



Investing in rural people

Kingdom of Cambodia

Agricultural services programme for innovations, resilience and extension

Final project design report

Main report and appendices

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Currency equivalents

Currency Unit =
US\$1.0 =

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

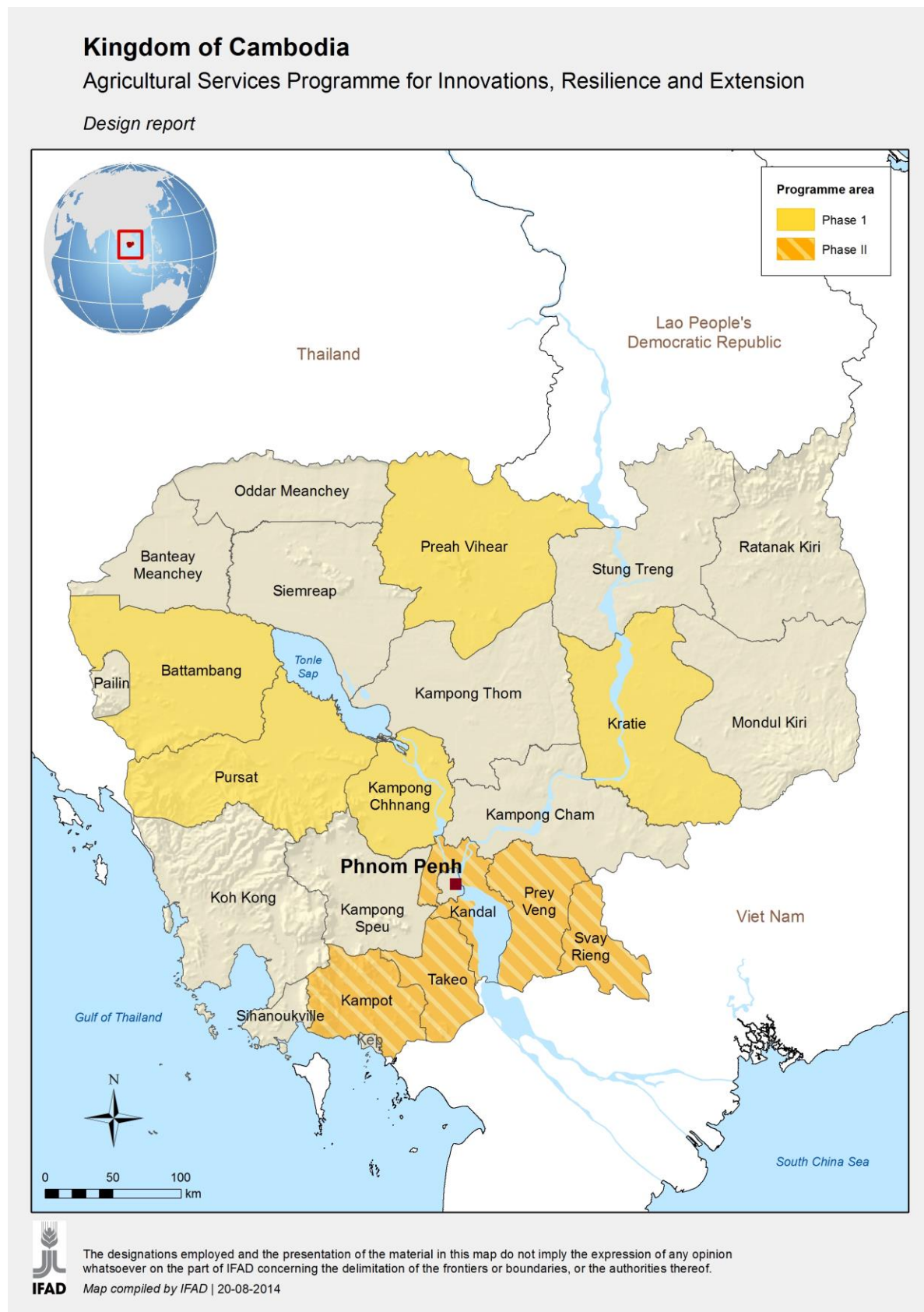
Abbreviations and acronyms

ACIAR	Australian Centre for International Agriculture Research
ADB	Asian Development Bank
AQIP	Agricultural Quality Improvement Project
ASPIRE	Agriculture Services Programme for Innovation, Resilience and Extension
AusAID	Australian Agency for International Development (now Department of Foreign Affairs and Trade)
C/S F	Commune <i>Sangkat</i> Fund
CARDI	Cambodia Agricultural Research and Development Institute
CAS	Country Assistance Strategy
CAVAC	Cambodia Agriculture Value Chain Program (Australian funding)
CBAPP	Community-Based Agricultural Productivity Project
CBRDP	Community Based Rural Development Project
CC (1)	Commune Council
CC (2)	Climate Change
CDB	Commune Database
CDHS	Cambodia Demographic and Health Survey
CDRI	Cambodia Development Research Institute
CEW	Commune Extension Worker
CIP	Commune Investment Programme
CMDGs	Cambodian Millennium Development Goals
COSOP	Country Strategic Opportunities Programme
CSES	Cambodia Socio-Economic Survey
D&D	Decentralisation and De-concentration
DALRM	Department of Agricultural Land Resource Management
DANIDA	Danish International Development Agency
DAO	District Agriculture Office
DfID	Department for International Development (UK)
DRC	Department of Rice Crop
DST	District Support Team
ECCA	Environment and Climate Change Assessment
ENRM	Environment and Natural Resources Management
FBS	Farm Business School
FMM	Financial Management Manual
FSS	Farmer Field School
FWUC	Farmer Water User Community
GCCTS	Group Conditional Capital Transfer Scheme
GDA	General Directorate of Agriculture
GDP	Gross Domestic Product
GESS	Grants for Extension Services to Smallholders
GIZ	Deutsche Gesellschaft fuer Internationale Zusammenarbeit (German International Cooperation Agency)
GPS	Global Positioning System
GRF	Group Revolving Fund
HARVEST	Helping Address Rural Vulnerabilities and Ecosystem Sustainability
HPI-1	Human Poverty Index
HRD	Human Resource Development
ICPM	Integrated Crop and Pest Management
ID Poor	Identification of Poor Household Programme, Ministry of Planning

IDA	International Development Association
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFPRI	International Food Policy Research Institute
IGRF	Improved Group Revolving Fund
IPA	International Procurement Agency
IPM	Integrated Pest Management
IRR	Internal Rate of Return
JFPR	Japanese Fund for Poverty Reduction
LST	Labour Saving Technology
M&E	Monitoring and Evaluation
MAFF	Ministry of Agriculture, Forestry and Fisheries
MDGs	Millennium Development Goals
MEF	Ministry of Economy and Finance
MFI	Micro-finance Intermediary
MIS	Management Information System
MOI	Ministry of Interior
MOWA	Ministry of Women's Affairs
MOWRAM	Ministry of Water Resources and Meteorology
MRD	Ministry of Rural Development
MVF	Most Vulnerable Family
NAL	National Agricultural Laboratory
NCDD	National Committee for Sub-National Democratic Development
NCDDS	NCDD Secretariat
NGO	Non-Governmental Organization
NIPMP	National Integrated Pest Management Programme
NLU	Nong Lam University (Ho Chi Minh City)
NPDD	National Programme for Democratic Development
NPV	Net Present Value
NSDP	National Socio-economic Development Plan
O&M	Operation and Maintenance
PASP	Provincial Agriculture Strategic Plan
PBCRG	Performance Based Climate Resilience Grant
PDA	Provincial Department of Agriculture
PDOWA	Provincial Department for Women's Affairs
PDRD	Provincial Department for Rural Development
PIM	Project Implementation Manual
PM	Procurement Management
PPF	Project Preparation Facility
PRWRAM	Provincial Department for Water Resources and Meteorology
RAU	Royal Agricultural University
RIF	Rural Infrastructure Fund
RIMS	Results and Impact Management System
RPRP	Rural Poverty Reduction Project in Prey Veng and Svay Rieng
RULIP	Rural Livelihoods Improvement Programme in Kratie, Preah Vihear and Ratanakiri
SA	Social Assessment
SAW	Strategy for Agriculture and Water
SNEC	Supreme National Economic Council
SOP	Standard Operating Procedures
SICRG	Specific Investment Climate Resilience Grant
TA	Technical Assistance
TOR	Terms of Reference
TOT	Training of Trainers

TSSD	Tonle Sap Poverty Reduction and Smallholder Development Project
UNCT	United Nations Country Team
UNDAF	United Nations Development Assistance Framework
US	United States
USAID	United States Agency for International Development
UXO	Unexploded Ordinance
VAHW	Village Animal Health Worker
VEW	Village Extension Worker
WB	World Bank
WFP	World Food Programme

Map of the programme area



Executive Summary

Background and Rationale

1. Despite the rapid development of Cambodian economy and society in the past 15 years, the agriculture sector still represents more than one third of GDP and over half of employment. The poverty headcount has fallen from over 50% to around 20%. Most of the poor live in rural areas and depend on agriculture for their livelihoods, while perhaps half the rural population remaining vulnerable to falling into poverty due to shocks related to climate, market fluctuations or household emergencies. Therefore the focus of the IFAD programme in Cambodia since 1998, of providing assistance to poor and vulnerable smallholder farmers, remains valid but the context in which the assistance is provided has changed and will continue to change. Trade liberalization and greatly improved transport and communications have linked Cambodian farmers to regional product markets, while opportunities for non-farm employment, mainly accessed by migration, have led to labour shortages and driven the adoption of less labour intensive agriculture technologies. Gross yields of staple crops are no longer the key determinants of food security or nutrition. Smallholder farmers need assistance to understand and take advantage of their new opportunities. Global climate change is increasingly seen as a factor in the frequent occurrence of damage to crops, property and infrastructure that reduce production and introduce additional uncertainties into farmers' investment decisions.
2. The transition of smallholders from a subsistence farming to business farming requires a major change in support services. Key to this is the generation and articulation of "informed demand" for extension services which requires not only an increased willingness to listen to and respond to the voice of farmers themselves, but a capacity to manage and facilitate complex flows of knowledge and information between farmers, market actors, technical specialists and researchers.
3. IFAD's focus on supporting smallholder remains valid but must adapt to the changed context. The model based on asset transfers, mainly through group revolving funds, is less relevant due to expanded availability of microcredit and cash incomes from employment and remittances. The public extension service remains focused on teaching a limited set of production technologies and lacks budget and human resources. There is a lack of coordination and knowledge sharing vertically, for example between public research institutes and the extension service, and horizontally, between public, private sector and civil society actors.
4. ASPIRE is designed on the assumption that the public sector, represented by MAFF and other State and local government agencies, will continue to have an important role in the extension sub-sector, but that role must adapt to the changed context and to the increasing importance of non-State extension providers. The concept of a Cambodian Model of Extension Services envisages a policy, institutions, human resources and an implementation approach emphasizing efficient sharing of knowledge, responsiveness to farmer demand, assisting smallholders to access market opportunities and developing resilience to climate change at farm and community levels. Public funding for extension should be targeted to achieve results linked to public policy goals including support to farmer who are underserved by the market.
5. RGC policies including the Rectangular Strategy, the NSDP and the flagship Policy for Paddy Production and Rice Export emphasize the need for improved extension services, while the policy context of ASPIRE also includes the Cambodia Climate Change Strategy and the ongoing Public Financial Management and decentralization reforms. ASPIRE is designed to assist RGC to develop policy and capacity to delivery improved extension services and to coordinate the extension sector activities of development partners as well as the private sector and civil society. This is conceived as the basis for an enhanced Cambodian Model of Extension Services and a Programme-Based Approach in the extension sub-sector. This will be

achieved through work at the policy and capacity development, innovative service delivery and a rigorous approach to measurement and evaluation of results.

Programme¹ Description

Results

6. ASPIRE contributes to the goal of the RB-COSOP which is Reduced Poverty and Increased Resilience of Poor and Vulnerable Smallholder Farmers in Cambodia. The Project Development Objective is that “By 2021 an enhanced Cambodian model of agriculture services is demonstrated as effective for assisting a diversity of smallholder farmers to contribute to broad-based economic growth through profitable and resilient farm businesses and is adopted as policy.” This will be achieved through three outcomes which are interdependent: (1) A national investment programme that can be supported by multiple donors is designed to implement an updated extension policy that provides smallholder farmers with access to quality information services; (2) MAFF has institutional and human resources capacity to manage an effective, demand driven system linking researchers and knowledge-based agencies to extension agents in public sector, private sector and civil society and to farmers; and (3) At least 120,000 smallholders have improved and resilient farm businesses as a result of integrated, demand led extension services and investments in climate resilient infrastructure.

Target Areas and Beneficiaries

7. ASPIRE is a national programme. RGC has selected five pilot provinces based on criteria including unrealised agriculture potential, capacity willingness and staff resources of the PDA to implement Provincial Sub-Programmes, previous IFAD experience and a large number of farmers in the target group. Subject to satisfactory progress, ASPIRE will expand into the five PADEE target provinces when that project ends in 2018, plus three additional Provinces to be identified by Mid-Term Review. Target Districts and Communes for the extension activities, and target Districts for the Climate Resilience Grants will be identified through Provincial level planning².
8. The target beneficiaries of ASPIRE are defined as productive poor and vulnerable smallholders. Farmers in this group produce for the market as well as for own consumption and can invest small amounts in improving production. The comparative advantage of IFAD lies in assisting this group rather than the chronically poor with no productive resources and the land poor who cannot produce for the market, on the one hand, or better off farmers, on the other. Extension activities will be designed to meet the needs of the target group and beneficiary households will be chosen largely by self-selection: i.e. the prime criterion for participation in a farmer field school will be the desire to learn.

Components

9. **Component 1: Evidence Based Policy Development** will support the definition and adoption in policy of the Cambodia Model for Extension Services and resource mobilisation for a programme based implementation approach. The component will demonstrate an improved and inclusive policy process. Policy will be developed through structured “policy rounds” with outputs, time-frame and responsibilities defined by the ASPIRE Steering Committee. The policy process will consist of three stages: i) Orientation; ii) Formulation and Approval; and iii) Mainstreaming and Learning. It is anticipated that there will be three to five policy rounds, each of 12 to 18 months duration.

¹ ASPIRE is designed to prepare for a Programme Based Approach to support to the extension sub-sector but is already “programmatic” in its emphasis on integrating policy, capacity and delivery of services, in its alignment with RGC policy and systems and in its open approach to partnership. Hence the term “programme” is adopted in preference to “project.”

² The selected pilot provinces are Battambang, Kampong Chhnang, Kratie, Preah Vihear and Pursat. The five PADEE provinces are Kampong, Kandal, Prey Veng, Svay Rieng and Takeo.

10. A framework for mobilisation of resources to support extension in a Programme Based Approach will be a key output of the policy process. During the final phase roll-out of the Cambodian Model of Extension Services to the five PADEE provinces will be financed by IFAD while ASPIRE will assist RGC to mobilise resources from additional donors, initially to roll out the model to a further three provinces. The roll-out and engagement of additional donors will achieve the conditions for a full Programme Based Approach.
11. Component 1 has two sub-components, associated with the ASPIRE Secretariat and the Supreme National Economic Council (SNEC) respectively. **Sub-Component 1.1: Policy Coordination and Development** includes coordination, policy drafting and resource mobilisation activities. In **Sub-Component 1.2: Policy Research and Analysis**, SNEC will build on its role of high-level policy advice to the leadership of RGC by establishing an Analytic Unit for the Agriculture Sector, conducting or commissioning policy studies and trials including Randomized Controlled Trials in collaboration with IFPRI, and formulating evidence-based policy recommendations.
12. **Component 2: Capacity Development for Extension Services** will be implemented through two sub-components focused on institutional development and strategic human resources respectively. Sub-Component.
13. **Sub-Component 2.1: Improving Extension Quality and Knowledge Management** will assist MAFF to improve the definition of roles and responsibilities of different agencies in extension and to establish an Extension and Research Advisory Board overseeing an Extension Hub within the General Directorate of Agriculture. The functions of the Extension Hub will include (1) Integration of existing extension materials and web content; (2) development of new extension materials and training content; (3) development of a system of extension demand assessment and extension service planning; (4) establishment of the Extension Portal, (5) outreach activities and (6) development and implementation of quality assurance systems.
14. **Sub-Component 2.2: Strengthening Human Resources for Extension** will support a Human Resources Development Strategy, strengthen the skills of current extension staff in key strategic areas including leadership and adult learning methods, and support academic education in extension for full-time students and for serving field personnel including Commune Extension Workers. In service education will be delivered through a combination of residential courses and e-learning.
15. **Sub-Component 3: Improved Extension services** will pilot Provincial sub-programmes within the MAFF Programme Budget framework, finance grants for piloting and testing innovative approaches to extension and support a mass media extension campaign.
16. **Sub-Component 3.1: Provincial Sub-Programmes** will be implemented within the Programme Budget structure of MAFF. An improved Provincial Agriculture Strategic Plan will be prepared through inclusive dialogue and supported by evidence on farmer needs and priorities, market opportunities and technical constraints. Through the Programme Budget, PDA will allocate grant funds to extension services with a mix of comparative models including public sector service delivery, a farmer-to-farmer extension model supported by the Commune Extension Workers, public-private partnerships and contracting out. Where appropriate, existing farmer organisations and cooperatives may be the basis for Smallholder Learning Groups and will play a major role in the farmer-to-farmer learning networks. More advanced cooperatives may act as service providers under contracting out or PPP modalities. PDA will be accountable to maximise results achieved through efficiently allocating the grant funds to these models.
17. **Sub-Component 3.2: Innovations for Climate Resilient Agriculture** will support demonstration and testing of promising innovations under smallholder farm conditions. Suitable technologies may include, but will not necessarily be limited to, improved on-farm water management, adjustments to the cropping calendar particularly including introduction of early

- wet season rice or other crops, introduction of climate resilient varieties, introduction of new crops with a potential to improve climate resilience.
18. **Sub-Component 3.3: Mass Media Campaign** will include climate change awareness and will promote climate smart agriculture. Activities will include: (i) radio broadcasts (ii) an educational television show with an entertaining, competition-based format and (iii) a mobile feedback show engaging farmers in discussion about the programmes. The farmer to farmer learning activities will build upon and enhance the effectiveness of the mass media campaign through ensuring further dissemination, discussion and understanding of mass media messages at the local level. All broadcast materials will also be available via the extension portal.
 19. **Sub-Component 4: Infrastructure Supporting Climate Resilient Agriculture** is designed to address a key constraint to the effectiveness of extension support to smallholders in areas of high climate risk. The component scales up a model successfully piloted by NCDD-S in which Districts develop Climate Resilience Strategies and allocate the proceeds of Performance Based Climate Resilience Grants. Eligible expenditures will be the additional costs of climate proofing productive infrastructure or constructing climate adaptive infrastructure. Investments will be identified by the Commune Councils from their development plans and the non-climate related costs will be financed by the Commune-Sangkat Fund. Districts meeting performance targets will receive three annual PBCR Grants in increasing amounts and will become eligible for one Special Project Climate Resilience Grant to finance a larger investment.
 20. ASPIRE supports the Cambodia Climate Change Strategic Plan and incorporates features to mainstream climate resilience concerns in education and training materials (Component 2); use of climate risk indicators to allocate resources and measure performance, and use of vulnerability reduction analysis in planning (Component 3.1); testing of climate resilient agriculture solutions (Component 3.2); financing climate resilient infrastructure (Component 4); and partnership arrangements with GEF-funded projects (UNDP Resilient Livelihoods and a future IFAD biogas project).

Implementation Approach

21. The implementation approach of ASPIRE reflects its ownership by RGC and its purpose to support reform within the extension sub-sector. ASPIRE implementation will be aligned with national systems and is designed to facilitate partnership and harmonisation with a wide range of development partners and stakeholders. Implementation arrangements emphasise creating accountability for results in line with the Paris Declaration, the Accra Agenda and the Busan declaration of 2011.
22. MAFF will be the Executing Agency under the overall coordination of MEF representing the Borrower. ASPIRE will be overseen by a Steering Committee (SC) co-chaired at Secretary of State level by MEF and MAFF, and with representation from CARD, SNEC, NCDDS and Ministry of Environment (MoE), participating provinces, development partners, civil society (farmer organisation) and the private sector.
23. As requested by RGC, ASPIRE will align with the Programme Budget of MAFF. This alignment will be managed by an ASPIRE Secretariat reporting to the Programme Director and will be accomplished through a phased approach. In the Foundation phase, the ASPIRE results framework will be cross-referenced to relevant outputs and activities of the Programme Budget and pilot Provincial Sub-Programmes will be established. In the Proving phase, the MAFF Strategic Budget Plan will become progressively more results-orientated and ASPIRE will support selected sub-programmes of the Programme Budget. In the Scale-Up Phase and subject to satisfactory progress it is envisaged that ASPIRE support will become fully aligned with the Strategic Budget Plan. The ASPIRE Secretariat could eventually be absorbed into the Department of Planning and Statistics and the Department of Finance that jointly manage the Programme Budget.

24. ASPIRE support will bring an increasing focus on results into the Programme Budget arrangements. ASPIRE will be designed to better define, measure and reward good performance at institutional and individual levels. Tools for this purpose will include performance based grants and allocations and potentially may include individual performance related incentives.
25. Through the Programme Budget (but without co-mingling of funds) ASPIRE will finance activities of MAFF technical agencies including but not necessarily limited to the General Directorate of Agriculture, the Department of Animal Health and Production and the Provincial Departments of Agriculture. PDA will be accountable for the Provincial sub-programmes and will allocate funds to activities of the District Agriculture Offices as well as to support public-private partnerships, contracted out extension services and farmer-to-farmer learning activities.
26. Not all ASPIRE activities will be implemented through the Programme Budget framework. Non-Programme budget activities will include Component 1.2, implemented by SNEC, and Component 4, implemented by NCDDS. There may also be non-Programme Budget activities within MAFF where these activities are essential to ASPIRE but do not match activities in the Strategic Budget Plan.
27. Local Administrations at Provincial, District and Commune levels assist in planning and coordination of ASPIRE. The Commune Councils will directly contract the Commune Extension Workers with funding support from the Provincial Sub-Programmes. The District Administrations and Commune Councils will jointly implement the climate resilient infrastructure activities, financed by grants from NCDD-S.
28. Monitoring, evaluation and knowledge management will be integrated into all aspects of ASPIRE. Key M&E tools will include (1) an integrated MIS; (2) a Major Impact Survey at baseline, mid-term and end of project; (3) annual Results Verification Surveys making use of use telephone surveys of farmers tracked by the MIS; (4) an independent evaluation of progress in policy development; (5) an extension practitioner survey, Qualitative Analysis (case studies and Most Significant Change stories) and (7) participatory evaluations of the infrastructure investments.
29. ASPIRE will result in improved knowledge in the areas of (1) The efficacy and cost-effectiveness of different approaches to extension, subject to different contexts; (i.e. what works, where); (2) Smallholder farmers' needs for extension services, and how smallholders can be assisted to identify and take advantage of emerging market opportunities; (3) the capacities and appropriate roles of the public sector, private sector and civil society in agriculture services in a Cambodian context; and (4) the effectiveness and applicability of selected innovations in climate resilient agriculture.

Costs, Financing and Benefits

30. Total estimated project costs are USD 82.2 million over seven years and include USD 4.1 million of contingencies. Direct costs will be financed by an IFAD loan of USD 26.1 million, a grant (financed through IFAD by ASAP) of USD 15.0 million, Government contribution of about USD 11.4 million, a grant from i3E to IFPRI of USD 0.9 million, activities financed by USAID of USD 0.33 million and a further USD 12.4 million to be mobilised from additional partners. Contributions in kind of USD 5.8 million from project beneficiaries, USD 7.2 million from sub-national administrations and USD 3 million from private partners are assumed in the total figure. The government will co-finance all categories of expenditure including 28% of salaries and allowances, 10% of equipment and materials, 27% of training, 18% of Grants for Extension Services to Smallholders, 17% of Grants for Climate Resilient Productive Infrastructure and 100% of salaries of Government staff seconded to the programme. The financial and economic analysis suggest satisfactory returns from project investments and sufficient incentives for participation of project beneficiaries. The overall economic rate of return is estimated at 15%.

Sustainability and Risk Mitigation

31. ASPIRE is designed for sustainability at multiple levels. At the policy level, sustainability will be achieved not only by embedding the Cambodia Model of Extension Services in formal policy but also by engaging stakeholders within and outside government as owners and partners in the model. Sustainable capacity development will be achieved by working through the permanent institutions and budget execution procedures of MAFF and by strengthening strategic human resources. The sustainability of improvements to smallholder farm businesses will be improved by a focus on resilience including to climate shocks. The sustainability of infrastructure investments will be improved by providing incentives for good maintenance performance and by introducing public-private partnerships where appropriate.
32. The key implementation risks to full achievement of the project objectives are outlined below with proposed mitigation measures:
 - (a) *Policy objectives do not engage sufficient attention and support from the leadership level in RGC.* IFAD will engage with senior RGC leaders during the project preparation and implementation readiness period, possibly including support to policy dialogue as part of a preparedness package. A major advantage of the involvement of SNEC is the agency's role and track record of policy advice to the highest levels of RGC;
 - (b) *Management failures leading to excessive delays in implementation.* To ensure a timely and efficient start-up of ASPIRE, IFAD is in discussion with RGC on options to finance start-up technical assistance with specialist programme management expertise in the programme preparedness phase and during the first year of implementation.
 - (c) *Reforms could be frustrated by obstruction from lower levels in the institutions concerned.* ASPIRE will seek to identify potential problems through open dialogue with stakeholders and the commitment and management authority of the leadership will be key to overcoming resistance. The issue of staff performance incentives is closely related.
 - (d) *Rent-seeking in the procurement process* for decentralised services will be minimised by strict application of RGC procurement procedures. Service providers for contracted-out extension may be subject to a pre-qualified list linked to the quality assurance system.
 - (e) *Effective staff resources, particularly at District level, will prove insufficient to fulfil the service delivery targets.* ASPIRE will require MAFF and its PDA directors to assign adequate staff to DAO before beginning service delivery in a district. Phasing in at approximately 3 Districts per Province in each of the first two years is intended to allow sufficient time for this.
 - (f) *Without the material incentives provided by previous IFAD projects, farmers will be reluctant to commit time to training and resources to adoption of new technologies.* The Smallholder Learning Group approach with emphasis on self-selection of participants, shorter training modules, improved learning methods and demand-led selection of training topics, is intended to overcome this difficulty. Where appropriate, SLG may be used as the basis for cooperative negotiation of terms with input sellers or credit providers.
 - (g) M&E and results monitoring arrangements fail to provide the quality of evidence that is needed to substantiate policy conclusions. ASPIRE will benefit from the improved approach to M&E already implemented in PADEE, including a professionally conducted major impact survey and the establishment of an MIS. ASPIRE will use a multi-layered approach to monitoring with the potential for cross-checking of findings, for example between RCTs, the impact survey, farmer tracking and mobile feedback "shows."

Logical Framework

Narrative Summary	Key Performance Indicators	Means of Verification	Assumptions (A) / Risks (R)
Goal:			
Reduced Poverty and Increased Resilience of Poor and Vulnerable Smallholder Farmers in Cambodia	<ul style="list-style-type: none"> ▪ Average household agricultural production value of 120,000 targeted households increased by 15%³ ▪ Value of household assets of increased by 25% (including for climate-vulnerable households)⁴ 	<ul style="list-style-type: none"> ▪ Impact survey (Baseline, Mid-Term, final) 	
Programme Development Objective:			
By 2021 an enhanced Cambodian model of agriculture services is demonstrated as effective for assisting a diversity of smallholder farmers to contribute to broad-based economic growth through profitable and resilient farm businesses and is adopted as policy	<ul style="list-style-type: none"> ▪ An evidence based Cambodian Model of Agriculture Extension Services is defined in policy and services are fully financed by Programme Budget by 2021 	<ul style="list-style-type: none"> ▪ Policy and budget documents 	A: Improved knowledge and support services cost-effectively benefit poor and vulnerable smallholders
Outcome 1: A national investment programme that can be supported by multiple donors is designed to implement an updated extension policy that provides smallholder farmers with access to quality information services	<ul style="list-style-type: none"> ▪ RGC commits to extend Provincial Sub-Programmes to all agriculture provinces ▪ At least 2 significant development partners in addition to IFAD commit in principle to future financing of CMAE through Programme Based Approach 	<ul style="list-style-type: none"> ▪ Documents 	A: Continuity of RGC policy facilitates development of programme-based approach R: Insufficient engagement / commitment of leadership
Outputs: 1.1 By 2016, an extension policy framework is approved that identifies a clear role for MAFF and key partners, provides strategic guidance to MAFF programmes and activities and targets public support at those most in need and who can benefit from advice	<ul style="list-style-type: none"> ▪ Policy Framework approved by Steering Committee following validation by stakeholders at annual Extension Policy Forum 	<ul style="list-style-type: none"> ▪ Policy documents 	A: MAFF willing to commit to policy development process with external participation A: Studies, results measurement and impact assessments provide clear evidence for policy direction
1.2 An Analytic Unit for the Agriculture Sector is established in SNEC	<ul style="list-style-type: none"> ▪ Unit formally established within government structure and staff recruited against PDs 	<ul style="list-style-type: none"> ▪ Programme progress reporting 	
1.3 By 2018, a set of extension policies has been formulated based on evidence, validated in discussion with stakeholders and adopted	<ul style="list-style-type: none"> ▪ Set of policies approved by competent authority that are based on evidence including studies, results monitoring and randomized controlled trials 	<ul style="list-style-type: none"> ▪ Record of policy approvals 	

³ Targets are relative to a control group and to be achieved by end of programme unless otherwise stated

⁴ Households assets taken as a proxy for resilience

Narrative Summary	Key Performance Indicators	Means of Verification	Assumptions (A) / Risks (R)
1.4 By 2018, an effective Framework for Resource Allocation and investment prioritisation	<ul style="list-style-type: none"> ▪ A medium term investment and resource allocation framework adopted 	<ul style="list-style-type: none"> ▪ Programme progress reporting 	
1.5 By 2021, adequate financial resources are mobilized to implement the Cambodia Model for Agriculture Extension	<ul style="list-style-type: none"> ▪ At least 10 Provinces have adequate resourcing through the Programme Budget to implement CMAE objectives. 	<ul style="list-style-type: none"> ▪ Budget documents 	A: DPs willing to support demonstrated successful model
Outcome 2: MAFF has institutional and human resources capacity to manage an effective, demand driven system linking researchers and knowledge-based agencies to extension agents in public sector, private sector and civil society and to farmers	<ul style="list-style-type: none"> ▪ At least 6 MAFF department-level technical agencies have strategic plans and fully financed sub-programme activities that respond to Farmer Needs Assessment ▪ At least 1,000 field level extension agents applying enhanced skills and improved methods as a result of ASPIRE support 	<ul style="list-style-type: none"> ▪ HR Strategy baseline and follow up study ▪ Capacity framework - baseline and progress assessment 	A: Improved capacity can be sustained by improved budgeting procedures and resources R: Reforms are frustrated by resistance from staff
Outputs: 2.1 The Extension Hub is established to support the extension sub-sector with sustainable financing and improves access to extension materials and technical support for field extension agents in public sector, private sector and civil society (SC 2.1)	<ul style="list-style-type: none"> ▪ # of extension materials accessible through the Extension Portal ▪ # Extension agents (by public sector, private sector, civil society) who access Extension Portal to support their work 	<ul style="list-style-type: none"> ▪ Extension Portal recording 	A: Weak knowledge management and sharing are key constraints to extension service A: New tools can cost-effectively improve understanding of farmer needs A: Private / civil sector extension agencies willing to participate in QA
2.2 The Farmer Needs Assessment system established within the Extension Hub supports improved planning of extension programmes (SC 2.1)	<ul style="list-style-type: none"> ▪ Needs assessment system (tool and defined actions/protocol) available than can be used in planning of services/products 	<ul style="list-style-type: none"> ▪ Programme Progress reporting 	A: MAFF has management strength to facilitate and if necessary, enforce compliance with guidelines
2.3 Improved extension techniques are developed and master trainers trained (SC 2.1)	<ul style="list-style-type: none"> ▪ # Master Trainers trained on improved techniques 	<ul style="list-style-type: none"> ▪ MIS 	Stakeholders value ASPIRE and willing to contribute to success
2.4 Quality assurance of extension materials and extension service providers operating under the Extension Hub (SC 2.1)	<ul style="list-style-type: none"> ▪ # of extension materials and service providers certified (by product category) 	<ul style="list-style-type: none"> ▪ Extension Portal recording 	A: Lack of human resources is a key constraint to extension service delivery R: management failures lead to delays in implementation
2.5 Clearly defined roles and responsibilities that support the extension service and MAFF institutions to work together (SC 2.1)	<ul style="list-style-type: none"> ▪ % of extension staff whose performance is managed based on approved job descriptions (Ext. Hub, PDA and DAO ext staff) 	<ul style="list-style-type: none"> ▪ MIS 	
2.6 The human resources needed to operate the extension service are strengthened in accordance with a human resources development strategy that identifies number of trained extension workers needed, key skills and education and training provisions (SC 2.2)	<ul style="list-style-type: none"> ▪ # of people with improved skills (by course/research type and gender) to deliver quality extension services in line with agreed HRDS 	<ul style="list-style-type: none"> ▪ MIS 	

Narrative Summary	Key Performance Indicators	Means of Verification	Assumptions (A) / Risks (R)
Outcome 3: At least 120,000 ⁵ smallholders have improved and resilient farm businesses as a result of integrated, demand led extension services and investments in climate resilient infrastructure.	<ul style="list-style-type: none"> ▪ At least 90,000 smallholder farm businesses with increased profits through applying techniques learned through participation in ASPIRE extension activities ▪ At least 70,000 climate vulnerable smallholders using infrastructure financed by PBCR/SPC to support their farming 	<ul style="list-style-type: none"> ▪ Farmer tracking / MIS and Impact Survey ▪ NCDD-S PID database 	A: Results measurement demonstrates benefits of ASPIRE approach
Outputs: 3.1 Public resources allocated in response to farmer needs need and market opportunities (SC 3.1)	<ul style="list-style-type: none"> ▪ At least 10 PDA demonstrating progress in PSP planning and results through Provincial Scorecard 	<ul style="list-style-type: none"> ▪ Provincial Scorecard/MIS 	A: Existing planning systems are not adequately responsive to farmer needs or market opportunities R: inadequate staff resources, particularly at District level.
3.2 Smallholders trained in improved climate-smart agriculture techniques learned through an efficient mix of delivery models (SC 3.1)	<ul style="list-style-type: none"> ▪ At least 120,000 smallholders participating in extension activities promoting and climate resilient agriculture techniques (by ID Poor 1,2, gender of HH) to be detailed by provider (DAO, private, PPP) 	<ul style="list-style-type: none"> ▪ Farmer tracking/MIS 	A: Smallholders willing to invest in improved farm businesses R: Change from previous IFAD approach of providing material assistance leads to farmer reluctance to participate
3.3 Smallholder farmers gain improved access to information through farmer-to-farmer learning supported by mass medial extension campaigns. (SC 3.3)	<ul style="list-style-type: none"> ▪ # of smallholders accessing information on improved and climate resilient agriculture techniques (by ID Poor 1,2, gender of HH) through media campaign 	<ul style="list-style-type: none"> ▪ Audience survey 	A: Suitable techniques and market opportunities exist A: Knowledge already available at local level is not shared efficiently
3.4 Improved knowledge of the effectiveness of innovative extension methods developed (SC 3.2)	<ul style="list-style-type: none"> ▪ # Innovation pilots reporting results (positive or negative) that improve knowledge for extension policy and planning 	<ul style="list-style-type: none"> ▪ Programme reporting/MIS 	A: Untested innovations have potential to improve extension service A: Investments in climate resilient public infrastructure provides sustainable benefits to farm businesses
3.5 Profitability and resilience of smallholder farm businesses enhanced by access to climate-resilient productive infrastructure (SC4)	<ul style="list-style-type: none"> ▪ 24 Districts with high climate risk supporting climate resilient infrastructure through grant funding in line with District level CR Strategy 	<ul style="list-style-type: none"> ▪ MIS - NCDDS and programme reporting 	

⁵ This result will be achieved through the combined effects of Component 3 and Component 4. The outreach target for Component 3 is 144,000 households and the outreach target for Component 4 is 70,000 households, of whom it is expected that about half will be Component 3 participants. Therefore the combined outreach target is around 179,000 households and the Outcome 3 target is that 120,000 of these households demonstrate improved and resilient farm businesses

I. STRATEGIC CONTEXT AND RATIONALE

A. Country and rural development context

1. The Kingdom of Cambodia has a land area of 181,035 km² and is bordered by Thailand to the northwest, Laos to the north and by Vietnam to the east and south, with a short coastline on the Gulf of Thailand to the west. The 2008 Census put the total population at 13.4 million with an annual rate of increase of around 1.6%: projection based on this growth rate implies a population of around 14.7 million in 2014. The overall population density is around 80 persons per square kilometre, although densities are generally higher in the low-lying, agricultural areas in the south of the country and in the Tonle Sap basin, and much lower in the forested and upland areas of the north and northwest. About 80% of Cambodians live in areas officially classified as “rural” by the National Institute of Statistics.
2. Cambodia was afflicted by almost continuous war and civil conflict from 1970 until the early 1990s, including the traumatic experience of the Democratic Kampuchea (“Khmer Rouge”) regime from 1975 to 1979. The peace agreement of 1991 and the UN-organised election of 1993 led to re-establishment of a constitutional monarchy with multi-party democratic institutions of governance. Full peace was established by 1998 and Cambodia has maintained general political stability since. The results of the national elections in 2013 were disputed and the opposition party has maintained a boycott of the National Assembly, however a new Government has been formed based on the election results and Government institutions are functioning more or as normal.
3. Since the 1990s Cambodia has re-integrated itself into the regional and global economies and made important progress in reconstruction and development. Cambodia adopted economic policies based on free markets in 1989 and since then has followed a broadly consistent path of reducing State involvement in the economy and, particularly since 1993, favouring macroeconomic stability and openness to international trade. Annual GDP growth averaged about 10% between 1999 and 2008. Growth fell to zero in 2009 in the aftermath of the food, fuel and financial crisis and has since recovered to about 7% per year. Population growth in this period was less than 2% per year, implying substantial increases in GDP per capita. Growth has been driven mainly by the garment, tourism and construction sectors which have also been the most significant sources of non-farm employment.
4. High growth has been accompanied by poverty reduction. According to the data of Cambodia Socio-Economic Survey (CSES), the poverty rate in 2011 is estimated at 20.5% compared to 53% in 2004⁶. The share of households below the food poverty line has decreased from 16% to 3.8% during the same period. With the majority of population being rural (about 80%), this substantial decline of overall poverty is a reflection of drastic reduction of rural poverty: poverty incidence in rural areas declined from 59% in 2004 to 24% in 2011 and food poverty was reduced from 18% to 4.4% in the same period. The rural poverty rate estimated from the CSES data more or less corresponds with the IDPoor poverty survey headcount, according to which about 27.1% of rural population were poor in the 2010-2011 period.
5. Despite the encouraging trend in poverty reduction, about 2.8 million people are still poor, 90% of whom (about 2.5 million) live in rural areas, although there are pockets of severe poverty in some urban areas, particularly in Phnom Penh.
6. Poor households have fewer adult earners and higher proportions of dependants, limited income sources, and smaller agricultural landholdings. The poor have limited access to formal credit. Due to underdeveloped extension services in the country, the poor’s access to technologies and market information is limited except where external supports are provided.

⁶ The main source for poverty statistics in this and the following paragraphs is Where Have All the Poor Gone: World Bank Poverty Estimate 2013

While income from non-farm self-employment and wages is becoming increasingly important in the rural areas, poor households still rely on a largest share (around 44%) of their household income from agriculture. Non-farm self-employment provides only around 5% of income. The pattern of higher shares of agriculture income in lower income quintiles has remained consistent over 2004-2012⁷.

7. The same study found that female-headed households in rural areas had lower income per capita than male-headed ones. The income of female-headed households fluctuates more sharply, indicating a higher degree of vulnerability for female-headed households. The share of salaries and wages in female-headed households' income is higher than those of other sources, including agriculture, but the types of jobs that poor women are employed are generally low paying. According to the 2008 census data, about 26% of Cambodian households are women headed and nearly 12% of women are widowed, divorced or separated; these figures are much higher than the corresponding proportions among men. Although girls' primary school enrolment rates are now similar to that of boys, adult women have lower education levels than men. Domestic violence is a serious problem especially amongst the poorest households.
8. Low agricultural productivity and the impact of floods and droughts, exacerbate poverty. The Cambodian rural economy is dominated by raw agricultural production and has not diversified in ways that could significantly provide jobs for poor rural residents: constraints to economic diversification include relatively poor infrastructure, an under-developed electricity grid and high energy costs, lack of finance for investments and high costs of doing business. In such conditions, the ability of smallholder farmers to take risks and innovate is severely constrained. Development in other sectors of the economy and in neighbouring countries has provided alternative employment opportunities. Many Cambodians and especially the rural poor migrate to find work, either seasonally or by permanent re-location to urban Phnom Penh or to the upland and forest provinces with greater land availability. Migration brings its own problems including social disruption and the vulnerability of migrant workers to abuse.
9. A high proportion of the poorest families in any village are typically landless, women-headed households with a high number of dependent children and lacking adult labour-power. Cambodian women enjoy equal economic rights with men in law but in practice they face additional challenges and may find it more difficult than men to escape from poverty. Cambodian women take a large degree of responsibility for managing household affairs and often engage in small business activities but they are under-represented in elected offices and positions of public authority and find it difficult to make their voices heard. Rural women have to combine agricultural work with domestic responsibilities. Women may find it difficult to exercise effective ownership of land and other assets, which may lead to divorced or widowed women becoming landless.
10. Although overall population growth has slowed, the labour force is growing much faster – the median age is about 21 and young people who were born during the baby boom years of the 1980s and 1990s are now searching for employment opportunities.

Agriculture and Natural Resources Sector

11. Despite growth in other sectors, agriculture still represents the largest source of employment in Cambodia and the recent economic crisis has highlighted the importance of the sector as a source of growth. While growth in other sectors has absorbed a significant amount of rural labour over the last ten years, agriculture still employs around 60% of the labour force (when including forestry and fisheries activities). The share in rural areas is even higher at 70% (2007 CSES data). In addition, agriculture currently makes up about 34% of total GDP (compared to slightly more than half of the country's GDP in 1990). The sector expanded at an annual rate of 4.4% over the 1998 to 2008 period, driven by increases in productivity and in cropped area: this

⁷ Tong Kimsun et al, *Levels and Sources of Household Income in Rural Cambodia 2012*, CDRI, August 2013.

- is a high growth rate when compared to other East Asian and Pacific countries. Most importantly, the sector continued expanding during the crisis with agricultural GDP registering an estimated 5.4% growth in 2009 and 4.0% in 2010. Key drivers of agricultural growth include large natural potential, foreign investments, public expenditures in infrastructure, credit and last but not least global and regional markets boosted by the food price spike after 2008.
12. The total area of cropland in Cambodia is about 25,000 square kilometres, or 14% of the total land area. About 60% of the land area is classified as forest. Rice is by far the dominant crop, accounting for about 80% of the cropped area. Wet rice cultivation is concentrated in the low-lying provinces of the southern part of the country and the Tonle Sap basin, while the higher areas in the northeast and southwest are dominated by forest, plantation and upland crops. Livestock production, while important, is mainly by smallholders as an additional activity to rice growing. Rice production has grown faster than the overall agricultural economy, so that Cambodia has become self-sufficient in rice and exports significant quantities of paddy, mainly through informal channels to Vietnam, as well as smaller amounts of milled rice. Other cash crops such as cassava are also exported to Vietnam without processing.
 13. Timber production and freshwater fisheries are major commercial activities in Cambodia. Although the forestry sector has been subject to a moratorium on logging for most purposes since 2002, in practice a considerable amount of production continues. Traditionally rural Cambodians harvest a wide range of natural products for processing, sale or domestic use. Although many of these products are of declining importance, most Cambodian rural households continue to rely on firewood for cooking fuel and catches of wild fish and small aquatic creatures make an important contribution to their diet.
 14. The land ownership system in rice-farming areas of Cambodia results from the distribution of collectivised land to households in the late 1980s and developments since that time. Population growth has increased pressure on land while sales forced by poverty, debt or domestic emergencies, and in some cases expropriation of land, have resulted in smaller average plot sizes and increased inequality in land distribution. A 2005 survey found that 80% of holdings were less than 2 hectares; however holdings over 2 hectares accounted for 50% of all land. About 37% were less than 0.5 hectares and thus probably too small to provide for household consumption. Land ownership is governed by the Land Law of 2001 and despite a significant land titling effort most agricultural land is still not covered by formal land titles. Land holdings under informal titles are fairly secure in traditional rice growing areas, but land ownership disputes have become common in former forest land and also in high-value urban areas. Large areas of the forest estate have been awarded to commercial interests as economic land concessions (ELC), often with accompanying criticism from civil society organizations (mainly on account of lack of transparency, failure to respect the rights of existing land users, weak control over the uses made of concession land and low productivity). The Government has also introduced a social land concession (SLC) program aimed at distributing vacant land to the rural poor, although so far this is on a much smaller scale than the ELC. In 2012 and 2013 the Government made a concerted effort to resolve outstanding land ownership disputes, particularly in forest and ELC areas, through a campaign of land surveying by student volunteers under the personal direction of the Prime Minister. It is said that 660,000 plots were surveyed 380,000 new titles issued under this scheme, however the long term effectiveness of the programme in ending land disputes is uncertain.
 15. Cambodia's total water resources are very large, consisting of average annual rainfall of 1000mm to 1500mm in most areas and cross-border flows of river and groundwater. However effective water availability for agriculture is highly seasonal and often unpredictable. About 90% of all rain falls between May and October. Cambodia's irrigation infrastructure is largely a legacy of schemes constructed by mass mobilisation of labour in the late 1970s: these schemes were characterised by unrealistic ambitions and by very poor standards of design and construction. Most investment in irrigation since 1980 has gone into rehabilitating and improving

the more promising parts of these “Khmer Rouge” systems: this is often the easiest course as it avoids land acquisition issues, although better technical solutions might be available. In 2006, only about 17% of the rice crop was fully irrigated, with the remainder being fully or partially dependent on rainfall. In most areas only one crop is grown per year, either a rain-fed wet season crop or in areas subject to annual inundation, a recession crop, with some supplementary irrigation used for both types. In recent years the Government has invested heavily in irrigation improvements, with most expenditure on headworks and main canals and rather less emphasis on distribution systems and maintenance.

16. Cambodia is vulnerable to climate variability and change, and has experienced an increasing number of natural disasters over the last several decades. Over the period 1980 – 2010 over 16 million people have been affected by floods and drought with estimated economic damages of US\$538 million. Current climate variability as experienced by local communities include late onset of monsoon rains, mid-monsoonal drought accompanied with temperature spikes, and late season floods followed by a cold spell. Climate change predictions indicate an increase in temperature between 0.7-2.7°C by 2060 and increase in average annual rainfall by about 30%. Paradoxically, useful water availability may be reduced as rainfall is expected to come in fewer incidences of high intensity rain leading to large scale runoff, and with a shorter rainy season and a longer dry season. Climatic variations are expected to increase the severity and frequency of flood and drought events. Changes in flows and seasonality could also have adverse impacts on sensitive and economically productive wetlands such as Tonle Sap. The impacts on agriculture and fisheries are likely to be dramatic. Finally, it is expected that climate change will increase the incidence of infectious, water-borne and vector-borne diseases, heat stress and mortality, with significant impact on public health costs.
17. Despite the progress made in recent years there is scope for further gains in rice productivity, in crop diversification and improved livestock production. Constraints faced by Cambodian farmers include poor soil quality, small and fragmented plots, lack of water, lack of access to quality inputs including improved seeds, lack of access to finance (particularly for poorer households), inefficient production techniques and high post-harvest losses. Poor road infrastructure is also a constraint (although the rural road network has improved greatly in recent years it is still far below the standard found in neighbouring countries) as are high energy costs and lack of access to electricity. Frequent crop losses due to extreme climate events reduce productivity and discourage investment.

Policies and Development Plans

18. The overall objectives of the Royal Government of Cambodia are expressed in the “Rectangular Strategy for Growth, Employment, Equity and Efficiency” first adopted in 2005 and updated in 2013. The Rectangular Strategy is based on development in four key areas: agriculture, infrastructure, the private sector and capacity building and human resources development, while good governance is placed at the core of the strategy.
19. The National Strategic Development Plan elaborates the principles of the Rectangular Strategy. The NSDP was adopted in 2006 and a newly adopted version covers the mandate of the current Government (2014-18). The NSDP commits Cambodia to achievement of its Millennium Development Goals and sets ambitious targets for expansion of agricultural production and exports, including achieving average rice yields of 3.25 tonnes per hectare by 2018 and increasing surplus paddy production to 6 million tonnes per year, and raising average value added per hectare (all crops) from US\$997/ha in 2007 to US\$1,450/ha by 2018.
20. The Policy on Rice Production and Export policy recognizes the strategic importance of rice production to Cambodia’s economy and lists a number of policy measures and related investment priorities, and identifies responsible institutions for implementation, to promote rice production and exports. It identifies the potential of milled rice to improve the balance of Cambodia’s exports, which are heavily dependent on the garment industry at present. The policy promotes a value chain approach combining increases in productivity with investments in

processing and exploitation of niche markets, for example for organic rice. The policy targets exports of 1 million tonnes of milled rice by 2015.

