specific location for each of the programme activities has still to be finalized during programme appraisal and if necessary, during implementation; (ii) the programme 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 programmes 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.

4. **Link with M&E and knowledge management:** Annual work plans and budgets need to be formulated with a view to achieving the program’s intended results, and cognizant of existing challenges and opportunities. Therefore, an important basis of formulating AWPBs is the programme Logical Framework (logframe) that sets up the programme 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 programme 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 programme logframe will need to be revised.

AWPB Outlines:

5. 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 programme 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 programme 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 programme 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 programme'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 programme 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 programme 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 programme 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		AWPB for coming year				Focus Level ⁵³				
	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 programme 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 programme financiers and suggested measures to overcome these constraints.

iv. Procurement:

- **Procurement plan:** Highlight any major changes in procurement as compared to the 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, by “category”, 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	Programme 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
Category-C: Poverty households				
Category-B: Vulnerable households				
Category-A: Better-off households				
Women				
Men				
Youth⁵⁴				

⁵³ Focus level: from the least focus 1 to the highest focus 5.

vi. Implementation support needs: This section presents the support needs currently identified in programme 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?

6. 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, programme 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.

B Monitoring and evaluation

7. The programme will establish an effective and efficient M&E system from national level (within central SOCAD) to provincial PMO through county PMOs down to the VIGs. 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.

8. The special features of the IPRAD M&E system will include (these features are discussed in the sections below):

- a) A consolidation role led by central SOCAD 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 programme M&E and SOCAD/national M&E system as well as MOA's key performance indicators, also to be reflected in the programme MIS system; and (ii) ensuring that SOCAD 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 program, in line with the government's poverty eradication effort. Therefore, the IPRAD programme 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 programme implementers and decision makers, through a user-friendly MIS system⁵⁵ 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.

⁵⁴ As per national definition of youth.

⁵⁵ See Terms of Reference for MIS development attached.

- d) Investment in the M&E capacity at implementation level, by recruiting an M&E specialist in each provincial PMO⁵⁶ 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.
- f) The option of testing/piloting a performance-based allocation system in the program (and related M&E requirements).

9. The M&E specialist to be recruited in each PPMO, and designated officers in CPMOs, will be responsible for monitoring programme implementation, sharing progress, experience and lessons learnt semi-annually and annually with all stakeholders in order to improve programme implementation and finally achieve programme objectives. In order to ensure an effective functioning of the M&E system, an M&E start-up workshop for the IPRAD Programme 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 programme implementation, M&E training will be held on as-required basis, but at least once a year.

10. The programme logframe has been set-up based on the programme 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 programme M&E and will be subject to adjustment during implementation of the programme, as required. Activity implementation and direct output indicators, although not listed in the logframe, are to be included and monitored in the MIS.

11. 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.

12. **Overview of IPRAD M&E system structure and processes:**

- (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 IPRAD MIS system.
- (ii) Outcome and impact assessment and evaluation: data to be collected from households in the programme 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.

⁵⁶ See Terms of Reference for PPMO M&E Specialist in separate attachment.

- (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 SOCAD 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

13. Implementation monitoring will focus on the programme 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)⁵⁷. For this purpose, monitoring data should be collected at the grassroots level (VIG) or by IAs, depending on the nature of indicators. In general, the state of benefits and participation at the levels of households and individual beneficiaries will be undertaken through the grassroots recording and reporting by VIGs and producer cooperatives.

14. Cooperative-level capacity development and related improved performance will be recorded and reported by implementing partners, and through an annual survey of all programme-supported cooperatives. It was further agreed that all cooperatives will be required to use a standardized management and accounting software, such as the one developed by China's Ministry of Agriculture which is provided for free to all registered cooperatives. Data from this software can be used to report on outcome-level logframe indicators, e.g. increased sales values or productivity changes. The CPMOs will organise the collection of data in accordance with the agreed indicators and report semi-annually and annually through the provincial PMO to IFAD. For this purpose, an operational data collection system of monitoring indicators will be established from the grassroots level (VIG and cooperatives) up to the PPMO. Frequency of reporting and responsibility is further defined in the appropriate log-frame columns.

15. 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 programme 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 programme development objective level.

ii. Outcome and impact assessment and evaluation

16. Evaluation is an instrument for assessing changes caused by interventions or timing. It will focus on the outcomes and impact of the programme. Outcome and impact indicators for the programme are set up based on the criteria of measurability, pertinence and sensitivity to change, while following the principles of: (i) building on existing indicators; (ii) harmonizing with other frameworks such as the National Poor Registration System and the Sustainable Development Goals (SDG); (iii) minimizing the number of indicators to be collected; (iv) relating to programme components; and (v) addressing the programme strategic needs.

⁵⁷ IFAD will provide SOCAD with the revised Results and Impact Management System (RIMS) guidelines.

17. There are generally four types of programme evaluations that are used for different purposes and carried out at different stages, i.e. formative evaluation, process evaluation, outcome evaluation, and impact evaluation. Outcome evaluation will be conducted annually and impact evaluation will be conducted three times during the programme implementation, including the baseline survey at appraisal, and subsequent surveys prior to Mid-Term Review and that at project completion.

- (a) **Outcome evaluation:** The evaluation is specifically designed to attribute the short to midterm changes to the intervention itself. At the very least, this type of evaluation has to be able to plausibly link observed outcomes to a well-defined programme, and to demonstrate that changes are not the result of non-programme factors. The primary data collection method will be the annual outcome surveys.
- (b) **Impact evaluation:** True impact evaluation, able to attribute long-term changes to a specific programme, would require the establishment of an experimental programme design with a control group. Since this was not considered feasible for this programme, data on impact indicators taken in conjunction with process and outcome evaluations will be considered to be sufficient to indicate the overall impact. The main instruments for assessing the impact of a programme are the baseline survey before implementation, the mid-term survey before mid-term review, and the completion survey at completion. Each survey will include, inter alia, the RIMS indicators and emphasize the improvement of household assets. It should be stressed that baseline indicators that reflect the poverty status of programme area before programme implementation will be used as references against those measured in succeeding mid-term and completion surveys. As such, the same sampling approach and data collection instruments need to be used for all three surveys for consistent and comparable purposes.

It should be noted that the existing National Poor Registration System (NPRS) provides an excellent basis for impact evaluation of the IPRAD Programme. This system 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). 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. The total number of nationally registered poor is updated on a regular basis and at the end of each year⁵⁸. If IPRAD will be using the NPRS for the poverty impact evaluation, the attribution should be high as the IPRAD programme will be the only intervention on poverty reduction through value chain and rural finance development taking place in the programme area⁵⁹.

iii. Annual cooperative performance assessment

18. Data on the cooperatives' financial performance will come from the management and accounting software, to be used by all programme-supported cooperatives⁶⁰. In addition, it is important to understand the management practices, business planning processes and pro-poor profit

⁵⁸ It declined from 100 million in 2012, to 82.5 million in 2013, to just over 70 million at end-2014, and to about 56 million as of end-2015.

⁵⁹ Other interventions will take place in the programme area but not specifically on the value chain development for poverty eradication.