21. Cambodia has engaged in progressive piloting and implementation of decentralisation reforms since 1996, with a key achievement being the establishment of directly elected Commune Councils as the lowest tier of government in 2002. The Strategic Framework for Decentralisation and Deconcentration Reforms (2005) established a vision for integrated administrations at Provincial and District Level. An Organic Law (2008) established the basis for indirect elections of Provincial and District Councils which took place in 2009. The Government is implementing a 10-year National Program for Sub-National Democratic Development (NP-SNDD) under the leadership of NCDD, with the second three-year implementation phase expected to begin in 2015. The draft NSDP 2014-2018 establishes transfer of functions, strengthened own-source revenue collection, decentralising staff management and improving vertical and horizontal accountabilities as priorities.
22. The Cambodia Climate Change Strategic Plan (CCCSP) outlines the government's vision for promoting climate-resilient development and green growth in the period 2014-23. During its first phase the strategy will focus on adaptation activities aimed at strengthening community resilience. All climate-related issues, including a climate change financing framework, will be gradually integrated into development strategy and planning at all levels – national and sub-national – as a matter of priority.
23. Cambodia has a system of bottom-up, participatory planning based on the five-year Commune Development Plans and annual Commune Investment Programs. Priorities identified in local planning are adopted into sector and agency programs through annual District Integration Workshops. NCDD approved new guidelines for District and Provincial planning in 2011.

B. Rationale

24. The design of the ASPIRE programme is based on the analysis of strategic opportunities for poverty reduction, inclusive growth and enhanced climate resilience underlying the RB-COSOP 2013-18. Agriculture will remain a key contributor to Cambodian growth and employment for the foreseeable future. About 20% of the rural population are poor but a much larger proportion – perhaps as much as 50% - is vulnerable to falling into poverty due to climate or other shocks. The agriculture sector as a whole, and the smallholder agriculture sector which is the basis of the livelihoods of the overwhelming majority of poor and vulnerable Cambodians – has potential for inclusive growth based on more effective use of available technology and on improved market linkages. In particular, there is a large sub-group of poor and near-poor but productive smallholders who can raise their incomes and increase their resilience through market-linked, climate smart improvements in agriculture production. Studies for preparation of the RB-COSOP found that the product markets to which smallholders have access are competitive and internationally linked, implying that smallholders have the opportunity to gain from improved productivity, technical efficiency gains and production decisions⁸.
25. Lack of access to up-to-date, relevant information on farming technologies, markets and climate risks, together with the lack of the skills needed to use information effectively, are key constraints to the improvement of smallholder farm businesses. This is a particular problem for the productive poor and near-poor. Larger and better resourced farmers have better access to knowledge and are more likely to benefit from links to private sector input suppliers and produce buyers. For the poorest members of the community, agriculture production is tailored to own consumption and to minimising risks, while the key constraints are lack of land or labour power, which IFAD does not have the ability to address directly. However, increased smallholder incomes and reduced climate-related losses will strengthen the rural economy,

⁸ RB-COSOP 2013-18 Design Report Appendix VI: Agriculture and Rural Development – Linking Farmers to Markets in Cambodia

- generate employment and reduce competition for existing off-farm jobs, thus benefitting all groups.
26. Climate vulnerability is a major concern with implications for existing smallholder incomes, the willingness and ability of farmers to invest and the sustainability of gains due to improved agriculture practice. The diversity of topography favours some areas while increasing the vulnerability of others. This highlights to the need for a more differentiated agricultural extension service that capitalises on the production potential of the favoured areas and mitigates the vulnerability of livelihoods in the risk prone areas. The most vulnerable farmers may need major changes to traditional cropping patterns or to diversify away from rice to achieve resilience. Climate resilient production technology will not be sufficient without complementary investment in climate-resilient and climate-adaptive productive infrastructure.
 27. Information is a public good and is inherently likely to be under-supplied (compared with the economically efficient level) by private markets. Poorer smallholders are most likely to be under-supplied with information. Farmers do not trust the advice they receive from input suppliers and extension messages disseminated by the private sector may not always support public policy goals. Therefore, in an under-developed agriculture economy, the public sector retains a key role in financing, facilitating, and appropriately regulating the agriculture extension sub-sector, but this role should complement and reinforce, not inhibit, investments in extension by the private sector and civil society.
 28. The traditional role of the public sector in extension in Cambodia has been that of direct service delivery, with civil servants training farmers in production techniques. There has been relatively little synergy between public and non-government extension services, while the approach to extension within the public sector has been supply-driven and focussed on maximising production of basic foodstuffs to ensure food security, with inadequate attention paid to the profitability or resilience of farm enterprises or to emerging market opportunities. The RGC recognises this problem and the need to move extension from a “system” to a “service” approach. The NSDP emphasises increased productivity, diversification and commercialisation and the need for “strengthening and expanding sustained extension services and market information; extending the outreach of the supporting services structure to local levels and linking them to the concerned networks and other stakeholders; promoting R&D for productivity improvement and adaptation to climate change.”
 29. In the more complex rural economy that is emerging, extension services must respond to informed demand of farmers. This requires a “service provider” attitude including willingness to listen to the “client” (i.e. the farmer) and to provide what the farmer needs. However, “informed demand” is in part a product of the extension services themselves. Therefore a modern extension service must be based on capacity to manage and learn from multiple flows of information, integrating the voice of the farmers together with those of market actors, technical experts and research findings.
 30. The behaviour change that is implied in this approach must be embedded in policy and supported by technical capacity, including the ability to incorporate ICT into all aspects of extension work, enhanced human and a diverse, innovative approach to service delivery. Change is a gradual process and sustainable improvements in public sector capacity will require long-term commitment and increasing alignment of external development partner resources with the government’s planning and budget execution systems. This points to a programme-based approach to the extension sub-sector but the analysis of the RB-COSOP was that the required conditions are not fully in place. Therefore ASPIRE is explicitly designed to prepare the way for a programme-based approach integrating government and development partner support in the extension sub-sector. And to pilot the approach
 31. The **Goal** of ASPIRE is the Goal of the RB-COSOP: *reduced poverty and increased resilience of poor and vulnerable smallholder farmers in Cambodia*. The **Programme Development**

Objective that contributes to the Goal is: *By 2021 an enhanced Cambodian model of agriculture services is demonstrated as effective for assisting a diversity of smallholder farmers to contribute to broad-based economic growth through profitable and resilient farm businesses and is adopted as policy.* In achieving this, ASPIRE will directly assist at least 100,000 smallholders to escape poverty and increase resilience. The complementary investments in climate resilient infrastructure are seen as essential to create the conditions in which the ASPIRE approach can be effective for the most climate-vulnerable farmers.

32. As well as supporting the Rectangular Strategy and NSDP targets for strengthening agriculture through improved extension services, ASPIRE actively promotes RGC policy goals in the areas of governance and climate change adaptation. Good governance features of ASPIRE will include promoting the use of results-based programme budgeting within MAFF, improving the performance of civil servants through piloting better human resources management procedures in line with RGC policy, and an emphasis on decentralised planning, service delivery and accountability for results. ASPIRE will mainstream climate smart agriculture in line with the MAFF climate change adaptation strategy and finance investments to strengthen community resilience in line with the CCCSP.
33. ASPIRE does not represent a break but rather a development from previous and ongoing IFAD projects, absorbing lessons learned, sustaining capacity developed and moving from a project-focused to a programme based approach. In the early stages of implementation ASPIRE will benefit from resources created by the PADEE project, especially regarding improved extension materials, developments in linking extension agents to information technology, engagement with stakeholder networks created and strengthened by PADEE and adoption / adaption of the PADEE MIS. The pilot provinces of the ASPIRE approach of Provincial Sub-Programmes for extension will include provinces where the RULIP project has strengthened capacity, while the model will be introduced into additional provinces concurrently with the phasing out of PADEE.
34. ASPIRE moves on from previous country programme practice in one important respect in that it does not include a component of finance for agriculture inputs. Although the poor have less access and pay higher interest rates than better off farmers, the range of credit options open to them has increased and includes tailored MFI products such as mutual guarantee group loans (avoiding need for collateral), increasingly formalised credit from input suppliers and a significant presence of savings groups and credit cooperatives as well as the traditional informal money market. Furthermore, the interest rate gap between the best of these products (generally 2.5% - 3%) and the rates applied to IFAD supported revolving fund groups (RFG) (minimum 2%) is becoming small. The extension-only approach of ASPIRE is compatible with the core mandate of PDA and with a flexible, decentralised, multi-modality approach to extension delivery and will also have the effect of enhancing the importance of training quality in the eyes of both client and service provider.
35. The ASPIRE approach allows the PDA to provide flexible and appropriate support to farmer organisations and cooperatives in line with MAFF policy priorities⁹. Farmer organisations and cooperatives may form the basis for Smallholder Learning Groups and will have a key role in the Farmer to Farmer learning strategy. Existing organisations and cooperatives with higher capacity may become a channel for service delivery through either contracting out or Public-Private Partnership arrangements.
36. ASPIRE is designed and implemented in a framework of cooperation and partnership. To a large extent this is possible because of the investments in partnership building and collaborative strategy development during the formulation of the RB-COSOP. Partnership arrangements that are under discussion or confirmed at the design stage include cooperation with USAID on technical assistance for policy development (Component 1) and for human resources capacity development (Component 2) as well as possible sharing of methods and

⁹ As expressed in the Law on Agriculture Cooperatives 2013

resources for M&E; policy-focussed research of IFPRI (also Component 1) and cooperation with the GEF funded UNDP Resilient Livelihoods project (Components 2 and 4). Through the involvement of NCDD-S ASPIRE will cooperate with the multi-donor National Programme for Sub-National Democratic Development. Other possibilities for beneficial mutual cooperation include the EU livestock and fisheries programme in MAFF and the Australian-funded ACIAR for technology research and innovative approaches to extension (Components 2 and 3). Development partners including FAO, World Bank and ADB have engaged in extensive discussions contributing to ASPIRE design and formal partnerships may emerge during implementation. In the final phase of the programme ASPIRE will assist RGC to mobilise external resources for a programme-based approach to the extension sub-sector.

37. The ASPIRE approach to climate resilient infrastructure provision is based on a model developed by NCDD-S with support from UNCDF, the Cambodia Climate Change Alliance and SIDA. Other development partners are also interested in scaling up this approach and there is good potential for cooperation in this area.
38. IFAD is uniquely well placed to lead development partner support to programmatic strengthening of the extension sub-sector. This is because of IFAD's importance within the agriculture sector and because of IFAD's commitment to working with Government and through Government systems. ASPIRE benefits from the experience gained and approaches developed and adapted in IFAD projects supporting extension activities over 15 years. These projects have also resulted in a high degree of mutual confidence with MAFF and also with MEF which has indicated that it sees IFAD as a partner of choice in supporting reform within the agriculture sector. IFAD's partnership network includes other development partners in the sector but also farmer organisations, private sector agencies and sub-national administrations and technical agencies. The quality of experience and network relationships developed through earlier investments will prove invaluable in meeting the challenges posed by the ambitious, reform-orientated agenda of ASPIRE.

II. Programme description

C. Programme area and target group

39. ASPIRE is designed as a national programme and the policy and capacity development components will have a national scope. The Provincial Sub-Programmes and Climate Resilient Infrastructure activities will be piloted in five provinces initially, with an expansion to at least five and (contingent on mobilising additional funds) up to eight provinces from 2018.
40. In principle the ASPIRE approach should be effective in any agricultural Province of Cambodia. However, Provinces with a high suitability to be selected for piloting will have the following characteristics: (i) high level of unrealised agricultural potential; (ii) good capacity of the PDA and willingness to operate under the Programme Budget arrangements (iii) PDA staff resources are not committed to implementation of existing major externally funded projects; (iv) Provinces where previous experience with IFAD projects has built experience in providing demand-driven agricultural services to poor smallholders, as well as institutional and human resources. The pilot Provinces should have a large aggregate number of productive poor and vulnerable smallholders. Taking these criteria into account, RGC has agreed to pilot ASPIRE in five provinces: Battambang, Kampong Chhnang, Kratie, Preah Vihear and Pursat. Subject to satisfactory progress in developing the programme-based approach, ASPIRE will expand into Kampot, Kandal, Prey Veng, Svay Rieng and Takeo with the phasing out of the PADEE project in those Provinces in 2018, plus three additional provinces to be identified by Mid-Term Review and contingent upon mobilisation of additional funds.

Table 1: Proposed Target Provinces				
Province	Previous IFAD Project	Districts¹	Communes¹	Households^{1,2}
Kratie	RULIP 2007-13	5	41	68,099
Preah Vihear	RULIP 2007-13	7	49	44,620
Battambang	ADESS 1998 - 2003	13	92	208,163
Pursat	ADESS 1998 - 2003	5	42	84,543
Kampong Chhnang	None	7	65	105,439
TOTAL FOR PILOT PROVINCES		37	224	405,525
Kampot	PADEE 2012-18	7	88	132,008
Kandal	PADEE 2012-18	10	121	228,969
Prey Veng	PADEE 2012-18	12	113	255,355
Svay Rieng	PADEE 2012-18	6	68	115,274
Takeo	PADEE 2012-18	9	97	195,269
TOTAL FOR 10³ IDENTIFIED PROVINCES		81	711	1,332,300

1. Rural Districts Only
2. Commune Database 2012
3. Three additional provinces to be identified later and subject to availability of funds.

41. In targeting geographical areas and individual farmers, ASPIRE will place emphasis on maximising the cost-effectiveness of funds used. This implies consideration of unrealised potential – investment in extension may be wasted in a district with no potential for agriculture, or in a highly productive district where few further gains are available. At the individual level, ASPIRE will seek to maximise the poverty reduction impact by targeting smallholder farmers who are either poor or near-poor and vulnerable to falling into poverty due to climate, market or other shocks but who have productive potential and can take advantage of market opportunities. By the end of the project, at least 120,000¹⁰ households in this category should have demonstrated improvements in profitability and resilience of their farm businesses with the assistance of ASPIRE. These farmers will not (as in the past) be identified primarily through a wealth ranking process but by self-selection of farmers into programmes designed for the target group. Where it is necessary to ration access to the ASPIRE farmer groups, willing farmers who are classed as poor (ID-Poor 1 or 2) will have priority. The experience of iDE in extension programmes based largely on self-selection by interested farmers is that ID-Poor farmers comprise about 50% of participants. Participation of the poor and women will be monitored in the programme M&E system. However, the participation of less poor smallholders in the programme will be important from the viewpoint of technology transfer as these farmers, as demonstrated by PADEE, are well situated to effectively try and demonstrate new technologies.
42. The mixture of extension models and flexibility provided by the Provincial Sub-Programme approach allows the needs of specific types of farmer to be addressed by appropriate interventions. The Contracting Out extension approach may be particularly suited to assist farmers with special needs. For example, a customised package of support could be provided to farm households living in Commune Social Land Concessions within the selected provinces subject to the considerations in the following paragraph.
43. **Beneficiaries on Newly Acquired Land.** IFAD recognizes and appreciates the efforts of the Royal Government of Cambodia to benefit poor and landless farmers through allocation of Social Land Concessions and also through formal land titling under the programme initiated by the Prime Minister. Secure access to land is a key factor in enabling smallholders to develop

¹⁰ Achievement of this target is contingent upon mobilisation of additional resources for expansion into 13 Provinces in total by 2018. The target for the five pilot provinces plus the five identified expansion provinces, fully financed by IFAD loan and grant proceeds and RGC contributions, is 100,000 farmers.

profitable and resilient farm businesses. IFAD also recognizes the potential sensitivities around land ownership issues in Cambodia and particularly concerning land that has recently changed ownership or use

44. ASPIRE will not provide direct support to allocation of land or issue of land titles. Under ASPIRE, PDA will be encouraged to allocate resources to support smallholders who have recently received new land and who have a genuine intention to develop the land for farming. However, such support will be subject to verification that there are no competing ownership claims to the land. Land allocated under the Commune Social Land Concession schemes and supported by World Bank – LASED Project will be automatically deemed to meet this criterion. If major support is planned in other areas of recently transferred land, including National Social Land Concession areas, ASPIRE will commission an independent audit of the land transfer process to verify the absence of competing claims.
45. ASPIRE's support to national extension programme will present a unique opportunity to mainstream gender in overall extension services of the country. Gender delineated needs analysis will inform selection of technology suitable to both men and women farmers; learning modalities and communication channels. Under capacity building and training activities (Component 2), women will be encouraged to participate in all ASPIRE supported trainings (MAFF staff, RUA and other agricultural schools, and other agencies). An indicative percentage (25%) is set for female participants in the trainings. In Component 3, it is envisaged that at least 50% of participants in Smallholder Learning Groups (SLGs) will be women.
46. A gender action plan for ASPIRE will be developed which will identify roles and responsibilities and detail monitoring and analysis to support ongoing review. The gender strategy goes beyond participation of women in learning groups and extends to tailoring extension packages and services to addressing gender needs; including representation of women and men on committees; in institutional capacity building and the HR Development Strategy for extension services; and project staffing including CEWs.
47. The Impact survey and reports will provide delineated information on female headed households and regular performance monitoring will detail gender participation, access and satisfaction and feedback. Where performance is below expectations reasons will be explored and program design modified where appropriate.

D. Programme Development Objective and Key Outcomes

48. The Programme Development Objective (PDO) of ASPIRE is: *By 2021 an enhanced Cambodian model of agriculture services is demonstrated as effective for assisting a diversity of smallholder farmers to achieve profitable and resilient farm businesses and is adopted as policy.*
49. The PDO will be considered as substantially achieved if by the end of the programme (2021) three Outcomes are verified:
 - Outcome 1.* A national investment programme that can be supported by multiple donors is designed to implement an updated extension policy that provides smallholder farmers with access to quality information services;
 - Outcome 2.* MAFF has institutional and human resources capacity to manage an effective, demand driven system linking researchers and knowledge-based agencies to extension agents in public sector, private sector and civil society and to farmers; and

Outcome 3. At least 120,000 smallholders have improved and resilient farm businesses as a result of integrated, demand led extension services and investments in climate resilient infrastructure¹¹.

50. These three outcomes will be achieved through activities organised in policy development, capacity development and two service delivery components. The results are inter-linked and mutually reinforcing: each outcome depends on results across all components.
51. ASPIRE is a change process. There will be three implementation phases representing increasingly close and mutual alignment between ASPIRE and the MAFF Strategic Budget Plan. The timing of transition between phases will be determined by the ASPIRE Steering Committee based on achievement of key intermediate outcomes.
52. During the first (Foundation) phase, pilot Provincial Sub-Programmes will be established within the MAFF Programme Budget. Other ASPIRE AWPB activities will be cross-referenced to the MAFF Strategic Budget Plan.
53. In the second (Proving) phase activity planning will be integrated with the Programme Budget planning cycle. PDA will gain greater discretion to allocate resources in the optimal manner to maximise target results.
54. In the third (Scale Up) phase the Cambodia Model of Extension Services will be rolled out through establishment of Provincial Sub-Programmes in additional Provinces, including an additional five Provinces financed from the IFAD loan and grant proceeds. Additional domestic and external (development partner) resources will mobilized with the initial aim of expanding to a further three Provinces (bringing the total ASPIRE Provinces to thirteen). The implementation modality for Phase 3 will be confirmed at the Mid-Term Review but it is anticipated that the ASPIRE results framework will be fully integrated with a more results-orientated MAFF Strategic Budget Plan. The Scale Up phase of ASPIRE plus successful implementation of a multi-partner resource mobilisation framework will meet the conditions for a full Programme Based Approach.
55. The key intermediate outcomes that will define the completion of each phase are shown together with the implementing arrangements for each phase in Table 2.

¹¹ It is expected that about 25% of the extension beneficiaries will also benefit from infrastructure investments.

Table 2: Implementation Phases of ASPIRE and Key Intermediate Outcomes				
GOAL	Reduced Poverty and Increased Resilience of Poor and Vulnerable Smallholder Farmers in Cambodia			
PDO	By 2021 an enhanced Cambodian model of agriculture services has been demonstrated as effective for assisting a diversity of smallholder farmers to contribute to broad-based economic growth through profitable and resilient farm businesses and is adopted as policy			
Phase	Policy Outcomes	Capacity Development Outcomes	Farm Businesses Outcomes	Implementation Arrangements
OUTCOMES	A national investment programme that can be supported by multiple donors is designed to implement an updated extension policy that provides smallholder farmers with access to quality information services.	MAFF has institutional and human resources capacity to manage an effective, demand driven system linking researchers and knowledge-based agencies to extension agents in public sector, private sector and civil society and to farmers	At least 120,000 smallholders have improved and resilient farm businesses as a result of integrated, demand led extension services and investments in climate resilient infrastructure.	<ul style="list-style-type: none"> Progressive alignment of ASPIRE with MAFF Programme Budget arrangements.
PHASE 1: Foundation 2015-16	<ul style="list-style-type: none"> Evidence-based Multistakeholder Policy Process agreed and implemented Demand-driven Extension Policy Framework developed and validated with stakeholders Analytical Unit for Agriculture established and functioning in SNEC First round of Policy Process launched 	<ul style="list-style-type: none"> Extension and Research Advisory Board established and functioning Extension Hub functions established Extension Portal designed Human Resources Development Strategy for the extension sector Academic curricula developed Quality Assurance system designed 	<ul style="list-style-type: none"> Provincial Agriculture Strategic Plan in 5 provinces reflected in Provincial Sub-Programmes (PSP) Participatory research activities in climate resilient agriculture initiated Mass media campaign initiated 16 Districts prepare District Climate Resilience Strategies (34 by Phase 2) First 8 Districts achieve minimum conditions to receive Performance Based Climate Resilience Grants (34 by Phase 2) 	<ul style="list-style-type: none"> ASPIRE Secretariat established under MAFF Secretary of State Provincial Sub-Programmes established in 5 pilot provinces
PHASE 2 Proving 2017-18	<ul style="list-style-type: none"> A set of extension policies developed with stakeholder participation and adopted. Institutional roles and responsibilities clearly defined A medium term investment and resource allocation framework for extension is integrated in the MAFF Strategic Plan Second round policy agenda approved and process is launched 	<ul style="list-style-type: none"> Quality Assurance for extension materials and services functioning PDA/DAO staff working to performance management job descriptions Field agents accessing Extension Portal to support their work. At least 50 CEW enrolled in in-service education leading to a recognised extension qualification. 	<ul style="list-style-type: none"> At least 4 Provinces demonstrate progress through increased scores measured by Balanced Scorecards Evidence of smallholders adopting techniques learned through training and mass media Innovations in climate resilient agriculture demonstrated and evaluated At least 50 Communes implement climate resilient infrastructure sub-projects 	<ul style="list-style-type: none"> ASPIRE Secretariat supports results-based programme budgeting across Programmes 1,2, &3 ASPIRE funds selected sub-programmes

			<ul style="list-style-type: none"> At least 24 Districts achieve performance criteria for annual PBCRG increase 	
<p>PHASE 3 Scale-Up 2019-21</p>	<ul style="list-style-type: none"> Mobilization of adequate financial resources to implement the Cambodia Model for Agriculture Extension Evaluation studies on extension models available and discussed in fourth policy round Decision on final incentive framework for extension 	<ul style="list-style-type: none"> Extension Hub functions fully financed by Programme Budget Increased availability of personnel with skills to deliver modern, demand led extension service 	<ul style="list-style-type: none"> PSP operating in at least 13 Provinces 144,000 farmers participate in extension activities of whom at least 85,000 demonstrate increased profits 34 Districts qualify for Specific Investment Climate Resilience Grants 70,000 smallholder farm businesses benefitting from access to climate resilient infrastructure (50% are additional to extension beneficiaries) 	<ul style="list-style-type: none"> ASPIRE and additional resources used to provide support at Programme level Provincial sub-programmes rolled out to additional Provinces

E. Components

56. The outputs and activities of ASPIRE are organised in four components: Knowledge Based Policy, Capacity Development for Extension Services, Improved Extension Services and Climate Resilient Productive Infrastructure. These components are mutually inter-dependent: outputs in one component may be contingent on achievement of outputs in another, and the outcomes will be achieved through the combined effect of all components. Effective management of knowledge, communications and monitoring and evaluation will be essential to the success of this approach and will be coordinated by the ASPIRE Secretariat. The ASPIRE communications strategy (further discussed in Section G below) is integrated into all components and will be supported by adequate specialist technical assistance, located in the Secretariat.

Component 1: Knowledge Based Policy

57. The Outcome of Component 1 will be a national programme implementing an updated extension policy and supported by multiple donors that provides smallholder farmers with access to quality information services. It is expected that the policy and programme will provide an incentive framework for synergies between actors engaged in delivery and use of extension services.
58. The extension policy and policy instruments to be developed under Component 1 will be formulated within a framework of key principles for farmer-led extension integrating the roles of the public sector, private sector and civil society. The policies will aim to provide clear guidance on critical issues determining which model of extension delivery works best in different contexts and for different categories of farmers. Based on policy, a medium-term framework for resource allocation and investment prioritisation will cut across the boundaries of agro-ecological areas, themes or value chains and service delivery models.
59. The component will achieve this through an inclusive, evidence based policy development process. This process will be directed by the ASPIRE Steering Committee with technical support from Supreme National Economic Council (SNEC). In accordance with the agreed policy agenda, a round of the policy dialogue will be organized for each policy deliverable. Each round will have a start and end date with key milestones and time line publicized in advance to the most directly concerned stakeholders. It will be an important role for the Steering Committee to ensure that the sponsors of various policy initiatives related to extension are encouraged to engage through this inclusive and collaborative policy process.
60. The policy process will consist of three stages: i) Orientation; ii) Formulation and Approval; and iii) Mainstreaming and Learning. It is anticipated that there will be three to five policy rounds, each of 12 to 18 months duration.
61. In the **Orientation stage** policy issues will be identified by different groups who may include the technical divisions of MAFF, the Extension and Research Advisory Board (ERAB), MEF, SNEC or other stakeholders. Based on proposals received, the ASPIRE Steering Committee will develop the policy agenda including the key issues for research and policy formulation, responsibilities, specific deliverables and a time-bound work plan. The steps of the Orientation stage will be as follows:
- i. Steering Committee approves the policy agenda for the coming year and budget for policy development activities within the AWPB;
 - ii. Expert researchers conduct studies and gather evidence which is summarised in one or more background papers or position papers. Where appropriate, more than one institution may prepare a position paper for consideration. Where needed, policy research will be referenced and benchmarked against international standards and guidelines provided by Cambodia membership of WTO and ASEAN. ASPIRE will provide

- funding opportunities for exchange visits to countries in the region to discuss and observe policies and their implementation.
- iii. SNEC facilitates a Policy Seminar to review the background paper and position papers. Participants in the seminar will represent key stakeholders including policy makers, development partners and representatives of farmer organisations, the private sector and civil society.
 - iv. Based on agreements at the Policy Seminar, SNEC will prepare a consolidated Seminar report and policy brief including recommendations for the key direction and content of policy.
62. The steps of **Policy Formulation and Approval** will be as follows:
- i. SNEC provides technical assistance to the key concerned technical division of MAFF to develop the formal policy document or regulatory instrument. The ERAB is used as a discussion forum for technical feedback on the policy during development. The policy document must include key indicators to be used in monitoring of implementation.
 - ii. The policy document is circulated to stakeholders in advance of the annual Policy Forum on Extension which is broadly inclusive of public sector, private sector and civil society stakeholders. At the Policy Forum, the proposed policy will be reviewed, discussed and validated. The Steering Committee will then make its recommendation on the draft policy based on the outcome of the Policy Forum.
 - iii. The policy instrument is formally approved at the relevant level of authority.
63. **During Mainstreaming and Learning**, SNEC will monitor implementation of the policy according to the agreed monitoring indicators and report to the ASPIRE Steering Committee on progress. For each approved policy a communication and roll-out plan will be developed which includes the roles and responsibilities for national level and local level leadership in the communication and implementation of the new policies. ASPIRE capacity development for “leadership for change” (Component 2.2) will support the successful implementation of the new policies.
64. The policy process as outlined here will be reviewed and validated by the Steering Committee during its first meeting and modified as required in the light of implementation experience.
65. The ASPIRE Secretariat will play a key role in policy coordination and development, including administering meetings of the policy forums and conducting a number of specific studies. SNEC, in line with its mandate to advise the senior leadership of RGC on policy issues, will play a strategic role in policy research and impact evaluation in order to feed the policy process with quality evidence. Key policy instruments will be submitted for approval at the level of the MAFF Minister or higher in accordance with RGC policy formulation protocols.
66. A basic policy framework is proposed in the design of ASPIRE and will be validated as a key outcome of Phase 1. It is anticipated that policies will include definition of roles and responsibilities of technical departments and sub-national administrations; a facilitative regulatory framework, priorities for allocation of public resources to support extension and guidance on capacity development.
67. **Sub-Component 1.1: Policy Coordination and Development:** The ASPIRE Secretariat will provide overall coordination of the policy development process including support to the ASPIRE Steering Committee and the Policy Forum. The Secretariat will directly contract studies to support development of the resource allocation framework and mobilisation of resources for the national extension programme. The Secretariat will be supported by an international expert in drafting of policy documents for 14 person-months during 2015-19.
68. **Sub-Component 1.2: Policy Research and Analysis:** An Analytical Unit for the Agriculture Sector will be established within SNEC. Through a learning by doing approach and particularly

the experience of implementing and analysing a structured programme of policy studies, ASPIRE will contribute to the long-term capacity development of SNEC in this area. The Analytical Unit for the Agriculture Sector will have funding support for strategic policy studies across the agriculture sector as a whole, in addition to the studies directly related to the ASPIRE policy process. Investment costs will include technical assistance for policy research, costs of policy studies, stakeholder dialogue events, peer review, publications, costs to support South-South cooperation and exposure visits, and research grants for postgraduate or post-doctoral researchers. Operational costs of the Analytical Unit will include salary support and expenses for SNEC staff, office costs and publication costs.

69. In the first year of ASPIRE, policy studies will include (1) a situation review of the extension sector in Cambodia, including policy, financing and public sector, private sector and civil society delivery mechanisms; and (2) a comparative review of international experience on extension services and the State role in extension in countries comparable to Cambodia.
70. Sub-Component 1.2 provides SNEC with funding to support strategic policy studies in the agriculture sector going beyond those directly linked to the ASPIRE policy process and to extension. This is to enable the Analytical Unit for the Agriculture Sector to support strategic policy work and to establish capacity and a record of achievement across the whole sector. This funding may be used to contract policy studies, to employ short-term researchers to study specific topics in-house or for other types of policy development expenditure.
71. The International Food Policy Research Institute (IFPRI) will implement a Randomized Controlled Trial (RCT) to assess the impact of different agricultural extension mechanisms among Cambodian farmers. This activity will be financed by the International Initiative for Impact Evaluation (3IE). The RCT will be implemented during the 2015/16 agricultural seasons in the target areas of IFAD's PADEE project and will provide the RGC with evidence-based policy recommendations before the expansion of ASPIRE in 2018. The study's recommendations will highlight the potential impact that ASPIRE might have on agricultural productivity and rural incomes. It will also inform about possible improvements to the extension model through performance-based incentives and better information flows through ICTs.

Component 2: Capacity Development for Extension Services

72. **Sub-Component 2.1: Improving Extension Quality and Knowledge Management** will establish the **Extension and Research Advisory Board**. In addition to its role in setting the policy agenda discussed above, the Board will be responsible to (i) improve extension coordination between line departments and with non-government providers of extension, (ii) ensure the overall quality assurance of Public Extension and (iii) oversee the Extension Hub. The suggested membership of the ERAB includes a MAFF Secretary of State as Chair, heads of the line departments, heads of the research and training institutes, representation of the MAFF Climate Change Technical Team, representation of PDA (rotational), and representatives from SNEC, private sector, development partners and farmer advocacy bodies.
73. **Defining roles, responsibilities and processes:** There is very little coordination within the public system in relation to extension. This is largely due to lack of clarity on roles, responsibilities and processes for individuals and institutions. ASPIRE will support mapping of the current situation then, with stakeholder coordination, will identify the areas that need further definition, gaps and areas of opportunities. The resulting framework will become part of policy. ASPIRE will support an internal process to develop clear and appropriate job descriptions, against which performance can be monitored (this will include the review of the staff appraisal system developed under CAAEP), for extension staff.
74. The **Extension Hub** is a mechanism to coordinate the day to day implementation of agriculture extension policies and activities by all technical departments of MAFF under the oversight of the ERAB. The capacity of the Department of Agriculture Extension of GDA (DEA) will be enhanced so that it can act as the Secretariat of the Extension Hub. Extension Hub operations

- supported by ASPIRE include: (1) Integration of existing extension materials and web content; (2) development of new extension materials and training content; (3) development of a system of extension demand assessment and extension service planning; (4) establishment of the Extension Portal, (5) outreach activities and (6) development and implementation of quality assurance systems.
75. **Integration of existing extension materials** will proceed by (1) conducting an inventory of existing materials, classified by format and subject matter; (2) creating a basic reference repository of these materials within the Extension Hub; (3) selectively reviewing materials and recommending appropriate materials for widespread adoption and use; and (4) digitization of selected material into the extension portal.. The decision to recommend any material will be taken by the Extension and Research Advisory Board based on the recommendation of suitably qualified members of the Board. This process will eventually be integrated with the Quality Assurance process.
76. **Development of New Extension Materials and Training Content:** It is planned to develop and validate two training packages and to review and update a minimum of two existing training packages in each year from 2016 – 2021. It is expected that materials developed will increasingly include visual web-based, video, and interactive (user input) materials as well as traditional printed material. ASPIRE will support professional production of short videos complementary to the FFS materials. All extension content developed under ASPIRE will promote climate resilient agriculture. ASPIRE will support the cascade training (master trainers and training of trainers) for new and revised packages.
77. **Demand Assessment and Extension Service Planning:** This activity will set up the mechanisms and systems to assess the needs of farmers effectively and regularly; to make sure that agricultural extension responds to those needs; and to monitor the outcomes of extension services to feed into agriculture extension planning. The Extension Hub will support the Provincial Agriculture Strategic Plan with expertise, resources and data. The system will include tools for measuring climate vulnerability and adaptive responses. The system will rely on multiple approaches to assess demand and an institution mechanism to convert these into actionable plans. The data collected will be processed by the extension hub, whose role it will be to convert all relevant data into usable information and distribute to the relevant stakeholders in the extension development chain. The key parts in the system will be the (i) farmer level demand assessment systems, (ii) knowledge hub – statistical, and qualitative data analysis and reporting function, (iii) support to extension advisory groups at the District and Province levels.
78. The **Extension Portal** will become, over time, the national repository of information, materials and resources for extension. The portal will initially consist of five core modules: (i) *Content*: existing and new extension materials and technical information, will be catalogued, refined, reviewed, and packaged into the portal. Selected materials will be converted into “e-learning” tools and tested in the project. (ii) *Monitoring*: This module will be the repository for data collected through various monitoring activities (or connect to existing databases), including demand assessment activity described above, baseline and impact surveys, client satisfaction surveys, and regular (digital) monitoring activities undertaken by programme staff, etc. The information will then feed into both the sub-national and national systems to inform the planning processes. (iii) *End user interface*: will initially consist of a website with a customized search engine. The portal will also support the development of mobile based applications, particularly decision support systems related to climate resilience. It will build on the “E-PADEE” sub project under PADEE. (iv) *Data Repository*: Integration of existing databases in MAFF (i.e. FSMIS – DAE, TeleCentre Cambodia, etc.) and elsewhere and (v) an extension service provider directory.
79. **Outreach Activities** will support agriculture extension related expositions, fairs, field days and similar events. It is expected that the private sector service providers (including machinery dealers, input suppliers etc.) will see these events as a useful part of their communications

- strategy and either partner in these events or contribute financially to participate. ASPIRE will support dissemination of information and communications materials and will actively facilitate media coverage of the programme, including by engaging an international journalist / media consultant on an intermittent basis.
80. ASPIRE will support development of a methodology for **Farmer to Farmer** information exchange supported by the Commune Extension Worker (CEW). Strategies will include (i) clear criteria for selection of key farmers (i.e. community orientated, respected in the community, successful farmer, etc.), (ii) formation of networks including key farmers and other stakeholders including cooperatives and farmer organisations, input sellers and produce buyers etc., (iii) training of CEW to facilitate this process and (iv) including key farmers in the SLG trainings. ASPIRE will review existing methodology and update guidelines for establishing Farmer to Farmer Learning Networks, support a workshop to validate the guideline and conduct Training of Trainers.
 81. **Quality assurance:** ASPIRE will support establishment of standards for extension delivery and a platform for better harmonization of activities by the numerous extension service providers through a self-certification process. The success of this system will depend on provision of the right incentives for service providers to participate; this will be addressed by involving stakeholders in the development of the QA protocols for certification. Incentives for self-certification will include enhanced access to the Extension Portal and ensuring acknowledgment (branding) of material developers. Certification could become a requirement for partnering/provision of government funded extension projects.
 82. ASPIRE will also introduce and strengthen internal QA processes to the public system of extension delivery. This will include validation of extension materials, working within defined roles and responsibilities and improving systems for review of AWPBs and other planning processes.
 83. **Sub-Component 2.2: Strengthening Human Resources for Extension:** ASPIRE will support preparation of a Human Resources Development Strategy in the first year of implementation. The Strategy will be informed by the Capacity Development Study (Working Paper 3) and a baseline survey of extension practitioners (financed under the M&E activities). The Strategy will (1) estimate future needs for skilled personnel, (2) identify gaps in educational provision and (3) propose improved MAFF human resources management procedures including recruitment, gender equality, a clear system of promotions and incentives, training and self-learning.
 84. The introduction of results-based demand driven extension and deeper engagement with the private sector will require a considerable change in the way extension is currently managed and implemented. Staff will need new skills and changed attitudes to support this transition. ASPIRE will support training of MAFF staff in key strategic skills including leadership, strategic planning, business management, farm and crop budgeting, adult education techniques, communication and facilitation skills, web content development, knowledge management, and content development.
 85. ASPIRE also recognises the need to improve the extension skill set of the next generation of skilled agriculture practitioners. Through a partnership with USAID, ASPIRE will provide assistance to RUA and Agricultural Schools to (1) update and improve the extension curricula of their undergraduate and diploma courses; (2) support the development of integrated in-service education for Commune Extension Workers combining residential and e-Learning and providing CEW and other extension agents at post-High School level with a recognised qualification; and (3) foster the use of final year university undergraduates to undertake specific extension related research in partnership with MAFF, PDAs and CARDI as appropriate.
 86. ASPIRE will also seek opportunities to create internships and short-term work experience opportunities for agriculture students. Possible areas in which interns could be employed

include the mass media campaigns, monitoring and farmer feedback activities, and possibly support to planning and delivery of extension services.

Component 3: Improved Extension Services

87. **Sub-Component 3.1: Provincial Sub-Programmes** will be implemented within the MAFF Programme Budget framework and will integrate Programme Budget resource allocations and Grants For Extension Services To Smallholders (GESS) financed by IFAD. Based on a decision of the Minister of MAFF dated 18th April 2014, the PDAs in the five initial target Provinces of ASPIRE will be constituted as Budget Entities and will implement Provincial Sub-Programmes within Programme 1 of the MAFF Programme Budget structure.
88. Each participating PDA will prepare a Provincial Agriculture Strategic Plan (PASP) based on MAFF policy and on an assessment of farmer needs and market opportunities. Extension Advisory Groups including representatives of farmer organisations and the private sector will be established at Province and District level and the PASP will be validated through stakeholder workshops. In selected Districts, the planning activities will include participatory Farmer Needs Assessment which will be integrated with Vulnerability Reduction Analysis to identify climate change adaptation needs. The PASP will be updated annually and will inform the annual review and update of the rolling 3-year Strategic Budget Plan of PDA. The PDA will use a 3-year indicative allocation of Programme Budget resources and GESS to prepare the Strategic Budget Plan and a confirmed annual allocation for preparation of the annual Programme Budget.
89. Design of the GESS will be detailed in the PIM and will be subject to review and adjustment during implementation. Design elements defined in the PIM include (1) an allocation formula based on the number of eligible smallholder farmers in each province and adjusted for an index of vulnerability and for performance in previous years; (2) a set of minimum access conditions which will include establishment of a Provincial Sub-Program targeting outcome level results and with the PDA Director as Sub-Program Manager; (3) defined eligible expenditures of the grant proceeds and (4) performance measures.
90. Performance will be measured using a **Provincial Performance Scorecard** with indicators in four areas: *Results and Impact* (linked to the Programme 1 results); *Internal Process*; *Clients* (i.e. farmers) and *Learning and Development*. Results will be measured primarily by self-reporting by PDA backed by spot-checks by ASPIRE Secretariat. A telephone survey contracted to a call centre firm will be used to verify numbers of farmers reached and to measure farmer satisfaction. The scorecard indicators will be designed to encourage implementation through a balanced mixture of service delivery modalities and to reward PDA for successfully supporting poor and vulnerable farmers.
91. It is expected that PDA will maximise returns on investment through identifying potential for improvements in farm profitability and resilience and, through the Programme Budget mechanism, allocating available resources to a mixture of extension approaches including public sector service delivery, public private partnerships, contracting-out of services and support to local knowledge sharing networks (farmer to farmer learning) which will also leverage the benefits of access to mass media extension.
92. The first GESS will be awarded in 2016. During 2015 ASPIRE will finance start-up activities in the pilot provinces, including preparation of the PASP, through a conventional line-item budget. In Preah Vihear and Kratie provinces only, these first year budgets will include some provision for extension services to farmers and support to farmer organisations, to maintain continuity from the RULIP project which is ending in 2014. Continuity activities may include provision for undertaking a training needs assessment, agriculture trainings and support for cooperatives (financial literacy and cooperative management – based on the existing PADEE materials) through the contracting out model.

93. In the **Foundation phase**, PDA in pilot provinces will be constrained to allocate resources to three Comparative Models (District Work Plan, PPP and Contracting Out) delivery which will be pre-defined in some detail. In **Phase 2 (Proving)** PDA will gain more discretion to vary the resources allocated to each model and to adapt the approach based on lessons learned. By **Phase 3 (Scale-Up)**, the PDA in all provinces should have in place adequate capacity, experience, together with a performance-based incentive structure (at the institutional and / or individual level) to be able to programme the Grant resources freely within the constraints of defined eligible expenditures.
94. **District Work Plans:** In the first round of PASP (2015), the pilot PDA will identify Districts with high potential for the public sector approach which is likely to be most applicable to assisting smallholder farmers to improve their basic farming skills and strengthen their links to the market. It is expected that an average of six Districts will be selected in each of the five pilot Provinces. Preah Vihear and Kratie provinces will be allowed additional flexibility to maintain continuity with RULIP by covering more Districts at a lower intensity. Half of the selected Districts will begin operations in 2016 and half in 2017. This phasing in will allow time for the PDA to assign sufficient staff to the DAO. A minimum of four permanent DAO staff with comprehensive job descriptions including extension work, will be a pre-condition for allocating Grant resources to the District Work Plans.
95. Initially, public sector farmer training will be delivered through Smallholder Learning Groups (SLG) of approximately 25 farmers each which will be formed from interested farmers or may be based on an existing group such as a farmer cooperative. Each group will receive a structured 3-year leaning and support programme designed to be attractive to productive smallholders who are poor and / or vulnerable. Over 3 years, the SLG will participate in three training modules, at least one farmer cross-visit and will receive follow-up support from the DAO. The SLG will also be linked to the farmer-to-farmer learning networks. Training modules will consist of approximately 10 half-day sessions and a demonstration and will be delivered by two DAO officials in the first year, then by one DAO official who may work with a technical specialist from PDA according to the subject matter.
96. Unlike previous IFAD projects ASPIRE will focus only on learning and will not finance farmer inputs (except for demonstration plots) either directly or through revolving funds. Smallholder Learning Group activities will not include general financial support for purchase of inputs. However the budget for each training module will include a provision for expenses including demonstration inputs, refreshments etc and the group members will have discretion over the best use of this budget. Training topics will address access to inputs and where appropriate this may extend to experimenting with group purchasing or negotiation of price or credit conditions with suppliers.
97. The Smallholder Learning Groups are not designed specifically to evolve into production or marketing cooperatives. However, the flexible funding arrangements for the Provincial Sub-Programmes will permit PDA to support either formation of cooperative groups, or support to existing cooperatives, where this is a cost-effective means of achieving improved and resilient smallholder farm businesses. This is in line with MAFF policy to encourage farmer co-operatives and with the analysis that the potential of cooperatives to raise farmer incomes and collectivise risk is highly dependent on types of produce, market conditions etc.
98. Each District will begin with a work plan under which (on average) 60 SLG will be formed in the first three years. Therefore, a District starting operations in 2017 will complete the training of 60 SLG (1,500 farmers) by 2021, the final year of ASPIRE. By selecting 30 Districts, 45,000 farmers will benefit from this activity in the five pilot provinces.
99. In the same Districts, one CEW will be recruited in each of 6 Communes per District (on average). The CEW will be a local resident with suitable capacity working under contract to the Commune Council and with coordination and technical support from DAO. The CEW role will

build upon the experience of previous IFAD projects but the emphasis will shift from implementation of project activities to a less intense but potentially longer-term role of facilitating information sharing. ASPIRE will fund the costs of training and equipping the CEW and will pay salary and operational expenses for three years. After three years, the Commune Council will have the option of continuing to employ a CEW, financed through the Commune Budget with a subsidy from ASPIRE, under a performance agreement between the Commune and PDA.

100. **The Farmer to Farmer Learning Network** will sustain and build upon the results of farmer training (provided by Public Sector Deliver, Public Private Partnership or Contracting Out models, or otherwise) by creating and supporting an environment in which available knowledge is more effectively shared within local communities between farmers and other actors including farmer cooperatives and organisations, local extension agents, local traders (input sellers and produce buyers), local agriculture linked enterprises and the local administration; as well as knowledge sharing between communities. The key strategies for Farmer to Farmer Learning will comprise (1) development and strengthening of local networks; (2) support to farmer cooperatives and organisations; (3) organisation of local events such as agriculture fairs, competitions, cross-visits and locally organised demonstration and learning activities; and (4) improving access to electronic and broadcast media information through extension agents acting as local intermediaries.
101. CEW will be equipped with mobile devices and will be specifically trained to access and disseminate information from the Extension Portal as well as to assist farmers to learn from broadcast extension materials.
102. **Contracting Out Model:** In the Contracting Out model, PDA will contract specialist service providers who may be firms or NGOs with proven capacity, to implement extension activities where (1) the services require specialist skills that the PDA and DAO do not possess; (2) the service does not displace any actual or potential private sector provision; (3) contracting out increases the total number of farmers that can be supported (i.e. the constraint is the staff capacity of PDA) or (4) the contracting out arrangement will result in increased long-term capacity for PDA. Each PDA will be required to allocate at least 20% of the GESS to contracted-out activities in the first two years of the PSP.
103. The contracting out model may be used to provide specialist types of training (for example, financial literacy) or to demonstrate innovative approaches to extension service provision (for example, strengthening farmer-to-farmer learning). The model could also be used to target groups with special needs, for example poor households with new access to land in the commune social land concessions. In appropriate circumstances, the contracting out model could be used to support extension activities by farmer organisations or cooperatives.
104. **Public-Private Partnerships:** Public Private Partnerships (PPP) can include a variety of arrangements in which public funds are used to encourage private sector firms or farmer cooperatives to invest in delivering extension services, with the long term aim that the arrangement becomes self-financing. The key feature is that the service provider supports at least 50% of the total cost of the arrangement and expects to gain a commercial benefit from improved farmer knowledge. PPP are suited to target smallholders with strong links to the market and in areas of significant commercial potential. Nevertheless, the experience with the iDE Farm Business Adviser scheme is that a high proportion (around 50%) of the FBA clients are classed as poor under the ID-Poor survey. Therefore PPP is considered as an appropriate means of benefitting the ASPIRE target group of smallholders and poor farmers with productive potential.
105. ASPIRE will support three types of public-private partnership (PPP): (i) the service provider provides direct training to farmers with public facilitation and support; (ii) the service provider

- works with the PDA to train input sellers to pass extension messages to farmers, and (iii) support to a social enterprise or farmer organisation with a self-financing business plan.
106. ASPIRE will work with companies and social enterprises, particularly those that have previous experience with PPP extension activities¹² to identify the most appropriate opportunities for PPP arrangements in the ASPIRE pilot provinces. The companies / social enterprises will then work with the PDA in each province to plan the details of the arrangements. Provincial level costs to support PPP will be financed from the GESS while national level costs will be included in Provincial Sub-Programme coordination and support costs (below). Each Province will be required to engage in at least one PPP arrangement with at least 1000 farmers as the ultimate beneficiaries during the first two years of the PSP.
 107. **Coordination and Support:** GDA will provide coordination, monitoring and support to Provincial Sub-Programmes. Including (1) organising national forums on specific technical topics; (2) training of trainers; (3) participation and support to preparation of the Provincial Agriculture Strategies; (4) monitoring of service delivery (5) expert support to develop solutions to specific technical problems identified at local level or through the Extension Portal and (6) commissioning technical and market studies of selected commodities with the aim of improving advice to PDA in preparation of the Provincial Agriculture Strategic Plan..
 108. In addition to the GESS, Sub-Component 3.1 finances (1) the costs of motorcycles and smartphones for CEW; (2) equipment for PDA and (3) technical assistance for PDA consisting of one management adviser, one M&E / MIS adviser and one finance and procurement adviser in each Province.
 109. **Sub-Component 3.2: Innovations for Climate Resilient Agriculture** will support demonstration and testing of promising innovations under smallholder farm conditions. Suitable technologies may include, but will not necessarily be limited to, improved on-farm water management, adjustments to the cropping calendar particularly including introduction of early wet season rice or other crops, introduction of climate resilient varieties, introduction of new crops with a potential to improve climate resilience.
 110. The Extension and Research Advisory Board will identify and screen candidate technologies through discussion with research agencies including CARDI, universities and non-governmental agencies. Once a technology has been selected by the ERAB, ASPIRE Secretariat will work with the agency responsible for the innovation to develop a testing program. All tests will be carried out in a participatory manner “on-farm” in the ASPIRE provinces; i.e. research station based testing is not eligible.
 111. Each testing program will include a knowledge development and communication plan to disseminate the results and mainstream the successful innovations through a review by the extension hub and inclusion of the results in new extension materials. Innovations can also be used as new evidence for the review of existing policies.
 112. **Sub-Component 3.3: Mass Media Campaign:** ASPIRE will finance a mass media campaign with the objective of bringing extension messages and information about extension events and activities to a broad rural audience. The mass media campaign will include climate change awareness and will promote climate smart agriculture. Activities will include: (i) radio broadcasts: annual seasons of 30 weekly programmes; (ii) an educational television show with an entertaining, competition-based format which will be broadcast in annual seasons of 24 shows; and (iii) a mobile feedback show engaging farmers in discussion about the programmes. The IFAD loan and grant financing and RGC contributions will finance the first three years of the radio shows and the first two years of the television shows, after which it is hoped to mobilise additional financing to continue. The farmer to farmer learning activities will

¹² This will include companies working in partnership with GIZ-Green Belt and CAVAC projects – see Working Paper #5.

build upon and enhance the effectiveness of the mass media campaign through ensuring further dissemination, discussion and understanding of mass media messages at the local level. All broadcast materials will also be available via the extension portal.

Component 4: Infrastructure Supporting Climate Resilient Agriculture

113. Districts identified through the Provincial Agriculture Strategic Plan (PASP) process as having a high level of climate vulnerability (34¹³ Districts within the 13 ASPIRE provinces) will receive grants to finance investments within the mandate of the local administrations and consistent with the Cambodia Climate Change Strategy (CCCS) comprising (1) the costs of climate proofing local infrastructure with a role in agriculture production; and (2) the costs of constructing local infrastructure that contributes directly to increasing the climate resilience of local agricultural communities.
114. In drought-prone areas, investments are likely to be predominantly in canal irrigation and in small, multi-purpose reservoirs. In flood-prone areas, investments in drainage and flood protection structures (including refuge mounds which can be used to keep livestock safe during a flood) are likely to be important. Elevated roads in flood-prone areas will also be eligible provided that there is a clear link to agriculture production.
115. It is estimated that about 70,000¹⁴ smallholder households will benefit from the infrastructure projects. Roughly half of these households will be beneficiaries of the extension services (Component 3). ASPIRE will seek ways to maximise the synergy between the infrastructure and extension service investments without compromising the discretion of the District Administrations (for infrastructure) and the PDA (for extension) to select the highest value investments.
116. Component 4 will support two financing instruments: (1) a Performance Based Climate Resilience Grant (PBCRG) which will be an annual allocation to each participating District and will be composed of a basic formula-based element and a performance-based element; and (2) a Specific Investment Climate Resilience Grant (SICRG) suitable for financing of larger sub-projects. It is envisaged that each participating District will receive three annual allocations of PBCRG and will become eligible for one SICRG based on demonstrated performance in implementing PBCRG financed activities.
117. The PBCRG will not pay the full cost of constructing infrastructure, but only the cost of climate proofing (i.e. the incremental cost due to climate change), taken, as a proxy estimate, to mean one-third of the total investment cost. Therefore the PBCRG will be used for co-financing together with other resources available to the sub-national administrations, primarily the Commune/Sangkat Fund and the District/Municipal Fund. This arrangement has been piloted successfully under the LGCC project.
118. Because of the larger size of the investments to be financed by the SICRG, it is likely that co-financing at the same ratio will not be possible (i.e. the SNA do not have co-financing resources available at this scale). Therefore it is likely that the SICRG will be eligible to finance full construction costs, but with a stronger test of contribution to climate resilience applied. SICRG will not be disbursed before 2019 at earliest so this issue will be reviewed during ASPIRE Mid-Term Review.
119. Each participating District (with the full participation of the Commune Councils) will develop a District Climate Resilience Strategy integrated with the District Development Plan. The District Climate Resilience Strategy will be based on community participatory Vulnerability Reduction

¹³ These will comprise 12 Districts in the 5 pilot Provinces and 12 Districts in the identified expansion Provinces (i.e. the PADEE provinces) with funding from IFAD loan and grant proceeds and RGC contributions, plus 10 additional Districts in 3 additional Provinces for which additional funding will be mobilized.

¹⁴ Assuming costs of \$500 per household for irrigation, \$50 per household for roads and \$100 per household for other types. The outreach target for the 10 fully financed Districts is 50,000 households.

- Analysis (VRA) and on science-based climate change scenarios and will identify key impacts of climate change, vulnerable locations and communities, potential adaptive actions and criteria for prioritising investments. VRA will be integrated with the Farmer Needs Assessment in the climate-vulnerable Districts. The District Climate Resilience Strategy will be approved by the District Council.
120. The PBCRG is a grant to the District. Commune Councils will identify and propose investments from within their Commune Development Plans and Commune Investment Programmes. The highest priority proposals will be selected by a joint meeting of the District and the Communes. Therefore, in each year, a number of Communes within the District will receive allocations of the Grant and will implement sub-projects, with co-financing from their Commune/Sangkat Fund allocations. SICRG sub-projects will be implemented directly by the District Administration. The District Administration will be responsible to monitor and report on the use of funds at both Commune and District levels.
 121. Infrastructure will be designed and constructed in conformance with the NCDD-S Technical Manual and template designs which are applied to Commune/Sangkat Fund investments. It is understood that NCDD-S intend to apply part of the proceeds of financing from the ADB Special Program for Climate Resilience (SPCR) program to developing specific technical standards for climate proofing of infrastructure in vulnerable areas. Design and construction supervision will be by engineers contracted to the District but with national and provincial level participation in recruitment. NCDD-S will employ a full time national infrastructure adviser who will review the designs and intervene to improve designs where necessary. A Technical Audit of infrastructure constructed in 2016 and 2017 will be carried out in time for the ASPIRE Mid-term Review.
 122. A commitment to maintain the completed investments will be a condition for eligibility of the investments. For roads and other purely public infrastructure the body responsible for maintenance will usually be the Commune Council that implements the investment. Maintenance of irrigation infrastructure should be financed from the value of the additional production. Maintenance responsibility is assigned to a Farmer Water User Community which collects water fees. However, experience in Cambodia is that FWUC are typically weak and find it difficult to collect fees at an adequate level. ASPIRE will encourage the formation of PPP arrangements in which a private provider partners with the FWUC to operate the scheme, collect fees and maintain the infrastructure. Districts will need to demonstrate adequate performance in maintenance of infrastructure to qualify for increments of the PBCRG and for the SICRG.
 123. NCDD-S will be the grant awarding body and ASPIRE will support necessary administration and technical assistance costs. Administration and technical assistance to the CRIF will be integrated with the implementation arrangements of the National Programme for Sub-National Democratic Development (NP-SNDD) which provides capacity development support to the District Administrations. NCDD-S will conduct an annual Performance Assessment which will (1) confirm that participating Districts meet the Minimum Conditions for access to grants and (2) assess performance against a set of Performance Measures which will determine the size of the Performance Allocation in the subsequent year.
 124. Component 4 supports technical assistance, equipment and operations costs at NCDD-S and Provincial level. The technical assistance team will consist of one national infrastructure adviser and one national climate change adaptation adviser.

Mainstreaming Climate Resilience

125. ASPIRE supports the Cambodia Climate Change Strategy and the MAFF Climate Change Action Plan. Indicators from the M&E Framework of the CCCS (currently under development) will be integrated into the ASPIRE M&E arrangements.

126. In **Component 2**, by inclusion of MAFF members of the Climate Change Technical Team in the membership of the Extension and Research Advisory Board and by mainstreaming climate change adaptation in education and training. All materials developed under ASPIRE will be informed by climate change considerations.
127. In **Component 3.1**, by use of climate risk indicators (vulnerability, exposure and hazard) in the allocation formula for grants and in the performance measurement of the Provincial Sub-Programmes; and by integration of Vulnerability Reduction Analysis (VRA, a participatory scenario development and livelihood impact analysis methodology already in use in Cambodia) in the preparation of the Provincial Agriculture Strategic Plan.
128. In **Component 3.2**, identifying, testing and disseminating technology solutions for climate resilient agriculture, using a Participatory Agriculture Research, (i.e. on-farm testing and demonstration) approach financed by the Innovations Fund.
129. In **Component 4**, through VRA, eligibility criteria for climate resilient infrastructure investments, use of climate change risk indicators in selection of investments, and by promoting use of improved technical standards and guidelines.
130. ASPIRE will form partnership and cooperation arrangements with other programmes for climate resilience in the agriculture sector, particularly the forthcoming UNDP-GEF resilient livelihoods project, and potential linkage of ASPIRE with a forthcoming biogas programme to be financed by GEF and implemented by IFAD.

F. Lessons learned and adherence to IFAD policies

131. The design of ASPIRE is strongly influenced by the outcome of the final review of the COSOP 2008-12 as well as the Scaling Up Country Study carried out by IFAD in 2011, reflections on experience during formulation of COSOP 2013-18 and early implementation experience with PADEE. ASPIRE does not represent a break with the previous IFAD project approach but rather an evolution and a mainstreaming of IFAD experience into the policies, systems and working procedures of MAFF. Some elements of the ASPIRE approach are already being tested in RULIP and PADEE.
132. ASPIRE also reflects the evolving policies of RGC for the agriculture sector based on evaluation of implementation of the overarching Rectangular Strategy (2008 – 2013) and incorporated in the revised Rectangular Strategy (2013-2018) and the National Strategic Development Plan.
133. The review of the COSOP 2008-12 identified the need for a more programmatic approach in order to maximise the synergies between projects, improve knowledge management, harmonise with development partners and ensure sustained improvements to the capacity of the public extension service.
134. The Scaling Up Study also emphasised the importance of improved knowledge management and identification of opportunities. ASPIRE responds to the recommendation of this study that “IFAD [in Cambodia] rebalance its operational goals with more of an emphasis on becoming truly a learning and scaling up organization.”
135. Supervision reports and the COSOP Review identified the need to increase the focus of project management at all levels on achievement of results, as opposed to delivery of activities and outputs. This has implications for project planning, monitoring and evaluation and for the type of financing instruments (performance related grants instead of pre-determined line-item budgets). The ASPIRE design learns from innovations in demand-driven planning of extension services in RULIP and builds on an improved approach to M&E in PADEE.
136. Previous IFAD projects have demonstrated success in assisting smallholders to improve their farm businesses but have been less effective at integrating the lessons learned into policy in producing sustained improvements in institutional and human resources capacity. This lesson

- informs the multi-level design of ASPIRE and the strategy of alignment with and improvement of the MAFF Strategic Budget Plan.
137. Weak coordination between different actors in the extension sub-sector, within MAFF and including non-government agencies, results in limited sharing of information and knowledge. This is a problem at all levels. ASPIRE will seek to improve information flows through policy and institutional changes as well as through improved use of technology. ASPIRE will build on the experience of using information technology for extension support and project monitoring piloted by PADEE.
 138. Experience has shown that extension staff working on IFAD projects are not equipped with the full set of skills needed to deliver a demand-led, market-orientated extension service. Only a minority of the staff have formal extension training. Training methods reflect a teacher-centred tradition and are not always appropriate for trainees with limited formal education. There has been much emphasis on production techniques for basic foodstuffs and less on assessing the profitability of farm enterprises or accessing market opportunities. ASPIRE will seek to strengthen the human resources for extension through a mixture of short-term training for existing staff and improvements to academic education of the next generation of extension workers.
 139. IFAD projects including RPRP, RULIP and PADEE have targeted poor farmers through a wealth ranking system. When applied in a too rigid way, and combined with the incentive of access to the revolving funds supported by those projects, this can result in recruitment of farmers who may have very little interest in the subject matter of the trainings. It is also desirable for training groups to include a greater diversity of farmers. In ASPIRE, the primary criterion for membership of a learning group will be the farmer's desire to learn, with the training content being tailored to match the needs of the target group.
 140. The Farmer Field School approach used in previous projects is time-consuming and evolved during a period when it could be assumed that farmers were under-employed for much of the year. The present situation in rural Cambodia is of labour shortage due to increased employment opportunities, locally and via migration. ASPIRE does not abandon the FFS approach but through the SLG will focus on a smaller number of shorter training sessions with more interactive engagement of farmers and greater use of multi-media materials. This approach will also facilitate delivery of trainings through the permanent staff of the District Agriculture Office, instead of mobilising large temporary teams as is the approach in PADEE.
 141. ASPIRE will continue and build upon the development of up-to-date, market orientated and climate-smart extension materials begun under PADEE.
 142. ASPIRE will be the first IFAD project in Cambodia since RPRP to include an infrastructure component. The design of the climate resilient infrastructure activities learns from the experience of infrastructure investments in CBRDP and RPRP, as well as from the LGCC model being piloted by NCDDS.
 143. Programme design complies with key IFAD policies and strategies in relation to Gender and Targeting as described in Annex 12.

III. Programme implementation

A. Approach

144. ASPIRE marks a further progress in the use of national systems for aid delivery in Cambodia and seeks to build partnerships for a Programme Based Approach with other development partners. In doing so, and by emphasising achievement, measurement, evaluation and reward of results, ASPIRE reflects the principles of the Paris Declaration (2005), and the Accra Agenda

- for Change. ASPIRE also emphasises the role of the private sector and civil society in line with the Busan Declaration of 2011.
145. ASPIRE is designed as a public sector reform programme within the extension sub-sector. This places ASPIRE in contrast to ongoing major agriculture development projects in Cambodia – HARVEST (USA) and CAVAC (Australia) which deliver services principally or entirely outside the public sector framework. ASPIRE shares with these projects the perception that the extension service must be diverse, market-oriented and able to mobilise the resources and capacity of the private sector and civil society. However ASPIRE seeks also to strengthen the capacity of the public sector to coordinate extension and to direct public resources to achieve policy goals and address market failures.
 146. The public sector reform agenda requires a long-term perspective. The intended result is a full programme-based approach (PBA), mobilising development partner resources in harmonised support to government policy goals. During preparation of the RB-COSOP, a number of options for a PBA were examined and discussed with stakeholders. At the request of RGC, ASPIRE will move to a PBA through an increasingly close alignment with the Strategic Budget Plan and Programme Budget arrangements of MAFF. This approach creates challenges as neither the planning nor the implementation of the Programme Budget meet the needs of ASPIRE at present. However aligning with Programme Budget also creates the opportunity to work with RGC to improve this system, in particular by introducing a greater emphasis on programming for results and incentivising performance. Alignment with Programme Budget implies alignment with RGC policy but also extends the influence of ASPIRE to a large and increasing share of the MAFF budget¹⁵ and should ensure that results are sustained beyond the programme period.
 147. ASPIRE will finance service delivery (extension and climate-resilient infrastructure) through flexible grant financing instruments. The sub-national implementing agencies (PDA and District Administrations respectively) will be accountable to use these grants in the most cost-effective manner to achieve target results. This will change management perspectives from the traditional supply-driven approach. Planning of extension services will focus on identifying unrealised potential for inclusive agriculture GDP growth and on responding to farmer demand. The grant funding will provide flexibility to choose the most appropriate mix of activities and the most appropriate delivery mechanisms in the local context.
 148. The focus on results will be supported by financial incentives for performance. These may operate at both the institutional and the individual level. The PDA will gain increased grants and more discretion in how the grants are used by meeting performance and capacity development targets. Districts will receive increased allocations of PBCRG and eligibility for the SICRG based on annual performance assessments. At individual level, ASPIRE will support a performance-related pay scheme based on performance measures integrated in the core job descriptions of staff members. This scheme will be based on a scheme recently agreed by RGC and key donors for the Health Sector PBA and is outlined in Appendix 5.
 149. By demonstrating success in using and improving national systems, and by assisting RGC to redefine the relationship between the public extension service, the private sector and civil society, ASPIRE will encourage other development partners to make use of these systems. The outlines of a Programme Based Approach are not pre-determined: there is scope for flexibility in the modality of support provided by each partner in accordance with its priorities and institutional constraints, led by government policy and aligned through a framework of effective demand identification, planning and measurement of results.
 150. ASPIRE will develop strategic partnerships with other programmes supporting agriculture and climate change adaptation. These partnerships will involve strategic cooperation and in some cases may evolve into more formal arrangements. Exploratory discussions have taken place for

¹⁵ Currently about 15%, but RGC plans to bring 100% of the MAFF budget within PB arrangements by 2015.

cooperation and possibly co-financing or parallel financing of some activities with USAID and mutual cooperation between ASPIRE and the GEF-financed Resilient Livelihoods Programme under preparation by UNDP. The EU-financed programme in the Livestock and Fisheries sub-sectors has areas of mutual interest with ASPIRE. Through NCDD-S ASPIRE will benefit from cooperation with the National Programme for Sub-National Democratic Development including associated sub-national climate change adaptation financing.

151. A specific opportunity has been identified for a Programme Implementing Partner to support technical assistance for capacity development, process facilitation, knowledge management and development of extension materials within ASPIRE Component 2. Such a partner would be an agency with specialist skills and demonstrated record of performance, that would also be able to mobilise a significant part of the costs as additional financing for ASPIRE. This idea will be developed further during the period up to negotiation of the programme financing.
152. ASPIRE will be implemented from 2015-2021, at national level and in five pilot provinces, with expansion into at least an additional five provinces, and, contingent on mobilisation of additional funds, up to eight additional provinces, after mid-term review in 2018. Three phases of implementation, defined by intermediate outcomes, are described in Section II-B above. Each phase represents an increasingly close alignment between ASPIRE and the MAFF Strategic Budget Plan. The timing of transition between phases is not predetermined but will depend on verification of results achieved. It is anticipated that Phase 1 (Foundation) will occupy approximately the first two years of the programme (2015-2016) while time required for Phase 2 (Proving) will be at least a further two years. Provisionally, Phase 3 (Scale-Up) arrangements could apply to the final three years 2018-21 but this transition, and the details of implementation arrangements in this phase, will be subject to confirmation at the Mid-Term Review.
153. The Provincial Sub-Programmes will also be subject to phased implementation corresponding to the three phases of the programme. However, there will be flexibility for variation in the timing of graduation between phases in each Province, subject to the condition that at least four of the five pilot provinces should achieve key Phase 2 targets before the programme as a whole moves to the Scale-Up phase. MAFF senior management recognises that roll-out of Programme Budgeting is a substantial challenge. ASPIRE's will support the wider roll-out of PB in MAFF through technical assistance and capacity building of key departments and staff. In this respect, the ASPIRE team will coordinate with the EU fisheries and livestock programme. This will accelerate the maturity of PB in MAFF and thereby facilitate the readiness of MAFF to be able to progress ASPIRE to Phase 2 and beyond.

B. Organizational framework

154. ASPIRE will be overseen by a Steering Committee (SC) co-chaired at Secretary of State level by MEF and MAFF, and with representation from CARD, SNEC, NCDDS and Ministry of Environment (MoE) as well as participating provinces together with a limited number of representatives of development partners, civil society (farmer organisation) and the private sector who will be appointed for not less than one year. The SC may invite additional resource persons/agencies to discuss specific agenda items as and when required. For effective work and decision making the total membership of the Steering Committee should not exceed 20 persons.
155. MEF is the official Representative the Kingdom of Cambodia as the Borrower/ Recipient. In this role MEF will be responsible for: (i) Providing inter-agency coordination when required; (ii) Fulfilling the government fiduciary oversight and management responsibilities; (iii) Providing sufficient counterpart contribution in a timely manner to finance the Programme activities, including payment of government staff salaries; (iv) Timely processing of WAs, approval of procurement actions and other necessary documents according to the SOP.

156. Without duplicating the function of the ASPIRE Secretariat, the Office for Multilateral Cooperation II (OMCII)/Department of Cooperation and Debt Management (DCDM)/General Department of Budget (GDB)/MEF will support ASPIRE Steering Committee specifically for coordinating and following up meetings and overall administration tasks while DCDM and Department of Budget (DB) of the GDB/MEF will follow up and monitor the implementation of Programme Budget.
157. MAFF will be the Executing Agency. MAFF will take responsibility for overall programme management, coordination and reporting while agencies and line departments of MAFF will undertake the majority of technical work at national and sub-national levels. SNEC will undertake policy research and analysis (Sub-Component 1.2). NCDD-S will be the implementing agency for Component 4. Provincial Sub-Programmes will be implemented by the Provincial Departments of Agriculture. District Administrations will be the recipients of Climate Resilience Grants (from NCDD-S) and will either implement directly or through sub-grants to the Commune Councils. The Commune Councils will contract Commune Extension Workers and play an important role in coordination and monitoring of extension service delivery.
158. Planning of Provincial Sub-Programmes and Climate Resilience activities will be integrated with the sub-national planning processes at each level, overseen by the Provincial, District and Commune administrations respectively.
159. ASPIRE will be led by a MAFF Secretary of State as Programme Director. The Programme Director will be supported by two Programme Managers within MAFF (responsible for (a) Extension, technology and research, and (b) Programme Budgeting, respectively) and one Programme Manager within NCDD-S. The Programme Manager - Extension, Technology and Research will be the Director General of the General Directorate of Agriculture, MAFF. The Programme Manager - Programme Budgeting will be the Director of the Department of Planning and Statistics, MAFF. The programme leadership team will additionally include the Team Leader of the Decentralized Advisory Team who will act as the ASPIRE Programme Advisor.
160. The Programme Director will oversee a dedicated ASPIRE Secretariat which will comprise:
 - (a) a Secretariat Support Team (SST) of contracted staff that will be primarily focused on programme management aspects of the ASPIRE programme itself, and,
 - (b) a Decentralized Advisory Team (DAT) that will be primarily focused on capacity building of central and provincial departments of MAFF related to performance based programme budgeting and management, agriculture and extension related issues under Components 2 and 3 and policy research under Component 1.
161. The ASPIRE Secretariat will undertake programme management, coordination and M&E tasks, as well as implementation of sub-component 1.1 (Policy Coordination and Development). The Secretariat will be staffed by about 10 full-time contracted staff selected on the basis of merit, experience and potential to learn fast. The Secretariat will work closely with the Department of Planning and Statistics and the Department of Finance which are responsible for administration of the Programme Budget. Through the Programme Budget mechanism, the ASPIRE Secretariat will coordinate the work plans of the technical agencies, principally GDA and DAHP at national level and the PDA.
162. The purpose of the ASPIRE Secretariat is to create the temporary administrative capacity needed to implement the programme-specific functions. MAFF agencies and line departments will undertake the majority of technical work at national and sub-national levels under Components 1, 2 and 3.
163. The mandate of SNEC is to provide policy advice to the senior leadership of RGC. SNEC consists of senior officials of MEF and other Ministries supported by a Secretariat. SNEC has a track record of achievement in developing policy for the agriculture sector. However its

- administrative capacity is limited and it lacks experience in conducting primary research. The role of SNEC in ASPIRE will add independent voice to the policy dialogue and link ASPIRE to senior policy-making levels of Government. SNEC participation in ASPIRE in turn will enhance the capacity of RGC to formulate policy in the agriculture sector.
164. NCDD-S is responsible to oversee implementation of the National Programme for Sub-National Democratic Development and as such, has a relationship of coordination and support with sub-national administrations. The primary role of NCDD-S in ASPIRE will be implementation of Component 4 which scales up an existing pilot initiative of NCDD-S in local investments for climate resilience. NCDD-S will also assist in facilitating cooperation with Provincial and District administrations, particularly for planning purposes. The proposed co-financing of the CEW position through the Commune budget would require the facilitation of NCDD-S. The NSDP foresees an increasing role for the sub-national administrations in the management of technical department staff (e.g. those of PDA and DAO) and, depending on how this develops, this could point to a role for these administrations in the human resources development activities of ASPIRE.
 165. The PDA will be the implementing agency for the Provincial Sub-Programmes (PSP). PDA will be responsible for preparation of the annual budget for the PSP which will be consolidated into the ASPIRE AWPB. Under the PSP, PDA will allocate funds to support activities of DAO, contracting-out arrangements, public-private partnerships and CEW. PDA will be responsible for monitoring all PSP activities and will be accountable for results. This role will require a significant enhancement of the capacity of PDA which has traditionally been focussed on implementing activities and reporting quantities of output achieved.
 166. DOA is a sub-office of PDA with no independent plan or budget. Many DOA are weak with few effective staff and little equipment and no discretionary resources for operations. ASPIRE will build permanent capacity in DAO by making adequate staffing levels and clear, appropriate job descriptions a precondition for implementation of the District work plans. The intention is to phase ASPIRE in at a rate which does not exceed the capacity of PDA to assign staff to the DAO.
 167. The Provincial Administration is responsible for coordinating development activities in the Province and in particular for the Provincial Development Plan, into which the Provincial Agriculture Strategic Plan will be integrated. The Provincial Administration will play a direct role, on behalf of NCDD-S, in coordination of the Climate Resilient Infrastructure activities.
 168. The District Administration will participate in planning and coordinating the District Work Plans under the PSP and will implement Component 4 activities directly and in cooperation with the Commune Councils.
 169. The Commune Council is the lowest tier of rural administration and routinely plays a significant role in grassroots planning and coordination of agriculture support activities. The Commune does not have an administrative staff so agriculture support falls within the ex-officio responsibility of the First Deputy Commune Chief for economic affairs. In ASPIRE, this role will be enhanced through the assistance of the CEW who will be contracted to the Commune Council. The Commune will assist in formation and coordination of Smallholder Learning Groups and the Farmer To Farmer Learning Network. CEW will participate in Vulnerability Reduction Analysis and preparation of the District Climate Resilience Strategy; identify and propose investments for climate resilience, participate in selecting the highest priority investments, and may implement sub-projects co-financed by their Commune/Sangkat Fund resources.
 170. Specialist service providers will be contracted to carry out a range of functions within ASPIRE. These will include policy studies, development of training materials and delivery of trainings, and surveys for M&E at national level, and will include contracts for provision of extension

- services (Contracting Out model) at Provincial level. The Provincial Sub-Programmes will also include Public Private Partnership arrangements which may take a variety of contractual forms.
171. Government and non-government entities in the extension sub-sector will be eligible to apply for innovation grants under Sub-Component 3.2.
 172. ASPIRE will take a participatory and inclusive approach to implementation and this will be reflected at all levels. Stakeholders from Government, private sector and civil society will be represented in the ASPIRE Secretariat and, more broadly, in the Extension Policy Forum and in the annual Extension Workshop and other events. There will be non-government representation on the Extension and Research Advisory Board. Stakeholders from all sectors will participate in farmer needs assessment and in planning at Province and District levels. The Farmer To Farmer Learning activities will develop local knowledge networks between stakeholders including farmer organisations, the private sector and civil society.
 173. IFAD is in discussion with RGC (MEF and MAFF) on options to finance specialist management technical assistance to support a rapid and efficient start-up of ASPIRE and to provide key management assistance to the ASPIRE Secretariat during the first year of implementation. The period for this support is anticipated to begin in the final quarter of 2014. One possible financing option would be to use uncommitted funds allocated to ongoing PADEE project, together with staff resources of the MAFF-PSU which will become free upon the closing of the RULIP project. Priority activities for this support would include (i) review and finalisation of the Programme Implementation Manual; (ii) detailed guidelines and procedures for MAFF-ASPIRE Performance Based Rewards scheme for government staff working on ASPIRE; and (iii) Updated job descriptions for PDA, DOA and CEW teams.

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

Planning

174. Needs-based planning, data collection, measurement of results and knowledge management are integral to the design of ASPIRE. Service delivery will be planned based on an improved understanding of smallholder farmers' needs and market opportunities. Evidence of results from the application of different approaches to extension will determine the planning of future activities and the allocation of grant funds as well as forming the basis for policy development. Planning of ASPIRE activities is integrated with the strategic and budget planning systems of the implementing agencies and is intended to effect a sustained improvement by making these systems increasingly evidence-based, inclusive and results-focussed.
175. **Planning within the framework of the Program Budget:** The MAFF Strategic Budget Plan and the annual Programme Budget are the key instruments for the annual planning activities of ASPIRE. The Programme Budget formulation process is overseen by the Department of Planning and Statistics (DPS) and consists of four steps beginning with a review of policy priorities in January of the preceding year. The DPS issues a circular to the implementing departments in February and annual departmental budget submissions are completed by March. The consolidated budget proposal is submitted to MEF in June. MEF checks the submission for compliance with the resource ceiling before passing it back to MAFF for finalisation.
176. For ASPIRE funded activities, the Program Budget will include a table showing the allocation of ASPIRE funds alongside the allocation of MAFF Program Budget funds for each activity. Items identified in the Program Budget as financed by ASPIRE will then be consolidated into the ASPIRE Annual Work Plan and Budget in the usual way.
177. Some ASPIRE costs will remain outside the framework of the MAFF Programme Budget. These will include project management, monitoring and evaluation costs within the ASPIRE Secretariat, costs of activities implemented by SNEC and Component 4 (Climate Resilient

- Infrastructure) costs, and the Innovation Grants. Some activities within MAFF that are essential to ASPIRE but that do not appear within the MAFF Strategic Budget Plan, may remain outside Programme Budget during the first phase of the project.
178. **Annual AWPB Approval Process:** During the final quarter of each year, the ASPIRE Secretariat will prepare the AWPB for the following year. The AWPB will be prepared by consolidating (1) the ASPIRE activities within the MAFF Programme Budget; (2) non-Programme Budget operations of ASPIRE in MAFF; (3) the annual ASPIRE work plan of SNEC; (4) the annual ASPIRE work plan of NCDDS; and (5) the annual plan for the programme management operations of the Secretariat.
 179. The AWPB will be submitted by the Programme Director through MEF and approved by the annual meeting of the ASPIRE Steering Committee (SC). Because of the risk of timing difficulties arising, the AWPB will be deemed approved if there is no comment by the members of the Steering Committee or no meeting is held after a lapse of time of two weeks after submission of the AWPB for review by the SC.
 180. **Planning in the Provincial Sub-Programmes:** The key planning instruments for the Provincial Sub-Programmes will be a Provincial Agriculture Strategic Plan and the three-year rolling Budget Plan of the PDA. The Provincial Agriculture Strategic Plan will be developed by a Provincial Agriculture Working Group with representation from the Provincial Administration, PDA and other relevant Provincial technical departments, the private sector and civil society. District priorities will be determined by a District Agriculture Working Group including the District Administration, the DAO, the Commune Councils, the private sector and civil society.
 181. The key improvements to the preparation of the five year **Provincial Agriculture Strategic Plan** in each Province will be (i) Preparation through a participatory process with public consultation meetings led by the Provincial Board of Governors; (ii) improved use of agronomic and market data; (iii) Participatory Farmer Needs Assessments carried out in selected representative communities and integrated with Vulnerability Reduction Analysis; (iv) stronger focus on strategic results.
 182. The Farmer Needs Assessment Team of the MAFF Extension Hub will provide technical assistance for preparation of the PASP and the District work plans. The roles of the Needs Assessment Team will include providing data collected from national surveys including the Major Impact Survey baseline, IVRP surveys etc as well as available data on soils (e.g. from Agro-Ecosystems Analysis), climate and markets.
 183. The Three Year Rolling Budget Plan of PDA is updated annually in the second quarter of the year. At present this is a line-item budget for recurrent costs of the PDA and does not allocate resources to achieve results. With the creation of the Provincial Sub-Programmes, there will be a Programme Budget section added to the plan which will show the Provincial Sub-Programme Budget for the following year plus provisional planned activities for the two out-years. Each Province will receive an indication of the ASPIRE resources available to support activities in the Budget Plan, based on the PASP, during the following three years. The grant amounts received may be adjusted based on capacity development and performance indicators and will be confirmed in the final quarter of the year during the ASPIRE AWPB process.
 184. ASPIRE will expand into the PADEE target provinces with planning activities taking place in 2018 which is the final year of PADEE. The PADEE provinces will formulate Provincial Agriculture Development Strategies and consolidate ASPIRE activities in their three-year rolling Budget Plans. However, the details of the approach may be modified with the agreement of the ASPIRE Steering Committee based on the experience of the initial five target Provinces.
 185. The Provincial Agriculture Strategic Plan and the District Extension Work Plans will be consolidated into the Province and District development plans and investment programmes in line with the sub-national development planning guidelines.

186. **Climate Resilient Infrastructure:** Planning of the Climate Resilient Infrastructure activities will be based on a District Climate Resilience Strategy (DCRS) which is integrated with the District development planning process. The DCRS has been piloted by NCDDS and combines the results of participatory Vulnerability Reduction Analysis (VRA) with science-based climate change scenarios. The DCRS is prepared with the participation of the Communes in the District and is approved by the District Council.
187. Communes will propose infrastructure projects that are included in their five-year development plans and annual investment programmes and that match the criteria in the DCRS. The District Planning Committee screens and ranks these proposals using the criteria in the DCRS. The resulting ranking is reviewed by a meeting with the Commune representatives and the available Climate Resilience Grant funding is allocated to the highest priority investments. The resulting work plan for the Climate Resilience Grant is reviewed and approved by NCDDS and is finally approved by the District Council.

Monitoring and Evaluation

188. ASPIRE monitoring and evaluation will be coordinated by the ASPIRE Secretariat and will integrate three dimensions of results measurement: (1) the impact of ASPIRE; (2) performance assessment; and (3) the cost-effectiveness of alternative modalities of extension service delivery. A range of monitoring and evaluation tools will provide the information needed for policy analysis and policy formulation (Component 1); design of capacity development activities (Component 2) and planning of service delivery (Components 3 and 4) as well as providing detailed and up-to-date information needed by programme management to ensure effective delivery. The M&E systems will also provide for fiduciary monitoring (i.e. verification of appropriate use of project funds).
189. The **logical framework** provides the casual links and the basis for the overall system for verifying programme performance based on expected outputs, institutional and community outcomes and household impacts and incorporates indicators from the RIMS.
190. The range of M&E tools described below will be complemented and enhanced by research and knowledge activities throughout the programme components. In particular, the **Randomized Controlled Trials** (RCT) conducted by IFPRI with support from 3iE (described under Component 1 above) will complement the general results measurement with high quality, statistically robust evidence of the effectiveness of key elements of the extension approaches, thus corroborating and adding detail to the understanding of the findings of the M&E activities.
191. **Management Information System:** The Programme MIS will be the primary channel of programme monitoring and will support a comprehensive approach to data collection, analysis and exchange with the main purpose of informing management decisions on programme matters. MIS data will permit monitoring of programme process and outputs, especially including conformance with eligible expenditures rules for grant financing. ASPIRE Secretariat and NCDDS will conduct verification (process, financial and technical) of MIS data which will also be available to facilitate spot-checking by IFAD supervision. Performance monitoring will rely mainly on measurement of results by the implementing agencies, particularly PDA, but performance measures will be independently verified. The ASPIRE Secretariat will contract and manage the results verification surveys and the major impact assessment survey.
192. The Programme MIS will be managed by the M&E unit within the ASPIRE Secretariat and will be based on the system developed for PADEE. DAO and CEW will directly upload data on field activities to the MIS. Quarterly and annual reports will be compiled at District and Province level and in each implementing agency, based on the data already recorded in the MIS.
193. Reporting on Component 4 will be incorporated into an existing MIS managed by NCDD-S (known as the PID) that monitors Commune investments including those funded by Climate Resilient infrastructure grants.

194. The **Major Impact Survey** will be carried out by a suitably qualified and experienced survey firm based on survey data collected at 3 stages: baseline, mid-term and an end-of-project. The assessment focuses on the outcome and impact changes with attention given to the effectiveness of targeting of beneficiaries, disaggregated by ID poor category and gender where applicable. The Baseline Survey will be undertaken shortly after programme start-up and will incorporate the farmer needs assessment used to develop the Provincial Agriculture Strategic Plan (PASP). A statistically valid approach to sampling reflective of the target group smallholder farmers over the 30 target Districts in the five initial ASPIRE provinces will be developed by the survey firm. Follow-up surveys will be conducted to interview the same panel of beneficiaries which will allow longitudinal analysis, and comparison to non-ASPIRE farmers..
195. The regular monitoring of activities and output indicators for Outcome 1 and Outcome 2 will be verified by an **Independent Evaluation of Policy and Capacity Development**. Progress will be assessed by an independent evaluation team (one international and one national expert) who will report to the Secretariat. The results of the assessment will be used by the ASPIRE Steering Committee to determine when Stage 1 and Stage 2 of ASPIRE implementation are substantially complete. Therefore, two studies will be carried out, one planned for 2016 and the second (tentatively) for 2018.
196. An **Extension Practitioner Survey** will provide quantitative data for measuring the achievement of Outcome 2. A baseline with mid-term and end of programme surveys will be conducted providing information on the number and quality of extension service providers. A survey of a panel sample of extension practitioners in the public sector, private sector and civil society will be constructed to approximate a representative sample. The survey will include questions on qualifications, skills, knowledge, attitudes and practices of the practitioners; as well as contact with and services received from MAFF.
197. Once extension activities commence details of the farmers entering the ASPIRE program will be collected by DAO staff and CEWs and upload directly to the MIS. **Farmer tracking** data will be used to measure results of the extension programmes based the profitability and resilience of the farm business. Information will be provided in format that allows cross referencing to the impact survey data. An annual **Results Verification Survey** of a random sample of farmers will verify the accuracy of the farmer tracking.
198. Performance of each of the Provincial Sub-programmes will be assessed using a **Provincial Performance Scorecard** (see example in Appendix 6). The scorecard will have indicators in four areas: Results and Impact; Internal Process; Clients (i.e. farmers) satisfaction and reach; and Learning and Development. Overall achievement against this scorecard will be incorporated into the log frame reporting (Outcome 2).
199. NCDD-S will conduct **annual performance assessments** of Districts participating in Component 4 (Climate Resilient Infrastructure). The performance assessment system will be based on one already piloted by NCDD-S. The results of the performance assessment will determine the size of the Performance Based Climate Resilience Grants in future years and will also determine eligibility to apply for a Special Purpose Climate Resilience Grant.
200. **Qualitative analysis** will also be used to expand the understanding of the influences on and dimensions of change and impacts (including the effect of gender and climate vulnerability) through the use of case studies and most significant change stories (MSCS).
201. Districts receiving Climate Resilience Grants will be obliged to conduct **Participatory Evaluations** of the sub-projects, following a methodology already piloted by NCDD-S. The evaluations will be conducted with a focus group of beneficiaries and will combine evaluation by a team from NCDD-S with self-evaluation by the beneficiaries. The evaluations will seek to measure the quality of the sub-project design and implementation process, the quality of the outputs and the cost-effectiveness of the sub-projects as investments for climate resilience.

202. The effectiveness of the different models of extension service delivery will be evaluated using Farmer Tracking and the Results Verification Survey supported by qualitative analysis. These findings will then be validated using the Major Impact Survey data.
203. The Results Verification Survey will also provide verification of physical delivery of services under Component 3.1. For Component 4, a **Technical Audit** of infrastructure will be carried out to verify quantity and quality of works delivered.
204. **Links to M&E Framework for Climate Change:** RGC launched the Climate Change Strategic Plan 2014 – 2023 in late 2013. MoE in partnership with IIED is developing a national M&E framework based on the Tracking Adaption and Measuring Development (TASM) approach. This framework will integrate national and sub-national development plans and actions as well as consider measurement tools on a sector basis. IFAD and MAFF will continue to liaise with MoE on the development of the national framework, indicators and tools and review the ASPIRE log frame, when and if, national reporting requirements are established to ensure harmonization.
205. **M&E Technology:** The MIS will be based on the one developed for PADEE and will use mobile technology for upload of data and access to reports. ASPIRE will test the suitability of telephone surveys particularly for survey of farmer needs and satisfaction with services delivered, and for spot checks of farmers reached. Telephone surveys could use Interactive Voice Response System (IVRS) technology if this is found suitable.

Knowledge Management and Communications

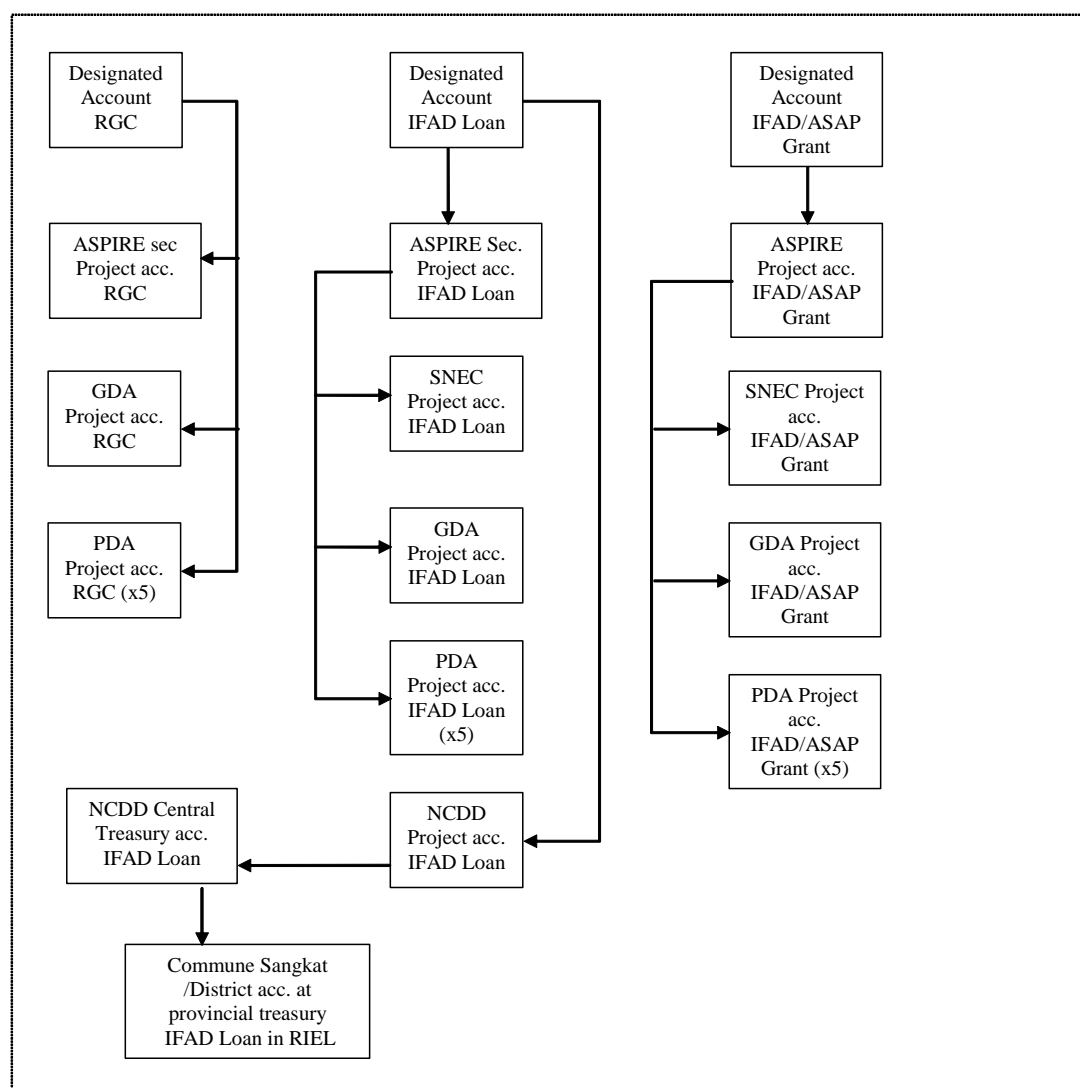
206. ASPIRE is specifically designed to generate knowledge and to improve the capacity to use and share knowledge at all levels. Specifically, ASPIRE will result in improved knowledge in the following areas:
- (a) The efficacy and cost-effectiveness of different approaches to extension, subject to different contexts (i.e. what works, where);
 - (b) Smallholder farmers' needs for extension services, and how smallholders can be assisted to identify and take advantage of emerging market opportunities;
 - (c) The capacities and appropriate roles of the public sector, private sector and civil society in agriculture services in a Cambodian context.
207. An effective communications strategy will be integrated into the management of ASPIRE and into its components. The Communications Strategy will play a large part in ensuring the programme achieves its outcomes. Specific inputs are planned by this communication strategy, targeting the various levels of actors – in each of the components of the programme.
208. At policy level, the communications strategy will ensure that evidence-based policy analysis reaches key decision makers in digestible form, while also facilitating broad engagement of stakeholders in the policy dialogue;
209. At Management level, the communications strategy will ensure efficient sharing of knowledge within the Secretariat, the Extension Hub and between the various technical departments of MAFF to ensure that appropriate and demand driven methodologies can be developed and scaled up for a program based approach;
210. At Implementation level, the communications strategy will assist in building ownership, sharing information and facilitating the change in attitudes and behaviour that are needed.
211. Strategic communications activities will be implemented in all programme components. The Communications Strategy will be coordinated by the ASPIRE Secretariat which will have a full-time Communications Officer. Programme reports will include a specific section on implementation of the Communications Strategy.

D. Financial management and procurement

Financial Management

212. **Disbursement arrangements and Flow of Funds.** Consistent with ASPIRE institutional arrangements, the following agencies shall be involved in the implementation of the programme activities, and as such, responsible for receiving and/or managing, accounting and reporting on the use of funds:
- (a) ASPIRE Secretariat, located within MAFF;
 - (b) Supreme National Economic Council (SNEC);
 - (c) National Committee for Sub-national Democratic Development Secretariat (NCDDS);
 - (d) General Directorate of Agriculture (GDA) at MAFF;
 - (e) Provincial Department of Agriculture (PDA).
213. The Ministry of Economy and Finance (MEF) and the ASPIRE Secretariat (MAFF) shall open and maintain in the National Bank of Cambodia the following Bank Accounts: (i) Two Designated Accounts in USD to receive the IFAD Loan and IFAD/ASAP Grant proceeds from the Loan and Grant Accounts maintained by IFAD; and (ii) One Account in USD to receive and manage the Government Counterpart Fund for the Programme. As the integration between ASPIRE and MAFF PB activities proceeds, the Government Counterpart account will receive less funding with the remainder channelled to programme activities via increased allocations under PB.
214. IFAD shall advance funds from the Loan and Grant Accounts to the Designated Loan and Grant Accounts based on an approved annual work plan and budget (AWPB) and cash flow projection for six months planned activities. IFAD will provide advances for the six months activities based on the approved AWPB. The ASPIRE Secretariat will transfer to all implementing agencies six months budget. The release of subsequent advances shall be based on the justification of 50% of the last advance and 100% of all preceding advances. MEF shall transfer the Government counterpart funds to the Counterpart Funds Account based on the same AWPB on a six monthly basis.
215. MEF shall authorize the opening of the following USD Programme Accounts for the IFAD Loan and Grant proceeds:
- (a) Four Programme Accounts at the National level for the loan, which will be maintained and operated respectively by ASPIRE Secretariat, GDA, NCDD, SNEC.
 - (b) One Sub-National Programme Account for the loan for each of the Provincial Departments of Agriculture participating in ASPIRE which will be used also to manage grants awarded under component 3
 - (c) Three programme accounts for ASAP maintained by ASPIRE Secretariat, SNEC and GDA. One Sub-National Programme Account for the grant for each of the Provincial Departments of Agriculture participating in ASPIRE;
216. MEF shall also authorize the opening of the following USD Programme Accounts for the Government Counterpart Fund proceeds:
- (a) One Programme Account at the National Level (ASPIRE Secretariat);
 - (b) One Programme Account for GDA;
 - (c) One Sub-National Programme Account for each of the Provincial Departments of Agriculture to be used initially.
217. All these accounts could be possibly phased out upon increased use of PB arrangements.

218. ASPIRE Secretariat shall advance funds from the main Programme Accounts to the accounts of the Implementing Agencies (IAs), namely: SNEC, GDA, and PDAs based on the approved annual work plan and budget (AWPB) and cash flow projection for the activities to be undertaken during the coming six months. Funds for NCDD will be transferred directly from the Designated Account at MEF upon request of the ASPIRE Programme Director.
219. SNEC, GDA and PDAs are the ultimate administrators of programme bank accounts; NCDD-S instead will open a programme account for operational expenditures, while the portion of funds dedicated for infrastructure related activities at provincial level will be channelled through the national treasury system. Based on the AWPB, NCDD will transfer required funding to the national treasury system. NCDD will identify correct administrative methodologies to charge to RGC the tax element of expenses channelled through the national treasury system, considering that such costs are ineligible under IFAD financing. The implementation of larger grants will be assessed at mid-term review.
220. RGC contribution will flow directly from the RGC designated account to the ASPIRE Secretariat, GDA and PDAs programme accounts upon request from the Aspire Secretariat.
221. Accordingly, the flow of funds shall be as per the following diagram:



222. ASPIRE Secretariat shall submit withdrawal applications on a quarterly basis justifying the advances received based on expenditures reports submitted by the implementing agencies. Such withdrawal applications shall be prepared in accordance with IFAD requirements with SOEs thresholds fixed at USD 50 000 for all cost categories. All expenditures above the established thresholds shall be accompanied by related supporting documentation, as well as all expenditures of every amount related to contracts of value exceeding USD 50 000. The Secretariat shall prepare and submit the withdrawal application to IFAD (through MEF) on a timely basis within 15 days after the end of each quarter starting from the first quarter after the first disbursement is made. Withdrawal application will be submitted to IFAD every quarter or when the required amount is approximately USD 1 million minimum.
223. **Internal controls.** Procedures and record maintenance at all level have to be significantly strengthened by addressing the issues of non-availability of skilled finance staff, setting up of internal controls, setting up of effective monitoring and review, introduction of accounting software, preparation of a detailed section in the PIM on Financial Management with guidance notes. The Advisors will play an important role in the overall process. The system of joint signatory for operating the bank accounts or appropriate authorization processes will have to be introduced. Detailed procedures for adequate recording, management and safeguard of programme fixed assets will be disclosed in the PIM..
224. **Accounting systems, policies, procedures and financial reporting.** The financial accounting of the ASPIRE will be done through a computerised accounting software at all levels, which will be customised to generate financial reports for RGC and for IFAD respecting specific reporting requirements. The customisation will be in such a way to disclose funds use by component, sub-component, cost category and each of the funding sources to be collated through the software. Customization will also include reference to the RGC's Chart of Account (COA). Budgetary control at activity level to be incorporated, also considering the RGC's budget classification, pending the deployment of a national system for PB management. The accounting software has to be customised to generate required financial statements and details of the achievements from the system itself. Each implementing agency will submit Monthly Financial Progress Reports to the ASPIRE Secretariat electronically. ASPIRE Secretariat will consolidate data received and will be the entry contact point with IFAD. ASPIRE Secretariat will prepare annual consolidated financial statements including data provided by all other implementing agencies. ASPIRE Secretariat and the Implementing Agencies shall apply cash basis accounting principles in accordance with the updated Standard Operating Procedures (SOP) for externally financed projects/programmes in Cambodia, issued by MEF, as per Sub-Decree No. 74 ANK. BK dated 22 May 2012, on the condition that these procedures are adequately adjusted to accommodate any specific financial management requirements of ASPIRE while taking into consideration local circumstances and capacities in respect of the implementation of ASPIRE activities at sub-national level. With the increased use of PB, the MAFF Department of Finance and Accounts will monitor RGC portion of ASPIRE expenditures and will regularly report back to the ASPIRE Secretariat.
225. **Internal Audit.** As the ASPIRE Secretariat will be a part of the MAFF, it will be subject to the activities of the MAFF Internal Auditor Office. In order to have more specific support, ASPIRE Secretariat on an annual basis will contract a private internal audit firm to perform internal controls review, propose improvements and issue recommendations. Implementation of such recommendations shall be monitored during the following exercise. Main duties to be stipulated in the TORs will include monitoring and review of the financial systems and procedures, their application and adherence to the PIM, support the introduction of administrative efficiencies. It would be a good practice to brief the appointed external auditors on the programme components, methods of implementation, monitoring arrangements, etc. so that they could deliver the reports effectively. Reports prepared by the internal audit firm will be submitted to the attention of the Steering Committee and forwarded to IFAD.