⁶⁰ The China Ministry of Agriculture provides a free software package that is readily available for download for all registered cooperatives.

sharing mechanisms of each supported cooperative, with a view to (a) providing feedback to the cooperative management to help them improve their business practices, and (b) obtaining performance monitoring data for logframe indicators. Therefore, a third party will be tasked with carrying out an annual performance assessment of all supported cooperatives, with guidance and supervision from the PPMO M&E Specialist. Dimensions to be assessed include, but are not limited to:

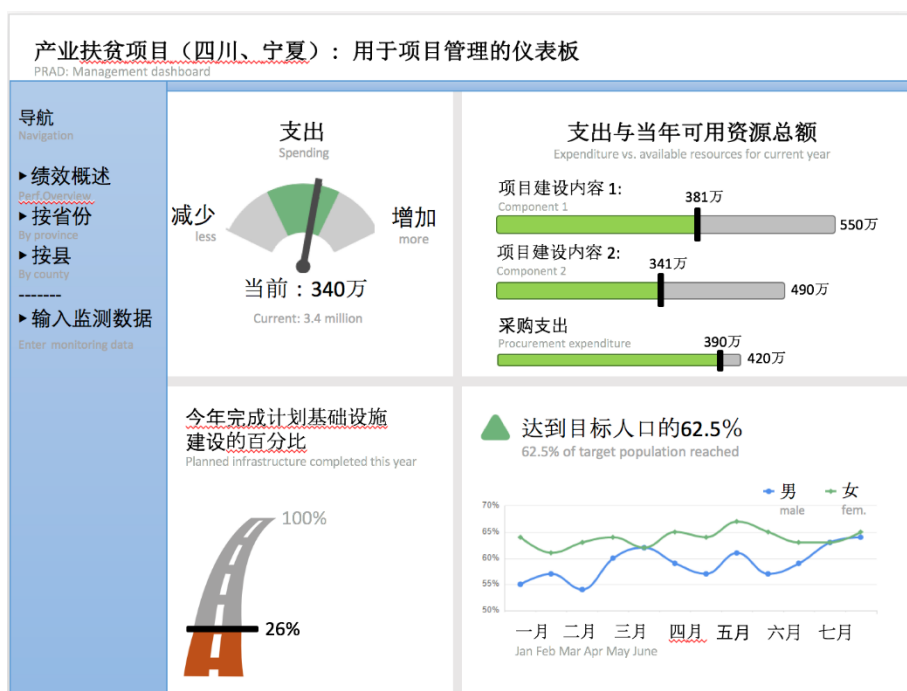
- Membership size and profile of each cooperative (number of members; sex; age; ownership share in cooperative; number of registered poor);
- Management composition (share of women and smallholders, i.e. those who own less than 5% shares);
- Management practices (frequency and transparency of meetings; disclosure of financial records to members; record keeping);
- Business planning (business plan available and up-to-date; comparison of plan with actual implementation);
- Services provided to members (list of services; number of members reached);
- Information dissemination (to members; to external stakeholders);
- Existing market linkages (number and kind of external linkages);
- Market research and intelligence (activities undertaken related to forecasting; demand analysis; price development).

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

19. A web-based Management Information System (MIS) will be established that is – ideally – integrated with SOCAD'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 IPRAD 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 IPRAD programme: 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 SOCAD to make programme data accessible across counties and provinces so they can compare their performance with each other, which can provide strong motivation for better performance.

20. The IPRAD logframe has been designed according to IFAD RIMS guidelines and already incorporates RIMS core indicators. RIMS is therefore not a parallel performance monitoring system, but fully integrated into the IPRAD M&E system via the logframe. Some background information on RIMS is provided in the following. There are three levels of RIMS indicators:

- (a) First-level results (outputs): Development programmes 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 programmes, are many and constitute the bulk of management information.
- (b) Second-level results (outcomes): Development programmes 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 programme 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 programme, with a degree of probability and over time (e.g. increased productivity of irrigated crops leads to increased assets and improved nutrition).

21. 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.

22. RIMS survey is an important tool for the impact evaluation of IFAD-funded programmes and it will be carried out three times during the six years of implementation of the programme, including a baseline survey, a mid-term survey before mid-term review, and a completion survey for assessment of programme 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 programme areas at the beginning of programme 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.

C Result-based allocation

23. It is proposed that a result-based allocation system be piloted under the IPRAD programme. During the appraisal mission it was discussed that, for administrative reasons, a result-based allocation will be implemented once at mid-term of the programme at the provincial level, based on

the differential performance of the provinces as recorded in the MIS. The exact modalities how to implement this will be proposed by SOCAD.

D Learning and knowledge management

24. The programme knowledge management strategy draws on the experiences of previous and on-going IFAD programmes 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 programme objectives; M&E will monitor and evaluate the results of programme 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 programme implementation. So will be the production of programme newsletters and cross review of programme implementation between counties;
- c) RIMS surveys (baseline, midline, completion) will be carried out regularly to assess the programme impact and draw experiences for subsequent implementation and for other IFAD programmes;
- d) VIGs and small producers' cooperatives will participate in the programme planning and M&E, which will improve their internal planning and management capacity as well as the programme's sustainability;
- e) Knowledge sharing among programmes will also be achieved through cross-programme visits, participation in country wide or region wide knowledge sharing platforms and activities, and study tours;
- f) Documentation of programme results and lessons learnt: all counties are to hold biannual 'strategic moments of reflections' (SMOR) to identify challenges in programme 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 SOCAD for onward sharing and with other on-going and subsequent IFAD programmes).

25. The PPMO and CPMOs will be responsible for capturing and documenting experiences, successful cases and innovations resulting from the programme implementation and organise semi-annual and/or annual workshops during the programme implementation to disseminate the experiences and innovations for scaling-up. Plans for scaling-up of successful cases and innovations within the programme area will be incorporated into the programme AWPBs during the programme 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.

26. **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.

27. 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.

28. **Regional knowledge networking:** The programme management will actively participate in regional knowledge networking activities in areas related to the programme, 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 programme. 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.

E Data collection and information dissemination through innovative ICT

29. During the appraisal mission, it became clear that – consistent with the overall trend in China – most farmers in the programme area own a mobile phone, yet few use it to access important information regarding their livelihoods, such as weather forecasts or current prices for cash crops. As of 2015, 96% of China's adult population own a mobile phone, 58% even own a smart phone.⁶¹ This presents two opportunities: Relevant information can be disseminated to farmers directly in a cost-efficient way, and data can be collected from cooperatives and farmers and can easily be integrated into the MIS management dashboards. This would provide a rich qualitative data source on programme implementation progress, coming directly from beneficiaries, going beyond physical and financial implementation rates. Feedback could be sought on issues such as: satisfaction with services provided by the cooperatives; views on current “greatest challenges” or success stories; dividend payments; etc.

30. It is proposed that an ICT platform will be developed or adapted centrally under SOCAD's leadership, so both programme provinces can use the same ICT infrastructure, with support from the PPMO M&E Specialists.⁶² The two main functions will be (i) to send information via text message, and to receive and analyse information submitted by farmers or cooperatives via text messages, and (ii) to send and receive the same information through an interactive voice response (IVR) system, to cater for beneficiaries who may be illiterate but can make phone calls. The required technology is readily available and there are many examples from other countries where such ICT platforms are being used for similar purposes; therefore, the setup costs are expected to be relatively low.⁶³

31. Given the high rates of mobile phone ownership in China, it is not recommended to use programme resources to provide mobile devices to individuals, for obvious sustainability reasons. However, to ensure that poor households are not excluded from this service, the programme can make provisions that cooperatives give access to a mobile device or computer in their village office on a fixed day during the week, so anyone without their own device has access to the ICT platform.