226. **External Audit.** Proper set-up of audit TORs will be a key safeguard for all stakeholders. A single private auditor will be hired for the annual audit of ASPIRE. In addition to IFAD usual requirements, TORs will include visits to all implementing agencies at central and provincial level, review of relevant documentation, physical verification on infrastructures built, sample interviews to participants to extension trainings and people/companies awarded with grants.
227. The audit firm will be competitively selected through Quality and Cost Based Selection method of procurement with a weight age of 70:30 for quality and cost. The cost of the audit shall be paid from the Programme proceeds. The firm shall audit the Programme's consolidated annual financial statements and operations, in accordance with International Standards on Auditing complemented by terms of reference (TORs) acceptable to IFAD.
228. The auditor shall issue separate opinions covering the financial statements, statements of expenditures, management of designated accounts and programme bank accounts as well as a management letter outlining any internal control weaknesses and recommended remedies; more particularly, the auditor must ascertain that the information included in the annual financial statements are correct, reliable, and present a true and fair description of the Programme financial position. The management letter will provide an update on the status of implementation of audit recommendations issued in previous years.
229. The audited financial statements and audit report shall be submitted to IFAD within six months after the end of each fiscal year and by the Programme closing date. The implementation status of the audit recommendations shall be provided by each Implementing Agency on a quarterly report to be submitted to the ASPIRE Secretariat and forwarded to IFAD.
230. **Taxes.** The proceeds of the IFAD financing may not be used to pay taxes which will be part of the contribution of the RGC to the programme. Social security benefits (employee's portion) and income tax (employee deductions) are eligible for financing.

Procurement

231. Procurement under the Programme shall be carried out in accordance with the revised SOP (2012) and other government rules and procedures¹⁶ and as long they are consistent with IFAD Procurement Guidelines. For each contract to be financed by IFAD proceeds, the types of procurement methods, the need for pre or post-qualification, estimated cost, prior review requirements and time-frame shall have to be agreed between the ASPIRE Secretariat and IFAD in the Procurement Plan to be submitted by the Implementing Agencies.
232. As per IFAD's Procurement Guidelines, IFAD review of and no objection to the Programme procurement plans shall be compulsory, and any changes and amendments to the procurement plan shall be subject to IFAD's No Objection; the plans submitted by ASPIRE Secretariat must include as a minimum:
- (a) A brief description of each procurement activity to be undertaken during the period and name of the implementing agency responsible for the procurement;
 - (b) The estimate value of each procurement activity;
 - (c) The method of procurement to be adopted for each procurement activity and;
 - (d) The method of review IFAD will undertake for each procurement activity indicating either post review or prior review.
233. IFAD shall assess the suitability of the procurement procedures of the District Administration and the Commune Councils for procurement of works financed by the Climate Resilient Infrastructure component.

¹⁶ Such as those provided for the procurement law (enacted in 2012), NCDADS Administration and Financial Manual, and the regulations on the procurement by subnational administrations (SNA).

234. IFAD prior review threshold will be established at USD 100,000.00 for goods and works and USD 50,000.00 for consultancy services and services.
235. The Programme shall include a number of actions to strengthen procurement capacity of IAs and mitigate procurement risks. In terms of capacity, the programme will include a Procurement Adviser to provide procurement and fiduciary services to the programme (including training) in addition to ASPIRE Secretariat Procurement Officer.
236. The design of the programme internal control framework shall include measures to address key control gaps existing within the current procurement process. The Procurement Advisor shall support ASPIRE Secretariat and the implementing agencies in establishing these controls.

E. Supervision

237. Programme supervision in the first 12 to 18 months will focus on ensuring that key preparatory actions for implementing each component and for programme management, monitoring and evaluation are in place. Service delivery activities are expected to commence in 2016, approximately nine months after programme effectiveness.
238. The first key topic of supervision will be to verify that the key institutions for implementing the programme are established and functional. This will include the issue of official decisions at the necessary level for establishment of the ASPIRE Steering Committee, the ASPIRE Secretariat and the Extension and Research Advisory Board as well as the Analytic Unit for the Agriculture Sector in SNEC. Supervision will verify that the Secretariat staff positions are filled with suitable candidates who are working on a full time basis.
239. The second topic will be to verify that financial management systems are in place, bank accounts opened and operating and proper accounting records being maintained. The supervision mission will also verify that there is adequate procurement capacity within the ASPIRE Secretariat and that key procurement actions are being taken on time and in accordance with procedures.
240. Supervision will evaluate the progress of planning activities in each component. For Component 1, this will include preparation of the policy agenda and (by 2016) the policy framework. For Component 2, this will include detailed work planning for each sub-component and activity, and commencement of preparatory activities such as preparation of training materials and training of trainers. For Component 3, the key activities to be verified in 2015 will be preparation of Provincial Agriculture Development Strategies in the pilot provinces, selection of Districts for the public sector service delivery activities, identification of vulnerable districts for the climate resilient infrastructure activities, and planning of the contracted out and public private partnership extension services. The Districts selected for the first round of climate resilient infrastructure grants should prepare District Climate Resilience Strategies by the end of 2015. Also by the end of 2015, the pilot Provinces should have completed planning for the Provincial Sub-Programme activities from 2016-2018 (i.e. 2016 work plan and budget plus two out years).
241. By the end of 2015 District Agriculture Offices selected to begin implementation of District Work Plans in 2016 should be adequately staffed and the staff should have clear job descriptions that include the tasks they will undertake with funding from ASPIRE. Supervision will verify the preparation of and approval of job descriptions and the timely appointment of staff.
242. Supervision will verify that key M&E arrangements are in place. This will include preparation of the Programme MIS and procurement of services for the major impact survey.
243. By the end of the first 18 months service delivery activities will be under way and supervision will evaluate the quality of service delivery including the formation of learning groups, training materials, subject matter and teaching methods, and establishment of the farmer to farmer learning networks.

244. The supervision missions in the first 18 months will be led by an institutional development specialist and should include an extension specialist, a financial management and procurement specialist and an M&E specialist. Other technical specialists may be needed to examine particular aspects of the programme. The supervision team will be supported by the Country Programme Manager and the in-country IFAD presence.

F. Risk identification and mitigation

245. The key implementation risks that could prevent full achievement of the programme objectives are (1) the risk of management failures leading to excessive delays in implementation; (2) the risk that the policy objectives do not engage sufficient attention and support from the leadership level in RGC; (3) the risk that reforms could be frustrated by obstruction from lower levels in the institutions concerned; (4) the risk that the potential benefits of contracting out services will be undermined by rent-seeking behaviour; (5) the risk that effective staff resources, particularly at District level, will prove insufficient to fulfil the service delivery targets; (6) the risk that, without the material incentives provided by previous IFAD projects, farmers will be reluctant to commit time to training and resources to adoption of new technologies; and (7) the risk that the M&E and results monitoring arrangements will fail to provide the quality of evidence that is needed to substantiate policy conclusions.

246. ASPIRE is a complex and ambitious programme. There is a high level of interdependency between the components and their outcomes. The management structure is complex: a number of different agencies (MAFF, GDA, SNEC, NCCDS and MEF) have national management roles and implementation of investments is largely decentralised to PDAs and District Administrations. High quality management will be needed at all levels but the establishment of strong capacity in the Secretariat, from programme start-up onwards, will be essential. Therefore, IFAD is discussing with RGC options to finance specialist management technical assistance during project preparation period. A key task of this start-up TA will be to assist the ASPIRE Secretariat to recruit high quality staff and advisers. Timely recruitment of high quality staff will be supported by IFAD will discuss with RGC to identify how best to ensure timely recruitment of high quality staff and advisers to the Secretariat. The engagement of a Financial Management Specialist during the inception phase will assist in ensuring that both systems and capacity needed for efficient financial management of the programme are in place.

247. The risk relating to leadership commitment will be mitigated by IFAD continuing to engage senior levels in dialogue during the programme preparation and implementation readiness period. Senior leadership will be directly engaged through the policy process and the initiation of this process will be an important focus of programme inception stage and the start-up technical assistance. A major advantage of the involvement of SNEC is the agency's role and track record of policy advice to the highest levels of RGC. Intentional frustration of the programme by lower institutional levels is most likely to occur the reforms introduced by the programme directly reduce existing scope for patronage and rent-seeking. It is possible that some human resources management reforms and some assignment of roles and responsibilities between departments could have this effect. ASPIRE will seek to identify potential problems in advance, including through open dialogue with stakeholders. ASPIRE will work through the senior leadership of MAFF and their commitment and management authority will be key to overcoming resistance, should this arise. The issue of staff performance incentives is closely related and IFAD will work with MEF and MAFF to identify an approach that is acceptable both to RGC and to its development partners.

248. Conversely, the benefits of introducing decentralised contracting-out arrangements as a service delivery modality could be compromised by rent-seeking in the procurement process. Procurement will be conducted under the RGC Special Operating Procedures which require a significant degree of oversight by Ministry of Economy and Finance. It is proposed to use a pre-qualified list process to ensure that only suitably qualified firms or agencies can be selected as

- contractors by the PDA. This pre-qualification requirement would be integrated into the extension service quality assurance system once this becomes effective.
249. The MAFF staffing profile is top-heavy, with about 38% of all staff and 53% of staff in the higher grades¹⁷ assigned to the national level institutions. DAO are generally under-staffed and the recruitment system makes it difficult to assign and retain new staff. ASPIRE will require MAFF and its PDA directors to sustainably improve this situation by assigning adequate numbers of staff, with clear job descriptions, to DAO before starting implementation of service delivery in a district. Phasing in at approximately 3 Districts per Province in each of the first two years is intended to allow sufficient time for this.
250. ASPIRE will need to overcome expectations of material support to farmers' input costs, established by previous IFAD projects¹⁸, and the general problem of competing demands for farmers' time. The Smallholder Learning Group approach places emphasis on self-selection of participants, shorter training modules, improved learning methods and demand-led selection of training topics. The experience of civil society and private sector (e.g. FBA scheme) extension models using similar approaches gives confidence that farmers are willing to invest time in learning given suitable selection of topics and attention to quality of extension services. Numerous sources of credit are available in rural Cambodia and where necessary the SLG can become a mechanism for improving farmers' ability or terms to access this credit or to negotiate improved terms directly with input sellers.
251. Previous IFAD projects (before PADEE) have experienced methodological and practical difficulties in convincingly measuring impacts. This issue is crucial to ASPIRE because determination of the cost-effectiveness of alternative approaches, in different contexts, is part of the mechanism of achieving the policy and capacity development objectives of the programme. ASPIRE will benefit from the improved approach to M&E already implemented in PADEE, including a professionally conducted major impact survey and the establishment of an MIS. ASPIRE will use a multi-layered approach to monitoring with the potential for cross-checking of findings, for example between RCTs, the impact survey, farmer tracking and mobile feedback "shows."

IV. Programme costs, financing, benefits and sustainability

A. Programme costs

252. Total programme costs are around USD 82.2 million over a seven-year implementation period and include USD 4.1 million of physical and price contingencies. Foreign exchange accounts for about 10% of total programme costs, with duties and taxes making up approximately USD 3 million. Funds allocated to the ASPIRE Secretariat are about USD 10.6 million or 13% of the total Programme costs. Table 3 below summarises the programme costs by component.

¹⁷ MAFF Functional Mapping Report, ADB 2011. Figures are for staff in the "agriculture" divisions excluding forests and fisheries.

¹⁸ Or for this purpose by projects funded by other donors.

COMPONENT	Khmer Riel (billions)			USD (millions)			% Foreign Exchange	% Total Base Costs
	Local	Foreign	Total	Local	Foreign	Total		
Comp 1: Knowledge Based Policy	3.9	8.2	12.1	0.98	2.01	3.02	68%	4%
Comp 2: Capacity Development for Extension Services	16.0	8.8	24.8	4.00	2.21	6.21	36%	8%
Comp 3: Improved Extension Services	152.9	5.4	157.3	37.97	1.35	39.32	3%	50%
Comp 4: Infrastructure Supporting Climate Resilient Agriculture	82.3	1.3	83.6	20.58	0.32	20.90	2%	27%
ASPIRE Secretariat	26.2	8.4	34.6	6.55	2.09	8.64	24%	11%
TOTAL BASELINE COSTS	280.3	32.1	312.4	70.08	8.01	78.09	10%	100%
Physical Contingencies	2.9	1.1	4.0	0.74	0.27	1.01	27%	1%
Price Contingencies	11.4	1.2	12.6	2.85	0.29	3.14	9%	4%
TOTAL PROGRAMME COSTS	294.7	34.3	329.0	73.67	8.58	82.25	10%	105%

B. Programme financing

253. Table 4 indicates the proposed programme financing in USD by component and financier. The bulk of the financing is provided by IFAD in the form of a loan (USD 26.1 million) and a grant (USD 15 million supported by ASAP). Government funding is estimated at USD 11.4 million of which USD 3 million represents taxes. The International Initiative for Impact Evaluation (3iE), supported by a number of development partners and foundations, will provide financing estimated at USD 932,400 for the Randomized Control Trials to be implemented by IFPRI under Component 1. USAID will finance selected activities in Component 2.2 estimated to cost USD 329,423.
254. The government will co-finance all categories of expenditure including 28% of salaries and allowances, 10% of equipment and materials, 27% of training, 18% of Grants for Extension Services to Smallholders, 17% of Grants for Climate Resilient Productive Infrastructure and 100% of salaries of Government staff seconded to the programme.
255. The following types of contributions in kind have been assumed in the cost tables: (1) estimated USD 5.8 million beneficiary contribution for extension services under Component 3; (2) Co-financing of infrastructure by the Commune Councils (2:1 ratio for infrastructure financed by the PBCR Grants, estimated at USD 7.2 million) and (3) co-financing of 50% of the costs of PPP activities by the private partners (estimated USD 3 million).
256. Activities with a total cost of USD 12.36 million are not covered by financing commitments. As detailed in the Component descriptions, mobilisation of funds to cover these costs are allocated for geographical expansion of the programme after Mid-Term Review and continued financing of broadcast extension. There are also two unfunded technical advisor positions identified to support climate resilient agriculture in Component 2.

COMPONENT	IFAD Loan / Grant		Other DP /a		Government		Other /b		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Comp 1: Knowledge Based Policy	1.65	49%	0.93	28%	0.80	24%	-	0%	3.38	4%
Comp 2: Capacity Development for Extension Services	3.55	50%	1.51	21%	2.11	29%	-	0%	7.17	9%
Comp 3: Improved Extension Services	19.97	50%	7.37	18%	3.72	9%	8.80	22%	39.86	48%
Comp 4: Infrastructure Supporting Climate Resilient Agriculture	8.46	40%	3.82	18%	1.71	8%	7.24	34%	21.23	26%
ASPIRE Secretariat	7.50	71%	-	0%	3.11	29%	-	0%	10.61	13%
TOTAL PROGRAMME COSTS	41.13	79%	13.63	1%	11.45	20%	16.04	20%	82.25	100%
a/ Other DP: 3iE 0.93 M, USAID 0.33 M, Unfunded 12.36 M										
b/ Other Contributions: Beneficiaries 5.8 M, C/S Fund 7.2 M, private partners 3.0M										

C. Summary benefits and economic analysis

257. The economic analysis of programme costs and benefits is presented in Appendix 10. The estimated Economic Internal Rate of Return of the programme overall is 15% on the base-case scenario, with a net present value of USD 6.5 million. Main benefits accrue from the PPP model, followed by the public extension services, the contracting out model and the climate resilient infrastructure fund.
258. A sensitivity analysis assessed the effect of variations in benefits and costs and for various lags in the realisation of benefits. A fall in total programme benefits by 30% and an increase in total programme costs by the same proportion would reduce the base IRR to about 10% and 8%, respectively. The switching value for total programme benefits is about 20%, while for programme costs it is approximately 15%. A one-year delay in programme benefits reduces the IRR to 12%. With a two-year delay in programme benefits, the IRR falls to approximately 8%.
259. The economic analysis considers tangible benefits arising from Components 3.1 (Provincial Sub-Programmes) and Component 4 (Climate Resilient Infrastructure) only. The policy, capacity development, innovation and mass media extension components, representing around 16% of the project costs, will provide additional intangible benefits in the form of sustainable improvements to national policy, systems, human resources and knowledge supporting extension, as well as direct benefits to a large number of farmers through mass media. In the longer term it is expected that a much larger number of farmers in the ASPIRE target group will benefit from these programme results, although the size of the benefit cannot be estimated. This point should be considered in interpreting the relatively small though positive net present value of the project calculated from tangible benefits only.

D. Sustainability

260. ASPIRE is designed to bring about long-term improvements in policy, capacity and service delivery in the extension sub-sector and to assist smallholders to achieve sustainably improvements in the profitability and resilience of their farm businesses. ASPIRE will invest in building capacity to generate, share and use knowledge at all levels and in strategic human

- resources. The objective of ASPIRE is to establish a programme-based approach in the sub-sector, led by policy and supported by diverse domestic and development partner financing.
261. At the policy and programme development level, sustainability will be achieved through engaging the commitment of senior leaders, through demonstrating the effectiveness of the improved service model and thus ensuring government and development partner support. Policy is dynamic: the policy documents produced with ASPIRE support will require review and updating. ASPIRE seeks to improve the policy process both through basing proposals on evidence and validating policy through inclusive dialogue, both of which features should assist in ensuring that policy improvements should survive any change in leadership personnel.
262. ASPIRE will build capacity within the permanent institutions of MAFF and will integrate financial support to the functions of these institutions with the State Budget through the Programme Budget mechanism. There is a general problem of under-funding of service activities and civil servant remuneration within the State budget, as well as specific under-funding of extension, but there has been a sustained year-on-year improvement in public finances in particular in collection of domestic revenues. Therefore it should not be beyond the fiscal capacity of RGC to sustain the funding of the capacity and service functions established by ASPIRE, while its willingness to do so will depend on the programme's ability to demonstrate cost-effective achievement.
263. The poverty reduction impact of ASPIRE will be achieved through improving smallholders' skills and access to knowledge, with an emphasis on building resilience to climate and other shocks. These gains are inherently sustainable unless externally-driven changes cause beneficiaries to abandon smallholder farming. Cambodia is undergoing a process of urbanisation and the industrial and service sectors are increasingly important for employment, but these changes are gradual and it is reasonable to expect that the majority of existing farm families with productive potential will remain on the land for the foreseeable future.
264. Limited capacity for operation and maintenance of infrastructure is an acknowledged problem in Cambodia as in other countries. The climate resilient infrastructure component of ASPIRE will seek to ensure sustainability by requiring sound, appropriate, climate-proofed standards of construction, by the implementation approach which ensures ownership and co-financing by the local administrations, and by specific requirements for operation and maintenance arrangements. The quality of operation and maintenance will be reflected in performance assessments which will determine access to further financing.
265. Environmental Sustainability and Compliance with Policies:
- (i) The programme's environmental classification is Category "B" - This Category is recommended basing it on the potential environmental implications and public health concerns associated with agricultural intensification and infrastructure development, if not adequately addressed; and
 - (ii) The design is fully aligned with both the ENRM Policy and CC Strategy.

Appendix 1: Country and rural context background

Country Background and Economy

1. The Kingdom of Cambodia has a land area of 181,035 km² and is bordered by Thailand to the northwest, Laos to the north and by Vietnam to the east and south, with a short coastline on the Gulf of Thailand to the west. The 2008 Census put the total population at 13.4 million with an annual rate of increase of around 1.6%: projection based on this growth rate implies a population of around 14.7 million in 2014. The overall population density is around 83 persons per square kilometre, although densities are generally higher in the low-lying, agricultural areas in the south of the country and in the Tonle Sap basin, and much lower in the forested and upland areas of the north and northwest. About 80% of Cambodians live in areas classified as “rural” by the National Institute of Statistics¹⁹.
2. Cambodia was afflicted by almost continuous war and civil conflict from 1970 until the early 1990s, including the traumatic experience of the Democratic Kampuchea (“Khmer Rouge”) regime from 1975 to 1979. The peace agreement of 1991 and the UN-organised election of 1993 led to re-establishment of a constitutional monarchy with multi-party democratic institutions of governance. Full peace was established by 1998 and Cambodia has maintained general political stability since. The results of the national elections in 2013 were disputed and the opposition party began a boycott of the National Assembly and a programme of civil protest. A new Government was formed based on the election results and Government institutions continued to function more or less as normal. The Government has made limited indications of willingness to embrace reforms but no agreement has been reached. A series of mainly peaceful political protests and inter-linked labour and land tenure disputes led to civil disturbances in late 2013 and since early 2014 the right to public protest has been suspended.
3. Since the 1990s Cambodia has re-integrated itself into the regional and global economies and made important progress in reconstruction and development. Cambodia adopted economic policies based on free markets in 1989 and since then has followed a broadly consistent path of reducing State involvement in the economy and, particularly since 1993, favouring macroeconomic stability and openness to international trade. The country is currently an active member of major regional and global economic institutions such as the Association of South-East Asian Nations (ASEAN), and the World Trade Organization (WTO)²⁰.
4. Annual GDP growth averaged about 10% between 1999 and 2008. Growth fell to zero in 2009 and has since recovered to about 7% per year. Population growth in this period was less than 2% per year, implying substantial increases in GDP per capita²¹. Growth has been driven mainly by the garment, tourism and construction sectors which have also been the most significant sources of non-farm employment.
5. Despite the growth of an important manufacturing sector since the late 1990s and the increasing importance of services, agriculture was responsible for about 34% of Cambodia’s GDP in 2010²². It is estimated that over 70% of the Cambodian workforce is fully or partly employed in agriculture²³.
6. Overall bank intermediation as measured by credit to the economy is still low in Cambodia relative to most countries in Asia. World Bank estimated the proportion of Cambodians with

¹⁹ Data from the 2008 Census. Rural areas are defined essentially as communes with less than 200 persons per square kilometre.

²⁰ Cambodia became member of ASEAN and WTO in 1999 and 2004, respectively.

²¹ World Bank data

²² Statistical Yearbook 2011

²³ <http://www.tradingeconomics.com>, quoting World Bank data

bank accounts as only 3.7%²⁴ although banking sector commentators criticized this figure as an under-estimate. The same report states the level of bank credit as 25.4% of GDP. The Cambodian Microfinance Association reports total microfinance loans outstanding as just over \$US 1 billion (including microfinance loans of ACLEDA bank); this represents about 7% of GDP. This shows the relative importance of the microfinance sector in the economy and in relation to the commercial banking sector. Other commercial banks (excluding ACLEDA) have almost no presence in rural areas which are served mainly by micro-finance institutions.

7. The banking system was able to survive the financial crisis of 2008-09 which resulted in a collapse of the real estate market in 2009. The ratio of non-performing loans in the banking sector declined from 3.05% in 2010 to 2.43% in 2011²⁵ (although IMF has suggested these figures may be underestimates). Still the current economic recovery is providing a good opportunity for banks to improve their balance sheets and reduce vulnerabilities.
8. Government finances remain heavily dependent on external assistance, with 34% of all Government expenditures and about 80% of public investment financed by grants and loans in 2012²⁶. Domestic revenue collection expanded 24.7% in 2012, mainly through improved collection, but revenue growth appears to have slowed sharply, to less than 10% year on year, in the first half of 2013²⁷. Exploitation of oil and gas reserves could improve the government's fiscal position but the move from discovery of viable reserves to production has been slow.
9. The labour force grew much faster than the population growth rate in the period up to 2010, as young people who were born during the baby boom years entered the labour force. World Bank data shows labour force growth slowing to about 2% annually by 2012²⁸, although the median age of the population at the time of the 2008 Census was 21²⁹.

Agriculture and Natural Resources Sector

10. Despite growth in other sectors, agriculture still represents the largest source of employment in Cambodia and the recent economic crisis has highlighted the importance of the sector as a source of growth. While growth in other sectors has absorbed a significant amount of rural labour over the last ten years, the 2008 Census identified 72% of the labour force as employed in agriculture, forestry and fishing (due to many farmers having multiple occupations this figure probably exaggerates the true share of employment in this sector). In addition, agriculture currently makes up about 34%³⁰ of total GDP (compared to slightly more than half of the country's GDP in 1990). The sector expanded at an annual rate of 4.4% over the 1998 to 2008 period, driven by increases in productivity and in cropped area: this is a high growth rate when compared to other East Asian and Pacific countries. Most importantly, the sector continued expanding during the crisis with agricultural GDP registering an estimated 5.4% growth in 2009 and 4.0% in 2010.
11. The total area of cropland in Cambodia is about 25,000 square kilometres, or 14% of the total land area. About 60% of the land area is classified as forest. Rice is the dominant crop in Cambodia. It represents about 25% of Cambodia's agriculture GDP and about half of all agricultural crops' value added. It is grown on 83% of cultivated land by some 80% of farmers. Wet rice cultivation is concentrated in the low-lying provinces of the southern part of the country and the Tonle Sap basin, while the higher areas in the north and northwest are dominated by forest, plantation and upland crops. Livestock production, while important, is mainly by smallholders as an additional activity to rice growing.

²⁴ World Bank Global Financial Development Report 2014

²⁵ National Bank of Cambodia Annual Report 2011

²⁶ World Bank, Cambodia Economic Update 2013

²⁷ ibid

²⁸ World Bank World Development Indicators

²⁹ Census 2008

³⁰ Statistical Yearbook 2011

12. Timber production and freshwater fisheries are major commercial activities in Cambodia. Although the forestry sector has been subject to a moratorium on logging for most purposes since 2002, in practice a considerable amount of production continues. Traditionally rural Cambodians harvest a wide range of natural products for processing, sale or domestic use. Although many of these products are of declining importance, most Cambodian rural households continue to rely on firewood for cooking fuel and catches of wild fish and small aquatic creatures make an important contribution to their diet.
13. The country has achieved an annual rice-surplus since 1995, with total rice production growing at an impressive annual growth rate of 6.6% between 2005 and 2010, well above population growth rates. Production has increased both through area expansion (harvested paddy area grew annually at 2.8 per cent) and productivity improvements (paddy yields have grown at a compound annual growth rate of 3.7% in the period). Increasing domestic surpluses have led to robust growth of rice exports, both formal and informal with a total of over 3 million tonnes of paddy available for export. Most (perhaps 90%) of this surplus is exported as paddy, mainly to Vietnam. Exports of milled rice grew from 53,000 tonnes in 2010 to 202,000 tonnes in 2011, but increased only slightly to 206,000 tonnes in 2012. Exports of rice (at around US\$ 700 million) account for around 15% of total country's exports which are dominated by garments (around 70% of total exports).
14. Despite the large reliance on rice, the agricultural sector has seen some diversification over the last decade. Among non-rice crops, production of maize, cassava and soya beans has seen the most rapid growth (above 20% annual growth in value added since 2002), partly due to increasing demand from the livestock sector. Other crops for which production surged during the last decade include tobacco, peanuts, and sesame, mostly through area expansion. Rubber and fish represent more than USD 250 million in annual exports, despite more modest growth over the last decade.
15. Cambodia's agriculture sector has high potential to contribute to economic growth and exports. The country is endowed with a good climate, and large land and surface water resource base. In particular, Cambodia has the opportunity to become an important agricultural exporter in the region, especially in rice where it is competitive vis-à-vis its neighbours and given overall positive prospects for world rice markets. There is potential for both increasing paddy production and also incorporating more value addition in country through processing. Average yields have increased dramatically but remain, at about 2.95 t/ha, well below yields in neighbouring countries such as Vietnam (4.9 t/ha). The average figure conceals an emerging duality between high-input, high yield rice farming, mainly in the dry season and in the southern provinces, where yields of 4t/ha to 5t/ha are expected, and low-input, low-yield rain-fed rice farming still practiced by the majority of Cambodian rice farmers.
16. The land ownership system in rice-farming areas of Cambodia results from the distribution of collectivised land to households in the late 1980s and developments since that time. Population growth has increased pressure on land while sales forced by poverty, debt or domestic emergencies, and in some cases expropriation of land, have resulted in smaller average plot sizes and increased inequality in land distribution. A 2005 survey found that 80% of holdings were less than 2 hectares; however holdings over 2 hectares accounted for 50% of all land. About 37% were less than 0.5 hectare and thus probably too small to provide for household consumption³¹. Land ownership is governed by the Land Law of 2001 and despite a significant land titling effort most agricultural land is still not covered by formal land titles. Land holdings under informal titles are fairly secure in traditional rice growing areas, but land ownership disputes have become common in former forest land and also in high-value urban areas. Large areas of the forest estate have been awarded to commercial interests as concessions, often with accompanying criticism from civil society organizations (mainly on account of lack of transparency, failure to respect the rights of existing land users, weak control over the uses

³¹ Data from ABiC 2005

made of concession land and low productivity). The Government has also introduced a social land concession program aimed at distributing vacant land to the rural poor, although so far this is on a much smaller scale than the economic land concessions. In 2012 and 2013 the Government made a concerted effort to resolve outstanding land ownership disputes, particularly in forest and economic land concession areas, through a campaign of land surveying by student volunteers under the personal direction of the Prime Minister. It is said that 660,000 plots were surveyed 380,000 new titles issued³² under this scheme, however the long term effectiveness of the programme in ending land disputes is uncertain.

17. Cambodia's total water resources are very large, consisting of average annual rainfall of 1000mm to 1500mm in most areas and cross-border flows of river and groundwater. However effective water availability for agriculture is highly seasonal and often unpredictable. About 90% of all rain falls between May and October. Cambodia's irrigation infrastructure is largely a legacy of schemes constructed by mass mobilisation of labour in the late 1970s: these schemes were characterised by unrealistic ambitions and by very poor standards of design and construction. Most investment in irrigation since 1980 has gone into rehabilitating and improving the more promising parts of these "Khmer Rouge" systems: this is often the easiest course as it avoids land acquisition issues, although better technical solutions might be available. In 2006, only about 17% of the rice crop was fully irrigated, with the remainder being fully or partially dependent on rainfall³³. In most areas only one crop is grown per year, either a rain-fed wet season crop or in areas subject to annual inundation, a recession crop, with some supplementary irrigation used for both types. In recent years the Government has invested heavily in irrigation improvements, with most expenditure on headworks and main canals and rather less emphasis on distribution systems and maintenance.
18. Cambodia is vulnerable to climate variability and change, and has experienced an increasing number of natural disasters over the last several decades. Over the period 1980 – 2010 over 16 million people have been affected by floods (60%) and drought (40%) with estimated economic damages of US\$538 million. Current climate variability as experienced by local communities include late onset of monsoon rains, mid-monsoonal drought accompanied with temperature spikes, and late season floods followed by a cold spell. Climate change predictions indicate an increase in temperature between 0.7-2.7°C by 2060 and increase in average annual rainfall by about 30%. With regard to the latter, paradoxically low water availability is anticipated as rainfall is expected to come in fewer incidences of high intensity rain leading to large scale runoff, and with a shorter rainy season and a longer dry season. According to recent analysis wet season flows could increase by as much as 41% in the Mekong basin and by 19% in the delta area. In contrast, dry season flows could decrease by 24% in the basin and 29% in the delta. Climatic variations are expected to increase the severity and frequency of flood and drought events. Changes in flows and seasonality could also have adverse impacts on sensitive and economically productive wetlands such as Tonle Sap. The impacts on agriculture and fisheries are likely to be dramatic. Finally, it is expected that climate change will increase the incidence of infectious, water-borne and vector-borne diseases, heat stress and mortality, with significant impact on public health costs. Under these scenarios agricultural production in many areas will be further constrained coupled with existing poor soil fertility and low water availability.

Policies and Development Plans

19. The overall objectives of the Royal Government of Cambodia are expressed in the "Rectangular Strategy for Growth, Employment, Equity and Efficiency" first adopted in 2005 and updated in 2013. The Rectangular Strategy is based on development in four key areas: agriculture, infrastructure, the private sector and capacity building and human resources development, while good governance is placed at the core of the strategy.

³² Cambodia Daily, 21st November 2013

³³ FAO data.

20. The National Strategic Development Plan elaborates the principles of the Rectangular Strategy. The NSDP was adopted in 2006 and is currently being updated for the period 2014 to 2018. The NSDP commits Cambodia to achievement of its Millennium Development Goals and sets ambitious targets for expansion of agricultural production and exports, including achieving average rice yields of 3.25 tonnes per hectare by 2018³⁴ and increasing surplus paddy production to 6 million tonnes per year, and raising average value added per hectare (all crops) from US\$997/ha in 2007 to US\$1,450/ha by 2018.
21. The Policy on Rice Production and Export policy recognizes the strategic importance of rice production to Cambodia's economy. The policy lists a number of measures and related investment priorities, and identifies responsible institutions for implementation, to promote rice production and exports. It identifies the potential of milled rice to improve the balance of Cambodia's exports, which are heavily dependent on the garment industry at present. The policy promotes a value chain approach combining increases in productivity with investments in processing and exploitation of niche markets, for example for organic rice. The policy targets exports of 1 million tonnes of milled rice by 2015.
22. Cambodia has engaged in progressive piloting and implementation of decentralisation reforms since 1996, with a key achievement being the establishment of directly elected Commune Councils as the lowest tier of government in 2002. The Strategic Framework for Decentralisation and Deconcentration Reforms (2005) established a vision for integrated administrations at Provincial and District Level. An Organic Law (2008) established the basis for indirect elections of Provincial and District Councils which took place in 2009. The Government is implementing a 10-year National Program for Sub-National Democratic Development under the leadership of NCDD³⁵, with the second three-year implementation phase expected to begin in 2015. The draft NSDP 2014-2018 establishes transfer of functions, strengthened own-source revenue collection, decentralising staff management and improving vertical and horizontal accountabilities as priorities.
23. The Cambodia Climate Change Strategic Plan (CCCSP) outlines the government's vision for promoting climate-resilient development and green growth in the period 2014-23. During its first phase the strategy will focus on adaptation activities aimed at strengthening community resilience. All climate-related issues, including a climate change financing framework, will be gradually integrated into development strategy and planning at all levels – national and sub-national – as a matter of priority.
24. Cambodia has a system of bottom-up, participatory planning based on the five-year Commune Development Plans and annual Commune Investment Programs. Priorities identified in local planning are adopted into sector and agency programs through annual District Integration Workshops. Under the D&D reforms, new guidelines for District and Provincial planning were adopted in 2011.

Constraints and Opportunities

25. There is strong potential for continued growth in rice exports and production diversification, but the sector needs to address several key challenges. While there are few policy-induced distortions which affect the sector, there are a number of factors that lead to low private returns on investments in agriculture such as inadequate knowledge and/or use of efficient production and post-harvest techniques and inefficient provision of key complementary production factors such as irrigation and transport infrastructure (both roads and port facilities) and energy (both for irrigation and processing facilities). In addition, tenure insecurity and formal and informal costs on trade lead to high risks and therefore lower probability of the current or potential returns to investments in the sector. Finally lack of access and high costs of finance contribute to sub-optimal investments both at the farm and processing stages of agriculture in Cambodia.

³⁴ From 2.58t/ha in 2008

³⁵ National Committee for Sub-National Democratic Development, which has its secretariat in the Ministry of the Interior

26. Addressing all these constraints is beyond the scope of a single programme and some are already receiving much attention from Government and donors. Examples include facilitating access to finance for agri-business development (proposed IDA-IFC Agribusiness SME Access to Finance Project), supporting land titling (conducted by Government but formerly supported by the Finnish, Canadian and German Governments and by the IDA co-financed LMAP project) and rehabilitation of port facilities which is being carried out with JICA assistance. A number of projects, notably the Australian-funded CAVAC and the US-funded HARVEST, support agricultural value chains and this will also be the focus of the next IFAD pipeline project, AIMS³⁶ and also of an upcoming initiative of ADB. More specifically, analysis of binding constraints to improving productivity of smallholder rice-based systems identified the following key constraints:
27. **Access to finance.** The Cambodian microfinance industry has been able to attract considerable investment from overseas both in the form of loans as well as in the form of equity from socially responsible investors and international development finance institutions. Cambodia Microfinance Association reports total loans outstanding of \$US 1.5 million and number of borrowers as 1.6 million³⁷, representing roughly 40% of all Cambodian households (though in fact some households are likely to have more than one outstanding loan). The growth of the industry has created economies of scale and increased competition. As a result interest rates have come down, reflected by the average (un-weighted) portfolio yield declining from 35% in 2006 to 30% per annum in 2010 for 13 MFIs for which this information was available for the four year period (the average annual interest rate stood at 42% in 2003). Competition has also encouraged the introduction of new products including loans that are appropriate to finance inputs for seasonal crops, something that used to be a weakness in the past. A number of microfinance institutions including AMK and PRASAC attempt to reach the poor by offering loans backed by a mutual guarantee group instead of requiring collateral which is typically in the form of a land title.
28. Despite the impressive growth and dynamism of the industry, poor smallholders still lack access to adequate financial services. There is still a very active informal market in which shopkeepers, traders and moneylenders provide credit in the form of cash or supplies. Typically, rural Cambodians appreciate the speed and flexibility of these informal arrangements, the lack of need for collateral and the re-negotiability of loan conditions, as compared with the formal microcredit sector, but such relationships come at the cost of high nominal interest rates or obligations to sell produce or provide labour at a large discount in repayment. The ability of poor households to link with formal financial institutions also results from lack of collateral, interpersonal communication skills, illiteracy, poor financial literacy and knowledge about existing opportunities and a minimum asset base.
29. **Inefficient production techniques.** Given the predominance of low quality soils in the lowland rice areas, yields are highly dependent on adequate amounts of fertilizer being used, which poor farmers cannot always afford. In addition, improved production and pest management techniques are still not well-known in many areas of the country. In this regard the experiences of APIP and in particular the national Integrated Pest Management (IPM) program show there is substantial productivity gains that can be achieved from improved practices (reviews comparing treatment and control groups indicate ability to increase average yields for wet and dry season between 25 and 50%³⁸). Moreover, pesticide usage can be lowered and overall household income increased (under IPM program it was estimated around 18% average increase in income comparing treatment and control groups)⁸. Finally, it is estimated that less than 4% of farmers in Cambodia actually use quality seed although use of third generation or commercial

³⁶ See RB-COSOP 2013-2018

³⁷ CMA website, 15/08/14

³⁸ For more details see Kamp "Impacts from the Cambodian National IPM Program 2000-2007 – A Synthesis of Assessments and Case Studies", 2007, Danida

- seed of a rice variety can increase yields by a minimum of 10-15% when combined with good agricultural practices.
30. **High post-harvest losses and inefficient marketing practices.** Post-harvest losses can account for up to 15-20% of the total paddy production in Cambodia. The main reasons for this are shortage of adequate local storage facilities, drying in sunshine which cause inconsistent moisture content, and packaging in poly-weave bags. While cross-border trade in paddy seems to be quite efficient (trader gross and net margins do not exceed 10% and 5% respectively and Cambodia farm gate prices closely mirror FOB prices in Vietnam deducted of transportation costs³⁹), lack of working capital is still a constraint, particularly for smallholders, leading them to sell paddy immediately after harvest. Moreover, in the case of vegetables, grading and adequate post-harvest practices can substantially increase farmer revenue (around 20 to 25% on average) as suggested by the experience of CAMIP's Farmer Marketing Schools.
 31. **Lack of efficient productive rural infrastructure.** Poor water management is constraining crop intensification and also restricting productivity. Only about 15% of the cultivated rice area in Cambodia is irrigated versus 28% in Thailand and 33% in Vietnam. Efficient irrigation services combined with technical advice and appropriate inputs allow farmers to obtain substantially higher yields (with estimates varying between 0.5 Mt and 1.0 Mt per hectare) besides greater cropping intensity, and productivity improvements result in substantial increases in land value⁴⁰. Poor state of rural road connections contributes to the high marketing cost of agricultural produce in Cambodia. The cost of transporting one ton of rice within Cambodia is about US\$ 15/Mt per 100 km, compared to US\$ 7.5/Mt in Vietnam and US\$ 4/Mt in Thailand. The recent agriculture public expenditure review carried out by the Bank highlights that rural roads have been one of the most effective forms of public expenditure in rural areas. The analysis shows that BCR for rural roads has increased from 1.6 to 4.1 between 2000 to 2009. Despite major improvements over the past decade, Cambodia still suffers from poor transport infrastructure in rural areas.
 32. **Vulnerability to Shocks.** Although Cambodia has made great progress in reducing the proportion of the population living in poverty from over 50% in the early 1990s to around 20% today, many rural smallholders have incomes only just above poverty levels and few assets or other resources to support them in cases of shocks which may result from climate events (see below), market fluctuations, crop failures, ill health or other causes. Financial stress due to any of these causes may result in a household selling its agricultural land or abandoning farming in favour of migrating to find work. Although rural to urban migration and diversification of employment away from agriculture are inevitable and desirable effects of overall economic growth; improvements in agriculture technology and output can only occur if farmers have sufficient security and stability of income to encourage them to plan and invest for the future. Thus, measures to develop resilience at the farm, household and community level, which may include changes to agriculture practice, availability of insurance and other measures, are an important part of an integrated approach to developing efficient, market-linked smallholder agriculture.
 33. **Climate Threats.** Many of the most populous and agriculturally productive areas of Cambodia lie within the floodplain of the Mekong River system. Annual flooding is expected and indeed necessary for the agricultural cycle, but extreme or unusual flood events are also a frequent cause of loss of human life, destruction of property and damage to agriculture production. Droughts are also a familiar threat. Global climate change is expected to accentuate these risks

³⁹ Data on trader and farm gate prices collected by ACI cross-border survey (July 2010). Comparison of annual average paddy farm gate prices in Cambodia with FOB prices in Thailand indicate that Cambodia farmers receive more than 50% of international prices (above 60% when accounting for a 75% quality adjustment factor to Thai 5% broken rice).

⁴⁰ Himel J, Suon V, and Prak S "Supplementary Socio-Economic Survey. Flood Control and Irrigation Component Flood Emergency Project", 2005. The study is based on ADB-supported irrigation schemes. Also Van Kampfen "Technical Audit of Commune-Sangkat Fund Infrastructure Projects", 2010 estimates yield increases of 1.0Mt per hectare from rehabilitation of canal schemes providing supplementary wet season irrigation.

by resulting in shorter and more intense wet seasons and a greater frequency of extreme events, and increased average temperatures may also impact on crop production and increase incidence of sickness in humans and animals. The diversity of topography favours some areas while increasing the vulnerability of others. This highlights the need for a more differentiated agricultural extension service that capitalises on the production potential of the favoured areas and mitigates the vulnerability of livelihoods in the risk prone areas.

34. The Government's ability to deal with these constraints is challenged by its limited revenue and multiple national development priorities as well as entrenched institutional centralisation. The Government has to depend on official development assistance (ODA) for one-third of public spending and over 80% of public investment. Over 50% of public spending on agriculture, amounting to about \$US 50 million, was ODA-funded in 2009. This represents about 5% of total ODA. Proportionally, investment in the two sectors combined is very static. Cambodia's public spending on agriculture, rural roads and irrigation represents about 1.5% of GDP or about 4% of agriculture GDP. Of 11 countries for which the World Bank PER provides comparative data, only Bangladesh and Indonesia spend less than Cambodia as a proportion of agriculture GDP⁴¹.

⁴¹ World Bank Public Expenditure Review of Agriculture, Irrigation and Rural Roads, 2011. NB that the draft PER states expenditure as 2.9% of agriculture GDP but this figure is clearly inconsistent with the figure of 1.5% of total GDP.

Appendix – Country data sheet

Land area (km2 thousand) 2012 1/	177	GNI per capita (USD) 2012 1/	880
Total population (million) 2012 1/	14.85	GDP per capita growth (annual %) 2012 1/	4.3
Population density (people per km2) 2012 1/	83	Inflation, consumer prices (annual %) 2012 1/	2.9
Local currency: Cambodian Riel (KHR)		Exchange rate: USD 1 = KHR 4,100	
Social Indicators		Economic Indicators	
Population growth (annual %) 2012 1/	1.6	GDP (USD million) 2012 1/	14 038
Crude birth rate (per thousand people) 2012 1/	26	GDP growth (annual %) 1/	
Crude death rate (per thousand people) 2012 1/	6	2010	6.0
Infant mortality rate (per thousand live births) 2012 1/	37	2011	7.1
Life expectancy at birth (years) 2012 1/	71	2012	7.3
Total labour force (million) 2012 1/	8.43	Sectoral distribution of GDP 2012 1/	
Female labour force as % of total 2012 1/	50	% agriculture	36
		% industry	24
		% manufacturing	16
		% services	40
Education		Consumption 2012 1/	
School enrolment, primary (% gross) 2007 1/	125	General government final consumption expenditure (as % of GDP)	n/a
Adult illiteracy rate (% age 15 and above) 2012 1/	26	Household final consumption expenditure, etc. (as % of GDP)	n/a
		Gross domestic savings (as % of GDP)	n/a
Nutrition		Balance of Payments (USD million)	
Daily calorie supply per capita	n/a	Merchandise exports 2012 1/	6 950
Malnutrition prevalence, height for age (% of children under 5) 2012 1/	41	Merchandise imports 2012 1/	9 300
Malnutrition prevalence, weight for age (% of children under 5) 2012 1/	26	Balance of merchandise trade	-2 350
		Current account balances (USD million)	
Health		before official transfers 2008 1/	-1 675
Health expenditure, total (as % of GDP) 2012 1/	5.7	after official transfers 2008 1/	-1 053
Physicians (per thousand people) 1/	n/a	Foreign direct investment, net 2012 1/	1 526
Population using improved water sources (%) 2012 1/	67	Government Finance	
Population using adequate sanitation facilities (%) 2012 1/	33	Cash surplus/deficit (as % of GDP) 2012 1/	-4.2
Agriculture and Food		Total expense (% of GDP) ^{a/} 2012 1/	10.8
Food imports (% of merchandise imports) 2012 1/	n/a	Present value of external debt (as % of GNI) 2012 1/	26.1
Fertilizer consumption (hundreds of grams per ha of arable land) 2012 1/	115	Total debt service (% of GNI) 2012 1/	1
Food production index (2004-6=100) 2012 1/	155	Lending interest rate (%) 2012 1/	n/a
Cereal yield (kg per ha) 2012 1/	2 942	Deposit interest rate (%) 2012 1/	1.33
Land Use			
Arable land as % of land area 2007 1/	23		
Forest area as % of total land area 2007 1/	56		
Agricultural irrigated land as % of total agric. land 2007 1/	n/a		

a/ Indicator replaces "Total expenditure" used previously.

1/ World Bank, *World Development Indicators* database 2013

Appendix 2: Poverty, targeting and gender

Country Context of Rural Poverty⁴²

1. Poverty in Cambodia continues a downward trend. According to the data of Cambodia Socio-Economic Survey (CSES), a nationally representative household survey, the poverty rate in 2011 is estimated at 20.5% compared to 53% in 2004⁴³. The share of households below the food poverty line has decreased from 16% to 3.8% during the same period. With the majority of population being rural (about 80%), this substantial decline of overall poverty is a reflection of drastic reduction of rural poverty: poverty incidence in rural areas declined from 59% in 2004 to 24% in 2011 and food poverty was reduced from 18% to 4.4% in the same period. Rural poverty rate using the CSES data more or less corresponds with the IDPoor data⁴⁴, according to which about 27.1% of rural population are poor in the 2010-2011 period⁴⁵.
2. Despite the encouraging trend in poverty reduction, about 2.8 million people are still poor, 90% of whom (about 2.5 million) live in rural areas. Furthermore, the majority of those who escaped poverty did so by only a small margin and remain vulnerable: a small shock of 1200 riel (\$0.30) per day in 2011 would have caused the poverty rate to double⁴⁶. Rural poverty reduction remains a key challenge and a priority of the government as highlighted in its Rectangular Strategy for Growth, Employment, Equity and Efficiency. The Rectangular Strategy, adopted in 2005 and periodically updated (2009 and 2013), is an overarching strategy for country development and poverty reduction with four key focus areas, including promotion of agriculture sector.
3. **Characteristics of the Poor.** According to the COSOP poverty analysis, the poor households are characterised with fewer adult earners and higher proportions of dependants, limited income sources, and smaller agricultural landholdings. The poor's access to formal credit is limited, and their knowledge about farming technology and market demand remains underdeveloped. Due to underdeveloped extension services in the country, the poor's access to technologies and market information is limited except where external supports are provided. While income from non-farm self-employment and wages is becoming increasingly important in the rural areas, the poor still relies on a largest share of their household income from agriculture. According to a recent study, the agricultural income share of the lowest quintile was 44% in 2004 while that of non-farm self-employment only accounted for 5%⁴⁷. This pattern of higher shares of agriculture income in lower income quintiles has remained consistent over 2004-2012, according to the study.
4. **Gender dimension of poverty.** The same study found that female-headed households in rural areas had lower income per capita than male-headed ones. The income of female-headed households fluctuates more sharply, indicating a higher degree of vulnerability for female-headed households. The share of salaries and wages in female-headed households' income is higher than those of other sources, including agriculture, but the types of jobs that poor women are employed are generally low paying.