F Scaling up potential

32. The IPRAAD programme'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

⁶¹ Pew Research Center, Spring 2015 Global Attitudes survey.

⁶² See technical specifications / TOR for the ICT platform in separate attachment.

⁶³ For example, RapidPro (<https://app.rapidpro.io/>) is a widely used platform, supported by UNICEF; other private providers are Voto Mobile (<https://www.votomobile.org/our-platform/>) or Farmerline (<http://farmerline.co/>) with services more specific to the agricultural sector.

and SOCAD 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 programmes promoting value chain development⁶⁴ and (iv) the programmatic approach retained for the IPRAD programme 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 IPRAD sustainable poverty reduction through value chain development; (ii) monitoring and impact evaluation at programme level based on programme M&E and on the National Poverty reduction System (NPRS); (iii) learning and stock taking at IFAD country programme level and at national level; (iv) identification of leveraging measures within government (policy change, mainstreaming into national programmes); 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 programme 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

⁶⁴ These include (i) Wholesale market development and upgrading; (ii) Direct "farmer to supermarket" purchase program; (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. **Fund flow:** the amount of initial allocation will be decided based on the financing plan of the program design, but usually not exceeds the cost required for the first six months of the program. While the initial allocation will be deposited at the Designated Account (DA) maintained by the SOCAD, it is encouraged that advancement could be made to the program accounts of the two provincial POCAD or even the county COCAD. The very purpose of the initial allocation to the DA is to advance loan funds for program implementation.
2. **Accounting system:** the installation or adaptation of an accounting system for the IFAD program will be stipulated as condition for withdrawal. SOCAD/POCAD 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. Retroactive financing would be made available for eligible expenditures related to system installation/adaptation and training.
3. **Financial Management Manual:** SOCAD will develop a financial management manual as an integral part of the Project Implementation Manual (PIM) to guide the program parties in the implementation and management of the program. The PIM will be made a condition to disbursement.
4. **Withdrawal Applications (WA):** the Program will be included in the IFAD Client Portal (ICP) newly developed for electronic delivery and processing of Withdrawal Applications (WA). Once the program is approved, IFAD will send the related communications to the government for subsequent submission of documents to qualify the program in the ICP. SOCAD may join the IFAD organized training in July 2017 to existing projects on ICP, such related cost can be considered eligible program expenditures for eventually retroactive financing.
5. **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 the strong desire from SOCAD to minimize disbursement documentation and increase efficiency, the SOE thresholds that will apply for withdrawal application under related procedures are suggested 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.
6. 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.
7. Withdrawal applications for Direct Payments and Special Commitments must be accompanied by a signed copy of the contract and relevant supporting documents evidencing eligible expenditure (e.g. invoices, receipts, documentary evidence of completion of contracted goods and services, payee's bank identity certificate).
8. **Disbursement and ratio:** The program will be designed in such a way to separate disbursement processing of counterpart funds and IFAD loan/grant. Government and IFAD funds will finance 100% of the activities they respectively cover. Among others however, the business plans in component 2 foresee co-investment by both IFAD loan and private sector (cooperatives or enterprises). In view of the output based disbursement practices being applied by government, the disbursement ratio for IFAD loan will adopt, as much as possible, 100% net of all other contributions.

Necessary supporting documents will be made available to justify the disbursement of IFAD support, despite that SOCAD may

9. **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. While IFAD loan and grants will be disbursed on 100% basis net of other contributions, the financial reporting will capture the contributions of all parties.

10. **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)). For projects approved after April 2014, payment of taxes is permitted provided that: (a) the borrower has informed IFAD in writing that it is impossible or impractical to exempt the project from all or certain taxes; and (b) the World Bank's Country Financing Parameters would permit the financing of such taxes for a similar project.

11. When financing of taxes is permitted under the criteria set out above, an assessment will be made before such decision is made, taking into account: (a) prior experience in the country and country FM performance; (b) whether taxes and duties constitute an excessively high share of project costs and are material; and (c) the government contribution to other costs, such as recurrent costs. Whenever possible, taxes and duties on imported goods will be excluded, based on the assumption that these taxes are easily identifiable and can be exempted in most countries. The rationale for allowing the financing of taxes must be included in the President's report submitted to the Executive Board.

B. Procurement

12. The program will follow the IFAD procurement guideline and Procurement Handbook in undertaking procurement activities of the program. The two documents were made available to SOCAD 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.

13. 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.

14. The Fund shall review and provide its no-objection to the **Procurement Plan**. A template will be provided to SOCAD soon after the DCM 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.

15. Any amendments to the Procurement Plan shall be subject to the Fund's 'no objection'.

16. **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.

17. **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 for SOCAD, 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.

18. **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 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.

19. 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 3 million, after BPAC approval but before agreement is to be signed for the BP.

20. **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 USD 1,000,000 equivalent or more
NCB Goods and Services	Post	Except contracts contract valued USD 200,000 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 USD20,000 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 USD 100,000.00 equivalent and below
Sole Source Selection (SSS)	Prior	Except procurement valued USD 20,000 equivalent or below

Procurement Method	Prior or Post	Comments
Recruitment of Individual Consultants		
Competitive Selection Process	Prior	Except procurement valued USD50,000 equivalent or above
Single Source Selection	Prior	Except procurement valued below USD 20,000 or equivalent

21. The above mentioned thresholds may be modified by IFAD during the course of Project implementation.

22. All contracts must be listed in the Register of Contracts, which should be updated and submitted to the IFAD Country Programme 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..

23. 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.

Appendix 8: Program cost and financing

Introduction and Assumptions

1. **Programme Life:** The programme will be implemented over a period of six years starting from 2018.
2. **Inflation:** An average of 3.0% inflation was assumed and the same rate was maintained throughout the programme implementation period from 2018 to 2023. The foreign exchange inflation was assumed at 2.0% for the programme life.
3. The programme cost estimates are presented in Chinese Yuan (CNY) using October 2016 prices. Physical contingencies are estimated at 8%. These were not applied to the expenditures that relate to the Programme Management component.
4. **Foreign Exchange (FE) Rate:** The average October 2016 exchange rate of CNY 6.9 to the USD was applied in converting all cost estimates to USD equivalent.
5. **Taxes and duties:** All farm inputs including fertiliser, pesticide, tools and implements and others are not taxed and agricultural products generated with the assistance of the program such as vegetable, fruits and livestock are tax exempted as far as trade is concerned. The tax rate for civil work was estimated at 5%, for vehicles at 17%, and for office equipment at 5%. All salaries paid by the provincial and county government are tax free. All taxes will be paid by the government.