⁴² In-depth poverty analysis was undertaken during the COSOP formulation process. The content of this section draws on the COSOP poverty analysis.

⁴³ World Bank 2013: Where Have All the Poor Gone? Cambodia Poverty Assessment 2013

⁴⁴ IDPoor (The Identification of Poor Households) is an official programme to identify the poor through standardized national procedures and data collection method. The programme was established in 2006 within the Ministry of Planning. A standardized household questionnaire is used for data collection, which includes asset ownership, food security and other factors related to vulnerability. With the issuance of Sub-decree No. 291 in 2011, the government declared that the IDPoor data be used for provision of services and assistance to poor families under poverty reduction interventions of the government and non-governmental agencies.

⁴⁵ Based on the IDPoor Rounds 4 and 5 (2010-2011) data from 20 provinces.

⁴⁶ World Bank 2013: Where Have All the Poor Gone? Cambodia Poverty Assessment 2013

⁴⁷ Tong Kimsun et al, *Levels and Sources of Household Income in Rural Cambodia 2012*, CDRI, August 2013.

5. **Vulnerability.** Smallholders are vulnerable to crop failures, deaths of animals, illness among household members, and fluctuating food prices. Crop failures are caused by natural disasters, such as flood and drought, as well as diseases and pests. Rice, which is the most important crop, is frequently affected by floods and droughts across the country including major rice-producing areas, such as Prey Veng, Takeo, Kompong Cham and Kompong Thom. Rainfed agriculture becomes riskier due to climate change which is believed to cause more extreme weather conditions. While such shocks could inflict serious damages to the livelihoods of any farming families, the poor ones who have limited assets and are often already indebted have limited means to cope with and reinstate their former livelihoods. They are often forced to sell land and whatever other assets they possess. Without productive assets and skills for alternative employment, they have no choice but to work as agricultural labourers, often becoming trapped in chronic poverty. Such downward slope into destitute may not spare those households just above the poverty line especially if they are faced with repeated shocks.
6. In view of the prevailing situation of poverty and vulnerability in rural areas, the current COSOP proposed the following strategic objectives which are reflected and embodied in the ASPIRE design: (1) poor smallholders are enabled to take advantage of market opportunities; (2) poor rural households and communities increase resilience to climate change and other shocks; and (3) poor rural households gain better access to strengthened rural service delivery by government, civil society and private-sector agencies.

Target Groups

7. ASPIRE target are defined as smallholders and poor farmers with productive potential who can take advantage of market opportunities. These farmers are mostly 'production-driven', meaning that their decisions on farming and choice of crops are primarily informed by their existing knowledge on production. They lack good understanding of the market or returns of their farming activities that would result from different crop choices or technology options. These smallholders will include farmers officially classified as poor according to the IDPoor methodology as well as somewhat better-off smallholders who are vulnerable to natural disasters, market risks, healthcare costs and other types of shocks and likely to fall into poverty at unfortunate turns of events. The participation of less poor smallholders is also important from the knowledge dissemination point of view as this type of farmers are better situated to try and demonstrate new technologies to the effect that poorer and more risk averse farmers can observe the results and adopt.
8. **Direct beneficiaries.** The direct target group of ASPIRE will be around 179,000 poor and vulnerable smallholder households (approximately 841,300 persons). This includes about 144,000 households (676,800 persons) participating in extension activities in selected provinces under Provincial Sub-Programmes (Component 3). It is envisaged that about 70,000 smallholder households (329,000 persons) will directly benefit from investments in climate resilient infrastructure (Component 4) with about half of these households also benefitting from Component 3, giving the combined total outreach target of 179,000 households.
9. These beneficiary households are from three sets of provinces: the first set comprises five pre-selected provinces where Provincial Sub-Programmes will be piloted under ASPIRE during the first phase of its implementation. The second set are pre-identified expansion Provinces, consisting of the five provinces of the ongoing PADEE project. The third set of three Provinces will be chosen to be included from the third phase (after Mid-Term Review), subject to mobilisation of additional financing, when Provincial Sub-Programmes are rolled out under a fully programme-based national extension programme.
10. **Indirect beneficiaries.** ASPIRE's support to extension policy formulation, strengthening of a national extension programme and capacity building (Components 1 and 2) will have far-reaching and long-term positive effects in the whole agriculture sector of the country outside the

above-mentioned direct beneficiaries. A robust and evidence-based national programme on agricultural extension with clearly defined institutional responsibilities, stakeholders with enhanced capacities and available operational tools (such as extension hub and portal) will leverage the supports other development partners, the private sector operators and actors in the civil society, and facilitate their support to small farmers.

Targeting Strategy

11. The targeting strategy of ASPIRE departs from the conventional approach of selecting beneficiaries against pre-set criteria who will receive the predetermined assistance. On contrary it aims to enable a new national extension programme to be responsive to farmers' needs and demands, including those of the poor and the vulnerable, using a combination of tools based on the systematic approach to information analysis, formulation of actionable plans effectively addressing the their needs and inclusion of farmer representatives in the key decision making processes.
12. Specific design instruments and processes are proposed to help determine the main feature of the inclusive and demand-informed national extension policy: support to the extension policy formulation process is guided by an Extension and Research Advisory Board which includes farmer representatives and civil society organizations; and facilitation of extension policy discussions will address needs and demands of different groups of smallholders, including the poor and the vulnerable. Similarly the proposed provincial strategy formulation process which will inform Provincial Sub-Programmes will take into consideration farmers' needs and demands, articulates delivery of public sector support prioritizing the poor and the vulnerable, and includes validation by stakeholders ('Inclusive Extension Advisory Group'), including farmer representatives. Identification of the poor and vulnerable farmers' needs and demands, as well as assessment of how extension impacts on their livelihoods, will be undertaken systematically at the Extension Hub, which will be the platform for extension content development, quality control and dissemination. This will allow the MAFF and PDAs/DOAs to plan extension services which are responsive to the poor and vulnerable smallholders and allocate resources optimally.

Provincial Sub-Programme Beneficiary Selection

13. ASPIRE's direct beneficiaries (see above) are those who will access extension services to be delivered under Provincial Sub-Programme using the three comparative models (public sector service delivery, public private partnerships and contracting-out of services). Outreach to the poor and the vulnerable under the public sector service model will be facilitated through extension programme development which will focus on basic farming skills mostly attractive to them. It is envisaged that 60 25-member Smallholder Learning Groups (SLGs) will be formed in each of the six districts of the selected provinces. Because of the financing arrangements and in view of the business sustainability, the public private partnership model may have tendency to include less-poor smallholders. However, the experience of iDE in their social enterprise driven model of extension is that about 50% of the self-selecting clients are from households with ID-Poor cards⁴⁸.
14. Provincial Sub-Programmes will include activities contracted out to specialist service providers (most likely NGOs). The most beneficial use of these contracting out arrangements will be identified at Provincial level through the Provincial Agriculture Strategic Plan (PASP). However, one likely use of contracting out will be to target specific groups of farmers with special needs. One example of a special needs group could be farm households living in Social Land Concession (SLC) as support for agricultural development is important in view of their current weak skill and knowledge basis on farm business and management, as well as needs to

⁴⁸ Source: discussions with iDE management

integrate it with other types of supports⁴⁹. Strengthening farming skills of new land recipient households is critical as failures to do so could undermine their whole new livelihoods.

15. **Selection of provinces:** ASPIRE will be implemented as a national level programme with, initially, five pilot Provincial sub-programmes. The selection of the initial pilot provinces was done by the RGC based on criteria identified during the design mission. These criteria included:
 - (a) Provinces with significant potential for increasing agriculture GDP;
 - (b) Provinces where the Provincial Department of Agriculture has a good existing potential and high willingness to operate results-based programming arrangements; and
 - (c) Provinces where PDA are in a position to deploy sufficient staff resources in implementation of ASPIRE funded activities; i.e. staff will not be occupied in implementation of existing major externally funded projects⁵⁰.
16. Provinces with previous experience with IFAD projects were considered positively in view of their experience in providing demand-driven agricultural services to poor smallholders, as well as advantages of building on institutional and human resources foundations which were facilitated by the projects.
17. Based on these criteria, RGC proposed and IFAD has agreed to select Kratie, Preah Vihear, Battambang, Pursat and Kampong Chhnang as pilot provinces. Subject to satisfactory progress, ASPIRE will expand into Kampot, Kandal, Prey Veng, Svay Rieng and Takeo with the phasing out of the PADEE project in those Provinces in 2018. Subject to mobilisation of additional resources, RGC with IFAD and the additional donor(s) will select three further provinces for expansion from 2018. Target Districts and Communes for the extension activities, and target Districts for the Climate Resilience Grants will be identified through Provincial level planning.
18. **Selection of districts and communes.** It is envisaged that the provincial extension programmes will have a district focus with strengthening of the District Agriculture Office and District level needs assessment being key elements of the process. Districts will not be pre-selected at the design stage but will be identified through the planning and budgeting process. It is expected that selection of districts will reflect factors including agricultural potential, especially untapped market opportunities, and vulnerability to climate risks. It is expected that an average of six districts will be selected in each province.
19. **Participation of beneficiaries.** Instead of selecting training participants against preset criteria, ASPIRE will apply a combination of tools to identify and select the beneficiaries as stated earlier: active information dissemination aimed at attracting those farmers who have genuine interest to learn on the basis of their full understanding of the opportunities and making technology packages geared toward and attractive to the target groups (poor and vulnerable smallholders) in reflection of their resource basis, livelihood opportunities and interests. Project M&E system will track inclusion of the poor and the vulnerable, and use the Extension Hub mechanism to assess effectiveness and impacts of the extension to the direct target group.

⁴⁹ In light of the potential sensitivities around land ownership issues in Cambodia and particularly concerning land that has recently changed ownership or use, special care must be taken before deciding on including new land recipients. Under the contracting-out model, PDA will be encouraged to allocate resources to support smallholder who have recently received new land and who have a genuine intention to develop the land for farming. However, such support will be subject to verification that there are no competing ownership claims to the land. Land allocated under the Commune Social Land Concession schemes and supported by World Bank's Land Administration for Social and Economic Development (LASED) Project will be automatically deemed to meet this criterion because of the rigorous process the project has taken in determining the land to be distributed and beneficiary selection. However, if major support is planned in other areas of recently transferred land, including National Social Land Concession areas, IFAD will require an independent audit of the land transfer process to verify the absence of competing claims.

⁵⁰ For this reason, provinces implementing the PADEE project will not be included in the initial pilot provinces of ASPIRE.

20. In each participating province the most climate-vulnerable districts will be selected to participate in the Climate Resilient Infrastructure Fund under Component 4. The selection will be based on data on past flood and drought impacts and an assessment which is informed by commune-level participatory Vulnerability Reduction Analysis (VRA). All communes will have an opportunity to receive support, but decision will be based on assessment of commune proposals for priority climate resilient infrastructure. as informed by and communes will be selected on the basis of their proposals

Gender Strategy

21. Cambodian smallholder agricultural substantially relies on contribution by female farmers. Women's contribution to food production is greater than that of men's: about 65% of agricultural labour and 75% of fisheries production is in the hands of women, representing a total of 80% of food production in the country. While women's role in agriculture is understood by policy makers, practitioners and other stakeholders of agricultural extension, there is a need to mainstream gender in extension and make the services responsive to their differentiated interests and demands. To achieve this, ASPIRE addresses and mainstreams gender in all aspects of its support - policy formulation, capacity building, extension delivery in selected provinces and climate resilient infrastructure development.
22. High gender disparity remains a concern in rural Cambodia; therefore IFAD supported projects emphasize addressing this issue as a priority. This requires a strategy that integrates a gender equality perspective into policy formulation and all stages of decision-making, planning and implementation of activities. For ASPIRE the gender strategy seeks to explicitly reduce the gaps in economic and resilience opportunities between women and men as an integral part of the project's overall strategy, policies and operations. This requires a gender lens in the design, implementation and monitoring of all project activities that recognizes and address the different needs of men and women and barriers to fully participate in and benefit from ASPIRE activities.
23. ASPIRE's support to national extension programme will present a unique opportunity to mainstream gender in overall extension services of the country. This will be done through addressing effective inclusion of and outreach to poor female smallholders in the process of extension policy framework formulation and making the Steering Committee membership include gender-informed members. Extension and Research Advisory Board will be sensitized on gender concerns, and promote gender mainstreaming in extension hub activities.
24. The inclusion and active participation of women as well as men in planning, implementing and evaluation of ASPIRE is included in the program design. A critical element of the ASPIRE program design is the development and application of need analysis tools that will inform the planning and delivery of Extension programs (Outcome 2). Monitoring and review of the relevance and success in addressing these needs will be undertaken at the local and sub national level. Gender delineated needs analysis should inform selection of technology suitable to both men and women farmers; learning modalities and communication channels.
25. Under capacity building and training activities (Component 2), women are encouraged to participate in all ASPIRE supported trainings (MAFF staff, RUA and other agricultural schools, and other agencies). An indicative percentage (25%) is set for female participants in the trainings. In Component 3, is envisaged that at least 50% of participants in Smallholder Learning Groups (SLGs) will be women.
26. A gender action plan for ASPIRE will be developed which will identify roles and responsibilities and detail monitoring and analysis to support ongoing review. The gender strategy goes beyond participation of women in learning groups and extends to tailoring extension packages and services to addressing gender needs; including representation of women and men on committees; in institutional capacity building and the HR Development Strategy for extension services; and project staffing including CEWs.

27. The Impact survey and reports will provide delineated information on female headed households and regular performance monitoring will detail gender participation, access and satisfaction and feedback. Where performance is below expectations reasons will be explored and program design modified where appropriate.

Table 1: Proposed Target Provinces					
Province	Previous Project	IFAD	Districts¹	Communes¹	Households^{1,2}
Kratie	RULIP 2007-13		5	41	68,099
Preah Vihear	RULIP 2007-13		7	49	44,620
Battambang	ADESS 1998 - 2003		13	92	208,163
Pursat	ADESS 1998 - 2003		5	42	84,543
Kampong Chhnang	None		7	65	105,439
TOTAL FOR PILOT PROVINCES			37	224	405,525
Kampot	PADEE 2012-18		7	88	132,008
Kandal	PADEE 2012-18		10	121	228,969
Prey Veng	PADEE 2012-18		12	113	255,355
Svay Rieng	PADEE 2012-18		6	68	115,274
Takeo	PADEE 2012-18		9	97	195,269
TOTAL FOR 10³ PROVINCES			81	711	1,332,300

1. Rural Districts Only
2. Commune Database 2012
3. Three additional expansion provinces to be selected at a later date and subject to availability of finance

Appendix 3: Country performance and lessons learned

Background and Summary Findings of COSOP 2008-12 Evaluation

1. The design of ASPIRE draws strongly on the lessons learned in implementation, supervision and evaluation of IFAD projects in Cambodia since 1998⁵¹. These projects, while having important distinguishing features, can be considered to represent an evolving model of support to poor and vulnerable smallholders in Cambodia. Key features of this model have included a decentralised approach to implementation, providing support through farmer groups and the delivery of an integrated package of (mainly agriculture) training and transfers of assets (either physical assets or finance in the form of group revolving funds). Two previous IFAD projects - RPRP and CBRDP – also included a significant rural infrastructure component.
2. ASPIRE shares some common features with these earlier projects but also differs in some important respects. New approaches introduced to the ASPIRE design have been developed based on insights gained from outcome of the final review of the COSOP 2008-12 as well as reflections on experience during formulation of COSOP 2013-18 and early implementation experience with PADEE. ASPIRE does not represent a break with the previous IFAD project approach but rather an evolution and a mainstreaming of IFAD experience into the policies, systems and working procedures of MAFF. Some elements of the ASPIRE approach are already being tested in RULIP and PADEE.
3. The final review of the COSOP 2008-12 made the following key recommendations which have been taken into consideration in the design of ASPIRE:
 - (a) Moving to a more programmatic approach to implementation of COSOP, including greater integration between IFAD projects as well as alignment and harmonisation with Government and DPs;
 - (b) Looking for opportunities to scale up successful initiatives;
 - (c) Responding to the changing context of the Cambodian rural economy into account, especially the increasing commercialisation of agriculture;
 - (d) Mainstreaming climate resilience in the design of IFAD projects and extension activities; and
 - (e) Integrating and improving the management of knowledge.
4. Additional lessons identified in the design report of the RB-COSOP 2013-18 included:
 - (a) The need for a new approach to the issue of incentives for Government staff. Previous standardized salary incentive schemes have not performed satisfactorily and the Priority Operating Cost scheme was officially ended by Government in mid-2012. The current agreed position of the UNCT, of which IFAD is a member, is not to pay salary supplements to Government staff in projects designed after 2012;
 - (b) The need for caution in entering into co-financing arrangements, to ensure that these arrangements preserve ability of IFAD to partner directly with government and to make use of its comparative advantages in directing agriculture sector assistance to serve the needs of poor and vulnerable smallholders.

⁵¹ The projects referred to are ADESS (1999-2004); CBRDP (2002-09); RPRP (2003-11); RULIP (2008-14), TSSD (2012-17) and PADEE (2012-17).

A Multi-Level, Programmatic Approach

5. The review of the COSOP 2008-12 identified the need for a more programmatic approach in order to maximise the synergies between projects, improve knowledge management, harmonise with development partners and ensure sustained improvements to the capacity of the public extension service.
6. Supervision reports and the COSOP Review identified the need to increase the focus of project management at all levels on achievement of results, as opposed to delivery of activities and outputs. This has implications for project planning, monitoring and evaluation and for the type of financing instruments (performance related grants instead of pre-determined line-item budgets). The ASPIRE design learns from innovations in demand-driven planning of extension services in RULIP and builds on an improved approach to M&E in PADEE.
7. Previous IFAD projects have demonstrated success in assisting smallholders to improve their farm businesses but have been less effective at integrating the lessons learned into policy in producing sustained improvements in institutional and human resources capacity. This lesson informs the multi-level design of ASPIRE and the strategy of alignment with and improvement of the MAFF Strategic Budget Plan.
8. Weak coordination between different actors in the extension sub-sector, within MAFF and including non-government agencies, results in limited sharing of information and knowledge. This is a problem at all levels. ASPIRE will seek to improve information flows through policy and institutional changes as well as through improved use of technology. ASPIRE will build on the experience of using information technology for extension support and project monitoring piloted by PADEE.
9. ASPIRE has been designed through an open, cooperative process of stakeholder consultations that continued the approach adopted during design of the RB-COSOP 2013-18. There is a considerable awareness of and interest in ASPIRE amongst development partners working in the agriculture sector. The collaborative approach will continue in implementation, with development partner participation in the ASPIRE Steering Committee and Policy Forum. This is expected to lead to consensus on the Cambodian Model for Extension Services and to opportunities for formal cooperation in a programme based approach.
10. IFAD is exploring options with RGC for an appropriate approach to payment of performance incentives to Government staff. One interesting model is the performance related pay scheme that has recently been agreed with development partners and adopted in the Health Sector PBA (Health Sector Support Programme Phase 2). Design of a performance pay scheme based on this model will be included in the tasks of the start-up technical assistance package of ASPIRE.

Opportunities for Scale-Up

11. In view of the rapidly changing context of the Cambodian rural economy, the “scaling up” agenda cannot be simply a matter of identifying what has worked in the past and doing it on a larger scale. Therefore, ASPIRE addresses this issue in the following ways:
 - (a) Elements of previous projects, particularly the farmer group approach, are continued and expanded;
 - (b) ASPIRE builds on initiatives of the PADEE project, particularly in development of improved extension materials;
 - (c) ASPIRE supports innovations within a rigorous evaluation framework, with the intention of identifying new approaches that can be taken to scale in the future;
 - (d) The climate resilient infrastructure component of ASPIRE is specifically a scaling-up of a successful pilot conducted by NCDDDS with support from UNCDF and SIDA.

Extension Services for the Modern Cambodian Rural Economy

12. Over the past decade there have been rapid and important changes in the Cambodian rural economy. The main drivers of these changes have been increasing links to regional and international product markets, through trade liberalisation and hugely improved infrastructure and communications; increasing opportunities for off-farm employment, including agricultural labour on commercial farms and economic land concessions but more importantly, employment in manufacturing, construction and services in the cities and opportunities for transnational migratory labour, particularly in Thailand; and the increased availability of credit, mainly through the expansion of microcredit institutions. Agriculture wages have risen faster than general wages and traditional labour-sharing schemes may no longer be viable in a situation of labour shortage. In turn, this has driven mechanisation of agriculture and a change to less labour-intensive production methods even where these do not necessarily minimise input costs or maximise yields.
13. These changes necessitate a move away from an approach to agriculture support focused mainly on increasing production of staple crops. Gross rice yields are no longer an important determinant of food security or nutrition. Farmers have an increased range of choices, including choosing whether to grow for own consumption or for the market; choosing between a range of possible cash crops; and choosing between seeking to maximise farm income or to devote effort and labour-power to off-farm employment. A modern, demand-led extension service needs to be able to respond to this challenge by supporting farmers to understand their options and to take advantage of new opportunities.
14. Experience has shown that extension staff working on IFAD projects are not equipped with the full set of skills needed to deliver a demand-led, market-orientated extension service. Only a minority of the staff have formal extension training. Training methods reflect a teacher-centred tradition and are not always appropriate for trainees with limited formal education. There has been a much emphasis on production techniques for basic foodstuffs and less on assessing the profitability of farm enterprises or accessing market opportunities. ASPIRE will seek to strengthen the human resources for extension through a mixture of short-term training for existing staff and improvements to academic education of the next generation of extension workers.
15. IFAD projects including RPRP, RULIP and PADEE have targeted poor farmers through a wealth ranking system. When applied in a too rigid way, and combined with the incentive of access to the revolving funds supported by those projects, this can result in recruitment of farmers who may have very little interest in the subject matter of the trainings. It is also desirable for training groups to include a greater diversity of farmers. In ASPIRE, the primary criterion for membership of a learning group will be the farmer's desire to learn, with the training content being tailored to match the needs of the target group.
16. The Farmer Field School approach used in previous projects is time-consuming and evolved during a period when it could be assumed that farmers were under-employed for much of the year. Therefore, in ASPIRE the Farmer Field Schools will consist of a smaller number of shorter training sessions with more interactive engagement of farmers and greater use of multi-media materials. This approach will also facilitate delivery of trainings through the permanent staff of the District Agriculture Office, instead mobilising large but temporary teams as is the approach in PADEE.
17. ASPIRE will continue and build upon the development of up-to-date, market orientated and climate-smart extension materials begun under PADEE.

Responding To Climate Change

18. ASPIRE will support mainstreaming of strategies to foster climate resilience at enterprise, farm and community level into planning and delivery of extension services and into extension messages. The approach adopted will be of climate resilient agriculture designed to take reduce vulnerability to extreme events such as drought and flood. ASPIRE will align with the Climate Change Action Plan currently being developed by MAFF.
19. An integrated approach to building climate resilience requires investments in local productive infrastructure that are complementary to introduction of climate resilient agriculture at farm level. Although the Cambodian Government has increased investments in major infrastructure including roads and irrigation headworks there remains a need for resources to finance community level productive infrastructure including farm roads and small scale or secondary/tertiary irrigation works. These activities will be supported by the local administrations with finance from ASPIRE.

Climate Resilient Infrastructure Beneficiaries

Sustainable Investments in Productive Infrastructure

20. ASPIRE will be the first IFAD project in Cambodia since RPRP to include an infrastructure component. The design of the climate resilient infrastructure activities learns from the experience of infrastructure investments in CBRDP and RPRP, as well as from the LGCC model being piloted by NCDDS.
21. Like the Commune Infrastructure Investment Fund of RPRP, ASPIRE will support infrastructure investments through the local administrations and with co-financing between IFAD funds and the Commune/Sangkat Fund. However ASPIRE will seek to address the weaknesses of the CIDF through financing fewer, larger investments, through ensuring a high standard of sub-project preparation and design, and by increased attention to sustainable operation and maintenance. The performance-based grants will ensure that the local administrations have an incentive for good performance both in implementation and in maintenance of sub-projects. For irrigation sub-projects, ASPIRE will encourage the formation of public-private partnerships for operation and maintenance.

Appendix 4: Detailed Project Description

1. The Goal of ASPIRE is Reduced Poverty and Increased Resilience of Poor and Vulnerable Smallholder Farmers in Cambodia. ASPIRE will contribute to this goal via the Programme Development Objective which is “by 2021 an enhanced Cambodian Model of Extension Services is demonstrated as effective for assisting a diversity of smallholder farmers to achieve profitable and resilient farm businesses and is adopted as policy.” The Cambodian Model of Extension Services will be defined in detail through the process of programme implementation but it is envisaged to provide smallholder farmers with access to knowledge through demand-led services integrating the roles of the public sector, private sector and civil society.
2. The Programme Development Objective will be achieved through an integrated set of activities contributing to policy development, capacity development and two service delivery components. The components are and their outcomes are interdependent: each outcome depends on results across all components.
3. ASPIRE will be implemented over seven years 2015-21. The programme will be implemented through three phases representing increasingly close alignment between ASPIRE and the MAFF Strategic Budget Plan. The timing of transition between phases will be determined by the ASPIRE Steering Committee based on achievement of key intermediate outcomes.
4. ASPIRE is explicitly designed to prepare the way for a programme based approach in the extension sub-sector. Planning and implementation will be integrated with the institutions and budget processes of MAFF and therefore the policy and capacity development components will support strengthened extension services nationwide. Services will be delivered in five pilot provinces initially with expansion to at least five and up to eight further five provinces, subject to satisfactory progress, after mid-term review. The intention is that by the end of the programme the Cambodian Model for Extension Services is ready to be rolled out to all 24 Provinces of Cambodia.
5. ASPIRE will support climate change adaptation through integration of the Cambodia Climate Change Strategy and the MAFF Climate Change Action Plan⁵² (CCAP) into extension strategy, content and delivery and in particular by implementing Action 1 of the CCAP: *Promoting and upscaling sustainable farming systems that are resilient to climate change*. Through its support to the Programme Budget process, ASPIRE will support mainstreaming of climate change adaptation into the Strategic Budget Plan and annual Program Budgets at national and provincial levels. The following features of the Programme will ensure effective mainstreaming of climate change adaptation:
 - (a) Linking the logframe to the M&E framework of the Cambodia Climate Change Strategy (currently under development⁵³);
 - (b) Inclusion of MAFF members of the Climate Change Technical Team in the membership of the Extension and Research Advisory Board;
 - (c) Identifying, testing and disseminating technology solutions for climate resilient agriculture, using a Participatory Agriculture Research, (i.e. on-farm testing and demonstration) approach financed by the Innovations Fund (Sub-Component 3.2);
 - (d) Mainstreaming climate change adaptation in education and training. All materials developed under ASPIRE will be informed by climate change considerations;

⁵² Updated March 2014

⁵³ International Institute for Environment and Development are providing technical support to Ministry of Environment with finance from Cambodia Climate Change Alliance.

- (e) Integration of Vulnerability Reduction Analysis (a participatory scenario development and livelihood impact analysis methodology already in use in Cambodia) in the preparation of the Provincial Agriculture Strategic Plan;
 - (f) Including indicators of climate change risk (vulnerability, exposure and hazard) in the performance measurement framework for the Provincial Sub-Programmes;
 - (g) Ensuring use of climate change risk indicators in prioritisation of investments in climate resilient agriculture;
 - (h) Use of improved technical standards and guidelines for climate resilient agriculture, with effective design and supervision support;
 - (i) Partnership and cooperation arrangements with other programmes for climate resilience in the agriculture sector, particularly the forthcoming UNDP-GEF resilient livelihoods project, and potential linkage of ASPIRE with a forthcoming biogas programme to be financed by GEF and implemented by IFAD.
6. In the **Foundation phase**, ASPIRE activities will be aligned with the MAFF Programme Budget through cross-referencing of AWPB activities to the MAFF Strategic Budget Plan and the establishment of pilot Provincial Sub-Programmes in five pilot provinces.. The outcomes of the first stage of implementation of ASPIRE will be validation of the framework of key principles underlying policy development, agreement of a policy process; definition of the key roles and responsibilities of different MAFF agencies and staff for support to extension services, including the “Extension Hub” function at national level; establishment of pilot Provincial Sub-Programmes within the MAFF Programme Budget framework and Provincial Agriculture Strategic Plans based on needs assessment and vulnerability reduction analyses and Climate Resilience Strategies in Districts selected on the basis of high climate vulnerability.
7. In the **Proving phase**, planning of ASPIRE activities will be integrated with the Programme Budget planning cycle. In particular, Provincial Departments of Agriculture will gain greater discretion to allocate grant resources to the activities expected to maximize results achieved, within the constraints of eligible expenditures defined in the grant conditions and activities identified in the Strategic Budget Plan. The outcomes of Phase 2 will be that the extension model is defined in evidence-based policy developed through stakeholder consultation and a resource mobilisation framework has been agreed; that the Extension Hub functions are established and being used by extension service providers; that the Provincial Sub-Programmes have demonstrated cost-effectiveness in supporting smallholders to develop improved and resilient farm businesses and that smallholders’ access to climate resilient productive infrastructure has been improved.
8. In the **Scale-Up phase** the Cambodia Model of Extension Services will be rolled out through establishment of Provincial Sub-Programmes in additional Provinces (including up to an additional eight Provinces with direct support from ASPIRE⁵⁴) and additional domestic and external (development partner) resources are mobilized. The implementation modality for Phase 3 will be confirmed at the Mid-Term Review but it is anticipated that the ASPIRE results framework will be fully integrated with a more results-orientated MAFF Strategic Budget Plan. The Scale-Up phase plus successful implementation of a multi-partner resource implementation framework would meet all conditions for a full Programme Based Approach.
9. The following sections describe how each Component and sub-Component contributes to achievement of the intermediate and final outcomes of ASPIRE. The management arrangements including the phased alignment of ASPIRE with the Programme Budget are described in detail in Annex VI.

⁵⁴ Expansion into an additional five provinces, provisionally agreed to be the five PADEE project provinces, will be financed by the IFAD loan and grant financing and RGC contributions. Additional funding will be sought for expansion into an additional three provinces to be identified by Mid-Term Review.

A. Component 1: Evidence Based Policy

General Process and Outcomes

10. Component 1 contributes primarily to the outcome of a national programme implementing an updated extension policy and supported by multiple donors that provides smallholder farmers with access to quality information services. It is expected that the policy and programme will provide an incentive framework for synergies between actors engaged in delivery and use of extension services.
11. The extension policy and policy instruments to be developed under Component 1 will be formulated within a framework of key principles for farmer-led extension integrating the roles of the public sector, private sector and civil society. The policies will aim to provide clear guidance on critical issues determining which model of extension delivery works best in different contexts and for different categories of farmers. Based on policy, a medium-term framework for resource allocation and investment prioritisation will cut across the boundaries of agro-ecological areas, themes or value chains and service delivery models.
12. The objective is that by 2021 the policy and resource allocation framework are implemented by a national programme and that additional resources are mobilised to support the programme. Conditional on achievement of intermediate outcome indicators, ASPIRE will finance scaling up the Cambodian Model for Extension Services to the five Provinces currently implementing the IFAD PADEE project (for which funding is already identified and fully financed) and three additional Provinces (subject to mobilisation of additional financing) from 2019.
13. The component will achieve this through an inclusive, evidence based policy development process. This process will be directed by the ASPIRE Steering Committee with technical support from Supreme National Economic Council (SNEC). In accordance with the agreed policy agenda, a round of the policy dialogue will be organized for each policy deliverable. Each round will have a start and end date with key milestones and time line publicized in advance to the most directly concerned stakeholders. It will be an important role for the Steering Committee to ensure that the sponsors of various policy initiatives related to extension are encouraged to engage through this inclusive and collaborative policy process.
14. The policy process will consist of three stages: i) Orientation; ii) Formulation and Approval; and iii) Mainstreaming and Learning. ASPIRE will conduct between 3 and 5 rounds of the policy process over its entire duration. Each round of policy making will unfold over a period of 12 to 18 months with clear start and end dates.
15. In the **Orientation stage** policy issues will be identified by different groups who may include the technical divisions of MAFF, the Extension and Research Advisory Board (ERAB), MEF, SNEC or other stakeholders. Based on proposals received, the ASPIRE Steering Committee will develop the policy agenda including the key issues for research and policy formulation, responsibilities, specific deliverables and a time-bound work plan. The steps of the Orientation stage will be as follows:
 - i. Steering Committee approves the **policy agenda** for the coming year and budget for policy development activities within the AWPB;
 - ii. Expert researchers conduct **studies and gather evidence** which is summarised in one or more background papers or position papers. Where appropriate, more than one institution may prepare a position paper for consideration. Where needed, policy research will be referenced and benchmarked against international standards and guidelines provided by Cambodia membership of WTO and ASEAN. ASPIRE will provide funding opportunities for exchange visits to countries in the region to discuss and observe policies and their implementation.

- iii. SNEC facilitates a **Policy Seminar** to review the background paper and position papers. Participants in the seminar will represent key stakeholders including policy makers, development partners and representatives of farmer organisations, the private sector and civil society.
 - iv. Based on agreements at the Policy Seminar, SNEC will prepare a consolidated Seminar report and **policy brief** including recommendations for the key direction and content of policy.
16. The steps of **Policy Formulation and Approval** will be as follows:
- i. SNEC provides technical assistance to the key concerned technical division of MAFF to develop the formal policy document or regulatory instrument. The ERAB is used as a discussion forum for technical feedback on the policy during development. The policy document must include key indicators to be used in monitoring of implementation.
 - ii. The policy document is circulated to stakeholders in advance of the annual Policy Forum on Extension which is broadly inclusive of public sector, private sector and civil society stakeholders. At the Policy Forum, the proposed policy will be reviewed, discussed and validated. The Steering Committee will then make its recommendation on the draft policy based on the outcome of the Policy Forum.
 - iii. The policy instrument is formally approved at the relevant level of authority.
17. **During Mainstreaming and Learning**, SNEC will monitor implementation of the policy according to the agreed monitoring indicators and report to the ASPIRE Steering Committee on progress. For each approved policy a communication and roll-out plan will be developed which includes the roles and responsibilities for national level and local level leadership in the communication and implementation of the new policies. ASPIRE capacity development for "leadership for change" (Component 2.2) will support the successful implementation of the new policies.
18. For meaningful participation by the intended stakeholders, it is important to publicize the "rules of the game" in advance and adequately. In particular the dates and steps of each policy round as well as the rules of engagement (how decisions are taken, etc.) should be clearly spelled out.
19. The policy process as outlined here will be reviewed and validated by the Steering Committee during its first meeting and modified as required in the light of implementation experience.
20. The ASPIRE Secretariat will play a key role in policy coordination and development, including administering meetings of the policy forums and conducting a number of specific studies. SNEC, in line with its mandate to advise the senior leadership of RGC on policy issues, will play a strategic role in policy research and impact evaluation in order to feed the policy process with quality evidence. Key policy instruments will be submitted for approval at the level of the MAFF Minister or higher in accordance with RGC policy formulation protocols.
21. The key outcomes to which Component 1 will contribute in each phase of ASPIRE implementation are summarised in the following table:

OUTCOME 1: A national programme implementing an updated extension policy and supported by multiple donors that provides smallholder farmers with access to quality information services.		
PHASE 1	PHASE 2	PHASE 3
<ul style="list-style-type: none"> • Evidence-based Multi-stakeholder Policy Process agreed and implemented • Demand-driven Extension Policy Framework developed and validated with stakeholders • Analytical Unit for Agriculture established and functioning in SNEC • First round of Policy Process launched 	<ul style="list-style-type: none"> • A set of extension policies developed with stakeholder participation and adopted. • Institutional roles and responsibilities clearly defined • A medium term investment and resource allocation framework for extension is integrated in the MAFF Strategic Plan • Second round policy agenda approved and process is launched 	<ul style="list-style-type: none"> • Mobilization of adequate financial resources to implement the Cambodia Model for Agriculture Extension • Evaluation studies on extension models available and discussed in fourth policy round • Decision on final incentive framework for extension

22. The key principles of the framework for policy development include:

- (a) Setting the policy agenda in consultation with actual stakeholders;
- (b) Defining the key policy objectives of public expenditure on agriculture extension;
- (c) Assessing what works and what does not work in agricultural extension by testing and evaluating various extension models implemented in Cambodia, in neighbouring countries and elsewhere. A particular attention will be paid to the evaluation of innovations in information and communication techniques by a range of evaluation methods, including randomized control trials when and where feasible;
- (d) Assessing the long-term financial viability of the various extension models;
- (e) Assessing policy options for strengthening support and enhancing the role farmer organisations in articulation of extension demand, participation in policy formulation and local development planning and delivering services to their members;
- (f) Defining the roles and responsibilities of various actors to optimize the efficiency of public expenditures in extension, including closer harmonization between development partners;
- (g) Prioritization of investments in various agro-ecological settings and for various categories of farmers; and
- (h) Capacity building in agricultural education, farmer organizations and agricultural research.

23. Therefore, the scope of policies to be formulated will be defined by the above framework and cannot be fully determined at the project design stage. It is anticipated that policies will include definition of roles and responsibilities of technical departments and sub-national administrations; a facilitative regulatory framework, priorities for allocation of public resources to support extension and guidance on capacity development. The policies will thus allow service markets to benefit from clarity in policy to become more accountable and efficient and will facilitate service users to review performance against clear and understandable criteria. The capacity to learn from success and innovation and to absorb lessons into future policy development will be a key result.

24. The resource allocation framework will support implementation of extension policy through the MAFF three-year rolling Strategic Budget Plan and the annual Programme Budgets. The Grants for Extension Services (Component 3) are designed as an early test of the resource allocation framework. By ASPIRE mid-term review at least four of the five pilot provinces should have demonstrated capacity to program resources and deliver services through the Provincial

Sub-Program in accordance with a needs-based Provincial Agriculture Strategic Plan with satisfactory results.

Sub-Component 1.1: Policy Coordination and Development

25. Sub-Component 1.1 finances the costs of the policy process as described above. Most costs will be disbursed directly by the ASPIRE Secretariat on behalf of the Steering Committee.
26. The ASPIRE Secretariat will contract experts to conduct a number of strategic studies under Sub-Component 1.1. These studies specifically relate to development of the National Extension Investment Programme and establishment of an Extension Fund.
27. Sub-Component 1.1 also includes the costs of meetings of the ASPIRE Steering Committee, the Annual Extension Policy Forum, and workshops to support the policy process.
28. There are no operations costs financed in Sub-Component 1.1 as these are financed separately as the general operations costs of the Secretariat, or the operations costs of SNEC which are covered in Sub-Component 1.2.

Sub-Component 1.2: Policy Research and Analysis

29. Sub-Component 1.2 finances the costs of establishing an analytical Unit for the Agriculture Sector within SNEC. This includes the costs of an international policy analysis adviser who will work for 10 months initially then fourteen months intermittently during the remainder of the programme, and the cost of two full time national advisers (one research adviser and one agriculture technical adviser) through the full period of the Programme.
30. Sub-Component 1.2 also includes the costs of carrying out three policy studies each year, leading to production of a policy brief. These costs include consultant fees, the costs of consultation events, peer reviews and publication costs for study reports and policy briefs.
31. Policy studies to be contracted by SNEC the first year of ASPIRE will include (1) a situation review of the extension sector in Cambodia, including policy, financing and public sector, private sector and civil society delivery mechanisms; and (2) a comparative review of international experience on extension services and the State role in extension in countries comparable to Cambodia.
32. Sub-Component 1.2 provides SNEC with funding to support strategic policy studies in the agriculture sector going beyond those directly linked to the ASPIRE policy process and to extension. This is to enable the Analytical Unit for the Agriculture Sector to support strategic policy work and to establish capacity and a record of achievement across the whole sector. This funding may be used to contract policy studies, to employ short-term researchers to study specific topics in-house or for other types of policy development expenditure.
33. SNEC will have funds to provide research grants or bursaries to post-graduate students or post-doctoral researchers. Each researcher will be entitled to support for a maximum of six months. The researchers will agree a research plan with SNEC which will include a commitment to conduct fieldwork in ASPIRE target communities and to produce, in addition to their core research outputs, case studies / Most Significant Change Stories illustrating the qualitative impacts of ASPIRE activities.
34. The International Food Policy Research Institute (IFPRI) will implement a Randomized Controlled Trial (RCT) to assess the impact of different agricultural extension mechanisms among Cambodian farmers. This activity will be financed by the International Initiative for Impact Evaluation (3IE) with a cost of approximately US\$ 900 000. The RCT will be implemented during the 2015/16 agricultural seasons. The timing of this intervention will allow IFPRI to provide the RGC with evidence-based policy recommendations before the roll-out of ASPIRE in 2018. The study's recommendations will highlight the potential impact that ASPIRE might have on agricultural productivity and rural incomes. It will also inform about possible

improvements to the extension model through performance-based incentives and better information flows through ICTs. To allow for a speedy implementation, the RCT will be conducted in the target area of IFAD's PADEE project (i.e. the projected expansion provinces of ASPIRE) and in association with ongoing PADEE activities. The full proposal of IFPRI to 3IE for these trials is available in the ASPIRE design file.

B. Component 2: Capacity Development for Extension Services

35. Component 2 contributes to Outcome 2: MAFF has institutional and human resources capacity to manage an effective, demand driven system linking researchers and knowledge-based agencies to extension agents in public sector, private sector and civil society and to farmers. There are two sub-components which focus on building systems and strengthening strategic human resources respectively. The following table shows the key intermediate outcomes to be achieved in each phase of ASPIRE implementation.

OUTCOME 2: MAFF has institutional and human resources capacity to manage an effective, demand driven system linking researchers and knowledge-based agencies to extension agents in public sector, private sector and civil society and to farmers		
PHASE 1	PHASE 2	PHASE 3
<ul style="list-style-type: none"> Extension and Research Advisory Board established and functioning Extension Hub functions established Extension Portal designed Human Resources Development Strategy for the extension sector Academic curricula developed QA system designed 	<ul style="list-style-type: none"> PDA/DAO staff working to performance management job descriptions Field agents accessing Extension Portal to support their work. At least 50 CEW enrolled in in-service education leading to a recognised extension qualification. Quality Assurance for extension materials and services functioning 	<ul style="list-style-type: none"> Extension Hub functions fully financed by Programme Budget Increased availability of personnel with skills to deliver modern, demand led extension service

Sub-Component 2.1: Improving Extension Quality and Knowledge Management

36. The **Extension and Research Advisory Board** will be established under Component 2. In addition to its role in setting the policy agenda discussed above, the Board will be responsible to (i) improve extension coordination between line departments and with non-government providers of extension, (ii) ensure the overall quality assurance of Public Extension and (iii) oversee the Extension Hub. The suggested membership of the Advisory Board includes a MAFF Secretary of State as Chair, heads of relevant line departments, representation of the MAFF Climate Change Technical Team, heads of the research and training institutes, representation of PDA (rotational), and representatives from SNEC, private sector, development partners and farmer advocacy bodies. Subcommittees of the ERAB may be formed on an ad hoc basis to deal with specific extension issues as they arise (for example technical review of policy developed under Component 1).
37. **Defining roles, responsibilities and processes:** There is very little coordination within the public system in relation to extension. This is largely due to lack of clarity on roles, responsibilities and processes for individuals and institutions. ASPIRE will support mapping of the current situation then, with stakeholder coordination, will identify the areas that need further definition, gaps and areas of opportunities. The resulting framework will become part of policy. ASPIRE will support an internal process to develop clear and appropriate job descriptions, against which performance can be monitored (this will include the review of the staff appraisal system developed under CAAEP), for extension staff.
38. The **Extension Hub** is a mechanism to coordinate the day to day implementation of agriculture extension policies and activities by all technical departments of MAFF under the oversight of the ERAB. The capacity of the Department of Agriculture Extension of GDA (DEA) will be

- enhanced so that it can act as the Secretariat of the Extension Hub. The operations of the Extension Hub will include quality assurance, extension content development and validation, development of an Extension Portal (database/E-Library), and the development of extension monitoring and demand assessment systems.
39. ASPIRE will support the following activities of the Extension Hub: (1) Integration of existing extension materials and web content; (2) development of new extension materials and training content; (3) development of a system of extension demand assessment and extension service planning; (4) establishment of the Extension Portal, (5) outreach activities and (6) development and implementation of quality assurance systems.
 40. **Integration of existing extension materials** will proceed by (1) conducting an inventory of existing materials, classified by format and subject matter; (2) creating a basic reference repository of these materials within the Extension Hub and (3) selectively reviewing materials and recommending appropriate materials for widespread adoption and use. The decision to recommend any material will be taken by the Extension and Research Advisory Board based on the recommendation of suitably qualified members of the Board. This process will eventually be integrated with the Quality Assurance process. This activity will also support the digitization of selected material into the extension portal.
 41. **Development of New Extension Materials and Training Content:** This activity will improve the existing processes for development and validation of new extension materials. The activity will benefit from and continue the work in this area supported by PADEE. It is planned to develop and validate two training packages and to review and update a minimum of two existing training packages in each year from 2016 – 2021. It is expected that materials developed will increasingly include visual web-based, video, and interactive (user input) materials as well as traditional printed material. ASPIRE will support professional production of short videos complementary to the FFS materials. All extension content developed under ASPIRE will promote climate smart agriculture. ASPIRE will support the cascade training (master trainers and training of trainers) for new and revised packages.
 42. **Demand Assessment and Extension Service Planning:** This activity will set up the mechanisms and systems to assess the needs of farmers effectively and regularly; to make sure that agricultural extension responds to those needs; and to monitor the outcomes of extension services to feed into agriculture extension planning. In effect, the Extension Hub will support the Provincial Agriculture Strategic Plan with expertise, resources and data. The system will include tools for measuring climate vulnerability and adaptive responses. The system will rely on multiple approaches to assess demand and an institution mechanism to convert these into actionable plans. The data collected will be processed (in some cases by automated systems) by the extension hub, whose role it will be to convert all relevant data into usable information and distribute to the relevant stakeholders in the extension development chain. The key parts in the system will be the (i) farmer level demand assessment systems, (ii) knowledge hub – statistical, and qualitative data analysis and reporting function, (iii) support to extension advisory groups at the District and Province levels.
 43. The **Extension Portal** will be established as the information system at the centre of the Extension Hub, which will become, over time, the national repository of information, materials and resources for extension. It will contain all the latest validated agriculture extension materials and package these in digital formats relevant to end users. . It will provide a platform for consolidation of information related to agriculture extension that will become a one stop shop for extension planners, policy developers and practitioners in Cambodia. The portal will initially consist of five core modules: (i) *Content*: existing and new extension materials and technical information, will be catalogued, refined, reviewed, and packaged into the portal. Selected materials will be converted into “e-learning” tools and tested in the project. (ii) *Monitoring*: This module will be the repository for data collected through various monitoring activities (or connect to existing databases), including demand assessment activity described

above, baseline and impact surveys, client satisfaction surveys, and regular (digital) monitoring activities undertaken by programme staff, etc. The information will then feed into both the sub-national and national systems to inform the planning processes. (iii) *End user interface*: will initially consist of a website with a customized search engine. The portal will also support the development of mobile based applications, particularly decision support systems related to climate resilience. It will build on the “E-PADEE” sub programme under PADEE. (iv) *Data Repository*: Integration of existing databases in MAFF (i.e. FSMIS – DAE, TeleCentre Cambodia, etc) and elsewhere and (v) an extension service provider directory.

44. **Outreach Activities:** ASPIRE will support national and provincial level agriculture extension related expositions (may encompass expos, fairs and field days). Wherever possible this activity will combine with similar existing events. It is expected that the private sector service providers (including machinery dealers, input suppliers etc.) would see these events as a useful part of their communications strategy and either partner in these events or contribute financially to participate. This activity will support professional event manager at the national level. ASPIRE will support dissemination of information and communications materials and will actively facilitate media coverage of the programme, including by engaging an international journalist / media consultant on an intermittent basis. This activity will be closely linked to Component 3.3 and SNV will lead this activity in coordination with the extension hub.
45. **Farmer to Farmer** information exchange is the first point of call for the vast majority of farmers, ASPIRE will investigate how best to leverage this process for improving the outreach of Public Extension. Strategies will include (i) clear criteria for selection of farmers that have suitable qualities to be effective for FTF (i.e. community orientated, respected in the community, successful farmer, etc), (ii) training of CEW to facilitate this process and (iii) including FTF farmers in the SLG trainings. ASPIRE will review existing methodology and update guidelines for establishing Farmer to Farmer Learning Networks, support a workshop to validate the guideline and conduct ToT.
46. **Introduction of quality assurance processes:** this activity will establish clear standards for extension delivery in Cambodia and develop the platform for better harmonization of activities by the numerous extension service providers through a self-administered/regulated quality assurance (QA). The success of this system will depend on provision of the right incentives for service providers to participate; this will be addressed by involving stakeholders in the development of the QA protocols for certification. Other incentives will include enhanced access to the Extension Portal, ensuring acknowledgment (branding) of material developers and certification could become a requirement for partnering/provision of government funded extension projects.
47. In addition, ASPIRE will introduce and strengthen internal QA processes to the public system of extension delivery. This will include the validation process for extension materials, improvements relating to roles and responsibilities and improved systems for reviewing and approving AWPBs and other planning processes. The extension QA process will review and expand the mobile monitoring system developed under PADEE and will include the introduction of client satisfaction surveys through call centres and other innovative methodologies

Sub-Component 2.2: Strengthening Human Resources for Extension

48. ASPIRE will support preparation of a Human Resources Development Strategy in the first year of implementation. The Strategy will be informed by a baseline survey of extension practitioners (financed under the M&E activities) as well as by the Capacity Assessment Study (Working Paper 3) and by the definition of departmental roles and responsibilities under Sub-Component 2.1. The Strategy will (1) estimate future needs for skilled personnel, (2) identify gaps in educational provision and (3) propose improved MAFF human resources management procedures including recruitment, gender equality, a clear system of promotions and incentives, training and self-learning.

49. The introduction of results-based demand driven extension and deeper engagement with the private sector will require a considerable change in the way extension is currently managed and implemented. The success of this transition will require considerable changes in the way staff and institutions operate. ASPIRE will support training of MAFF (including PDA) staff in key strategic skills including leadership strategic planning, business management, farm and crop budgeting,, adult education techniques, communication and facilitation skills, web content development, knowledge management, and content development.
50. ASPIRE also recognises the need to improve the extension skill set of the next generation of skilled agriculture practitioners. Through a partnership arrangement agreed between IFAD and USAID, ASPIRE will assist RUA and Agricultural Schools to (1) update and improve the extension curricula of their undergraduate and diploma courses; (2) support the development of integrated in-service education for Commune Extension Workers, combining residential and e-Learning and providing CEW and other extension agents at post-High School level with a recognised qualification; and (3) foster the use of final year university undergraduates to undertake specific extension related research in partnership with MAFF, PDAs and CARDI as appropriate.

C. Component 3: Improved Extension Services

51. Component 3, together with the climate resilient infrastructure activities in Component 4, contributes to Outcome 3: *At least 120,000⁵⁵ smallholders have improved and resilient farm businesses as a result of integrated, demand led extension services and investments in climate resilient infrastructure.* The total output target (number of farmers participating in extension activities) for Component 3 is also 120,000, with the outcome level indicator being that at least 90,000 of these smallholders demonstrate improved profitability through applying techniques learned.
52. Component 3 has three sub-components: Provincial Sub-Programmes, Innovations for Climate Resilient Agriculture and Mass Media outreach. The key intermediate outcomes to be achieved in each phase of ASPIRE implementation are shown in the following table.

OUTCOME 3: At least 100,000 smallholders have improved and resilient farm businesses as a result of integrated, demand led extension services and investments in climate resilient infrastructure.		
PHASE 1	PHASE 2	PHASE 3
<ul style="list-style-type: none"> Provincial Agriculture Strategic Plan in 5 provinces reflected in Provincial Sub-Programmes (PSP) Participatory research activities in climate resilient agriculture initiated Mass media campaign initiated 	<ul style="list-style-type: none"> At least 4 Provinces demonstrate progress through increased scores measured by Balanced Scorecards Evidence of smallholders adopting techniques learned through training and mass media Innovations in climate resilient agriculture demonstrated and evaluated 	<ul style="list-style-type: none"> PSP operating in at least 13⁵⁶ Provinces 120,000 farmers participate in extension activities of whom at least 90,000 demonstrate increased profits

⁵⁵ 17% of these target values are contingent upon mobilization of funds for expansion into 3 additional provinces from 2018; the targets for the five pilot provinces and five confirmed expansion provinces are 100,000 farmers reached and 75,000 demonstrating improved profitability.

⁵⁶ IE 10 provinces financed by the IFAD loan and grant proceeds plus RGC contributions, and a further three provinces for which funding is to be mobilized.

Sub-Component 3.1: Provincial Sub-Programmes

53. Provincial Sub-Programmes will be implemented within the MAFF Programme Budget framework and will integrate Programme Budget resource allocations and Grants For Extension Services To Smallholders (GESS) financed by ASPIRE. Based on a decision of the Minister of MAFF dated 18th April 2014, the PDAs in the five initial target Provinces of ASPIRE will be constituted as Budget Entities within the Programme Budget structure of MAFF and will implement Provincial Sub-Programmes within Programme 1. Establishment of a Provincial Sub-Program targeting outcome level results and with the PDA Director as Sub-Programme Manager will be a specific condition for disbursement of the GESS to any Province.
54. Each participating PDA will prepare a Provincial Agriculture Strategic Plan (PASP) based on MAFF policy and on an assessment of farmer needs and market opportunities. In selected Districts, the planning activities will include participatory Farmer Needs Assessment which will be integrated with Vulnerability Reduction Analysis to identify climate change adaptation needs. The Extension Hub will provide support including technical assistance to PDA and data acquired and analysed through the Extension Portal (see Component 2). Inclusive Extension Advisory Groups including representation from farmer organisations and the private sector will be established at Province and District level and the PASP will be validated through stakeholder workshops. The PASP will be updated annually and will inform the annual review and update of the rolling 3-year Strategic Budget Plan of PDA. The PDA will use a 3-year indicative allocation of Programme Budget resources and Grants to prepare the Strategic Budget Plan and a confirmed annual allocation for preparation of the annual Programme Budget.
55. Design of the GESS will be detailed in the PIM and will include (1) an allocation formula based on the number of eligible smallholder farmers in each province and adjusted for an index of vulnerability and for performance in previous years; (2) a set of minimum access conditions which will include establishment of a Provincial Sub-Program targeting outcome level results and with the PDA Director as Sub-Program Manager; (3) defined eligible expenditures of the grant proceeds and (4) performance measures. All aspects of the grant design will be subject to review and adjustment during implementation of ASPIRE, however Provinces should be able to plan based on a broadly predictable allocation of medium-term (i.e. 3 years) resources.
56. Performance will be measured using a Provincial Performance Scorecard. The scorecard is a management tool that draws from planning and monitoring information on internal business processes and external outcomes. The scorecard will have indicators in four areas: Results and Impact (linked to the Programme 1 results); Internal Process; Clients (i.e. farmers) and Learning and Development. Results will be measured primarily by self-reporting by PDA backed by spot-checks by ASPIRE Secretariat. A telephone survey contracted to a call centre firm will be used to verify numbers of farmers reached (i.e. by spot-checking farmers recorded in the MIS) and to measure farmer satisfaction. The scorecard indicators will be designed to encourage implementation through a balanced mixture of service delivery modalities and to reward PDA for successfully supporting poor and vulnerable farmers. A model for the Provincial Performance Scorecard is provided as an Annex to Appendix 6.
57. It is expected that PDA will maximise returns on investment through identifying potential for improvements in farm profitability and resilience and, through the Programme Budget mechanism, allocating available resources to a mixture of extension approaches including public sector service delivery, public private partnerships, contracting-out of services and support to local knowledge sharing networks (farmer to farmer learning) which will also leverage the benefits of access to mass media extension.
58. The first GESS will be awarded in 2016. During 2015 ASPIRE will finance start-up activities in the pilot provinces, including preparation of the PASP, through a conventional line-item budget. In Preah Vihear and Kratie provinces only, these first year budgets will include some provision for extension services to farmers and support to farmer organisations, to maintain continuity

- from the RULIP programme which is ending in 2014. Continuity activities may include provision for undertaking a training needs assessment, agriculture trainings and support for cooperatives (financial literacy and cooperative management – based on the existing PADEE materials) through the contracting out model.
59. In the **Foundation phase**, PDA in pilot provinces will be constrained to allocate resources to three Comparative Models of extension service delivery which will be pre-defined in some detail. These models will be (1) District Work Plans which combine direct delivery of farmer training by the DAO with development of a farmer-to-farmer learning environment facilitated by the CEW; (2) public-private partnerships (PPP) and (3) contracting out of farmer training to a suitable service provider, possibly an NGO. PDA will monitor and report on the results achieved through all three models. In **Phase 2 (Proving)**, once the planning is fully integrated into the Strategic Budget Plan, PDA will gain more discretion to vary the resources allocated to each model and to adapt the approach based on lessons learned. Preparation of the PASP and necessary capacity development measures in the expansion (PADEE programme) provinces will also take place in Phase 2. By **Phase 3 (Scale-Up)**, the PDA in all provinces should have in place adequate capacity, experience, together with a performance-based incentive structure (at the institutional and / or individual level) to be able to programme the Grant resources freely within the constraints of defined eligible expenditures.
60. **District Work Plans:** In the first round of PASP (2015), the pilot PDA will identify Districts with high potential for the public sector approach which is likely to be most applicable to assisting smallholder farmers to improve their basic farming skills and strengthen their links to the market. It is expected that an average of six Districts will be selected in each of the five pilot Provinces, however this will may be adjusted depending on resource availability and cost. Preah Vihear and Kratie provinces will be allowed flexibility to cover more Districts at a lower intensity, in order to maintain continuity of support from the RULIP project, if they so decide. Half of the selected Districts will begin operations in 2016 and half in the 2017 Programme Budget. This phasing in will allow time for the PDA to assign sufficient staff to the DAO. A minimum of four permanent DAO staff with comprehensive job descriptions including extension work, will be a pre-condition for allocating Grant resources to the District Work Plans.
61. Initially, public sector farmer training will be delivered through Smallholder Learning Groups (SLG) of approximately 25 farmers each. Smallholder Learning Groups may be formed from interested farmers or may be based on an existing group such as a farmer cooperative. Each group will receive a structured 3-year leaning and support programme designed to be attractive to productive smallholders who are poor and / or vulnerable. Farmers in the SLG will be tracked using an electronic interface uploading data to the Extension Portal and capable of cross-referencing to the Impact Survey. Over 3 years, the SLG will participate in three training modules, at least one farmer cross-visit and will receive follow-up support from the DAO. The SLG will also be linked to the farmer-to-farmer learning networks. Training modules will consist of approximately 10 half-day sessions and a demonstration and will be delivered by two DAO officials in the first year, then by one DAO official who may work with a technical specialist from PDA according to the subject matter.
62. Each District will begin with a work plan under which (on average) 60 SLG will be formed in the first three years. Therefore, a District starting operations in 2017 will complete the training of 60 SLG (1,500 farmers) by 2021, the final year of ASPIRE. By selecting 30 Districts, 45,000 farmers will benefit from this activity in the five pilot provinces.
63. The SLG activities planned under ASPIRE will place considerable pressure on the staff resources of the DAO. Provincial level staff will be required to also conduct a portion of the training within the districts. ASPIRE will support selected staff with training and capacity development. In the foundation phase two PDA level staff will be assigned to two districts, these staff will assist in the district strategic needs assessment and the district level planning process.

- They will also provide an enhanced liaison between the PDA and the DAO and be under the incentive scheme.
64. The Smallholder Learning Groups will allow for some flexibility for the second and third year support, and will allow for new farmers to participate and others to leave depending on interest in the topic. The second and third year support will become more flexible allowing a range of support trainings to include shorter duration trainings and refresher courses.
 65. In the same Districts, one CEW will be recruited in each of 6 Communes per District (on average). The CEW will be a local resident with suitable capacity working under contract to the Commune Council and with coordination and technical support from DAO. The CEW role will build upon the experience of previous IFAD projects but the emphasis will shift from implementation of project activities to a less intense but potentially longer-term role of facilitating information sharing. ASPIRE will fund the costs of training and equipping the CEW and will pay salary and operational expenses for three years. After three years, the Commune Council will have the option of continuing to employ a CEW, financed through the Commune Budget with a subsidy from ASPIRE, under a performance agreement between the Commune and PDA. The CEW job description will provide support to the Commune Council in all agriculture-related activities and in particular will facilitate the development and strengthening of a local farmer-to-farmer learning network.
 66. **The Farmer to Farmer Learning Network** will sustain and build upon the results of farmer training (provided by Public Sector Delivery, Public Private Partnership or Contracting Out models, or otherwise) by creating and supporting an environment in which available knowledge is more effectively shared within local communities between farmers and other actors including farmer cooperatives and organisations, local extension agents, local traders (input sellers and produce buyers), local agriculture linked enterprises and the local administration; as well as knowledge sharing between communities. Shared knowledge may include information about agriculture inputs, market opportunities, new techniques, established good farming practice and weather / climate related information and opportunities to participate in extension activities. Knowledge shared may be knowledge that some community members possess already, but it can also include knowledge from outside sources that may not be equally easy for all community members to access. These outside sources may include the Internet and broadcast as well as advice from the District Agriculture Office, agriculture support NGOs, private sector input supply firms and produce purchasers.
 67. The key strategies for Farmer to Farmer Learning will comprise (1) development and strengthening of local networks; (2) support to farmer cooperatives and organisations; (3) organisation of local events such as agriculture fairs, competitions, cross-visits and locally organised demonstration and learning activities; and (4) improving access to electronic and broadcast media information through extension agents acting as local intermediaries.
 68. CEW will be equipped with mobile devices and will be specifically trained to access and disseminate information from the Extension Portal as well as to assist farmers to learn from broadcast extension materials.
 69. **Contracting Out Model:** In the Contracting Out model, PDA will contract specialist service providers who may be firms or NGOs with proven capacity, to implement extension activities. The cost per farmer trained is likely to be higher than for the public sector delivery model. Contracting out of extension services may be justified where (1) the services require specialist skills that the PDA and DAO do not possess; (2) the service does not displace any actual or potential private sector provision; (3) contracting out increases the total number of farmers that can be supported (i.e. the constraint is the staff capacity of PDA) or (4) the contracting out arrangement will result in increased long-term capacity for PDA. Each PDA will be required to allocate at least 20% of the GESS to contracted-out activities in the first two years of the PSP.

70. The contracting out model may be used to provide specialist types of training (for example, financial literacy) or to demonstrate innovative approaches to extension service provision (for example, strengthening farmer-to-farmer learning). The model could also be used to target groups with special needs, for example poor households with new access to land in the commune social land concessions. In appropriate circumstances, the contracting out model could be used to support extension activities by farmer organisations or cooperatives.
71. For planning purposes, it is assumed that each pilot Province will tender one contract to provide extension services, of comparable scope to the SLG training programme, to 4,000 farmers during Phase 1 and Phase 2 of ASPIRE (i.e. 20,000 farmers reached through this model in the pilot provinces). The contract should be structured to reward results achieved and PDA will monitor the contractor performance. The possibility of combining capacity development and cross-learning for PDA staff with the extension service contracts will be examined.
72. Once the extension service quality assurance function is operating (see the Quality Assurance activities under Component 2), certification will be a requirement for service providers to be contracted under the Contracting Out model.
73. **Public-Private Partnerships:** Public Private Partnerships (PPP) can include a variety of arrangements in which public funds are used to encourage private sector firms or farmer cooperatives to invest in delivering extension services, with the long term aim that the arrangement becomes self-financing. The key feature is that the service provider expects to gain a commercial benefit from improved farmer knowledge, hence the arrangement has the potential to become self-sustaining. PPP usually complement the achievement of public sector strategies and provide an opportunity to increase the efficiency of public extension funds. PPP are suited to target smallholders with strong links to the market and in areas of significant commercial potential. Nevertheless, the experience with the iDE Farm Business Adviser scheme is that a high proportion (around 50%) of the FBA clients are classed as poor under the ID-Poor survey. Therefore PPP is considered as an appropriate means of benefitting the ASPIRE target group of smallholders and poor farmers with productive potential.
74. ASPIRE will support three types of public-private partnership (PPP) as follows: (i) the service provider provides direct training to farmers with public facilitation and support; (ii) the service provider works with the PDA to train input sellers to pass extension messages to farmers, and (iii) support to a social enterprise or farmer organisation with a self-financing business plan.
75. In the first two models public funds are used to lower the entry cost for the company to a point where they will invest. Examples of such public expenditure to support private involvement are facilitation, selection of target groups/places, the running costs of workshops and trainings and development of training materials. The private partner will usually finance the provision of staff for undertaking the trainings, and demonstration inputs.
76. The third PPP model (social enterprise) leverages NGO funds. In this model, project funds will be used to finance the establishment costs for social enterprises to expand established activities into programme provinces. Examples of social enterprises with existing business models that could be suitable are the Svay Rieng CEW Association; the AVSF Village Animal Health Workers, the iDE Farm Business Advisors and the CEDAC Key Farmers schemes. Well established farmer organisations or cooperatives could also qualify for this approach. After establishment, these social enterprise service providers will be expected to begin covering their own costs within a limited time.
77. There are some important principles to be considered before establishing private public partnerships :
 - (a) The relationship is a partnership, not a service contract. A joint development objective must exist to produce a Win – Win for both public and private partners;

- (b) At least 50% of the cost of a Public-Private Partnership extension activity must be paid by the private partner;
 - (c) Targets, activities, standards, obligations, and monitoring should be clearly defined in agreement;
 - (d) The agreement must state how poor and vulnerable smallholder farmers will benefit from the partnership;
 - (e) The support provided under the agreement should be for a limited time with the expectation that the private partners will continue thereafter without further support;
 - (f) Private partners must have good corporate standards; and
 - (g) Where the private partner is a firm, other firms in the same business must also have an opportunity to participate. For example, if there are two major input sellers with the capacity to provide technical support to farmers, they must both be invited to participate.
78. ASPIRE will work with companies and social enterprises, particularly those that have previous experience with PPP extension activities⁵⁷ to identify the most appropriate opportunities for PPP arrangements in the ASPIRE pilot provinces. The companies / social enterprises will then work with the PDA in each province to plan the details of the arrangements. Provincial level costs to support PPP will be financed from the Grants while national level costs will be included in Provincial Sub-Programme coordination and support costs (below). Each Province will be required to engage in at least one PPP arrangement with at least 1000 farmers as the ultimate beneficiaries during the first two years of the PSP.
79. **Coordination and Support:** GDA and DAHP will provide coordination, monitoring and support to Provincial Sub-Programmes. Including (1) organising national forums on specific technical topics; (2) training of trainers; (3) participation and support to preparation of the Provincial Agriculture Strategies; (4) monitoring of service delivery and (5) expert support to develop solutions to specific technical problems identified at local level or through the Extension Portal.
80. **Commodity Analyses:** Sub-Component 3.1 includes funding for MAFF-GDA to commission technical and market studies of selected commodities grown by, or that could potentially be introduced to, Cambodian smallholders. The primary purpose of the commodity analyses is to assist GDA to provide sound and up-to-date advice to PDA in preparation of the Provincial Agriculture Strategic Plan.
81. In addition to the GESS, Sub-Component 3.1 finances (1) the costs of motorcycles and smartphones for CEW; (2) equipment for PDA and (3) technical assistance for PDA consisting of one management adviser, one M&E / MIS adviser and one finance and procurement adviser in each Province.

Sub-Component 3.2: Innovations for Climate Resilient Agriculture

82. The purpose of Sub-Component 3.2 is to support demonstration and testing under smallholder farm conditions of promising technologies for climate resilient agriculture. Suitable technologies may include, but will not necessarily be limited to, improved on-farm water management, adjustments to the cropping calendar particularly including introduction of early wet season rice or other crops, introduction of climate resilient varieties, introduction of new crops with a potential to improve climate resilience.
83. The Extension and Research Advisory Board will have the task of identifying and screening candidate technologies through discussion with research agencies including CARDI, universities and non-governmental agencies. Once a technology has been selected by the ERAB, ASPIRE Secretariat will work with the agency responsible for the innovation to develop

⁵⁷ This will include companies working in partnership with GIZ-Green Belt and CAVAC projects – see Working Paper #5.

a testing program. All tests will be carried out in a participatory manner “on-farm” in the ASPIRE provinces; i.e. research station based testing is not eligible.

84. Each testing program will include a knowledge development and communication plan to disseminate the results and mainstream the successful innovations through a review by the extension hub and inclusion of the results in new extension materials. Innovations can also be used as new evidence for the review of existing policies.

Sub-Component 3.3: Mass Media Campaign

85. ASPIRE will finance a mass media campaign with the objective of bringing extension messages and information about extension events and activities to a broad rural audience. The mass media campaign will include climate change awareness and will promote climate smart agriculture. Activities will include: (i) radio broadcasts: six annual seasons of 30 weekly programmes each from 2016 to 2021; (ii) an educational television show with an entertaining, competition-based format. ASPIRE will finance production and broadcasting six annual seasons (2016 – 2021) of twenty-four weekly programmes, each programme being broadcast two times; and (iii) a mobile feedback show engaging farmers in discussion about the programmes. The IFAD loan and grant proceeds plus RGC contributions will finance three seasons of the radio broadcasts and two seasons of television broadcasts, while additional financing, perhaps including an element of commercial financing, will be sought to continue the campaign through to 2021. The farmer to farmer learning activities will build upon and enhance the effectiveness of the mass media campaign through ensuring further dissemination, discussion and understanding of mass media messages at the local level. All broadcast materials will also be available via the extension portal.
86. Both the television and radio shows will be recorded in ASPIRE target communities with the participation of local farmers and programme staff (PDA/DAO/CEW). A mobile radio show and a popular TV show (the Elite Farmer) will travel to specific programme locations, covering the 30 districts of ASPIRE at commune level. Both media programmes relay key messages and help distribute materials produced by the Extension Hub. Each show requires the active participation of the programme staff (PDA/DOA/CEW).
87. The radio show (Farmer's Questions) will direct distribution of messages (leaflets, posters, banners) with programme branded visibility items. It also brings a panel of experts directly to the field level and responds to questions asked by the farmers. During this outreach a radio show is recorded, and subsequently aired weekly on national radio along as on local radios reaching the programme areas.
88. The TV show recording will follow (by a few weeks) the radio show in each location, assuring a repetition and a frequency in the delivery of messages and program promotion. Aired at national level on a popular station, this national competition show (working title: The Elite Farmer) will challenge farmers to grow out of poverty, by relying on the models of change promoted by IFAD projects.
89. A specially trained mobile unit will carry out showings and distribution of promotional materials and conduct Q&A in the villages and communities surrounding the farmers being filmed. This will help to bring a normalizing impact of the show at local level. The team will also conduct qualitative feedback assessments and help to identify new service providers and innovative ideas that they will collect during research activities. This will feed back directly into the production of the show. The combination of these evaluation reports will be used to develop a Knowledge Attitudes and Practices Report to guide the show content and future communication efforts. This feedback team will also support the work of the Extension Hub to test print and video media materials, and to identify new needs where they arise.

D. Component 4 Description: Infrastructure Supporting Climate Resilient Agriculture

90. Component 4 contributes to the outcome of improved and resilient farm businesses by addressing the need for resilient and climate adaptive infrastructure to support smallholder production in the Districts identified as most vulnerable to climate change. Approximately 50,000 vulnerable smallholder households will benefit, of whom about half will also be participants in extension activities under Component 3.

OUTCOME 3: At least 100,000 smallholders have improved and resilient farm businesses as a result of integrated, demand led extension services and investments in climate resilient infrastructure.

PHASE 1	PHASE 2	PHASE 3
<ul style="list-style-type: none"> 16 Districts prepare District Climate Resilience Strategies (34 by Phase 2) First 8 Districts achieve minimum conditions to receive Performance Based Climate Resilience Grants (34 by Phase 2) 	<ul style="list-style-type: none"> At least 70 Communes implement climate resilient infrastructure sub-projects At least 24 Districts achieve performance criteria for annual PBCRG increase 	<ul style="list-style-type: none"> 34⁵⁸ Districts qualify for Specific Investment Climate Resilience Grants 70,000⁵⁹ smallholder farm businesses benefitting from access to climate resilient infrastructure.

91. ASPIRE will provide grants to selected local administrations at District and Commune levels to finance investments within the mandate of the local administrations and consistent with the Cambodia Climate Change Strategy (CCCS) comprising (1) the costs of climate proofing local infrastructure with a role in agriculture production; and (2) the costs of constructing local infrastructure that contributes directly to increasing the climate resilience of local agricultural communities.
92. In drought-prone areas, investments are likely to be predominantly in canal irrigation and in small, multi-purpose reservoirs. In flood-prone areas, investments in drainage and flood protection structures (including refuge mounds which can be used to keep livestock safe during a flood) are likely to be important. Elevated roads in flood-prone areas will also be eligible provided that there is a clear link to agriculture production. The table below shows the range of investment types financed by a pilot project implemented by NCDD-S⁶⁰.

Type	Projects	PBCRG Finance	
		Amount	%
Canal Irrigation	21	\$ 142,106	29%
Small Reservoirs	7	\$ 58,129	12%
Drainage	9	\$ 54,847	11%
Flood Protection	4	\$ 33,169	7%
Roads	31	\$ 195,977	40%

⁵⁸ The IFAD loan and grant financing and RGC contributions will finance implementation of Component 4 in 24 Districts within the five ASPIRE pilot provinces and the five PADEE provinces. The intention is to mobilize additional financing for 10 additional Districts in 3 additional Provinces.

⁵⁹ The outreach target for 24 Districts in 10 Provinces is 50,000.

⁶⁰ The Local Governments for Climate Change (LGCC) project was financed by Cambodia Climate Change Alliance Trust Fund in 2011 and by SIDA in 2012-13 together with UNCDF and was implemented in 7 Districts and one Municipality in Takeo and Battambang provinces. LGCC eligibility criteria do not specifically include a link to agriculture production.

93. Assuming a similar mix of project types to those selected under LGCC, it is estimated that about 70,000⁶¹ smallholder households will benefit from the infrastructure projects. Roughly half of these households will be beneficiaries of the extension services (Component 3). ASPIRE will seek ways to maximise the synergy between the infrastructure and extension service investments without compromising the discretion of the District Administrations (for infrastructure) and the PDA (for extension) to select the highest value investments.
94. Component 4 will support two financing instruments: (1) a Performance Based Climate Resilience Grant (PBCRG) which will be an annual allocation to each participating District and will be composed of a basic formula-based element and a performance-based element; and (2) a Specific Investment Climate Resilience Grant (SICRG) suitable for financing of larger sub-projects. It is envisaged that each participating District will receive three annual allocations of PBCRG and will become eligible for one SICRG based on demonstrated performance in implementing PBCRG financed activities.
95. The PBCRG will not pay the full cost of constructing infrastructure, but only the cost of climate proofing (i.e. the incremental cost due to climate change), taken, as a proxy estimate, to mean one-third of the total investment cost. Therefore the PBCRG will be used for co-financing together with other resources available to the sub-national administrations, primarily the Commune/Sangkat Fund and the District/Municipal Fund. This arrangement has been piloted successfully under the LGCC project.
96. Because of the larger size of the investments to be financed by the SICRG, it is likely that co-financing at the same ratio will not be possible (i.e. the SNA do not have co-financing resources available at this scale). Therefore it is likely that the SICRG will be eligible to finance full construction costs, but with a stronger test of contribution to climate resilience applied. SICRG will not be disbursed before 2019 at earliest so this issue will be reviewed during ASPIRE Mid-Term Review.
97. It is envisaged that 34 Districts within the ASPIRE provinces will be identified as having high levels of climate vulnerability and will be selected for participation in the Component 4. These will comprise 12 Districts in the initial five pilot Provinces, 12 Districts in the identified five expansion provinces (i.e. the PADEE provinces) and a further 10 Districts in three additional provinces, contingent on mobilisation of additional funds. Selection of the participating Districts will be integrated with preparation of the Provincial Agriculture Strategic Plan.
98. Each participating District (with the full participation of the Commune Councils) will develop a District Climate Resilience Strategy integrated with the District Development Plan. The District Climate Resilience Strategy will be based on community participatory Vulnerability Reduction Analysis (VRA) and on science-based climate change scenarios and will identify key impacts of climate change, vulnerable locations and communities, potential adaptive actions and criteria for prioritising investments. VRA will be integrated with the Farmer Needs Assessment in the climate-vulnerable Districts. The District Climate Resilience Strategy will be approved by the District Council.
99. The PBCRG is a grant to the District. Commune Councils will identify and propose investments from within their Commune Development Plans and Commune Investment Programmes. The highest priority proposals will be selected by a joint meeting of the District and the Communes. Therefore, in each year, a number of Communes within the District will receive allocations of the Grant and will implement sub-projects, with co-financing from their Commune/Sangkat Fund allocations. SICRG sub-projects will be implemented directly by the District Administration. The District Administration will be responsible to monitor and report on the use of funds at both Commune and District levels.

⁶¹ IE based on implementation in 34 Districts – see previous footnotes. Assuming costs of \$500 per household for irrigation, \$50 per household for roads and \$100 per household for other types.

100. Infrastructure will be designed and constructed in conformance with the NCDD-S Technical Manual and template designs which are applied to Commune/Sangkat Fund investments. It is understood that NCDD-S intend to apply part of the proceeds of financing from the ADB Special Program for Climate Resilience (SPCR) program to developing specific technical standards for climate proofing of infrastructure in vulnerable areas. Design and construction supervision will be by engineers contracted to the District but with national and provincial level participation in recruitment. NCDD-S will employ a full time national infrastructure adviser who will review the designs and intervene to improve designs where necessary. A Technical Audit of infrastructure constructed in 2016 and 2017 will be carried out in time for the ASPIRE Mid-term Review.
101. A commitment to maintain the completed investments will be a condition for eligibility of the investments. For roads and other purely public infrastructure the body responsible for maintenance will usually be the Commune Council that implements the investment. Maintenance of irrigation infrastructure should be financed from the value of the additional production. Maintenance responsibility is assigned to a Farmer Water User Community which collects water fees. However, experience in Cambodia is that FWUC are typically weak and find it difficult to collect fees at an adequate level. ASPIRE will encourage the formation of PPP arrangements in which a private provider partners with the FWUC to operate the scheme, collect fees and maintain the infrastructure. This arrangement is most feasible on pumped-intake schemes providing dry season irrigation and is less likely to succeed in a gravity-flow and/or wet season supplementary irrigation context. Adequate maintenance of existing infrastructure will be assessed in the performance assessments and Districts will need to demonstrate adequate performance in this respect in order to qualify for the SICR grant.
102. NCDD-S will be the grant awarding body and ASPIRE will support necessary administration and technical assistance costs. Administration and technical assistance to the CRIF will be integrated with the implementation arrangements of the National Programme for Sub-National Democratic Development (NP-SNDD). Through its three-year, multi-donor financing and implementation plan known as IP3, the NP-SNDD provides capacity development support to sub-national administrations through a technical advisory team that includes a Provincial Finance Adviser, a Provincial Infrastructure Adviser and District Advisers. This capacity support will assist the Districts to achieve the performance levels required to access the climate resilient infrastructure financing.
103. NCDD-S will conduct an annual Performance Assessment which will (1) confirm that participating Districts meet the Minimum Conditions for access to grants and (2) assess performance against a set of Performance Measures which will determine the size of the Performance Allocation in the subsequent year.
104. Component 4 supports technical assistance, equipment and operations costs at NCDD-S and Provincial level. The technical assistance team will consist of one national infrastructure adviser and one national climate change adaptation adviser at national level who will be supported by an international engineer who will work for three months in the first year and then two months per year subsequently. NCDD-S will also employ a Finance Assistant to support financial management of Component 4. At Provincial level there will be a Provincial Coordinator to support implementation in each Province.

Appendix 5: Institutional aspects and implementation arrangements

A. Approach

1. The implementation arrangements are designed to achieve the complementary institutional objectives of i) demonstrating an enhanced Cambodian model for agricultural services, and ii) deepening the practice of programme budgeting (PB) within MAFF.
2. Programme Budgeting in MAFF is evolving quickly. Since 2007, MAFF has been one of eight Ministries piloting programme budgeting under the Public Finance Management Reform Programme (PFMRP). In 2013, PB accounted for about 15% of total budget appropriations of MAFF. From 2015 onwards, RGC intends that PB should account for 100% of budget appropriations in MAFF (and the other PB pilot ministries). In preparation for this in 2014 MAFF has established multiple Budget Entities within the Ministry to facilitate better PB management. Consequently, ASPIRE's first year of operation (2015) is expected to coincide with the first year of full PB in MAFF which may bring a period of substantial change in MAFF, especially in terms of planning, resource allocation and financial management. Thus there is expected to be a significant and unavoidable level of uncertainty related to PB practices in MAFF in the run up to, and during, the initial period of ASPIRE implementation.
3. A Phased approach to alignment of ASPIRE management with MAFF PB will be used in order to reduce the risks that ASPIRE disrupts the rollout of full PB in MAFF or conversely that the rollout of full PB in MAFF has a negative impact on the initial ASPIRE implementation.
4. A key challenge confirmed with MEF and MAFF during the design process was to be able to ensure that IFAD's commitment to flexible, results-based programming of resources at Provincial level can be maintained within the Programme Budget framework. Accordingly, it has been agreed that ASPIRE implementation will align with the existing five Programs of MAFF planned for implementation from 2015 onwards but with the creation on a pilot basis of additional sub-programmes under MAFF Programme 1 managed by the PDA in each Province supported by ASPIRE as provincial sub-programmes. The Provincial Sub-programmes will each follow a similar phased approach, moving from an initial "Foundation" phase through a second "Proving" phase and finally to a third "Scaling-up" phase. Importantly, each province will progress at its own pace through the three phases based on its actual performance and proven capacity to operate at the higher levels required for subsequent phases. While similar in concept, progress of the overall ASPIRE project management to subsequent phases at the national level will not be a determinant of the progress of individual provinces through to their own subsequent higher phases and vice versa. The phased approach for the provincial programmes is described in detail in Appendix 4 and so is not described further here.
5. There is recognition within the senior management responsible for the wider PB role out in MAFF of the substantial challenges they face to ensure the roll-out is successful and to build sufficient capacity related to performance-based programme planning, budgeting and delivery across the ministry. Consequently, ASPIRE's approach will also be to provide direct support to the wider roll-out of PB in MAFF, primarily through technical assistance and capacity building of key departments and staff at the central MAFF level, in addition to the activities concerning agricultural extension in Component 1 and 2 and the Provincial sub-programmes under Component 3. In this respect, the ASPIRE team will coordinate closely with the recently initiated EU project concerning fisheries and livestock that will seek to provide similar PB-related capacity strengthening within the forestry and fisheries administrations of MAFF. This is intended to help accelerate the maturity of PB in MAFF and thereby facilitate the readiness of MAFF to be able to progress ASPIRE to Phase 2 and beyond. ASPIRE is designed to progressively introduce a more programmatic approach to extension services. For this reason, it may be appropriate to adjust the implementation arrangements, for example by integrating

management of ASPIRE more closely with the Programme Budget management arrangements, during the course of implementation.

B. Organizational framework

6. Implementation of ASPIRE will be overseen by a **Steering Committee (SC)** co-chaired at Secretary of State level by MEF and MAFF, and with representation from CARD, SNEC, NCDD and Ministry of Environment (MoE) as well as participating provinces together with a limited number of representatives of development partners, civil society (farmer organisation) and the private sector who will be appointed for not less than one year. The SC may invite additional resource persons/agencies to discuss specific agenda items as and when required. For effective work and decision making the total membership of the Steering Committee should not exceed 20 persons.
7. **MEF** is the official Representative the Kingdom of Cambodia as the Borrower/ Recipient. In this role MEF will be responsible for: (i) Providing inter-agency coordination when required; (ii) Fulfilling the government fiduciary oversight and management responsibilities; (iii) Providing sufficient counterpart contribution in a timely manner to finance the Project activities, including payment of government staff salaries; (iv) Timely processing of WAs, approval of procurement actions and other necessary documents according to the SOP.
8. Without duplicating the function of the ASPIRE Secretariat, the Office for Multilateral Cooperation II (OMCII)/Department of Cooperation and Debt Management (DCDM)/General Department of Budget (GDB)/MEF will support ASPIRE Steering Committee specifically for coordinating and following up meetings and overall administration tasks while DCDM and Department of Budget (DB) of the GDB/MEF will follow up and monitor the implementation of Programme Budget.
9. **MAFF will be the Executing Agency** and take responsibility for overall programme delivery and achievement of programme results. MAFF will assign programme management responsibility to a dedicated ASPIRE Secretariat to be established within MAFF that will report to the Programme Director. The Secretariat will comprise:
 - (a) a Secretariat Support Team (SST) of contracted staff that will be primarily focused on programme management aspects of the ASPIRE programme itself, and,
 - (b) a Decentralized Advisory Team (DAT) that will be primarily focused on capacity building of central and provincial departments of MAFF related to performance based programme budgeting and management, agriculture and extension related issues under Components 2 and 3 and policy research under Component 1.
10. ASPIRE will be led by the MAFF Secretary of State, also responsible for PADEE, who will be appointed as the **ASPIRE Programme Director** and head of the Secretariat. This will ensure good coordination between ASPIRE and PADEE, including the integration of the PADEE provinces into ASPIRE from 2019 onwards. The Programme Director will be supported by two **Programme Managers** within MAFF (responsible for (a) Extension, technology and research, and (b) Programme Budgeting, respectively) and one Programme Manager within NCDD-S. The Programme Manager - Extension, Technology and Research will be the Director General of the General Directorate of Agriculture, MAFF. The Programme Manager - Programme Budgeting will be the Director of the Department of Planning and Statistics, MAFF. The programme leadership team will additionally include the Team Leader of the Decentralized Advisory Team who will act as the ASPIRE Programme Advisor.
11. MAFF agencies and line departments will undertake the majority of technical work at national and sub-national levels under Components 1, 2 and 3. The structure and contents of the MAFF programmes under PB is expected to evolve during the period of ASPIRE implementation as PB becomes increasingly mainstreamed into MAFF management practices. Therefore, with ASPIRE's increasing alignment with PB in MAFF, specific programme implementation

- responsibilities and roles in implementing activities and elements of ASPIRE within MAFF will also evolve during the course of programme implementation.
12. The mandate of **SNEC** is to provide policy advice to the senior leadership of RGC. SNEC consists of senior officials of MEF and other Ministries supported by a Secretariat. SNEC has a track record of achievement in developing policy for the agriculture sector. However its administrative capacity is limited and it lacks experience in conducting primary research. The role of SNEC in ASPIRE will add independent voice to the policy dialogue and link ASPIRE to senior policy-making levels of Government. SNEC participation in ASPIRE in turn will enhance the capacity of RGC to formulate policy in the agriculture sector.
 13. SNEC will play a strategic role in policy research and impact evaluation (Component 1). It will bear a main responsibility for feeding the policy process with quality evidence. Its role will be to research, analyse, propose and advise. As part of the Programme Steering Committee it will contribute to the definition of the extension policy agenda. As implementing agency, it will conduct or commission studies and impact evaluations related to the established policy agenda. Finally, it will have a major role in developing and nurturing agricultural and economic policy networks. To this effect, ASPIRE will support the establishment and operation of a dedicated small analytical unit within the SNEC Secretariat. The role of the Analytical Unit for the Agriculture Sector will be to play a strategic role in policy research and impact evaluation under Component 1 in order to feed the policy process with quality evidence.
 14. **NCDD-S** is responsible to oversee implementation of the National Programme for Sub-National Democratic Development and as such, has a relationship of coordination and support with sub-national administrations. The primary role of NCDD-S in ASPIRE will be implementation of Component 4 which scales up an existing pilot initiative of NCDD-S in local investments for climate resilience. NCDD-S will also assist in facilitating cooperation with Provincial and District administrations, particularly for planning purposes. The proposed co-financing of the CEW position through the Commune budget would require the facilitation of NCDD-S. The NSDP foresees an increasing role for the sub-national administrations in the management of technical department staff (e.g. those of PDA and DAO) and, depending on how this develops, this could point to a role for these administrations in the human resources development activities of ASPIRE.
 15. The PDA will be the budget entity for the Provincial Sub-Programmes (PSP). PDA will be responsible for preparation of the annual budget for the PSP which will be consolidated into the ASPIRE AWPB. Under the PSP, PDA will allocate funds to support activities of DAO, contracting-out arrangements, public-private partnerships and CEW. PDA will be responsible for monitoring all PSP activities and will be accountable for results. This role will require a significant enhancement of the capacity of PDA which has traditionally been focussed on implementing activities and reporting quantities of output achieved.
 16. DOA is a sub-office of PDA with no independent plan or budget. Many DOA are weak with few effective staff and little equipment and no discretionary resources for operations. ASPIRE will build permanent capacity in DAO by making adequate staffing levels and clear, appropriate job descriptions a precondition for implementation of the District work plans. The intention is to phase ASPIRE in at a rate which does not exceed the capacity of PDA to assign staff to the DAO.
 17. The Provincial Administration is responsible for coordinating development activities in the Province and in particular for the Provincial Development Plan, into which the Provincial Agriculture Strategic Plan will be integrated. The Provincial Administration will play a direct role, on behalf of NCDD-S, in coordination of the Climate Resilient Infrastructure activities.
 18. The District Administration will participate in planning and coordinating the District Work Plans under the PSP and will implement Component 4 activities directly and in cooperation with the Commune Councils.

19. The Commune Council is the lowest tier of rural administration and routinely plays a significant role in grassroots planning and coordination of agriculture support activities. The Commune does not have an administrative staff so agriculture support is the responsibility of the First Deputy Commune Chief in his / her capacity as focal point for economic affairs. In ASPIRE, this role will be enhanced through the assistance of the CEW who will be contracted to the Commune Council. The Commune will assist in formation and coordination of Smallholder Learning Groups and the Farmer To Farmer Learning Network. CEW will participate in Vulnerability Reduction Analysis and preparation of the District Climate Resilience Strategy; identify and propose investments for climate resilience, participate in selecting the highest priority investments, and may implement sub-projects co-financed by their Commune/Sangkat Fund resources.
20. Specialist service providers will be contracted to carry out a range of functions within ASPIRE. These will include policy studies, development of training materials and delivery of trainings, and surveys for M&E at national level, and will include contracts for provision of extension services (Contracting Out model) at Provincial level. The Provincial Sub-Programmes will also include Public Private Partnership arrangements which may take a variety of contractual forms.
21. Government and non-government entities in the extension sub-sector will be eligible to apply for innovation grants under Sub-Component 3.2.

C. Partnerships

22. ASPIRE will take a participatory and inclusive approach to implementation and this will be reflected at all levels. Stakeholders from Government, private sector and civil society will be represented in the ASPIRE Secretariat and, more broadly, in the Extension Policy Forum and in the annual Extension Workshop and other events. There will be non-government representation on the Extension and Research Advisory Board. Stakeholders from all sectors will participate in farmer needs assessment and in planning at Province and District levels. The Farmer To Farmer Learning activities will develop local knowledge networks between stakeholders including farmer organisations, the private sector and civil society.
23. ASPIRE will develop strategic partnerships with other programmes supporting agriculture and climate change adaptation. These partnerships will involve strategic cooperation and in some cases may evolve into more formal arrangements. Exploratory discussions have taken place for cooperation and possibly co-financing or parallel financing of some activities with USAID and mutual cooperation between ASPIRE and the GEF-financed Resilient Livelihoods Programme under preparation by UNDP. The EU-financed programme in the Livestock and Fisheries sub-sectors has areas of mutual interest with ASPIRE. Through NCDD-S ASPIRE will benefit from cooperation with the National Programme for Sub-National Democratic Development including associated sub-national climate change adaptation financing.

Table: Summary of Important Partnership Opportunities			
Potential Partner or Programme	Description / Area of Activity	Time Frame	Potential Cooperation
USAID	HARVEST programme including extension and value chain activities	Current phase ends 2015.	Cooperation on extension policy, M&E strategy. Specific options for USAID financing of activities under Component 2.2 (Human resources for extension) through arrangements with a US university.
CAVAC (Australia)	Value chain project	Ends 2015	Knowledge sharing and lessons learned
EU	Fisheries and Livestock programme in MAFF		Cooperation in support of strategic budget planning in MAFF, extension on livestock
UNDP-GEF Resilient Livelihoods		2015 - 2019	Shared approach to climate resilient agriculture and productive infrastructure. Sharing of technical packages. Potentially, sharing of some TA resources.
NP-SNDD	Multi-donor support to decentralisation and sub-national capacity development through the "IP3" financing arrangements	Ongoing. New 3 year financing plan 2015-17	ASPIRE benefits from IP3 support to sub-national administration capacity. Cooperation with other CCA infrastructure funding instruments.
SNV	Expertise in extension and climate-smart agriculture. Implementing partner in PADEE	Long-term country presence	SNV expertise in extension and climate-smart agriculture of benefit to ASPIRE. SNV is an Implementing Partner in PADEE and is likely to provide TA to GDA under the GEF-RL project (see above).
FAO	Implementing partner in PADEE. Climate resilient agriculture activities	Long-term country presence	Knowledge sharing and specific cooperation

24. A specific opportunity has been identified for a Programme Implementing Partner to support technical assistance for capacity development, process facilitation, knowledge management and development of extension materials within ASPIRE Component 2. Such a partner would be an agency with specialist skills and demonstrated record of performance, that would also be able to mobilise a significant part of the costs as additional financing for ASPIRE. This idea will be developed further during the period up to negotiation of the programme financing.
25. IFAD is in discussion with RGC (MEF and MAFF) on options to finance specialist management technical assistance to support a rapid and efficient start-up of ASPIRE and to provide key management assistance to the ASPIRE Secretariat during the first year of implementation. The period for this support is anticipated to begin in the final quarter of 2014. One possible financing option would be to use uncommitted funds allocated to ongoing PADEE project, together with staff resources of the MAFF-PSU which will become free upon the closing of the RULIP project. Priority activities for this support would include (i) review and finalisation of the

Programme Implementation Manual; (ii) detailed guidelines and procedures for MAFF-ASPIRE Performance Based Rewards scheme for government staff working on ASPIRE; and (iii) Updated job descriptions for PDA, DOA and CEW teams.

26. Partnership with the private sector will be developed mainly through the Public Private Partnership arrangements in Component 3.1 and through private sector participation in Extension Advisory Groups, the ERAB and the ASPIRE Steering Committee. ASPIRE will actively encourage private sector involvement in development of extension strategy and will seek opportunities to build new types of partnership with the private sector when these arise.

D. Implementation Phases

27. Implementation arrangements at the national level will evolve in three distinct Phases (1: Foundation, 2: Proving, 3: Scale Up) through the course of the project with the objective of gradually increasing alignment of ASPIRE activities within MAFF under the overall MAFF PB and strategic budget plan (SBP) framework. This phased approach to central implementation arrangements, with objective triggers and clear joint decision points (between RGC and IFAD) to transition from one phase to the next phase of implementation arrangements is highly appropriate given that results-based Programme Budgeting in MAFF is undergoing a period of rapid change as it moves from its small pilot stage to become the mainstream basis for resources allocation and delivery of strategy and policy from 2015 onwards.
28. However it is important to note that the phasing at the central level primarily relates to the implementation arrangements for ASPIRE at central MAFF level. The implementation arrangement phasing at the central MAFF level does not affect the investment activities to be carried out under Components 1-4. Consequently, release of IFAD funds through the course of ASPIRE implementation will NOT be subject to successful transition from Phase 1 to Phase 2 or on to Phase 3 for the central implementation arrangements. This de-linking of the central level implementation arrangements and the main investment activities will enable ASPIRE to pursue its two main institutional objectives of i) demonstrating an enhanced Cambodian model for agricultural services, and ii) deepening the practice of programme budgeting (PB) within MAFF, without the risk that delays in one will undermine progress in the other.
29. **Phase 1: "Foundation"** will focus on the establishment of the major elements of the programme at national and sub-national level within each of the four Components.
30. Phase 1 management by the ASPIRE Secretariat will be under the day-to-day guidance of the Programme Director. During this period the ASPIRE Secretariat will primarily function as a dedicated programme management unit attached to the Programme Director with a large majority of its management support focused on: i) overall ASPIRE programme management (via ASPIRE SST); ii) support to the PDAs leading the sub-national sub-programme pilots under Component 3 (via ASPIRE DAT); iii) support to the central departments and units implementing activities under Components 1 and 2 (via ASPIRE DAT).
31. During Phase 1, the Secretariat will work closely with the lead departments under MAFF responsible for MAFF Programme Budgeting, namely the Department of Planning and Statistics and the Department of Finance and Accounting but will formerly remain a separate dedicated unit under the Programme Director.
32. Phase 1 investments will support MAFF PB in the forthcoming MAFF Strategic Budget Plan cycle (2015-17). The modalities for this in Phase 1 will be that, in addition to the inclusion of the 5 provincial sub-programmes within Programme 1 of the MAFF Strategic Budget Plan (SBP), ASPIRE activities will operate as complimentary parallel investments to aligned activities already within the MAFF SBP, especially under MAFF programmes related to agriculture, livestock and MAFF institutional development (SBP Programmes 1 2 and 5 respectively). During this period not all ASPIRE activities with MAFF are expected to fully align with activities under the SBP. However, MAFF's annual process of updating the SBP's sub-programmes and activities under the SBP (lead by DPS and DFA), will provide the opportunity to update the

- design and plans for the relevant MAFF SBP sub-programmes to gradually increase alignment, where such opportunities arise. The aim, will then be to have a more substantive alignment between ASPIRE's MAFF-based activities and the MAFF SBP for the following SBP cycle (2018-20), with ASPIRE moving to its Phase 2 implementation modalities at the Secretariat level (subject to satisfactory capacity having been demonstrated in DPS and DFA to accommodate this). This greater alignment will necessarily be based on an updated and strengthened MAFF SBP for 2018-20
33. ASPIRE will, therefore, support DPS and DFA in the design and execution of the SBP development process in 2017. Phase 1 support to the wider MAFF PB management system will be guided by the ASPIRE Programme Manager - Programme Budgeting and is expected to address selected issues, including:
- (a) facilitating the annual review and rationalization by MAFF of the structure and content of the various sub-programmes related to extension, technology transfer and research, PB capacity, and
 - (b) further refining the systems and practice for linking national and sub-national investment within the MAFF PB system,
 - (c) support to capacity building activities by DPS and DFA for other MAFF teams at central and provincial level,
 - (d) advanced professional capacity strengthening of DPS and DFA teams related to programme budgeting,
 - (e) assessing the feasibility of implementing improved IT systems to enable more efficient and strengthened PB processes.
34. In Phase 1, capacity building on PB for Provincial teams (including staff of the PDA, PA, DA and other relevant agencies) will cover all ten (10) pre-identified ASPIRE provinces - the initial five ASPIRE pilot provinces and the five current PADEE provinces. This capacity building will be structured and timed to ensure that the PADEE provinces have a high degree of PB readiness by the end of PADEE.
35. Transition of ASPIRE management arrangements to Phase 2 will be by agreement between RGC and IFAD triggered by verified satisfactory progress on the first 4 issues above.
36. **Phase 2: Proving** will focus on increasing convergence of ASPIRE investments and management with PB in MAFF and preparing the basis for future scaling up of programme-based investment in extension. Critical to this will be to build a solid evidence base for further development of policy and practice on extension and MAFF PB from both practice and research.
37. Phase 2 management will see the ASPIRE Secretariat become more closely integrated with DPS and DFA in MAFF, for example with the various units of the Secretariat Support Team embedded in DPS and DFA, as appropriate, in order that it can better contribute to deepening the practice of effective results-based programme budgeting within MAFF.
38. Phase 2 investments will continue ongoing implementation of the major investments at the national and sub-national level initiated in Phase 1. The scope of ASPIRE investments under the MAFF PB framework may also be extended to additional sub-programmes and activities within the clarified sub-programme structure relating to extension and MAFF PB capacity emerging during Phase 1.
39. Phase 2 will see increased support to the wider MAFF PB management with the ASPIRE Secretariat available to provide increasing levels of support to DPS, DFA, GDA and other line departments to strengthen PB planning and management practices.
40. Performance trigger to progress from Phase 2 to Phase 3 will be jointly agreed by IFAD and RGC at the start of Phase 2.