PROGRAMME COSTS AND FINANCING PLAN

6. Total programme cost is estimated at US\$181.21 million, including contingencies, but excluding expected resources leveraged from financial institutions (which is estimated to total approximately US\$13 million). Programme costs are organized into three major components: (i) infrastructure development & climate-smart production (37percent of baseline costs); (ii) pro-poor value chain development (57 percent of baseline costs); and (iii) program management and coordination (6 percent of baseline costs). Investment and recurrent costs amount to 99.1 and 0.1 percent of the programme's total cost respectively.

Table 1
Programme costs by component and financier
 (Thousands of United States dollars)

Component	IFAD loan		IFAD grant		Beneficiaries (cooperatives and enterprises)		Borrower/ counterpart		Total
	Amount	%	Amount	%	Amount	%	Amount	%	Amount
1. Infrastructure development & climate-smart agriculture									
1.1 Infrastructure development	6 630.3	13.2	--	--	--	--	43 667.3	86.8	50 307.6
1.2 Land improvement & climate-smart production	7 177.7	42.3	--	--	--	--	9 789.6	57.7	16 967.3
Subtotal	13 808.0	20.5	--	--	--	--	53 466.9	79.5	62 274.9
2. Pro-poor value chain development									
2.1 Capacity development	6 632.4	72.9	44.9	0.5	--	--	2 425.1	26.6	9 102.5
2.2 Business plan financing	54 123.7	58.6	--	--	21 206.3	23.0	17 051.3	18.5	92 381.3
2.3 Rural finance	908.4	100	--	--	--	--	--	--	908.4
Subtotal	61 664.4	60.2	44.9	--	21 206.3	20.7	19 476.5	19.0	102 392.1
3. Programme management and coordination									
3.1 Programme management	3 353.8	31.4	369.6	3.5	--	--	6 943.2	65.1	10 666.6
3.2 Monitoring & evaluation and knowledge management	660.0	75.7	85.5	9.8	--	--	126.4	14.5	872.0
Subtotal	4 013.8	34.8	455.1	3.9	--	--	7 069.7	61.3	11 538.5
Total	79 486.2	43.9	500.0	0.3	21 206.3	11.7	80 013.1	44.2	181 205.6

7. IFAD will contribute US\$80 million (44 percent of the total cost) to the programme: US\$79.5 million as a loan, and US\$0.5 million as a grant to support and strengthen the coordination functions of the national coordination agency, SOCAD, and particularly its M&E and knowledge management functions. These functions are considered critical to provide SOCAD with the necessary capacity to assess and identify successful approaches and practices that can be replicated nationally through the implementation of national programmes. The government will contribute to the programme in the amount of US\$80.0 million (44 percent of the total cost). Participating cooperatives and enterprises are expected to contribute an estimated amount of approximately US\$21.2 million (12 percent of the total cost) as required co-financing for the business plans. Additional resources (estimated at approximately US\$13 million) are expected to be leveraged from financial institutions.

Table 2
Programme costs by expenditure category and financier

(Thousands of United States dollars)

Expenditure category	IFAD loan		IFAD grant		Beneficiaries (cooperatives and enterprises)		Borrower/ counterpart		Total
	Amount	%	Amount	%	Amount	%	Amount	%	Amount
I. Investment costs									
A. Goods and equipment	6 502.9	100	--	--	--	--	--	--	6 502.9
B. Government account ¹	--	--	--	--	--	--	27 149.0	100	27 149.0
C. Business plan ²	36 606.2	63.3	--	--	21 206.3	36.7	--	--	57 812.5
D Civil works	22 663.7	30.1	--	--	--	--	52 600.5	69.9	75 264.2
E. Consultancies	13 713.4	96.5	500.0	3.5	--	--	--	--	14 213.4
Subtotal	79 486.2	43.9	500.0	0.3	21 206.3	11.7	79 749.4	44.1	180 941.9
II. Recurrent costs									
A. Operating costs	--	--	--	--	--	--	263.6	100	263.6
Subtotal	--	--	--	--	--	--	263.6	100	263.6
Total	79 486.2	43.9	500.0	0.3	21 206.3	11.7	80 013.1	44.2	181 205.6

¹ Government account includes works, goods, materials, and services, financed and directly procured by the government.

² Business plan includes eligible expenditures related to support business plan proposals under subcomponent 2.2 (business plan financing), excluding civil works.

Appendix 9: Economic and Financial Analysis

FINANCIAL ANALYSIS

Introduction

1. **The purpose of the financial analysis** of the program is to: (i) evaluate the financial viability of the improved production activities under the program interventions; (ii) analyse the impact of these improvements on the poverty of adopting households, cash flow position and income levels; (iii) calculate the incremental productions that result from program interventions; and (iv) provide a basis for the economic analysis of the program.
2. **Programme Life:** The programme will be implemented over a period of six years starting from 2018, while the duration of the analysis is 20 years.
3. **Cost-benefit analysis (CBA) will be used.** The methodology includes (i) developing appropriate production models, crop and activity models, that are being focused under the programme (ii) preparing farm or household models based on average size of landholding per household, and (iv) carrying out the whole programme analysis by aggregating all activity/household models. In line with the implementation agreement and loan agreement, financial economic analysis has been conducted separately for Sichuan and Ningxia.

Assumption of Financial Analysis

4. **Financial analysis for activities under component 1.** The analysis aims to gauge the financial impact on farmers from the infrastructure built under the component 1. Irrigation works in particular will directly contribute to the productivity increases of various crop production. The financial analysis of the Program is based on prices and costs collected by the Design mission in Sept 2016. The main assumptions that were used in the analyses are as follows.
 - a. For all activities, a financial rural daily wage rate of CNY 80 was assumed. The same rate was used to value household family labour under the assumption that labour market is unrestricted and there is availability of labour opportunities in the program area.
 - b. Average size of farm per household covered by the program is 2.0 mu for annual crops, and 1.5 mu for tree crops for Sichuan; 3.0 mu for annual crops and 5 mu for tree crops for Ningxia. All area units are referred to in mu.
 - c. Productivity increases under irrigation improvement are assumed to be generated by better and improved supply of irrigation water and the adoption of improved water management practices. There are no significant changes in input application.
 - d. Average size of a rural household has been assumed at 3 members.
 - e. Almost all the farmers would be marketing their farm products through either new or existing cooperatives and a small number through the agribusiness. Thus, the prices of farm products used in the analysis are the farm gate prices offered by these buyers.
 - f. Family consumption of crops and livestock products produced under the program were accounted for at market price.

Production Models and Direct Household Beneficiaries

5. Production models were developed to reflect ongoing agricultural practices for the selected crops and livestock products that the program is aiming to develop. These are presented in the table below. These model were subject to a financial analysis and formed the building block for the economic analysis.

6. The programme is aiming to develop about 12 kinds of different crops. The models elaborated are assumed to cover 99,858 households. The table below shows the distribution of the households directly benefiting from the program interventions. Assuming the average family size is 3, the total number of direct beneficiaries is 299,574 in the two provinces. It is therefore estimated that the program will provide US\$ 667.6 (CNY 4539.8) per person over a period of 6 years. Production Models and Direct Household Beneficiaries for Sichuan and Ningxia are tabled below.