41. **Phase 3: Scale Up** will build on the proven investment approaches and PB practices that have been established in Phase 2 to expand the geographical coverage and scale of investments into the sub-sector using ASPIRE and RGC resources. Additional RGC and donor investments will be sought for further scale-up aligned to the programme based approach to extension proven during Phase 2.
42. Phase 3 management will continue to be closely aligned to MAFF PB processes as in Phase 2.
43. Phase 3 investments will, in addition to the continuation of Phase 2 investments aligned to PB, include the expansion of ASPIRE investment at sub-national level to additional provinces, including the PADEE provinces after PADEE completion in 2018.
44. **Non-PB Investments:** ASPIRE investments and management will increasingly converge with investments under the Program Budget of MAFF through the three Phases outlined above. However some activities under ASPIRE will initially remain outside of the MAFF PB framework, most notably: Climate Resilient Infrastructure investment under NCDDDS (Component 4); technical assistance to strengthen the capacity of PDAs and other programme implementing units within MAFF (Component 3); Innovation grants beyond the scope of MAFF PB programmes (Component 3), and; programme management, fiduciary, M&E and reporting requirements associated with IFAD supported projects (Secretariat).

E. Programme Leadership

45. The **Programme Director** will be the Secretary of State, MAFF (who is also responsible for PADEE) and will be accountable to the Programme Steering Committee for overall performance of the programme.
46. The **Programme Manager: - Extension, technology & research** will be the General Director, General Directorate of Agriculture, MAFF, who will be responsible to the Programme Director for the day to day leadership of all activities related to extension, technology and research under ASPIRE Components 1, 2 and 3 and accountable for the achievement of programme objectives and results in these areas. A primary responsibility will be to ensure the full support to ASPIRE from the implementing units within MAFF at national and sub national level engaged in the various ASPIRE activities and the increasing alignment of ASPIRE and PB programme design within MAFF PB Programmes.
47. The **Programme Manager: - Programme Budgeting** will be the Director, Department of Planning and Statistics (DPS) of MAFF who will be responsible to the Programme Director for the day to day leadership of all activities related to the support and alignment of ASPIRE to MAFF PB and accountable for the achievement of programme objectives and results in strengthening PB within MAFF. In addition, from Phase 2 onwards may oversee the ASPIRE programme planning, M&E and financial management arrangements.
48. The role of **Programme Manager: - Climate Resilient Infrastructure** will be assigned to a senior leader of NCDDDS and will be responsible to the Programme Director for the day to day leadership of all activities related to Component 4 (Climate Resilient Infrastructure) and accountable for the achievement of programme objectives and results in this area. The Programme Manager – Climate Resilient Infrastructure will also support and facilitate cooperation between ASPIRE and the National Programme for Sub-National Democratic Development, and between the Provincial sub-programmes and the sub-national administrations at Province, District and Commune levels.
49. The Team Leader of the Decentralized Advisory Team (see below) will also be a member of the ASPIRE programme leadership team.

F. ASPIRE Secretariat

50. The Secretariat will comprise:
- (a) a Secretariat Support Team of contracted staff which will primarily deal with the programme management and administration aspects of the ASPIRE programme and,
 - (b) a Decentralized Advisory Team that will be primarily focused on capacity building of central and provincial departments of MAFF, SNEC and other implementing agencies.
51. The size and composition of the ASPIRE Secretariat is expected to be adjusted from time to time to respond to the evolving requirements of programme coordination and support to implementing agencies and line departments within MAFF as the programme moves through the different implementation Phases. The initial composition of the ASPIRE Secretariat for Phase 1 is summarized below. All positions are fulltime with the exception of certain advisor post that may be short term or part time.
52. The core programme management functions of the Secretariat will initially be organized into a temporary **Secretariat Support Team** (SST) lead by an SST Manager reporting to the Programme Director. The SST will be staffed with professionally selected contract staff and will have an executive/operational role in programme management and administration.
53. In due course, it is envisaged that as ASPIRE moves to its Phase 2 implementation modalities - with a high degree of alignment between ASPIRE investment activities and the MAFF SBP investment programmes - the need for a separate SST will diminish and the functions of the SST will be absorbed within the respective teams in MAFF Department of Planning and Statistics (DPS) and the Department of Finance and Accounting (DFA).
54. Given the required close co-ordination and evolving roles among the Decentralized Advisory Team, the SST, DPS and DAF, the ASPIRE Secretariat should remain distinct from existing MAFF-PSU so that it can more closely align and work with DPS and DFA to support alignment of ASPIRE with the MAFF Programme Based Budgeting arrangements.
55. The **Decentralized Advisory Team** will operate as a coordinated team led by the Advisory Team Leader / ASPIRE Programme Advisor with a majority of its advisors out-posted with their counter-part departments at central and provincial level. The advisory team will be a temporary team that should not need to be maintained beyond the end of the ASPIRE programme once capacity has been strengthened in the various central and provincial departments.
56. The Decentralized Advisory Team will be clearly focused on capacity development at central and provincial levels and all Advisors will have clearly identified counterparts from MAFF (or other implementing partners) and capacity development plans with all counterparts to ensure readiness for phase out of TA before the end of programme in most provinces and departments.

G. ASPIRE team composition

57. In addition to the posts assigned to leaders and staff of MAFF, NCDDS, SNEC and other implementing agencies, ASPIRE will hire a number of additional dedicated posts as summarized below.

Management

58. The Programme Managers will be supported by full time Deputy Programme Managers. These positions will be professionally recruited contract post and include:
- (a) **Deputy Programme Manager - Extension, technology & research** responsible to the Programme Manager - Extension, technology and research for the day to day management and coordination of all activities in these areas;

- (b) **Deputy Programme Manager - Programme Budgeting** responsible to the Programme Manager - Programme Budget for the day to day management and coordination of all PB- related administration, planning, M&E and financial management activities.
- (c) **Secretariat Support Team Manager** will report directly to the Programme Director and be responsible for the day-to-day management of all aspects of the Secretariat Support Team

Secretariat Support Team

- 59. The SST will be managed on a day-to-day basis by the Secretariat Support Team Manager. All positions will be full-time professionally recruited contract posts unless indicated otherwise and will be organized into three units:
- 60. Planning, Monitoring and Evaluation (PME) Unit will consist of the following full-time posts:
 - (a) Programme Budgeting Officer
 - (b) Planning, M&E Officer
 - (c) MIS Officer
- 61. Finance and Procurement Unit will consist of the following full-time posts:
 - (a) Finance Manager
 - (b) Accountant
 - (c) Procurement Officer
 - (d) Cashier
- 62. Administrative and support staff will include the following full-time posts:
 - (a) Administration assistants x2
 - (b) Support Staff x2
 - (c) Drivers (as per vehicles)

Decentralized Advisory Team

- 63. The DAT will be led by the Advisory Team Leader / ASPIRE Programme Advisor and will consist of long term technical advisors working in MAFF, PDAs, SNEC and other implementing agencies. The DAT will also provide technical coordination and quality assurance for all short terms experts and TA contracted to the programme, including the selection of the experts, definition of the Terms of reference and monitoring of performance.
- 64. MAFF Central level advisors will include:
 - (a) Advisory Team Leader & ASPIRE Programme Advisor (international)
 - (b) Senior Advisor - Management (national - supporting PDAs)
 - (c) Senior Advisor - MIS & M&E (national - supporting PDAs)
 - (d) Senior Advisor - Financial & procurement (national - supporting PDAs)
 - (e) Senior Advisor - Programme Budgeting (national - attached to DPS)
 - (f) Senior Advisor - Programme Budgeting - Finance & accounting (national - attached to DFA)
- 65. MAFF Provincial level advisors will be contracted to the ASPIRE Secretariat and attached to each PDA to support the Provincial sub-programmes including:

- (a) Advisor - Management (national) x5 (one per provincial sub-programme)
 - (b) Advisor - MIS & M&E (national) x5 (one per provincial sub-programme)
 - (c) Advisor - Finance & procurement (national) x5 (one per provincial sub-programme)
66. SNEC central level advisors, to be out-posted to SNEC to support activities under Component 1 include:
- (a) International advisor - policy analysis (part time international) to work three months per year in the period 2015 to 2019 and one month each in 2020 and 2021,
 - (b) Advisor - policy research adviser (full time national)
 - (c) Advisor - agriculture (full time national)
67. Additional short term technical assistance and experts will be recruited as needed to support activities under the various components and will be coordinated by through the DAT. Several such assignments are already described in the detailed description of the Components in Appendix 4 and additional short term assignments are expected to be identified during programme implementation.

H. Implementation readiness

68. IFAD is in discussion with RGC to identify a means of financing specialist management technical assistance in the implementation readiness period, so as to achieve a rapid start-up. One option under discussion is to use uncommitted funds from the PADEE project to provide technical assistance through MAFF-PSU, also using staff resources that will become available on the closure of the RULIP project.
69. The objective of start-up technical assistance will be to establish implementation readiness of MAFF for ASPIRE, by building the necessary capacities, teams and work procedures and by nurturing country ownership at all levels.
70. Key targets for the implementation readiness phase are:
- (a) improved programme management and coordination capacity
 - (b) enhanced work programming, budgeting and monitoring methods
 - (c) compliance of financial management, procurement and contracting systems with required norms and standards
71. Documentary outputs will include:
- (a) approved ASPIRE Programme Implementation Manual
 - (b) detailed guidelines and procedures for MAFF-ASPIRE Performance Based Rewards scheme for government staff working on ASPIRE
 - (c) Updated job descriptions for PDA, DOA and CEW teams
72. **Main activities** in the implementation readiness phase will include:
73. Building the ASPIRE team
- (a) Recruitment: support MAFF to complete the professional selection and recruitment of competent individuals to the various TA and contract staff posts for ASPIRE outlined in the PDR.
 - (b) Leadership facilitation: facilitation of a process with the ASPIRE Director and Programme Managers to ensure strong common understanding, shared vision and ambition for the programme and highly effective working relationship around programme. It is expected that this may entail a series of facilitated discussions, "away days" etc. to deepen

understanding of programme, think through how they will lead the programme as a leadership team, likely challenges and how to work together to address them.

74. ASPIRE Programme Processes and Systems

- (a) ASPIRE Programme Implementation Manual review and finalization of PIM based on the draft already prepared by the design team,
- (b) ASPIRE workflow processes and procedures design and set-up,
- (c) ASPIRE financial management and procurement process design, documentation and set-up.

75. MAFF-ASPIRE Performance Based Reward Scheme for civil servants working on ASPIRE

- (a) MAFF-ASPIRE Performance Based Reward scheme design: in close consultation with MEF and MAFF, prepare detailed guidelines and procedures for the scheme in line with the principles agreed between RGC and IFAD summarized in the PDR (see annex),
- (b) Job audit and job descriptions: Coordinate the implementation of a process of job audits and simple job description preparation for all staff and posts at PDA, District Agriculture Office and commune/CEW (as a necessary pre-requisite of implementing the Performance Based Pay scheme),
- (c) Implementation and roll-out: Coordinate the introduction and operationalization of the Performance Based Reward scheme within the ASPIRE teams.

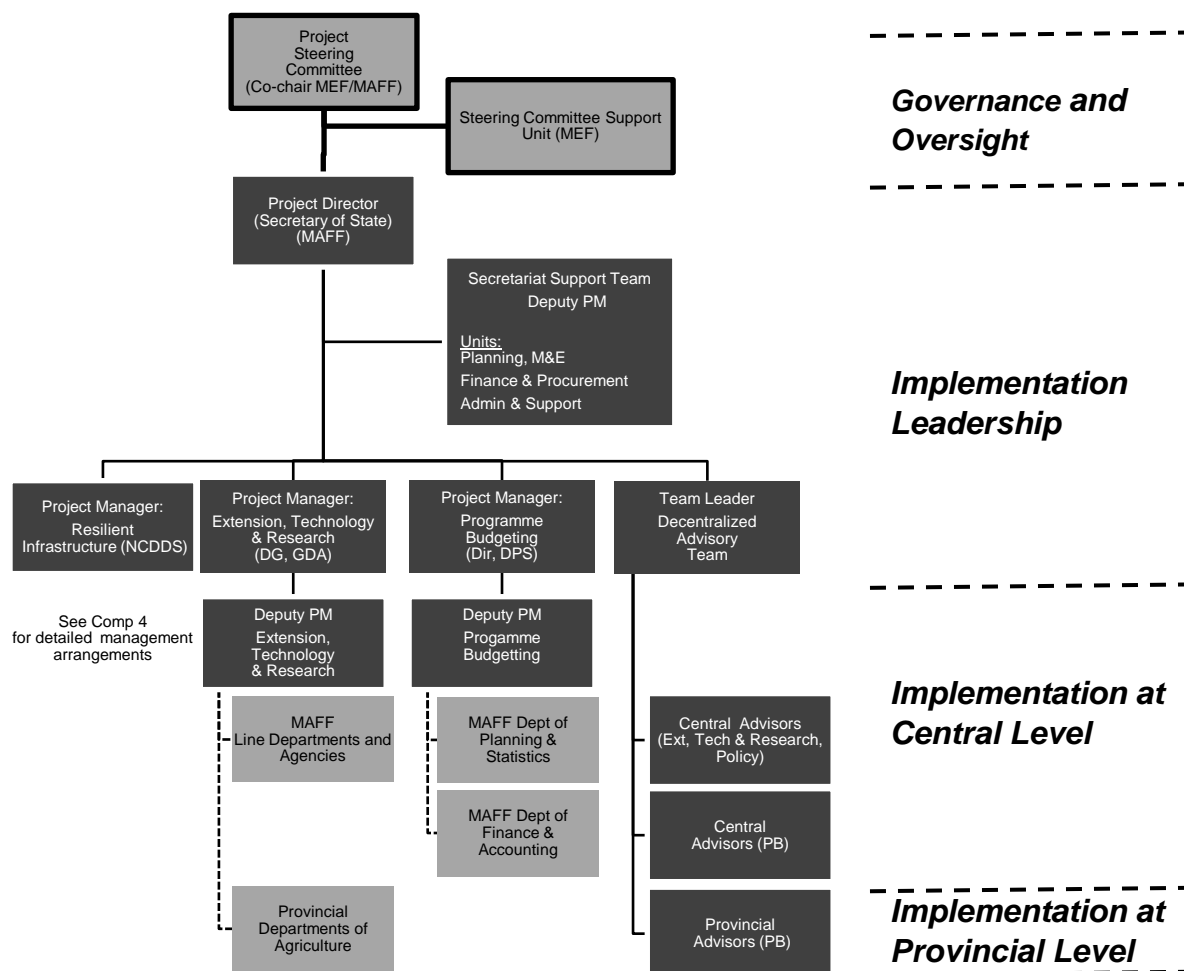
76. Programme Budgeting Processes and Systems

- (a) Programme budgeting (PB) and planning processes: in close collaboration with MAFF DPS, DFA and PDA teams, elaborate a detailed process for programme budget planning at the PDA level and how this interfaces with MAFF PB processes and regular sub-national planning processes at Provincial and District levels.
- (b) PB IT platform – feasibility, selection and introduction preparations:
 - (i) support DPS & DFA to define their requirements for an improved IT platform to underpin the PB roll-out and operation across MAFF, including workflow mapping for the relevant processes and activities,
 - (ii) review available IT solutions in terms of costs, functionality and fit with the identified requirements. Such systems may include Enterprise Resource Planning (ERP) or systems currently in use by other ministries in Cambodia, e.g. MoH,
 - (iii) make recommendations as to the most appropriate IT solution and design a dedicated sub-programme for the implementation of the recommended solution.

77. Other activities

- (a) Assist in preparation of partnership agreements with ASPIRE implementing partners,
- (b) Training, study tours and exposure activities as required in support of the above activities,
- (c) General facilitation during programme start-up.

Figure 1: ASPIRE Organisation Chart



Annex 1 of Appendix 5 : MAFF ASPIRE Performance Based Payment Scheme - Principals and Overview

Objectives and rational

- Objective of the scheme is to create a tool to more clearly link individual and team performance at each level to the delivery of ASPIRE (and MAFF PB) objectives and targets
- Approach is to introduce a performance-based mechanism for part of the pay of individuals and teams working on ASPIRE related activities where the level of performance incentives is linked to an verifiable assessment of actual performance

Oversight and funding

- Performance payments to be financed ONLY through the grant financing under ASPIRE
- Only one scheme will operate within ASPIRE at any time
- MEF will approve :
 1. the level of the ceiling for payments at different positions/levels
 2. the consolidated list of positions that will participate in the scheme
- MAFF Secretary of State responsible for the ASPIRE programme will approve the consolidated list of positions and staff participating in the scheme in each period
- Funds available for both individual and group schemes will be limited to those amounts approved by IFAD and RGC as part of ASPIRE programme financing.

Eligibility and scheme participation

- Eligible position will be limited to civil servants working on ASPIRE related activities at central, provincial or other levels
- Individual staff are only allowed to be on one performance/incentive scheme - even if they are participating as member of a group within the scheme. (no double funding)
- MAFF staff (in central Departments/Agencies, PDAs and lower levels) who have key roles in ASPIRE implementation in their unit/team *must* be included within the ASPIRE-financed performance based payment scheme to the exclusion of any other incentive scheme

Review and time limit

- The effectiveness of the scheme will be evaluated periodically during the course of ASPIRE and, subject to RGC approval, adjustments made if necessary to improve its functioning
- These procedures will be time-bound and funded solely through the ASPIRE programme and will expire at the latest at the end of the programme, currently December 2021.

Scheme operation (provisional, with details to be finalized in PIM)

- Detailed scheme operation arrangements and guidelines will be set-out in the Programme Implementation Manual.
- Performance targets for individuals and groups will be defined to ensure alignment with overall achievement of ASPIRE objectives
- Systems for measurement of performance will be objective and verifiable and designed to be practical and efficient to operate.
- ASPIRE Secretariat will conduct spot checks and verification of performance assessments
- It expected that performance assessment will not be more frequent that once per six months
- Scheme to include use of a two-tiered scheme for individuals and group-based performance based payment. It is expected that the group-based performance mechanism will be used with service delivery teams, such as for each DAO team.
- All incentivized posts will be verifiably based on performance (using pre-agreed performance targets, indicators and performance measurement).
- All position holders involved in the payment scheme will be civil servants and they will be paid directly into their bank accounts. All payments will be in line with MAFF payroll procedures.

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

A. Overview

1. Needs-based planning, data collection, measurement of results and knowledge management are integral to the design of ASPIRE. Service delivery will be planned based on an improved understanding of smallholder farmers' needs and market opportunities. Evidence of results from the application of different approaches to extension will determine the planning of future activities and the allocation of grant funds as well as forming the basis for policy development.

2. ASPIRE supports a reform process and each component will be implemented in stages, with activities and implementation arrangements differing somewhat in each stage. Transition between stages will be determined by the ASPIRE Steering Committee based on key progress markers in each Component. Therefore the timing of these transitions cannot be predicted with any certainty during programme design.

B. Planning

3. The purpose of planning within ASPIRE is not only to ensure an efficient allocation of programme resources but also to effect a sustainable improvement in the planning systems and capacity of the implementing agencies. In general, ASPIRE will work with the implementing agencies to increase the extent to which strategic and budget planning systems are evidence based, inclusive and results-focussed.

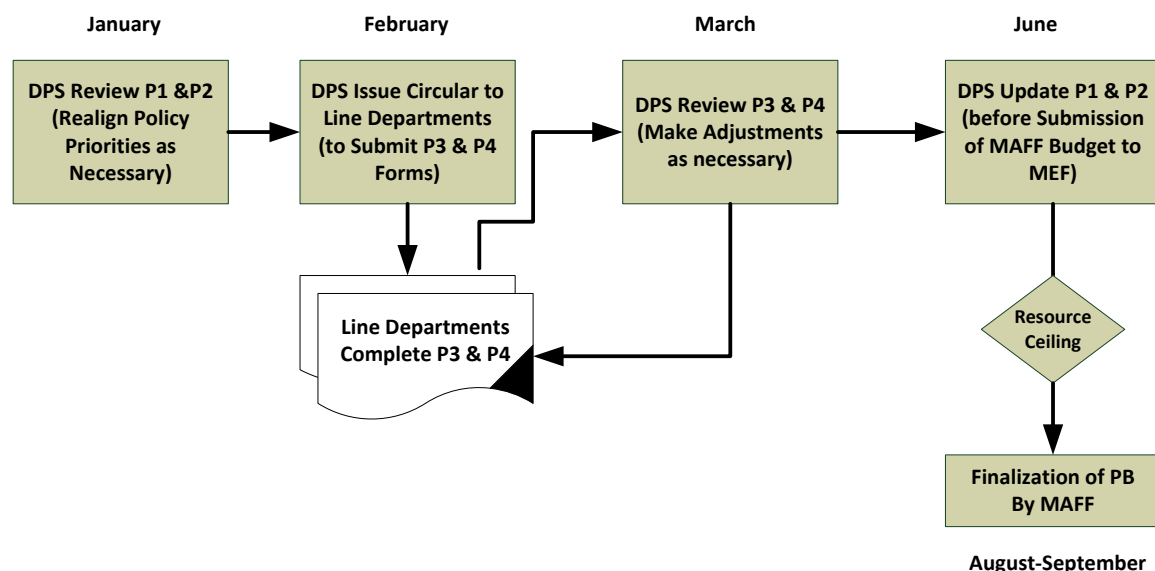
4. **Medium term planning** instruments, subject to annual review and update, that will be used to plan activities within the Components of ASPIRE include the MAFF Strategic Budget Plan, the Policy Agenda (Component 1), the Provincial Agriculture Strategic Plan and PDA Budget Plan at Provincial level (Component 3) and the District Climate Resilience Strategy (Component 4). Planning of ASPIRE activities at sub-national level will be integrated with the general development planning processes of the sub-national administrations.

Planning within the framework of the Program Budget

5. The key instrument for integrating planning within ASPIRE with the planning systems of MAFF is the Program Budget. The activities of ASPIRE will progressively be aligned with the Program Budget of MAFF, while ASPIRE seeks to make Program Budget increasingly results-orientated. Three stages of alignment are envisaged. In the first stage, roughly 2015 – 2016, ASPIRE will support selected existing activities within the Programme Budget (i.e. the ASPIRE results framework will in effect be cross-referenced to the Programme Budget), with the important modification of the creation of pilot Provincial sub-programmes in the five initial ASPIRE provinces. In the second stage, from approximately 2017, ASPIRE will assist MAFF to review the Strategic Budget Plan to introduce a stronger results focus and ASPIRE funding will be available for a greater part of the Programme Budget activities. The PDA will gain increased autonomy in planning and management of the Provincial Sub-Programmes, which will be extended to further provinces with ASPIRE support and potentially to additional Provinces with other funding. The final stage is envisaged as a fully programmatic approach that brings in additional funding partners and aligns ASPIRE support fully with the selected Programmes within the Programme Budget.

6. Therefore, the key planning instrument for the annual planning activities of ASPIRE is the MAFF Program Budget. The Programme Budget formulation process is overseen by the Department of Planning and Statistics (DPS) and consists of four steps associated with four forms (numbered P1 to P4). The process is described in Working Paper 2 and is summarised in the diagram below.

Programme Budget Formulation Process



7. For ASPIRE funded activities, the Program Budget will include a table showing the allocation of ASPIRE funds alongside the allocation of MAFF Program Budget funds for each activity.
8. Items identified in the Program Budget as financed by ASPIRE will then be consolidated into the ASPIRE Annual Work Plan and Budget in the usual way.

Non Programme Budget items

9. Some ASPIRE costs will remain outside the framework of the MAFF Programme Budget. These will include programme management, monitoring and evaluation costs within the ASPIRE Secretariat, costs of activities implemented by SNEC and Component 4 (Climate Resilient Infrastructure) costs. Other activities within MAFF that are essential to ASPIRE but that do not appear within the MAFF Strategic Budget Plan, may remain outside Programme Budget during the first phase of the programme.

Annual AWPB Approval Process

10. During the final quarter of each year, the ASPIRE Secretariat will prepare the AWPB for the following year. The AWPB will be prepared by consolidating (1) the ASPIRE activities within the MAFF Programme Budget including the Provincial Sub-Programmes; (2) non-Programme Budget operations of ASPIRE in MAFF; (3) the annual ASPIRE work plan of SNEC; (4) the annual ASPIRE work plan of NCDDS; and (5) the annual plan for the programme management operations of the Secretariat.
11. The AWPB will be submitted by the Programme Director through MEF and approved by the annual meeting of the ASPIRE Steering Committee (SC). Because of the risk of timing difficulties arising, the AWPB will be deemed approved if there is no comment by the members of the Steering Committee or no meeting is held after a lapse of time of two weeks after submission of the AWPB for review by the SC.

Planning in the Provincial Sub-Programmes

12. **Component 3: Provincial Sub-Programmes:** The key planning instruments for the Provincial Sub-Programmes will be an improved Provincial Agriculture Strategic Plan and the three-year rolling Budget Plan of the PDA. The Provincial Agriculture Strategic Plan will be developed by a Provincial Agriculture Working Group with representation from the Provincial Administration,

PDA and other relevant Provincial technical departments, the private sector and civil society. District priorities will be determined by a District Agriculture Working Group including the District Administration, the DAO, the Commune Councils, the private sector and civil society.

13. **Provincial Agriculture Strategic Plan:** The key improvements to the preparation of the five year Provincial Agriculture Strategic Plan in each Province will be:
 - (a) Preparation through a participatory process with public consultation meetings led by the Provincial Board of Governors;
 - (b) Use of available data on soils, climate (including climate change scenarios), current crop and livestock production patterns and trends and market opportunities;
 - (c) Participatory Farmer Needs Assessments carried out in selected representative communities and integrated with Vulnerability Reduction Analysis;
 - (d) A focus on strategic results relevant to improved profitability and resilience of smallholder farm businesses.
14. The Farmer Needs Assessment Team of the MAFF Extension Hub will provide technical assistance for preparation of the PASP and the District work plans. The roles of the Needs Assessment Team will include providing data collected from national surveys including the Major Impact Survey baseline, IVRP surveys etc as well as available data on soils (e.g. from Agro-Ecosystems Analysis), climate and markets, and technical and market information on specific commodities based on the Commodity Analysis studies undertaken by GDA.
15. The PASP will be prepared in the first year of ASPIRE operations in the start-up Provinces. At this stage it is unlikely that information from ASPIRE surveys will be available so the first iteration of the PASP will be based on existing knowledge, but will be annually reviewed and updated based on improved knowledge from surveys and results monitoring.
16. During the first year (2015) of ASPIRE operations, planning activities at Provincial level will include (1) preparation of the initial Provincial Agriculture Strategic Plan in five Provinces; (2) selection of 30 Districts in the five Provinces of which 15 will be target Districts starting in 2016 and the second group of 15 starting in 2017; (3) needs assessment and activity planning in the 15 first-round target Districts and (4) the ASPIRE Baseline Survey which will be conducted in the 30 target Districts.
17. The participatory Farmer Needs Assessment will be carried out in selected Districts each year and will be based on a simplified and updated version of the field level assessment in the current Agro-Ecosystems Analysis methodology. In Districts that are identified as vulnerable to climate change, the Farmer Needs Assessment will be integrated with Vulnerability Reduction Analysis, a participatory, gender-disaggregated tool for assessing community climate risks and adaptation measures that is already in use in a number of programmes in Cambodia.
18. The work plan in the 15 target Districts in 2016 will be based on a template. Each PDA will begin with an allocation of activities (about 30 Smallholder Learning Groups per District, some Public Private Partnership and contracted out activities, recruitment and training of CEW and establishment of the Farmer To Farmer learning systems. Through needs assessment and District level work planning, the PDA will allocate these activities to the most appropriate locations and determine the subject matter of trainings. Start of implementation in any District will be conditional on at least four permanent staff being assigned to the DAO and having comprehensive job descriptions including extension activities. This approach represents Phase 1 of Component 3 implementation. The rolling three-year budget plan for 2017-2019 will be developed in the first half of 2016 and will allocate indicative grant amounts for the three years to further activities in the initial target Districts and the work plan in the second round target Districts (Phase 2).

19. Provinces that meet performance targets for capacity development and Provincial Sub-Programme results (measured using the Provincial Performance Scorecard) will gain increased control over planning the use of ASPIRE resources in future years, so that from approximately 2018 the Provinces will gain the discretion to expand into additional Districts and / or to modify the implementation approach (Phase 3).
20. ASPIRE will expand into the PADEE target provinces with planning activities taking place in 2018 which is the final year of PADEE. The PADEE provinces will formulate Provincial Agriculture Development Strategies and consolidate ASPIRE activities in their three-year rolling Budget Plans. However, the details of the approach may be modified based on experience in the pilot Provinces as assessed at the ASPIRE Mid-Term Review.
21. **PDA Three Year Rolling Budget Plan:** The Three Year Rolling Budget Plan of PDA is updated annually in the second quarter of the year. At present this is a line-item budget for recurrent costs of the PDA and does not allocate resources to achieve results. With the creation of the Provincial Sub-Programmes, there will be a Programme Budget section added to the plan which will show the Provincial Sub-Programme Budget for the following year plus provisional planned activities for the two out-years. Each Province will receive an indication of the ASPIRE resources available to support activities in the Budget Plan, based on the PASP, during the following three years. The grant amounts received may be adjusted based on capacity development and performance indicators and will be confirmed in the final quarter of the year during the ASPIRE AWPB process. Integration of ASPIRE activities into the Provincial Sub-Program and rolling Budget Plans starting from 2016 for the pilot provinces will be a priority task of the ASPIRE start-up technical assistance.
22. **Sub-National Development Planning:** Each local administration at Provincial, District and Commune level prepares a five-year development plan and an investment programme (3 years rolling at Province/District level and annual at Commune level). Agriculture activities are integrated into the Commune Investment Programmes through the District Integration Workshop. Sectoral plans are included in the overall development plans at District and Province level. Therefore, the DAO and PDA submissions to the development plans and investment programmes will be based on the PASP.

Component 4: Climate Resilient Infrastructure

23. Planning of the Climate Resilient Infrastructure activities will be based on a District Climate Resilience Strategy (DCRS) which is integrated with the District development planning process. The DCRS has been piloted previously by NCDDS and combines the results of participatory Vulnerability Reduction Analysis (VRA) with science-based climate change scenarios. The DCRS is prepared with the participation of the Communes in the District and is approved by the District Council. The DCRS identifies key climate change impacts and vulnerable communities and locations; identifies priority activities to build climate resilience and sets criteria for selecting and prioritising investments for climate change adaptation.
24. Communes will propose infrastructure projects that are included in their five-year development plans and annual investment programmes and that match the criteria in the DCRS. The District Planning Committee screens and ranks these proposals using the criteria in the DCRS. The resulting ranking is reviewed by a meeting with the Commune representatives and the available Climate Resilience Grant funding is allocated to the highest priority investments. The resulting work plan for the Climate Resilience Grant is reviewed and approved by NCDDS and is finally approved by the District Council.

C. Monitoring and Evaluation

25. Results-based monitoring and evaluation is a process of continuous improvement: it supports management to assess the achievement of results; allocate resources to the activities required to achieve the specified results; and report performance results to stakeholders. This requires

- an approach that goes beyond routine data collection, to providing information that supports learning and change.
26. Fundamental to APIRE is providing a framework, capacity and evidence for systematic planning and assessment of results. Results are described and planned in a sequential hierarchy, beginning with specific shorter term results that, when achieved, lead to achievement of broader long-term results. Monitoring and Evaluation (M&E) will provide the on-going, real-time assessment of the processes employed in programme activities as well as progress towards development goals and objectives.
 27. The ASPIRE M&E system will integrate three dimensions of results measurement: (1) measurement and evaluation of the impacts of ASPIRE; (2) performance monitoring and assessment of results identified in the Programme Budget arrangements; and (3) planning information including the assessment of the cost-effectiveness of alternative modalities of extension service delivery, in different contexts.
 28. The **logical framework** provides the causal links and the basis for the overall system for verifying programme performance based on expected outputs, institutional and community outcomes and household impacts and incorporates indicators from the RIMS.
 29. The logical framework will be used to structure detailed programme reporting on supporting activities and processes by implementing agencies and partners, and progress in achievement of planned results. The logical framework, targets and indicators will be reviewed throughout the implementation stages and, if necessary, updated as part of the adaptive learning process. To a large extent, the M&E system will be participatory, actively involving farmers and communities' feedback as part of the planning, feedback and learning loops.
 30. The M&E system will cover both the operational and fiduciary aspects of the Programme and the ASPIRE Secretariat will have responsibility for managing M&E activities and systems. The Secretariat will coordinate and align reporting to avoid duplication of efforts across the various levels of programme administration, and oversight reporting to ensure that timely and accurate data is provided.
 31. Performance monitoring will rely mainly on measurement of results by the implementing agencies, particularly PDA, however these will be independently verified. The ASPIRE Secretariat and NCDDS (for Climate Resilient Infrastructure Grants) will manage verification of programme reporting including process, financial and technical audits. The ASPIRE Secretariat will also contract regular independent results verification surveys including the major impact assessment survey.

Management Information System (MIS)

32. The MIS will be the primary channel of programme monitoring and will support a comprehensive approach to data collection, analysis and exchange with the main purpose of informing management decisions on programme matters.
 - (a) A MIS that supports the monitoring and analysis of Components 1 -3 will be developed and managed by the ASPIRE Secretariat.
 - (b) Reporting on Component 4 will be incorporated into an existing MIS managed by NCDDS (known as the PID) that monitors Commune investments including those funded by Climate resilient infrastructure grants.
33. Monitoring of financials, activities and outputs will be recorded directly into the Programme MIS by implementing agencies. Data will be consolidated so as to provide information to programme management and produce performance reporting against output and outcome indicators including gender disaggregated data. Quantitative measures of progress will be supplemented with qualitative information related to the knowledge and skills, target groups' perception,

awareness and attitudes, and behaviour changes. Information also will support the annual planning and budgeting process, as well as conformance with eligible expenditures rules.

34. Quarterly and annual reports will be compiled at District and Province level and tailored for each implementing agency to meet their information needs. The preparation of reporting formats for use by implementing agencies will be part of the overall design of the MIS.

Impact Assessment

35. The major impact study will be carried out by a suitably qualified and experienced survey firm based on survey data collected at 3 stages: baseline, mid-term and an end-of-programme. The assessment focuses on the outcome and impact changes with attention given to the effectiveness of targeting of beneficiaries, disaggregated by ID poor category and gender where applicable.
36. The Baseline Survey will be undertaken shortly after programme start-up and will incorporate the farmer needs assessment used to develop the Provincial Agriculture Strategic Plan. The survey instrument will record household level key socio-economic and demographic information including assets, livelihoods, farming systems, yields and profitability of farm businesses, climate vulnerability and access to extension services. Baseline questions will be used to provide farmer needs assessment.
37. A statistical valid approach to sampling reflective of the smallholder farmers over the 30 target Districts in the five initial ASPIRE provinces that could be considered as target households will be developed by the survey firm. Follow-up surveys will be conducted to interview the same panel of beneficiaries which will allow longitudinal analysis, and comparison to non-ASPIRE farmers including assessment of whether there is flow of indirect benefits.

Performance Monitoring

38. Monitoring will be an integral part of the programme. Implementing staff will be responsible for providing data that demonstrates performance in their particular areas, and the ASPIRE Secretariat will manage independent spot-checks and result verification surveys.
39. Monitoring information will: (1) provide programme management support to ensure efficient and effective delivery of processes and activities to achieve outputs; (2) measure progress towards the project objectives by measuring the indicators defined in the Logical framework which incorporates indicators needed for the IFAD Results and Impacts Management System (RIMS); and (3) generate learnings and information that will support planning and review of programme objectives and outcomes.
40. A range of M&E tools will provide the planning and performance information needed for policy analysis and policy formulation (Outcome 1); design of capacity development activities (Outcome 2) and service delivery (Outcome 3).
41. The regular monitoring of activities and output indicators for Outcome 1 and Outcome 2 will be verified by an **Independent Evaluation of Policy and Capacity Development**. Progress will be assessed by an independent evaluation team (one international and one national expert) who will report to the Secretariat. The results of the assessment will be used by the ASPIRE Steering Committee to determine when Stage 1 and Stage 2 of ASPIRE implementation are substantially complete. Therefore, two studies will be carried out, one planned for 2016 and the second (tentatively) for 2018.
42. **The Extension Practitioner Survey** will also provide quantitative data for measuring the achievement of Outcome 2. A baseline with mid-term and end of programme surveys will be conducted providing information on the number and quality of extension service providers. A survey of a panel sample of extension practitioners in the public sector, private sector and civil

- society will be constructed to approximate a representative sample⁶². The survey will include questions on qualifications, skills, attitudes and practices of the practitioners; as well as contact with and services received from MAFF.
43. Once extension activities commence details of the farmers entering the ASPIRE program will be collected by DAO staff and CEWs and upload directly to the MIS. **Farmer tracking** data will be used to measure results of the extension programmes based the profitability and resilience of the farm business. Information will be provided in format that allows cross referencing to the impact survey data.
 44. A random sample of farmers will be interviewed to verify the accuracy of the farmer tracking. The first performance assessments, through an annual **Results Verification Survey**, will be conducted in 2017 and the results will be taken into consideration in setting the grant amounts for the Provincial Sub-Programmes in 2018 and subsequent years.
 45. **Provincial Performance Scorecard:** Performance of each of the Provincial Sub-programmes will be assessed using a Provincial Performance Scorecard. The scorecard indicators will be designed to encourage implementation through a balanced mixture of service delivery modalities and to reward PDA for successfully supporting poor and vulnerable farmers. The scorecard is a management tool that draws from planning and monitoring information on internal business processes and external outcomes and will have indicators in four areas: Results and Impact; Internal Process; Clients (i.e. farmers) satisfaction and reach; and Learning and Development. Overall achievement against this scorecard will be incorporated into the log frame reporting (Outcome 2). A model for the Provincial Performance Scorecard is provided as an annex to this Appendix.
 46. NCDDES will conduct an annual **Performance Assessment** of Districts receiving support for Climate Resilient Infrastructure (Outcome 3 - Component 4), against established performance measures. The results will be used to determine the size of the Performance Based Climate Resilience Grants in future years and will also determine eligibility to apply for a Special Purpose Climate Resilience Grant.
 47. The M&E tools will complement and enhance research and knowledge activities throughout the programme components. In particular **Randomised Controlled Trials** (RCT) conducted by IFPRI with support from 3iE will be used to evaluate the effectiveness of different extension models from the ASPIRE programme and elsewhere. They will provide high quality, statistically robust evidence of the effectiveness of key elements of the extension approaches. The RCT may directly sample farmers engaged in Provincial Sub-Programme activities, together with control groups, or the test treatments financed by the Innovation Grants. The field results of RCT will be inform the policy development (Outcome 1) and extension methods and materials under Outcome 2. The results will be cross-referenced to the overall impacts of ASPIRE to corroborate and add more detail to the M&E findings.
 48. Qualitative analysis will also be used to expand the understanding of the influences on and dimensions of change and impacts (including the effect of gender and climate vulnerability) through the use of **case studies and most significant change stories** (MSCS). This information will be used to complement and nuance the quantitative reporting, support the knowledge management and learning objectives of ASPIRE and identify possible areas for improvement in the future. While the main impact study focuses on the key performance indicators it may not be able to provide insights on a number of social and institutional issues.
 49. Case studies and MSCS allow for an in-depth understanding of the context and human factors behind performance monitoring, providing participatory M&E tools to collecting information of changes in peoples' lives as a result of programme interventions, and allow the beneficiaries to explain what made the difference from their perspective. This supports data capture of

⁶² Construction of a sampling frame for true random sampling will probably not be feasible.

unexpected results and fosters knowledge management and programme improvement. For MSCS a number of families will be followed and interviewed throughout the programme. This will show changes in specific domains (that still need to be defined in agreement with the partners); examples might be ownership of assets, agricultural practices, and household demographics.

50. Qualitative studies will also be collected from other programme stakeholders such as PDA, DAO and extension workers to demonstrate the progress and effect of institutional and human capacity. These studies will be linked to the Independent Evaluation of Policy and Capacity Development (refer to para. 41)
51. **Participatory Evaluations of the Climate Resilient Infrastructure investments** will also be conducted following a methodology piloted by NCDDDS. The evaluations will be conducted with a focus group of beneficiaries and will combine evaluation by a team from NCDDDS with self-evaluation by the beneficiaries. The evaluations will seek to measure the quality of the sub-project design and implementation process, the quality of the outputs and the cost-effectiveness of the sub-projects as investments for climate resilience.

Monitoring Technology

52. The development of the MIS will be informed by learnings from the PADEE system and will enable links to PADEE data and reporting. Mobile technology will be provided so that implementing agents, including DAO and CEW, are able to directly upload data on field activities to the MIS.
53. Options and suitability of telephone surveys that enable simple farmer surveys (tracking data, needs, satisfaction, outreach and suitability of response to mass media campaigns etc.) and data verification (including spot checks of farmers reached) will be explored. This would include Interactive Voice Response System (IVRS) technology. The effectiveness and potential scope of this technology including results verification and farmer need assessment will be evaluated. This will include an assessment of farmer support required to respond including training and incentives.

Links to National M&E framework for Climate Change

54. The Cambodian government launched the Climate Change Strategic Plan 2014 – 2023 in late 2013. MoE in partnership with IIED is developing a national M&E framework based on the Tracking Adaption and Measuring Development (TASM) approach. This framework will integrate national and sub-national development plans and actions as well as consider measurement tools on a sector basis. IFAD and MAFF will continue to liaise with MoE on the development of the national framework, indicators and tools and review the ASPIRE log frame, when and if, national reporting requirements are established to ensure harmonization.
55. ASPIRE monitoring and evaluation will be coordinated by the ASPIRE Secretariat and will integrate three dimensions of results measurement: (1) measurement of the impact of ASPIRE; (2) assessment of the cost-effectiveness of alternative modalities of extension service delivery, in different contexts; and (3) performance assessment linked to results identified in the Programme Budget. The M&E systems will also provide for fiduciary monitoring (i.e. verification of appropriate use of project funds).

Management Information System and Verification

56. Activities and outputs will be monitored by the implementing agencies and will be recorded in a Programme MIS. Performance monitoring will rely mainly on measurement of results by the implementing agencies, particularly PDA, but performance measures will be independently verified. The ASPIRE Secretariat will contract and manage the results verification surveys and the major impact assessment survey.

57. The Programme MIS will be managed by the M&E unit within the ASPIRE Secretariat and will be based on the system developed for PADEE. DAO and CEW will directly upload data on field activities to the MIS. Quarterly and annual reports will be compiled at District and Province level and in each implementing agency, based on the data already recorded in the MIS.
58. The MIS will provide the basic information needed for monitoring the proper use of programme funds, in particular, compliance with rules for eligible expenditures of grant financing. The ASPIRE Secretariat (for Extension Grants and Innovation Grants) and NCDDS (for Climate Resilient Infrastructure Grants) will conduct on-the-ground verifications including process, financial audit trail and technical audit. Reports of these verifications will be made available to IFAD supervision for spot-checking.

Major Impact Survey

59. The major impact survey will be carried out by a suitably qualified and experienced survey firm and will consist of a baseline survey, a mid-term follow-up survey and an end-of-programme survey. The sample population will be smallholder farmers in the ASPIRE target group, in 30 Districts in the five initial ASPIRE provinces. The size of the sample population is estimated to be around 200,000 farm households (assuming there are about 10,000 farm households per District and that about 66% of these could be considered as the ASPIRE target). Stratified random sampling will be used with the aim of identifying and interviewing in detail about 3,000 households (i.e. 100 per District). It is expected that about 50% of these will become ASPIRE beneficiaries. The follow-up surveys will interview the same panel of beneficiaries. The survey instrument will record key demographic and socio-economic information, RIMS indicators, information on livelihoods, farming systems, yields and profitability of farm businesses, information on climate vulnerability and information on access to extension services.

Farmer Tracking

60. Details of farmers entering the ASPIRE extension programmes will be entered directly to the MIS using electronic technology (most probably a laptop or tablet computer). The data recorded will be sufficient to assess the profitability and resilience of the farm business and will be in similar format (and so can be cross-referenced) to the impact survey data. ASPIRE farmers will report results annually for three years, using the same system. This will be the basic means of measuring the results achieved by the Provincial sub-programmes.

Performance Evaluations and Results Verification Survey

61. The results of the extension programmes will be measured primarily by the farmer tracking system described above. As this is essentially a self-assessment system (the data are input by DAO staff) the results will be subject to verification by an independent survey. This survey will be contracted by the ASPIRE Secretariat and will interview a random sample of farmers to check the accuracy of the farmer tracking. The first performance assessments will be conducted in 2017 and the results will be taken into consideration in setting the grant amounts for the Provincial Sub-Programmes in 2018 and subsequent years.
62. The effectiveness of the different models of extension service delivery will be evaluated using Farmer Tracking and the Results Verification Survey supported by qualitative analysis. These findings will then be validated using the Major Impact Survey data.
63. NCDDS will conduct annual performance assessments of Districts participating in Component 4 (Climate Resilient Infrastructure). The performance assessment system will be based on one already piloted by NCDDS. The results of the performance assessment will determine the size of the Performance Based Climate Resilience Grants in future years and will also determine eligibility to apply for a Special Purpose Climate Resilience Grant.

IVRS Technology

64. ASPIRE will introduce Interactive Voice Response System (IVRS) technology conducting simple surveys of farmers. The effectiveness and potential scope of this technology will be evaluated but it could potentially be used for the results verification surveys as well as for surveys of farmer needs, access to information etc. It may be found that the system requires support from the CEW who can train farmers to respond to IVRS surveys. Consideration will be given to incentives for farmers to respond to IVRS surveys, such as payment in telephone credit or entry into a lottery linked to the Agriculture Fairs.

Independent Evaluation of Policy and Capacity Development

65. Progress in policy and capacity development will be assessed by an independent evaluation team (one international and one national expert) who will report to the Secretariat. The results of the assessment will be used by the ASPIRE Steering Committee to determine when Stage 1 and Stage 2 of ASPIRE implementation are substantially complete. Therefore, two studies will be carried out, one planned for 2016 and the second (tentatively) for 2018.

Extension Practitioner Survey

66. The Extension Practitioner Survey will provide quantitative data for measuring the impacts of Component 2. The methodology will be a questionnaire survey of a panel sample of extension practitioners in the public sector, private sector and civil society, constructed to approximate to a representative sample⁶³. The subject matter of the survey will include qualifications, skills, knowledge, attitudes and practices of the practitioners; as well as contact with and services received from MAFF (i.e. in follow up surveys, use of the Extension Hub).

Randomised Controlled Trials

67. Randomised Controlled Trials will be used to test innovative extension methodologies including those being used in the Provincial Sub-Programmes. The RCT will be implemented by IFPRI using finance from the Gates Foundation. The RCT may directly sample farmers engaged in Provincial Sub-Programme activities, together with control groups, or the test treatments may be financed by Innovation Grants. The results of RCT will be taken into account in policy formulation and in developing extension methods and materials under Component 2. The results will also serve as a useful cross-reference for assessing the overall impacts of ASPIRE.

Component 4: Participatory Evaluations

68. Districts receiving Climate Resilience Grants will be obliged to conduct participatory evaluations of the sub-projects, following a methodology already piloted by NCDDES. The evaluations will be conducted with a focus group of beneficiaries and will combine evaluation by a team from NCDDES with self-evaluation by the beneficiaries. The evaluations will seek to measure the quality of the sub-project design and implementation process, the quality of the outputs and the cost-effectiveness of the sub-projects as investments for climate resilience.

Monitoring of Activities and Outputs

69. Field activities will be recorded in the MIS using electronic data directly input by DAO officials and CEW. This will build upon systems already in use in PADEE. Quarterly and annual reports will be compiled at District and Province level and in each implementing agency, based on the data already recorded in the MIS.
70. The Results Verification Survey will provide verification of physical delivery of services under Component 3.1. For Component 4, a **Technical Audit** of infrastructure will be carried out to verify quantity and quality of works delivered.

⁶³ Construction of a sampling frame for true random sampling will probably not be feasible.