Table 1: Production Models and Direct Household Beneficiaries for Sichuan

产品 product	规模 Crop	Farm Size	Beneficiaries/Production Models
	Quantity(Mu)	Mu	(No. Of Households)
Rice paddy(水稻)	42,400	2	21,200
Maize (玉米)	38,700	2	19,350
Vegetables (蔬菜)	38,700	2	19,350
Orange(柑橘)	2,400	1.5	1,600
tea tree (油茶)	1,400	1.5	933
Mulberry (桑树)	1,420	1.5	947
Kiwi (猕猴桃)	12,400	1.5	8,267
Total			71,797

Table 2: Production Models and Direct Household Beneficiaries for Ningxia

产品 product (mu)	Crop	Price	Production Value	Farm Size	Beneficiaries/Production Models
	Quantity(Mu)	Unit Price	Yuan (10,000)	Mu	No. Of Households
玉米(Maize)	62,835	1.9	6,029.03	3	11,121
小麦(Wheat)	14,550	2.25	1,244.03	3	3,439
马铃薯(Potato)	6,150	1	993.23	3	5,256
牧草(Forage grass)	28,665	1.25	1,053.44	5	4,072
枸杞(Lycium chinense)	4,800	19	1,368.00	3	1,213
黄花菜(Daylily)	3,000	27	1,215.00	3	962
总计(Total)					28,061

Summary of Financial Analysis

7. Each production model provides yields and inputs per unit of area, economic and financial budgets according to “without” and “with program” as well as increments in terms of value, quantities, and production. Results of the financial analysis are summarised in the table below and available in details in a separate excel file (available as part of the program life file).

Table 3: Summary of financial analysis in Sichuan

Crop (mu)	Avg size (mu)	With out project	With project (full development)	
		Net income (CYN/Yr)	Net income (CYN/Yr)	FIRR
Rice	2.0	436	608	NR
Maize	2.0	564	614	NR
Vegetables	2.0	435.6	2240	NR
Orange	1.5	423	966	18%
Tea tree	1.5	423	463	29%
Mulberry	1.5	423	506	26%
Kiwi	1.5	423	1376	22%

Table 4: Summary of financial analysis in Ningxia

作物(Crop) (mu)	平均面积(Avg size) (mu)	Without project	With project (full development)	
		净收入(Net income) (RMB/Yr)	净收益(Net income) (RMB/Yr)	FIRR
玉米(Maize)	3.00	102	1,039	NA
小麦(Wheat)	3.00	129	598	NA
马铃薯(Potato)	3.00	155	506	NA
牧草(Forage grass)	5.00	NA	629	20%
枸杞(Lycium chinense)	3.00	129	217	16%
黄花菜(Daylily)	3.00	129	635	17%

8. The above results indicate all these production models are profitable and therefore financially attractive to the participating farmers.

9. Financial contributions and subsidies associated with the establishment of production basis and post-production facilities have not been accounted for in the analysis.

Financial activities under component 2.

10. For activities under business plan, given its demand driven nature and selection process, it is not viable to have a component-wide ex-ante analysis. However, an indicative sample analysis has been provided for business plan evaluation (see supporting documents for EFA).

ECONOMIC ANALYSIS

Purpose and assumptions

11. **The Purpose of Economic Analysis** is to evaluate the expected contribution of the Program to the economic development of the program area using cost-benefit analysis (CBA). The economic analysis will determine whether the benefits sufficiently justify the interventions the Program is planning to invest on.

12. **Scope of the Analysis:** As in the case of the financial analysis, the economic analysis only covers Component 1 (refer to financial analysis section above).

13. **The programme economic costs.** The incremental cost flows include all incremental on-farm investment and incremental production costs as estimated in the crop model analysis. The costs were converted to economic cost using the standard conversion factor of 1 for production models, while the COSTAB generated the economic cost of on-farm infrastructure and project management (exclusive of taxes and duties, and price contingencies, but inclusive of the physical contingencies). The operation and management (O&M) cost of on-farm infrastructure (irrigation facilities and roads) have been accounted for during the whole project economic life (20 years).

14. **Production Benefits:** The farm productions benefits are derived from the production models as calculated in the financial analysis.

15. **Environment benefits (Carbon sequestration):** It is confirmed that tree crops generate sizable carbon sequestration. For the purpose of this analysis, it was assumed one mu of the tree crops will produce CNY 50 at full development (this will be further refined during design completion mission).

16. **Assumption for the economic analysis.** The following factors and assumptions were used in the economic analysis of the Program.

- a. A twenty-year planning period is assumed including the six-year program investment period;

- b. The analysis was carried out at farm gate level.
- c. Agricultural goods are freely traded within the programme area in response to market signals. Therefore, the conversion factor for these goods is set at 1 to reflect the fact that financial prices are equivalent to economic prices ;
- d. All traded inputs and outputs are valued at farm-gate prices as of Sept 2016.
- e. Economic costs (as generated by COSTAB) are net of duties, taxes and price contingencies, and grants but inclusive of physical contingencies;
- f. Family labor is valued at an opportunity cost equivalent to market wage rate of CYN 80/day. The reason behind this is that labor costs have been on the increase in the past decades. As it is widely recognized that China has reached Lewis turning point, no conversion factor has been used for labor in economic analysis. Also see immediate above response.
- g. Opportunity cost of land is represented by the value of next best alternative land use. If land developed under the program were already into production, the net benefit was used as opportunity cost;
- h. The operation and management (O&M) cost of irrigation structures, roads and extension stations were maintained throughout the duration of the analysis;
- i. Opportunity cost of capital (OCC) was assumed at 6% and the analysis was carried out in domestic currency values.

Results of the Economic Analysis

- 17. The economic viability of the Program has been measured using the economic internal rate of Return (EIRR), and Economic Net Present value (ENPV) at the OCC of 6%.
- 18. The economic analysis yields an EIRR of 15.9% for Ningxia and 17% for Sichuan with economic net present value is 73.83 US\$ million (OCC at 6%), indicating the program is economically viable.
- 19. A sensitivity analysis was carried out to test the robustness of the programme to unforeseen circumstances. The results are summarised below:

Table 5: Results of the sensitivity analysis of the economic analysis for Sichuan

Sensitivity analysis	Base case	Cost Increase		Price Decrease		delay - 2
		20%	30%	20%	25%	
IRR	17%	15%	14%	10%	9%	14%

Table 6: Results of the sensitivity analysis of the economic analysis for Ningxia

敏感性分析(Sensitivity analysis)	Base case	Cost Increase by 40%	Output price decrease 35%	delayed for 2 years
ERR	15.9%	10.0%	8.0%	12.0%

- 20. Sensitivity analysis indicated the program is relatively robust with key variables such as output price decreases, cost increases and implementation delays. Specifically, the price reliance is due to net incremental production generated by infrastructure (irrigation), ensuring all the positive net benefit increases even with sharp price decreases under with project and without project situations.

Economic analysis for activities under Component 2

21. By design, the Program would finance business plans on a competitive basis to efficiently allocating resources to cooperatives and enterprises to support the development of pro-poor value chains. Specifically, the Program will have three windows for financing business plans: (1) Business Plans presented by Cooperatives; (2) Pilot Business Plans for developing linkages between Cooperatives and Supermarkets; and, on an exceptional basis, (3) Innovative Business Plans presented by Agro-enterprises. Eligibility criteria, eligible activities, financing/co-financing requirements, ceilings, selection modalities, etc. for each model are contained in the detained description of Component 2.

22. As such, without detailed business plan, the component-wide *ex ante* financial and economic analysis is neither practical nor relevant. Nevertheless, one model business plan has been tentatively developed for (i) demonstrating the methodologies and data requirement and for the analysis; and (ii) serving as a tool to selecting the qualified entities and investment activities. The indicative financial and economic analysis for business plan is contained in supporting documents for EFA. The model has been well tested in the ongoing World Bank poverty reduction project in Guizhou province. And it has been rendered into Chinese for the easy access to the local stakeholders. It is desirable that the financial and economic analysis for this component be conducted at MTR, at which the program will accumulate sufficient evidence of business plan implementation and have reasonable projections for the analysis.

23. Appendix 10: Draft program implementation manual
To be finalized during the start-up workshop on 27-30 November 2017.

Appendix 11: Compliance with IFAD policies

I. Compliance with IFAD policies

A Compliance with IFAD's strategic framework

1. The IPRAD program 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. IPRAD 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 IPRAD programme 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 program 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 program design will take into account the experiences learnt from previous and on-going IFAD projects in China, particularly QLMAPRP, 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 IPRAD program. 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.

(ii) **Thematic area of focus 1.B: Support inclusive cooperatives.** Cooperatives will be the main rural institutions supported by IPRAD. 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 the establishment of a credit guarantee scheme, a pilot warehouse receipt system, technical support for financial institutions and financial literacy for small producers.

b) The alignment with **Strategic Objective 2: Strengthen environmental sustainability and climate resilience** is presented below according to the three 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, IPRAD will invest in land levelling and terracing, water saving irrigation technologies.

(ii) **Thematic area of focus 2.B:** *Mainstreaming environmental and climate resilience considerations into the country program activities.* Environmental and climate resilience interventions within IPRAD 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; (ii) improved ground water use through tube well irrigation rehabilitation; (iii) promotion of drought and heat resisting varieties; and (iv) plastic film mulching.

C Compliance with IFAD's policies

3. The proposed program is in line with IFAD's Policies. The program 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 program 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 programme 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 IPRAD programme are discussed below and summarised in table 1 below.

Targeting- Reaching the Poor and Gender Mainstreaming

6. The program 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 programme approach to these two important aspects. The target group for the program has been clearly defined and the selection of the program area is in keeping with poverty criteria. The programme design addresses the production and marketing issues confronting smallholder producers. Detailed discussions were held with them during the Program design to ensure that the programme components and activities were consistent with their needs and constraints. The programme 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

2011.⁶⁵ 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 IPRAD programme, 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 programme 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 2011⁶⁶ 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 IPRAD program, 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 IPRAD program 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 IPRAD program will improve the access to credit for small producers involved in the value chains that the program 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.

IFAD Climate Change Strategy (2010)

⁶⁵ Private-Sector Strategy. Deepening IFAD's engagement with the private sector. IFAD. February 2012.

⁶⁶ IFAD's Environment and Natural Resource Management Policy: Resilient livelihoods through the sustainable use of natural assets. May 2011.

13. IFAD's climate change strategy⁶⁷ 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 IPRAD program 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 change⁶⁸; (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.

⁶⁷ Climate Change Strategy. IFAD. May 2010.

⁶⁸ 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 program with IFAD's policies

Major policies	Design of the proposed program	Status of compliance
Programme objective	The program 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 program, M&E indicators for women's participation in planning, implementation and management of the program will be developed.	Yes
Poverty focus	The program 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 program has been included in the design.	Yes
Scaling-up	The program has a strong focus on scaling up ensured by (i) the national level institutional framework (the Ministry of Finance is the borrower and SOCAD is the implementing agency); and (ii) if successful in piloting sustainable poverty reduction models through value chain development, the program 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 program 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 programme, 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 program 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 programme	Yes

II. Adherence to the Social Environmental and Climate Assessment Procedures (SECAP)

15. A SECAP review note has been prepared (see separate document) and a summary note is presented in attachment 1 to this appendix. The main recommendations of the note include: (i) Environmental and social category B has been confirmed; (ii) In light of recent and projected agriculturally-sensitive climatic trends, in particular increases in temperature, uncertainties over Yellow River flow volumes and the future allocation of water quotas for Ningxia, increase risk of drought and potential impacts of some program activities in the Region, in particular increase in numbers of livestock, the High risk category is confirmed and the Climate Vulnerability Assessment (CVA) is recommended; and (iii) IFAD policies do not support program activities where a resettlement process is on-going. As a consequence, SOCAD and IFAD will need to address this issue for those villages that were/are involved in the 12th Five Year's Government Resettlement Program.

Attachment 1: SECAP annotated RN note

Major landscape characteristics and Issues

Socio-cultural context

1. Since the initiation of the rural reform process in 1978 China has achieved an historic reduction in absolute poverty. These achievements are largely due to the country's well-funded and comprehensive poverty reduction strategy and program. The New Poverty Eradication Program under 13th Five Year Plan (FYP), introduces or expands on previous efforts and will continue to focus on fourteen contiguous poverty blocks (lagging poor regions) that make up the 832 nationally designated poor counties. Sichuan and Ningxia are priority areas of the Chinese government's poverty reduction program. Consistent with its large population and 5.8% poverty rate in 2015, Sichuan has the sixth greatest number of poor in the country. Ningxia by comparison, had a significantly higher poverty rate of 8.7% in 2015 (but a much smaller total population than Sichuan), and is well known for its extreme depth of poverty particularly among the Hui (Muslim) ethnic minority people in the Xihai Region (in the south of Ningxia).

Natural resources and NRM

2. **Sichuan**. Located in southwest China, Sichuan Province consists of two geographically distinct features distinguished by the Sichuan Basin, a fertile lowland area that dominates the central and eastern portions of the Province, from the numerous mountain ranges forming the easternmost part of the Qinghai-Tibet Plateau in the west. The programme area comprises administrative villages in four counties and one district located on the margins of the Basin in the upper reaches of the Yangtze River. Programme areas occur mainly in sloping and hilly lands and are characterized by fragile ecological environments or mountain areas. Water resources are fairly abundant dominated by surface water. Water quality does not appear to be a significant problem in these agricultural-based counties with the possible exception of overuse of agro-chemicals. The major environmental issue is erosion and downstream sedimentation.

3. **Ningxia**. In contrast to Sichuan, Ningxia Region is mostly desert and lies partially on the Loess Plateau and in the vast plain of the Yellow River. Much of its economy is based on agriculture made possible through land reclamation and an extensive irrigation system dependent on the Yellow River and its tributaries. The programme area comprises 4 post-resettlement sites located in the north (1) and central counties/districts (3) and two areas from the southern counties. The main water source is irrigation from the Yellow River (and its tributary Qingshui River) supplemented with groundwater and less significantly rain harvesting dependent on local conditions. Water quality from the Yellow River appears to vary dependent on where the off-take is. There is some evidence of over-use of fertilizers and their presence together with pesticides in groundwater. The quality of groundwater resources depends largely on the depth of the wells drilled for extraction. Surface water harvested from precipitation is generally of poor quality. Biodiversity is low in this heavily, human-impacted arid/semi-arid landscape.

Climate

4. **Sichuan**. The climate of the program counties is characterized as sub-tropical humid with dry winters and hot summers with a long frost-free period, four distinct seasons and abundant but uneven rainfall. The average temperature of the Province has been increasing at a rate of 0.1 °C per decade. Similarly, total precipitation has decreased approximately 100 mm over the same period of time with five of the last 10 least-rainfall occurring after 1994. The intensity and frequency of extreme weather and climate disasters also appeared to increase significantly in the Province dominated by floods,

extreme precipitation events, low temperatures, hail, drought and high winds. Annual temperatures are expected to continue to increase about 1.0 °C during 2021 - 2030 period while projections for 2041 - 2050 period range between 1.4 up to 1.8 °C. Total precipitation is projected to increase more or less continually from 2021 to 2040 at a rate of around 1%, while for the period 2041 to 2050 precipitation is predicted to increase from 1 % up to 4% depending on the scenario applied. At a regional level, most scenarios predict a decrease in precipitation in the southeast and the middle east of Sichuan (program areas).

5. **Ningxia.** The climate of the program counties is characterized by a dry, arid – semi-arid cold desert climate in the north transitioning to a arid-semi-arid steppe climate in the middle reaches with the notable exception of Peng Yang County which is characterized by a continental climate with dry winters and warm summers. During the 1981–2011 period average annual air temperature increased by 0.5 °C per decade while precipitation and evaporation decreased. Runoff from the upper Yellow River over the period 1961 to 2007 demonstrated a trend in decreased flow that has only slightly recovered since 2000. By 2080 CC emission models project an increase of up to 4.4 °C in summer months and an increase ranging between +3.7 to + 3.9 °C in winter months. These same models predict an increase in rainfall but not evenly distributed and an increased likelihood of flooding in the eastern portions of the Region. Any increase in precipitation will be more than offset by increased evapotranspiration associated with increasing temperature. The main CC-related risks are drought (nearly continuous with a frequency of 80 % since the 1980s), strong winds and sandstorms, frost, flooding in both the upland areas and river floodplains, snow and ice.

Key Issues

6. The main issues are: (i) recent trends and projections in the effects of climate change; (ii) water scarcity (Ningxia); and (iii) program interventions in on-going resettlement areas (Ningxia).

Potential project's social, environmental, and climate change impacts and risks

Key potential impacts

7. **Social Impacts.** Social impacts derived from the Program are expected to be largely positive. The IPRED strategy calls for the transformation of poverty-stricken areas that will be supported through the Program mainly through increasing agriculture production and efficiencies, provision of off-farm employment, promotion of greater market access and electrification. Due to development of urban labor markets many of the beneficiaries remaining in program counties will be female and the elderly. At the village level adequate safeguards have been built into program design per PRC and IFAD policies to ensure fair distribution benefits among these and other groups including minorities in the program areas. The main issues are: (i) program interventions in on-going resettlement areas and (ii) elite capture.

8. **Environmental Impacts.** Several of the proposed program counties are characterized by degraded landscapes and a reduction in the provision of local ecological “goods and services” primarily due to erosion and downstream sedimentation in “hilly-landscapes” and water logging, soil salinization and inefficient use of water leading to increased scarcity of the resource in lowland river valleys in semi-arid environments. Based on these features many of the proposed activities in the program areas would produce environmentally-positive outcomes in particular in: (i) terracing at the household level leading to reduced erosion and sedimentation primarily in upland areas located in sub-tropical, high rainfall environments; and (ii) water savings associated with promoting increased efficiencies in water utilization through improvements to existing irrigation systems, water harvesting and storage and land - levelling in low-land, semi-arid environments.

9. A number of potential adverse environmental impacts associated with program-supported activities have been identified. Most of these impacts however are likely to be relatively small in nature, localized and readily addressed through applying the appropriate mitigation measures. More problematic are the potential adverse impacts associated with new infrastructure works in particular: (i) roads (inter-village and feeder), (ii) irrigation schemes, (iii) construction of weirs, (iv) construction of centralized cattle pens (and the likely unintended consequence of contributing to an increase in stocks as vacated household lots are restocked with new livestock in turn contributing to increase demand on water and forage resources), (v) greenhouse and warehouse construction and (vi) the risk of one or more of the activities associated with value-chain (VC) development supported under the programme could impact on the environment in particular in the storage, processing and/or packaging phases of the VC.

Climate change and adaptation

10. **Sichuan.** In the northeast of Sichuan, climate potential productivity declines have been recorded but at a reduced rate from other regions in the Province. Based on the *status quo* in agriculture production in Sichuan and climate change projections, the following countermeasures form part of the Province's Climate Change Strategy and Adaptation Measure for the Agriculture Sector: (i) water saving irrigation infrastructure, (ii) climate-resilient crops and (iii) agricultural-based CC studies.

11. **Ningxia.** CC-based trends are thought to have contributed to changes in crop growth duration, planting structure, migration of the planting region (northward) and the occurrence of more severe plant diseases and insect pests in Ningxia as elsewhere in Northwest China. In response, Ningxia developed and started the implementation of drought adaptation strategies and mitigation actions in 2000. These include: (i) adjustment of planting structure, (ii) drought tolerant crops, (iii) water harvesting, (iv) plastic soil mulching and (v) artificial precipitation. Climate change adaptive measures supported under IPRAD are fully supportive of the provincial/regional strategies cited above.

Environmental and social category

12. In programme identification the initial environmental and social category assigned was Category B. However, an environmental risk was flagged associated livestock production intensification activities that needed to be examined in greater detail during preparation. During preparation this risk was confirmed and mitigation measures have been recommended. The Category B category is confirmed.

Climate risk category

13. At the time of identification climate risk was classified as Moderate in Sichuan but was considered High Risk in Ningxia. A CVA for targeting and identifying CCA measures would be considered in preparation. In light of recent and projected agriculturally-sensitive climatic trends, the High Risk category is confirmed and the CVA is recommended. Moreover, it is further recommend to expand the CVA to cover the Sichuan program sites given climate-related trends and projections affecting these topographically steep areas on fragile lands.

Recommended features of project design and implementation

Mitigation measures

14. Satisfactory mitigation measures to reduce or eliminate most adverse program impacts on the environment exist through: (i) avoiding activities which might result in diverse impacts; (ii) the "mainstreaming" a number of these measures in program design; (iii) the existence of robust environmental protection framework implemented through the respective provincial/prefecture bureaus of environment; and (iv) the high importance placed by PRC on improving environmental quality in the 13th FYP ensuring that effective measures exist to enforce compliance with existing

standards. Despite the measures there remain some key issues that need to be treated in greater detail. These are: (i) increase in herd size and water scarcity in Ningxia, (ii) terracing, (iii) exclusion of programme activities in or adjacent to nature reserves and (iv) construction of weirs.

Multi-benefit approaches

15. There already exist policies in place in China that promote a multi-benefit approach to poverty reduction and the environment. One of the major approaches adopted in China's Poverty Reduction Strategy for (2011-2020) is to ensure that development-oriented poverty reduction would be combined with ecological construction and environmental protection. In so doing the Strategy will avail of the ecological environment and natural resource advantages of poverty-stricken areas. Programme design, supported by these enabling policies, supports fully this multi-benefit design.

Incentives for good practices

16. There exist a number of activities supported under the Program that serve both as incentives leading to a shift to more sustainable farming and post-production practices and contribute to reduction in poverty and achievement of the PDO. These include: (i) engineering measures and the adoption of on-farm irrigation technologies leading to increases in water use efficiencies; (ii) land – levelling and terracing leading to increase water use efficiencies and reduction in erosion and downstream sedimentation; (iii) shifts to less dependency on expensive and harmful agro-chemicals through adoption of more balanced use of fertilizers and use of IPM techniques; and (iv) supporting one or more pilots for certification of environmentally sustainable production and assessing market viability.

Participatory processes

17. At the village level public participation will be facilitated through the creation of Village Implementation Groups (VIG) in the program-targeted villages to ensure appropriate targeting, mobilise household participation and monitor project activities. In addition, Farmers' organizations including Water User Associations (WUAs), Farmer Cooperatives (FCs) and their Associations (FAs) will also participate in the implementation and monitoring of program activities. Women are expected to play an equal role within the different farmer groups and VIGs.

Analysis of alternatives

18. Two alternatives were considered in programme design. The "business as usual" approach characterized by programme supported interventions that address the immediate problem of poverty reduction. This was rejected because China's existing policy framework already supports a shift to a more sustainable approach incorporating the challenges of both climate change adaptation and environmental enhancement and restoration as part of its 10 year poverty reduction strategy. In the alternative approach adopted the Program would build on the "business as usual" as baseline and include design features that improve the chances of achieving sustainable outcomes in the highly uncertain future in the programme sites, in particular with respect to climate change while addressing the PDO of poverty reduction.

Institutional analysis

Institutional framework

19. To obtain government clearance for the Program, SOCAD will need to submit a feasibility study report to NDRC with water resources and environment impact assessment reports prepared as a pre-requisite. The impacts of climate change on water availability and demands and needed adaptation options will be addressed at this stage.

20. Overall project management and coordination of the Program will be the responsibility of SOCAD). Implementation of program activities in the counties will be carried out by relevant technical agencies. Relevant environmental/NR bureaus will participate in these activities as well as being “on-call” to the CPMOs when needed. SOCAD will take the lead on CC mainstreaming.

21. A Project Implementation Manual (PIM) will be developed and adopted before program disbursement, to guide implementation that will include information as it relates to social, environmental and climate change issues.

Capacity building

22. Climate change and environmental issues will be covered as part of training and TA budget already incorporated in program design and budget. An illustrative list of training topics has been prepared and will be finalized at the time of the preparation of the PIM.

Additional funding

23. China does not qualify for the Least Developed Countries Fund (LDCF) Country. Nor has it applied for accreditation under the Global Climate Fund (GCF). China as a Non-Annex 1 country, does qualify for the Special Climate Change Fund (SCCF) however, it has only received one grant under the SCCF and the Fund is thought to give priority to the needs of other more vulnerable countries. Two GEF programs were identified that appear compatible with the PDO. These are: (i) Program 4: Promote conservation and enhancement of carbon stocks in forest, and other land use, and support climate smart agriculture (GEF 6 CC Strategy 2); and (ii) Program 2: SLM for Climate-Smart Agriculture (SLM Strategy 1). Under the GEF 6 STAR allocation system as of end November 2016, there still remains to be utilized USD 70 million and USD 6.2 million for the CC and the LD focal areas, respectively.

Monitoring and Evaluation

24. For IPAD, the National PMO will be responsible for overall program M&E however the PPMO will be responsible for the establishment of the M&E system and undertaking activity monitoring and supervision; organising the programme baseline and RIMS surveys. At the county level it will be the CPMOS responsible for undertaking M&E and reporting. Third party monitoring and evaluation will also be considered for IPAD either at national or at local level. Parameters suggested for inclusion in the M&E In line with the programme activities related to climate change and environmental mitigation have been developed. Final selection of indicators and values will be included in the PIM.

Further information required to complete screening, if any

25. Six issues were identified where further information is required: These are: (i) water scarcity in Ningxia; (ii) climate vulnerability analysis; (iii) additional information on the construction of weirs, terracing, land levelling on lands with slopes greater than 25 degrees and screening for programme activities in or adjacent to nature reserves; (iv) targeting; (v) linkages between poverty reduction and programme activities and (vi) resettlement villages.

Budgetary resources and schedule

26. Costs for environment and social protection and related training and awareness raising have been “mainstreamed” into production component activities.

Appendix 12: Contents of the Program Life File

1. Design team. The Program 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); Enrique Hennings (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); Liu Ke (Associate Country Program Officer, IFAD); Josef Ernstberger (Value Chain Specialist); Tim Zachernuk (Cooperative Specialist); Zhao Jun (Cooperative Specialist); Anna Carbone (Cooperative and Geographic Indication Specialist); Yuhui Qiao (Food Safety Specialist); David Picha (Horticulture Specialist); Zhijun Chen (Irrigation and rural infrastructure engineer, FAO/TCI); Gao Feng (Rrural Engineer); Peter Situ (Rural Finance Specialist); Marc de Sousa (Rural Finance Specialist); Alan Piazza (Poverty Reduction Specialist); Cai Kui (Gender Specialist); Wang Xiaoyi (Safeguard Specialist); Liu Xueming (Senior Economist, FAO/TCI); Zhe Yuan (Economist, FAO/TCI); Dinghuan Hu (Market Linkages Specialist); Gou Tianlai (Value Chain and M&E Specialist); Random Dubois (Senior Environmental Expert); Clemens Gros (M&E Specialist).

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); Francesco Rispoli (Senior Technical Specialist, Inclusive Rural Financial Services, PTA); Beatrice Gerli (Gender & Targeting Specialist, PTA); Mylene Kherallah (Lead Technical Specialist, Rural Markets & Enterprises, PTA); Antonio Rota (Lead Technical Specialist - Livestock, PTA), Mawira Chitima (Lead Technical Specialist, Water & Rural Infrastructures, PTA); Elisabeth Steinmayr (Land Tenure Specialist, PTA); Ed Heinemann (Lead Technical Specialist, Policy, PTA); Eloisa de Villalobos (Economist, PMD); Isabel De la Pena (Value Chain & Nutrition Specialist, PMD); Sheila Mwanundu (Lead Technical Specialist, ECD); Roshan Cooke (Regional Climate and Environment Specialist, ECD); Irene Li (Senior Finance Officer, FMD); Elisabeth Brunat Boulet (Legal Officer, LEG); 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 2016 **Design Mission**
- November 2016 **First CPMT Meeting**
- January 2017 **Quality Enhancement**
- January 2017 **Pre-Appraisal Mission**
- May-June 2017 **Appraisal Mission**
- July 2017 **Second CPMT Meeting**
- October 2017 **Quality Assurance**
- November 2017 **Negotiations**
- December 2017 **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) Environmental and Social Management Framework
- (6) Climate Change Vulnerability Assessment (to be completed)
- (7) Baseline survey (to be completed)
- (8) Concept note included in COSOP 2016-2020;
- (9) Aide Memoires of the Design, Pre-Appraisal and Appraisal missions
- (10) Minutes of the CPMT meetings
- (11) QE Overall & Detailed Comments and Panel Report
- (12) 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