D. Knowledge Management

71. ASPIRE is specifically designed to generate knowledge and to improve the capacity to use and share knowledge at all levels. Specifically, ASPIRE will result in improved knowledge in the following areas:
 - (a) The efficacy and cost-effectiveness of different approaches to extension, subject to different contexts (i.e. what works, where);
 - (b) Smallholder farmers' needs for extension services, and how smallholders can be assisted to identify and take advantage of emerging market opportunities;
 - (c) The capacities and appropriate roles of the public sector, private sector and civil society in agriculture services in a Cambodian context
72. **Component 1** will specifically seek to enhance the capacity to develop policy based on evidence generated by measurement of the results of ASPIRE and by a range of policy studies and field trials (RCT). This capacity will be developed within SNEC which has a mandate to advise the senior leadership of RGC on policy matters, but also within the senior leadership of MAFF and within a wider community of stakeholders. Demonstration of an effective, inclusive and evidence-based policy process will be co-equally important with the policy outcomes.
73. Within Component 2, **the Extension Hub** is a knowledge management facility that will assist in generating knowledge based on research and implementation results, as well as systematically organising existing knowledge resources (extension materials etc.) and making knowledge accessible to extension practitioners and farmers via the Extension Portal.
74. **The Farmer Needs Assessment** tools developed within the Extension Hub and the Provincial Agriculture Strategic Plan will lead to improved understanding of farmer needs and opportunities and this knowledge will be used in developing appropriate extension materials and strengthening the systems for planning and delivering demand-led services.
75. Component 3 will strengthen learning systems through innovative approaches to extension delivery, including improved model for public sector extension as well as innovative modalities of partnership with the private sector and civil society. The farmer-to-farmer learning activities will strengthen the sharing of locally available knowledge and will also leverage the effectiveness of mass media extension using broadcast and internet access to knowledge.
76. ASPIRE will build partnerships and share knowledge as widely as possible. This will include specific cooperation and knowledge sharing with the PADEE project (including cost-sharing of the national extension workshops, sharing of extension materials and bringing the measurement of PADEE results within the learning framework of ASPIRE); knowledge-based partnerships with USAID and with the UNDP-GEF Resilient Livelihoods project, cooperation with academic and research institutes and specifically, cooperation with the ACIAR support to agricultural research within CARDI.

Summary Table of ASPIRE Expansion Plan and Key Planning and M&E Activities								
Year	Provinces	Provincial Sub-Programme (1)				Climate Resilient Agriculture (2)		Key Planning and M&E Activities
		Dist	FFS Group	PPP	CO	PBG	SPG	
2015	5							<ul style="list-style-type: none"> 5 pilot provinces formulate Provincial Agriculture Strategic Plan (PASP) 30 Districts selected and baseline survey conducted Extension Practitioner survey 1 15 Districts conduct needs assessment 8 climate vulnerable districts formulate Climate Resilience Strategy (CRS)
2016	5	15	450	5	5	8		<ul style="list-style-type: none"> Policy and capacity progress evaluation PASP reviewed and updated 15 additional District needs assessments ASPIRE activities consolidated in PDA 3-year rolling budget plan 8 additional District CRS Farmer tracking begins
2017	5	30	1100	10	5	16		<ul style="list-style-type: none"> Update of PASP and District Needs Assessments 18 additional District CRS Results Verification Survey begins
2018	10	30	1200	15	5	24		<ul style="list-style-type: none"> PASP formulated in 8 additional Provinces and 3-year rolling budget plan prepared Mid-term impact survey Extension Practitioner Survey 2 Technical Audit of infrastructure
2019	10	60	3000	20	10	16	8	•
2020	10	60	3000	20	10	8	8	•
2021	10	60	3000	20	10		8	<ul style="list-style-type: none"> Policy and capacity progress evaluation (2) Final impact survey Extension Practitioner Survey 3

Note

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1 Cumulative numbers of activities. NB these numbers are indicative only – actual numbers will be determined through the Provincial Sub-Programme planning process

2 Numbers of Performance Based Climate Resilience and Specific Project Climate Resilience grants in each year

Annex to Appendix 6: MODEL FOR Provincial Performance Scorecard	
Results and Impact Weighting: 10%	Clients Weighting: 25%
1. Total increased annual agricultural income for all farmers served in last 3 years 2. Total increased annual agricultural income for ID Poor farmers served in last 3 years 3. Cost efficiency - Total increased annual agricultural income of farmers served (Indicator 1)/ Total annual expenditure 4. [See if can use one main performance indicator from MAFF PB programme 1 so MAFF can see how it contributes]	1. Client satisfaction rating - % of farmers who have received service that are either satisfied or highly satisfied with the services 2. Total number of clients served in the year 3. Total number of ID poor clients served
Internal process Weighting: 40%	Learning and development Weighting: 25%
1. Use of non-direct delivery modalities such as PPP and contracting out [have an index for this and score based on number, sophistication and effectiveness of arrangements] 2. Effectiveness of client demand assessment and service delivery planning process [% of clients saying the services provided met their priority needs] 3. Quality of PADS - process for PADS is inclusive/strong 4. Coherence of actual activities with 3 year strategic budget plan	1. HR/staff capacity development indicators (To be defined - no. of professional training days?) 2. Agricultural action research / development activity & investment linked to Provincial Ag Development strategy (PADS) 3. [See if can use a main performance indicator from MAFF PB programme 5 (Capacity building) so MAFF can see how it contributes]
<i>Weightings to be adjusted to 25% for all quadrants from Yr 3 of each provincial sub-programme.</i>	

Appendix 6A: Communications Strategy

A. Definition

1. An effective communications strategy will be integrated into the management of ASPIRE and into its components. The Communications Strategy will play a large part in ensuring the programme achieves its outcomes. Specific inputs are planned by this communication strategy, targeting the various levels of actors – in each of the components of the programme.

2. As a project supporting a programmatic approach to agriculture extension, ASPIRE is concerned with the production and sharing of knowledge. An inclusive, participatory approach is fundamental to the ASPIRE design and this implies that wherever possible communication is a two-way process. The ASPIRE Communications Strategy is concerned with those activities that contribute directly to changing the perceptions of stakeholders concerning the purpose, scope, value and delivery of extension activities. This definition does not include teaching and learning of agriculture, marketing and related techniques that comprise “extension” itself and also the activities of data collection and analysis that comprise monitoring and evaluation. However, there are no firm boundaries between strategic communications thus defined and the technical communication that is the content of extension. Broadly, the communications strategy supports the reform agenda of ASPIRE by effecting a sustained change in understanding and hence of behaviour, at all levels from policy makers, service providers within and outside the public sector, to the farmers themselves. The communications strategy is integrated in all components and activities of ASPIRE and frequently shares participants and techniques with the activities contributing to planning, delivery and results measurement of extension services.

B. Purpose of the Communications Strategy

3. The communications strategy serves the Programme Development Objective of ASPIRE which is that by 2021 an enhanced Cambodian model of agriculture services has been demonstrated as effective for assisting a diversity of smallholder farmers to contribute to broad-based economic growth through profitable and resilient farm businesses and is adopted as policy. Supporting the “evidence loop” by ensuring that the results achieved and the recommendations of policy analysis are effectively communicated and understood, is a key purpose of the communication strategy. This will be achieved not only directly by dissemination of information and recommendations, but more broadly by activities that foster engagement and ownership amongst key decision-makers and a broader community of stakeholders including Government officials, development partners, civil society and the private sector. Improved communications will lead to better coordination between technical agencies including the different agencies of MAFF that engage in or support extension and will foster attitude change by supporting a better understanding of the role of each agency and the interactions between them. The communications strategy will facilitate a sustainable improvement in the capacity to share knowledge, both through developing institutions to support knowledge sharing and by introducing new techniques including an increased use of information and communications technology (ICT) and broadcast media.



Figure 1: The Evidence Loop

C. Communications Methods

4. ASPIRE will use the following methods to communicate with stakeholders and enhance awareness and acceptance of its approach:
 - (a) **Events** including workshops, seminars and agriculture fairs / expositions that attract participation of a broad range of stakeholders and provide an opportunity to raise awareness of ASPIRE as well as to engage stakeholders in dialogue on specific issues;
 - (b) **Publications** including reports and policy briefs that present, in accessible format, key knowledge products of ASPIRE;
 - (c) **Dissemination** of news and progress reports through a variety of media including a website and facilitation of access by news journalists to ASPIRE activities;
 - (d) **Participation** by ASPIRE representatives in events organised by other programmes and agencies;
 - (e) **Engagement** with key opinion leaders and decision makers through personal communications, membership of the ASPIRE Steering Committee and other bodies and participation in ASPIRE activities.

D. Content of the Communications Strategy

5. For each of the outcomes of ASPIRE, the Communications Strategy defines the following parameters:
 - (a) The message content: i.e. what is to be communicated;
 - (b) The communication technique or techniques used;
 - (c) The target audience;
 - (d) Feedback arrangements: how the audience respond to and participate in communications activities;

- (e) Resources: the specific inputs allocated to support communications. These inputs may be exclusively concerned with supporting the communications strategy (e.g. a newsletter) or may support strategic communications together with planning, technical learning or other activities.

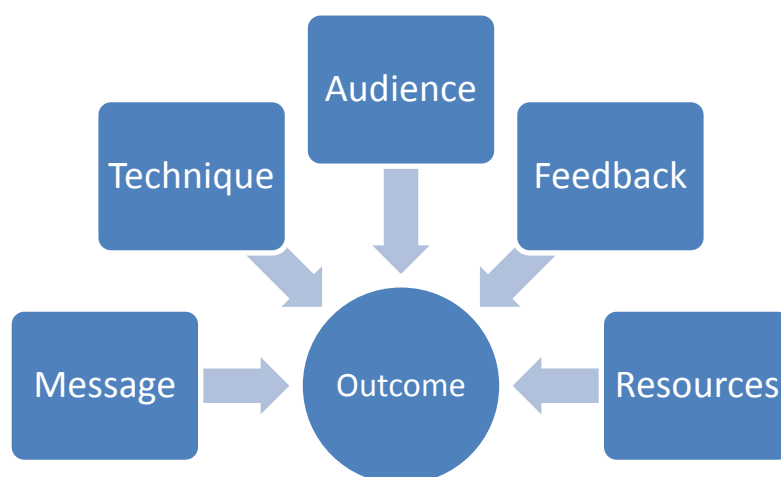


Figure 2: Contents of the Communications Strategy

6. **OUTCOME 1: A national investment programme that can be supported by multiple donors is designed to implement an updated extension policy that provides smallholder farmers with access to quality information services.** At policy level, the communications strategy will ensure that evidence-based policy analysis reaches key decision makers in digestible form, while also facilitating broad engagement of stakeholders in the policy dialogue.

7. The key content to be communicated in support of Outcome 1 concerns the implications of different policy choices. Critically, this will include evidence on the effectiveness of different models of extension service delivery in different contexts and in pursuit of different policy goals (e.g. increased production, inclusive growth, climate resilience). This evidence will be derived from measurement of the results of ASPIRE service delivery activities obtained from programme M&E, randomised controlled trials (RCT) and piloting of innovations; but also from the comparative experience of other extension programmes in Cambodia and internationally.

8. Communication of evidence for policy will be through a mixture of techniques including production of policy briefs targeted to meet the needs of key decision-makers, through dialogue in policy forums and general workshops, and through events such as internal and external study tours specifically designed to improve policy makers' understanding of alternative options.

9. The key decision makers for policy, ultimately, are the senior leaders of government. However, the audience for evidence for policy is not limited to these key decision makers. ASPIRE will facilitate policy formulation through dialogue and consensus with informed stakeholders within government agencies, civil society and the private sector as well as with development partners. Communication with a wide range of stakeholders including the general public forms part of the context in which policy dialogue takes place.

10. ASPIRE will specifically support opportunities for dialogue on policy, most particularly through the annual Policy Forum and the (more limited) group of the ASPIRE Steering Committee, but also through general participatory events throughout the programme components that will be opportunities to present, discuss and receive feedback on policy options and recommendations.

11. The key resources supporting communications for evidence-based policy include:
 - (a) Meetings of the ASPIRE Steering Committee;
 - (b) The annual Policy Forum;
 - (c) Workshop and seminar events to discuss specific aspects of policy development;
 - (d) Ensuring that leaders and representatives of ASPIRE are well briefed and prepared to represent ASPIRE in events organised by other programmes and agencies;
 - (e) Publication of policy study reports and policy briefs;
 - (f) Engagement of and dissemination of information to the general news media;
 - (g) Website publication and communications including the possibility for stakeholder feedback;
 - (h) Study tours for key decision makers to study the effectiveness of different models of extension delivery in Cambodia and regionally.
12. **OUTCOME 2: MAFF has institutional and human resources capacity to manage an effective, demand driven system linking researchers and knowledge-based agencies to extension agents in public sector, private sector and civil society and to farmers.** At Management level, the communications strategy will ensure efficient sharing of knowledge within the Secretariat, the Extension Hub and between the various technical departments of MAFF to ensure that appropriate and demand driven methodologies can be developed and scaled up for a program based approach.
13. For outcome 2, improved capacity to communicate will be as important as the content of communications supported by ASPIRE. Communications will assist in sharing a diverse range of information including the progress of programme activities, the plans and activities of different agencies within and outside MAFF relating to the extension sub-sector, improved understanding of farmer needs and market opportunities and the implications of global climate change. Most importantly, the communications strategy aims to increase understanding and build consensus around the objectives of ASPIRE and the policy choices that emerge from ASPIRE, thus facilitating change in the behaviour and attitudes of service providers within and outside the public sector.
14. The audience for communications for capacity development constitutes the staff of public sector agencies concerned with extension but also the staff of academic institutions, private sector actors, civil society and development partners.
15. Information will be communicated through a range of techniques including dialogue in the Extension and Research Advisory Board and in general workshops, events such as the annual Agriculture Exhibitions and general publicity activities. ASPIRE will support and encourage increased use of ICT for sharing of information between extension agencies.
16. The Extension and Research Advisory Board will be a key forum for dialogue between stakeholders at the senior technical level and representing the public sector, academia, civil society and the private sector. Workshop events will also facilitate feedback as will opportunities for stakeholder responses through the Extension Portal website.
17. In addition to supporting the Extension and Research Advisory Board, general workshop events and web-based dissemination and feedback, ASPIRE Component 2 includes budget for specific communication activities including outreach through the national media, production of publicity materials etc. These will also be integrated with the broadcast extension activities in Component 3. ASPIRE will support international and national experts in knowledge management and in ICT and will also support a journalist / media consultant who will be responsible to facilitate field visits and other forms of communication with the national media. ASPIRE will support production of videos which will have strategic as well as technical content and will fund investments in equipment for the Extension Hub to support communications activities.

18. OUTCOME 3: By 2021, at least 100,000 smallholders have improved and resilient farm businesses as a result of integrated, demand led extension services and investments in climate resilient infrastructure.

19. Component 3 of ASPIRE is concerned with communication of specific knowledge on agriculture techniques and practices. To be used with full effect, this “technical” knowledge needs broader changes in the understanding, attitude and behaviour required for smallholders to make the transition from production-driven agriculture prioritising basic foodstuffs for own consumption, to planning and managing a sustainable and resilient farm business. This will include an improved understanding of the operation of markets, the impacts of different investment decisions on net income and risk, and the implications of global climate change. These messages will be integrated with technical learning which will occur through a range of modalities including formal teaching, farmer-to-farmer learning and an increased ability to access information from a variety of sources including the Internet. ASPIRE will also support a pilot extension programme via radio and television.

20. The target audience for communication of strategic learning will be poor and vulnerable smallholder farmers, particularly those with some productive potential. This audience will be targeted mainly by tailoring the message to suit its needs and encouraging participation, rather than by selective targeting using wealth ranking or similar methods.

21. Farmers will be treated not as passive learners but as participants in the planning and implementation of learning activities. This will be achieved through creating opportunities for feedback through traditional participatory methods as well as by increased use of ICT and surveys using IVRS technology. Farmer representatives will participate in activities to assess the priority extension needs of farmers and the most appropriate modalities of extension service delivery. The television extension campaign will be accompanied by “mobile feedback teams” using a mixture of entertainment and dialogue to encourage farmers to express their views on what they have learned.

22. In particular, ASPIRE will support establishment of local knowledge sharing networks facilitated by the Commune Extension Workers and linking smallholders to local skilled farmers, input sellers and produce buyers and extension agents including village animal health workers. These local networks will also leverage the media campaigns and the access of some members of the network, including the CEW, to the Internet.

23. In addition to the field-based extension activities delivered by the DAO, through contracting-out arrangements and through public-private partnerships, ASPIRE will support the following communications activities targeted to or closely supporting the beneficiary smallholders:

- (a) Production and broadcast of two seasons (24 weekly shows each) of a television show aimed at smallholder farmers and combining entertainment with information. These television campaigns will be followed up by “mobile feedback shows” to allow farmers to communicate their observations;
- (b) Production and broadcast of three seasons (30 weekly shows each) of radio broadcasts;
- (c) Dissemination of extension messages via the Extension Hub portal, with opportunities for feedback. CEW will be trained and equipped with mobile devices to access this information and to use it to assist farmers, as well as gradually introducing internet use by the farmers themselves;
- (d) Including a significant element of communications and knowledge management in the terms of reference of the Provincial advisory teams, most likely by combining these tasks with the M&E role. This will be supported by selection of candidates with suitable skills and by provision of appropriate training.

E. Coordination and Reporting

24. The activities contributing to the Communications Strategy are assigned to the different components of ASPIRE and some activities contribute to both technical learning and strategic communications objectives. The ASPIRE Secretariat will be responsible to co-ordinate the communications strategy and monitor and assess its effectiveness. Implementation of the Communications Strategy will be a specific section of ASPIRE programme reports. The ASPIRE Secretariat staff will include one full-time Communications Officer who will be responsible (1) to ensure that the AWPB for each component adequately reflects the Communications Strategy; (2) identify needs for capacity development for communications and design/implement activities accordingly; (3) monitor implementation of activities contributing to the communications strategy and (4) assist the Programme Manager in reporting on the results of the Communications strategy. The Communications Officer will be assisted by the Senior Management Adviser (national).

Appendix 7: Financial management and disbursement arrangements

A. Summary of Risk Assessment

1. During design, a Financial Management (FM) risk assessment has been completed in accordance with CFS guidelines. The assessment has been developed after visiting the MAFF department of planning, NCDD, SNEC, MEF, the PDA of Kampong Chhnang, and the Provincial Treasury of Kampong Chhnang.
2. MAFF will be the main ASPIRE implementing agency which will host the “ASPIRE Secretariat” (the programme central PIU). MAFF has a long experience with the management of IFAD projects as currently executing three IFAD financed projects, RULIP, PADEE and TONLE-SAP. While the first two projects are directly supervised by IFAD, for TONLE SAP the ADB is acting as cooperating institution. In all these projects the PIU set-up followed a “ring fenced” approach without any kind of reliance on national systems. ASPIRE design contains many innovative elements never tested in Cambodia; the main ones are the intention to partially use the national treasury system for funds flow and the alignment of ASPIRE activities to national programme budgeting (PB) schemes. This will happen in phases; in the first phase (foundation) there will be an alignment of programme budget activities with MAFF PB, in a second phase (proving) there will be full integration in the MAFF PB and the third phase (scale-up) will follow a full PB approach. Main issues to be addressed include the coordination among the different implementing agencies from a financial management point of view (4 agencies at central level, and from 5 to 10 PDAs and sub-national administrations). In addition to the coordination issue, other weaknesses to be addressed are related to number and skills of staff, internal control mechanisms, accounting and financial reporting, audit.
3. In order to address these serious weaknesses, the entire financial management practices and procedures of ASPIRE will have to be laid out clearly disclosing the overall ASPIRE staffing needs and roles, establishing proper maintenance of accounts, use of software for both finance and PB purposes, monitoring and review of the financial achievements against the budget projections, internal controls, internal audit, capacity building of finance staff, financial reporting and external audit by a chartered accountant firm.
4. The overall risk rating assigned at this stage is **high** before any mitigation measures are put in place; it decreases to **medium with trend to high** with the application of basic FM practices. Despite the detailed design, the practical implementation still contain some risk elements. Practical risk mitigation measures are specifically described in the following paragraphs; the implementation of some of these will be considered as conditions precedent to withdrawal.

B. Implementation arrangements

5. MAFF will be the lead implementing agency. MAFF, through the ASPIRE Secretariat, will take responsibility for overall programme management, coordination and reporting while agencies and line departments of MAFF (including GDA and PDAs) will undertake the majority of technical work at national and sub-national levels. SNEC will undertake policy research and analysis. NCDDDS will be the implementing agency for Component 4. Provincial Sub-Programmes will be implemented by the Provincial Departments of Agriculture (PDAs). District Administrations will be the recipients of Climate Resilience Grants (from NCDDDS) and will either implement directly or through sub-grants to the Commune Councils. The Commune Councils will contract Commune Extension Workers and play an important role in coordination and monitoring of extension service delivery.
6. The finance unit of the ASPIRE Secretariat will be adequately staffed; in fact, in addition to the finance manager there will be an accountant, a finance advisor at central level and five finance

advisors at provincial/PDA level, to support local finance units which appear to be particularly weak. The internal control function will be further enhanced with an internal audit review to be contracted annually to a private internal audit firm. Reports prepared, which will be inclusive of recommendations and suggestions to enhance the internal control system, will be submitted to the Steering Committee and forwarded to IFAD. Also the other implementing agencies will have finance staff dedicated to ASPIRE; this has been confirmed from the visits to NCDD and SNEC. However an extremely important role will be performed by the accounting software, which will be set-up in all participating agencies, including PDAs, to allow smooth financial reporting to the ASPIRE Secretariat which will consolidate data and will be the contact point for IFAD. There will be substantial training associated to the deployment of the accounting software.

7. Part of component 1, component 2 and 3, which account for approximately 65% of programme finances, will be implemented within the MAFF PB framework with a gradual approach through phases:
 - (a) Foundation, alignment to MAFF PB through cross referencing
 - (b) Proving, integration with the PB planning cycle. More discretion in budget use for PDAs
 - (c) Scale-up, full PB approach.

The move from a phase to the other will be decided upon assessment of performance and readiness of the public system; additional details on the PFM in subsequent paragraphs.

8. Characteristic of the ASPIRE PB approach, is the integration of programme activities within the overall MAFF PB. This will happen gradually and starting from the “foundation” phase. During the first phase there will be the set-up of a series of programme bank accounts at all levels, with the ASPIRE Secretariat coordinating the overall programme FM function from budgeting to accounting and reporting, funds flow, internal control and audit. In the case of component 4, managed by NCDD which during the mission has been assessed as a solid and experienced agency which is part of Ministry of Interior, the case will be different. In fact administrative expenditures will be financed through its programme account, while to finance infrastructures at provincial level will be used the national treasury system with the opening of specific accounts in the provincial treasuries.
9. Proper set-up of audit TORs will be a key safeguard for all stakeholders. A single auditor will be hired for the annual audit of ASPIRE. In addition to IFAD usual requirements, TORs will include visits to all implementing agencies at central and provincial level, review of relevant documentation, physical verification of infrastructures built, sample interviews to participants to extension trainings and people/companies awarded with grants.

C. Financial Management risk assessment

Inherent risks

10. The following review of Cambodia’s public financial management system builds on the findings of a series of assessments carried out recently by several international financial institutions, more particularly:
 - (a) - Cambodia: Preparing the Strengthening of Public Financial Management for Rural Development Projects (October 2008) from ADB;
 - (b) - Public Finance Management Assessment Based on the Public Expenditure Financial Accountability Framework (Feb 2010) from MEF PFM Reform Programme;
 - (c) - Financial Management Capacity Assessment (July 2011) from IDA;
 - (d) - Cambodia PEFA, 2010.

11. *Public Financial Management Overall Performance*. The Royal Government of Cambodia (RGC) initiated a comprehensive Public Financial Management Reform Programme (PFMRP) with the full support of the Development Partners community. The overall objective of the programme is the strengthening of the governance framework through enhanced public financial management for effective service delivery. During Stage I of the programme, significant progress was achieved in improving the overall FM fiduciary environment and the budget credibility, while the target for the Stage II (which became effective in fiscal year 2008) is to further improve the financial accountability through a series of measures, including (i) improving lines of accountability, functions and responsibilities of public spending agencies at national and sub-national levels; (ii) adoption of a new budget classification and new chart of accounts; (iii) improved budget execution, accounting and financial management information systems; (iv) improved statutory financial reporting and transparency; (v) improved external and internal auditing and responsiveness to audit findings, and (vi) implementation of a fiscal decentralization framework.
12. As noted by PADEE supervision mission (September 2013), the basic regulatory framework for public financial management is already in place, but its application at the ground (at line ministries and sub-national level) is still not fully effective because of lack of capacity and resources. More particularly, the internal control and fiduciary framework does not provide full assurance of a regular, efficient and transparent use of public funds for the intended purposes – to the extent that:
 - (a) Government accounts are kept on cash basis, in the absence of an integrated financial management information system (FMIS);
 - (b) In the absence of a FMIS, there is no guarantee that the disclosed government financial statements are comprehensive enough to inform on the true, fair financial position of the public finance system;
 - (c) Salaries in the public sector are very low – a situation prone to corruption risks;
 - (d) Disbursement of planned budget appropriations in the form of a number of cash advances (equal to 1/8 of approved budget) for payment of salaries and recurrent expenditures (settled therefore in cash)
 - (e) The public procurement system does not completely satisfy the requirements of transparency and efficiency
 - (f) Delivery of external aid “ring fenced” through dedicated programme management units – leaving little room for an integrated planning of available resources.
13. As a result of the above mentioned shortcomings, the inherent fiduciary risk associated with the public financial management system is considered **high**.
14. The following table summarizes the features of the public finance management system, based on the *Public Expenditure Financial Accountability Framework* (PEFA) methodology:

Criteria	Assessment
Credibility of the budget PEFA score: B	<ul style="list-style-type: none"> The budget provides a fair indication of actual appropriations available to spending agencies thanks to greater predictability of revenues and reasonably good expenditure control; However, predictability for each budget entity is low, with the variance in expenditure composition exceeding aggregate deviation by ten percent in recent years, partly reflecting allocations from the budgeted unallocated reserve/contingency item; credibility has, however, tended to be higher for priority sectors (education, health and agriculture); Also, improved budget formulation process and the introduction of Budget Strategy Plans (BSP) as well as the gradual expansion of the Treasury Single Account (TSA) and in-year cash flow planning have contributed to budget credibility.
Comprehensiveness and transparency PEFA score: C+	<ul style="list-style-type: none"> The existence of significant unreported extra-budgetary operations, and the non-transparency of many donor-funded projects, particularly grant-funded projects potentially undermine the budget credibility, especially in respect of the accurate budgeting for the recurrent cost implications of these projects; Yet, there is no sufficient publicly disclosed information on the budget plans and budget execution – which impedes the ability of the citizens to demand accountability for the efficient use of public resources and judge; Also, the large size of the <i>Reserve Fund</i> that comprises part of the budget (it has been usually over 10 percent of budgeted expenditure) and the way it is allocated during the fiscal year undermines transparency and reduce predictability of the budget.
Policy-based Budgeting PEFA score: C+	The main weakness in this respect is the insufficient integration of capital and recurrent expenditures to the extent that sound linkages between the current and capital budgets would enhance the credibility of the budget over the medium term.
Predictability and control in budget execution PEFA score: D	<ul style="list-style-type: none"> The Government is faced with key challenges in respect of (i) compliance issues regarding tax registration, declaration and collection; and (ii) internal control issues. In particular, robust controls over public spending are still needed to minimize resource wastage (payroll and purchases of non-wage inputs), and - the internal audit function needs to be strengthened.
Accounting, recording and reporting PEFA score: C-	<ul style="list-style-type: none"> Weak accounting, recording and reporting on budget execution resulted in flawed accountability and further undermined the credibility of the budget. Non-existence of an FMIS to keep national accounts.
External Scrutiny and audit PEFA score: D	<ul style="list-style-type: none"> The external audit function is not playing a strong role in holding the executive branch of government to account; The National Audit Authority (NAA) does not publish its reports (making it difficult for the public to know whether public funds are being spent according to their intended purpose).

15. *Financial management capacity of MAFF.* The following evaluation of the financial management capacity of MAFF and sub-national administrations (Districts and Communes) builds on the conclusions of the capacity assessment carried out in the context of the “Community based Agricultural Productivity Project⁶⁴ – CBAPP” to determine whether MAFF structures have adequate FM capacity and satisfy related fiduciary assurance requirements of the International Financial Institutions. The fiduciary risk is still regarded as quite substantial at MAFF level

⁶⁴ IDA Q7090-KH

despite the improvements made in the overall public financial management environment in Cambodia⁶⁵. Nevertheless, it should be noted that MAFF gained a long, sustained experience in the management of externally financed projects to deal with the fiduciary risks along the mitigation measures to be included in the programme financial management arrangements.

16. The table below summarizes the key strengths and weaknesses in respect of the financial management system as it is currently applied by MAFF:

Strengths	<ul style="list-style-type: none"> • MAFF has a strategic vision and direction to guide the development of the agriculture sector and to “absorb” externally financed projects; • MAFF has developed a working planning and budgeting procedures as well as an internal monitoring and evaluation system in the context of the emerging budget strategic plan (BSP) and programme budget (PB) framework; • Dedicated planning and finance departments are staffed with skilled personnel to advise and support the operational departments in the planning and budgeting of their activities, and monitoring execution of the annual budget; • Planning and operational staff are available in all departments of MAFF; many of them benefited from capacity building through donor-funded projects activities.
Weaknesses	<ul style="list-style-type: none"> • The policy formulation process is not yet fully inclusive of all stakeholders and it remains heavily influenced by the respective agendas of donors; the current policy formulation process (Medium Term Expenditure Framework and BSP) needs to be further strengthened for the sake of better informed policy formulation and improved ownership; • The annual planning process is not yet fully aligned with the established policy – the annual planning is reflective to a large extent of previous years’ priorities; also, in the absence of consistent set of policy performance indicators, contribution of activities to policy goals is hard to measure, and the effectiveness of activities difficult to assess; • Annual Work Plans and Budgets of externally funded projects are rather static (built upon preceding annual plan) and do not take sufficient account of changing project implementation requirement and lessons learnt so far; • The planning-budgeting function is fragmented within MAFF and carried out by separate Departments (Planning and Statistics in Department being in charge of the development budget formulation, while the Department of Accounting and Finance is responsible for the recurrent budget formulation); as a result, development plans, incorporating donor-funded activities, often do not account for operational budget constraints; and effective performance monitoring and evaluation is undermined; • Planning, monitoring and evaluation capacity and skill levels are in need of further strengthening, especially in the areas of accounting and financial management, procurement, development of appropriate verifiable indicators and means of verification in monitoring and evaluation; • There is no consistent human resource management policy: allocation of tasks is rather ad hoc; this situation is further compounded by inadequate remuneration levels and poor incentive arrangements, pushing many of the most qualified staff to leave (temporarily or then permanently) for the private sector, donor or NGO employment opportunities, and making it hard for the public sector in general to recruit and/or retrain skilled, competent personnel.

17. Furthermore, MAFF has a relatively large number of staff involved in finance, administration and planning. Many of these staffs have good academic qualifications but limited professional experience in their specific area of work. As the rest of the Ministry’s workforce, financial management staff members need further capacity development to improve their skills base and

⁶⁵ According to IFAD requirements, the FM arrangements are acceptable if they: (i) are capable of correctly and completely recording all transactions and balances relating to the project; (ii) facilitate the preparation of regular, timely and reliable financial statements; (iii) safeguard the projects assets; and (iv) include acceptable auditing arrangements.

leadership capabilities. Another aggravating factor is the low level remuneration of the civil servants which acts as a major disincentive to attracting competent staff or retaining existing staff that have the potential to perform well.

18. *Financial management capacity in GDA, SNEC and NCDD.* From the review of documents and interview with finance staff of SNEC and NCDD, the finance departments which will absorb ASPIRE activities appears to be sufficiently solid, always considering the country context.
19. *Programme budgeting practices in MAFF* Since 2008 MAFF has been running the following 5 programme budgets:
 1. Enhancement of agricultural productivity and diversification
 2. Increasing market access for agricultural products
 3. Strengthening the institutional, legislative framework and human resources development
 4. Sustainable management of fisheries resources
 5. Sustainable management of forestry resources.
20. During the period 2009-2013, the share of programme-based budgeting in MAFF's total resources was on average 15% (or 22% without the provincial departments) – a figure far below the national average which is 30% (all 8 ministries participating in the programme budgeting pilot). Programme 1 (agricultural productivity and diversification) absorbs almost half (49.2%) of total PB resources, of which 8.33% are dedicated to the extension services.
21. The implementation of programme budgeting in MAFF is faced with a series of challenges that MEF and MAFF should address for the sake of improved effectiveness of, and accountability for service delivery:
 - (a) PB are under-funded: resource allocation from the national budget for MAFF programmes covers hardly 10% of needs (based on MAFF estimates in the BSP); as a result, the geographic coverage and scope of activities are reduced in the same proportion (for instance, not all provinces, or not all districts within a given province are covered by the extension services during a given fiscal year);
 - (b) Lack of coordination/synergy between PB planning and external aid funded projects (except in the Fisheries): there is no consistent consultation between PB managers and externally funded projects during the budgeting process;
 - (c) Formulation of PB follows a top-down logic and is dictated by the resources constraint; yet, MEF sets the funding ceiling for PB in an incremental manner (expressed as a % increase of last year budget); as a result, programmes often replicate previous year activities, without reassessing relevance and effectiveness of on-going sub-programmes or activities for instance; hence, as they are now, PB seem to be a way of clustering previous line items expenditures and not as a genuine expression of an articulated, coherent, result-oriented programme of activities;
 - (d) PB cross department mandates: responsibility for a given programme is often shared by more than one department – which does not allow for straightforward tracking of accountability for performance back to a clearly identified party; furthermore, accountability for results is further undermined by not including staffing, procurement and capital costs under the control of PB holders;
 - (e) PB expenditures are settled in cash: while good practice requests the use of national treasury system. Such arrangement might cause some fiduciary risks and lack of transparency of transactions; anecdotal evidence suggests that “funds leakage” is occurring along the disbursement-payment process because of cash payment procedure and multiplication of parties involved in handling of funds;

- (f) Frequent liquidity “bottlenecks” affecting the public finance system (irregular release of quarterly cash advances) are hampering proper implementation of PB activities, with negative impact on seasonality-sensitive activities;
 - (g) Programme managers have no discretion over shifting resources between sub-programmes or within the same sub-programme: current rules restrict them to conform to the line-item costing (at activity level) specified in the PB document; and any deviation requires due authorization from MAFF top management and/or MEF approval; as a result, managers have no flexibility in responding to unforeseen events or correcting misallocations at the budgeting stage;
 - (h) Programme managers have very little control over the procurement process (timing, selection of contractors or suppliers, quality of goods or services supplied,...); as a result, procurement is often done with delay and the quality of goods is also at question; this is a critical issue as most of PB activities in the agriculture sector are seasonal, and if the inputs (seeds or fertilizers) are not procured in time, they become useless;
 - (i) Low capacity combined with weak commitment of staff at all levels (central and sub-national): salary levels act as disincentive to attract or retain qualified staffs (who tend to work for external aid projects or NGOs).
22. However, despite the flaws in the formulation and implementation mentioned above the programme budgeting system has yielded some improvement in the quality of service delivery – to the extent that:
- (a) Programme budgeting modality allowed for linking the annual resource allocation process (budget) to the medium term strategic planning (Budget Strategic Plan), and hence, improving the allocative efficiency of public resources;
 - (b) Funding for service delivery is more predicable under the programme budgeting modality: appropriations earmarked for PB within the Ministry’s budget are “insulated” and, as such, cannot be diverted to other uses;
 - (c) Yet, the disbursement arrangement (appropriations being released to concerned departments in quarterly cash advances) provided flexibility and predictability in the implementation of planned activities in a timely, effective manner; indeed, PB performance in term of actual implementation of activities is much better than non-PB activities;

Control risks

23. Overall, ASPIRE will be operating in a rather high inherent risk environment due to weak public sector financial management systems, especially in the area of fiscal discipline and internal control environment. The proposed financial management arrangements for the project incorporate a number of measures intended to reduce such risks to acceptable levels and ensure that (i) the project funds are used for intended purposes in an efficient and effective way, (ii) reliable and timely financial reports are prepared, and (iii) project assets and resources are safeguarded from unauthorized or wasteful use.

Summary of FM risks and mitigating actions

Summary of Project Fiduciary Risk Assessment at Design			
	Initial Risk Assessment	Proposed Mitigation	Final Risk Assessment
Inherent Risk			
1. TI Index	H Index: 20 in 2013 (ranking 160 out of 177 surveyed countries)	-	H
2. RSP Score	M Score: 3.57 (2009) ⁶⁶	-	M
Control Risks			
1. Organization and Staffing	H	<ul style="list-style-type: none"> Adequate staffing of ASPIRE Secretariat with clear JD and accountability lines Contracting Technical Advisers (FM and Procurement) Comprehensive, user-friendly PIM 	M
2. Budgeting	M	<ul style="list-style-type: none"> Use of unified AWPB across the Project Coding of activities for ease of tracking 	M
3. Funds flow and Disbursement Arrangements	H	<ul style="list-style-type: none"> Sound, rigorous cash flow planning Rules for replenishment of project accounts 	M
4. Internal Controls	H	<ul style="list-style-type: none"> Segregation of fiduciary-sensitive duties Periodic reconciliation of bank accounts Restricting access to accounting files and documents Periodic count of inventories and fixed assets 	M
5. Accounting Systems, Policies & Procedures	H	<ul style="list-style-type: none"> Use of same accounting software across the project Back-up of accounting records Use of registry of fixed assets Training of project accountants and delivery of back-stopping 	M
6. Reporting and monitoring	H	<ul style="list-style-type: none"> PIM to detail reporting and monitoring requirements and rules Accounting to generate automated, consolidated financial reports 	M
7. Internal Audit	H	<ul style="list-style-type: none"> Appointment of an experienced internal auditor company for annual reviews Project management to act on internal audit findings and recommendations 	M
8. External Audit	M	<ul style="list-style-type: none"> Appointment of an external auditor on the basis of TOR agreeable to IFAD 	L
Project Fiduciary Risk @ Design	H		M

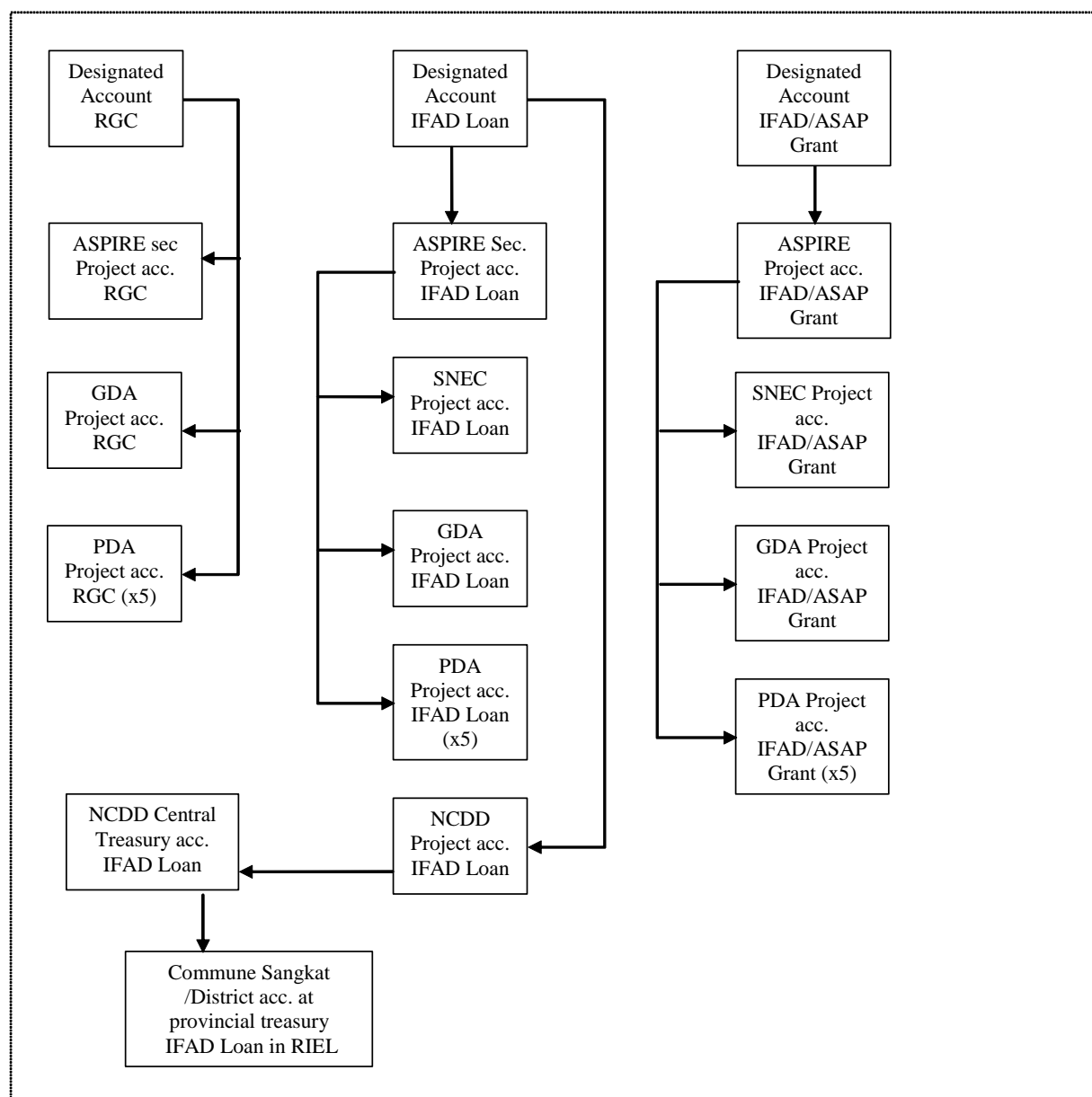
⁶⁶ <http://www.ifad.org/operations/pbas/>

24. After mitigation, the overall programme fiduciary risk decreases from **High to Medium but with negative trend**.

D. Financial Management and disbursement arrangements

25. **Budgeting.** In the first phase, the ASPIRE Secretariat will consolidate the annual work plan and budget (AWPB) considering input received from the various implementing agencies/partners and aligning the overall set of planned PB activities to arrangements in place at MAFF. Non PB activities, mainly with component 4 will follow the budget prepared by NCDD. In subsequent phases, ASPIRE AWPB will increasingly rely on MAFF procedures for the set-up annual budgets and PB within the multiyear strategy approved for MAFF. The AWPB will be subject to the approval of the Steering Committee and submitted to IFAD for non-objection at least 2 months before the start of the fiscal year. Once approved, and pending the deployment of an ERM system at MAFF, the annual budget shall be input in budget module of the accounting software to allow systematic management and monitoring of it.
26. **Disbursement arrangements and Flow of Funds.** Consistent with ASPIRE institutional arrangements, the following agencies shall be involved in the implementation of the programme activities, and as such, responsible for receiving and/or managing, accounting and reporting on the use of funds:
- (a) ASPIRE Secretariat, located within MAFF;
 - (b) Supreme National Economic Council (SNEC);
 - (c) National Committee for Sub-national Democratic Development Secretariat (NCDDS);
 - (d) General Directorate of Agriculture (GDA) at MAFF;
 - (e) Provincial Department of Agriculture (PDA).
27. The Ministry of Economy and Finance (MEF) and the ASPIRE Secretariat (MAFF) shall open and maintain in the National Bank of Cambodia the following Bank Accounts: (i) Two Designated Accounts in USD to receive the IFAD Loan and IFAD/ASAP Grant proceeds from the Loan and Grant Accounts maintained by IFAD; and (ii) One Account in USD to receive and manage the Government Counterpart Fund for the Programme. As long as the integration between ASPIRE and MAFF PB activities proceeds, the Government Counterpart account will receive less funding with the remainder channelled to programme activities via increased allocations under PB.
28. IFAD shall advance funds from the Loan and Grant Accounts to the Designated Loan and Grant Accounts based on an approved annual work plan and budget (AWPB) and cash flow projection for six months planned activities. IFAD will provide advances for the six months activities based on the approved AWPB. The Aspire Secretariat will transfer to all implementing agencies six months budget. The release subsequent advances shall be based on the justification of 50% of the last advance and 100% of all preceding advances. MEF shall transfer the Government counterpart funds to the Counterpart Funds Account based on the same AWPB on a six monthly basis.
29. MEF shall authorize the opening of the following USD Programme Accounts for the IFAD Loan and Grant proceeds:
- (a) Four Programme Accounts at the National level for the loan, which will be maintained and operated respectively by ASPIRE Secretariat, GDA, NCDD, SNEC.
 - (b) One Sub-National Programme Account for the loan for each of the Provincial Departments of Agriculture participating in ASPIRE which will be used also to manage grants awarded under component 3

- (c) Three programme accounts for ASAP maintained by ASPIRE Secretariat, SNEC and GDA. One Sub-National Programme Account for the grant for each of the Provincial Departments of Agriculture participating in ASPIRE;
30. MEF shall also authorize the opening of the following USD Programme Accounts for the Government Counterpart Fund proceeds:
 - (a) One Programme Account at the National Level (ASPIRE Secretariat);
 - (b) One Programme Account for GDA;
 - (c) One Sub-National Programme Account for each of the Provincial Departments of Agriculture to be used initially.
31. All these accounts could be possibly phased out upon increased use of PB arrangements.
32. ASPIRE Secretariat shall advance funds from the main Programme Accounts to the accounts of the Implementing Agencies (IAs), namely: SNEC, GDA, and PDAs based on the approved annual work plan and budget (AWPB) and cash flow projection for the activities to be undertaken during the coming six months. Funds for NCDD will be transferred directly from the Designated Account at MEF upon request of the ASPIRE Programme Director.
33. SNEC, GDA and PDAs are the ultimate administrators of programme bank accounts; NCDD instead will open a programme account for operational expenditures, while the portion of funds dedicated for infrastructure related activities at provincial level will be channelled through the national treasury system, that NCDD is successfully using to implement other projects. Based on the AWPB, NCDD will transfer required funding to the national treasury system. NCDD will identify correct administrative methodologies to charge to RGC the tax element of expenses channelled through the national treasury system, considering that such costs are ineligible under IFAD financing. The implementation of larger grants will be assessed at mid-term review.
34. RGC contribution will flow directly from the RGC designated account to the ASPIRE Secretariat, GDA and PDAs programme accounts upon request from the Aspire Secretariat.
35. Accordingly, the flow of funds shall be as per the following diagram:



36. ASPIRE Secretariat shall submit withdrawal applications on a quarterly basis justifying the advances received based on expenditures reports submitted by the implementing agencies. Such withdrawal applications shall be prepared in accordance with IFAD requirements with SOEs thresholds fixed at USD 50 000 for all cost categories. All expenditures above the established thresholds shall be accompanied by related supporting documentation, as well as all expenditures of every amount related to contracts of value exceeding USD 50 000. The Secretariat shall prepare and submit the withdrawal application to IFAD (through MEF) on a timely basis within 15 days after the end of each quarter starting from the first quarter after the first disbursement is made. Withdrawal application will be submitted to IFAD every quarter or when the required amount is approximately USD 1 million minimum.
37. **Internal controls.** Procedures and record maintenance at all level have to be significantly strengthened by addressing the issues of non-availability of skilled finance staff, setting up of internal controls, setting up of effective monitoring and review, introduction of accounting software, preparation of a detailed section in the PIM on Financial Management with guidance notes. The Advisors will play an important role in the overall process. The system of joint

signatory for operating the bank accounts or appropriate authorization processes will have to be introduced. Detailed procedures for adequate recording, management and safeguard of programme fixed assets will be disclosed in the PIM..

38. **Accounting systems, policies, procedures and financial reporting.** The financial accounting of the ASPIRE will be done through a computerised accounting software at all levels, which will be customised to generate financial reports for RGC and for IFAD respecting specific reporting requirements. The customisation will be in such a way to disclose funds use by component, sub-component, cost category and each of the funding sources to be collated through the software. Customization will also include reference to the RGC's Chart of Account (COA). Budgetary control at activity level to be incorporated, also considering the RGC's budget classification, pending the deployment of a national system for PB management. The accounting software has to be customised to generate required financial statements and details of the achievements from the system itself. Each implementing agency will submit Monthly Financial Progress Reports to the ASPIRE Secretariat electronically. ASPIRE Secretariat will consolidate data received and will be the entry contact point with IFAD. ASPIRE Secretariat will prepare annual consolidated financial statements including data provided by all other implementing agencies. ASPIRE Secretariat and the Implementing Agencies shall apply cash basis accounting principles in accordance with the updated Standard Operating Procedures (SOP) for externally financed projects/programmes in Cambodia, issued by MEF, as per Sub-Decree No. 74 ANK. BK dated 22 May 2012, on the condition that these procedures are adequately adjusted to accommodate any specific financial management requirements of ASPIRE while taking into consideration local circumstances and capacities in respect of the implementation of ASPIRE activities at sub-national level. With the increased use of PB, the MAFF Department of Finance and Accounts will monitor RGC portion of ASPIRE expenditures and will regularly report back to the ASPIRA Secretariat.
39. **Internal Audit.** As the ASPIRE Secretariat will be a part of the MAFF, it will be subject to the activities of the MAFF Internal Auditor Office. In order to have more specific support, ASPIRE Secretariat on an annual basis will contract a private internal audit firm to perform internal controls review, proposes improvements and issue recommendations. Implementation of such recommendations shall be monitored during the following exercise. Main duties to be stipulated in the TORs will include monitoring and review of the financial systems and procedures, their application and adherence to the PIM, support the introduction of administrative efficiencies. It would be a good practice to brief the appointed external auditors on the programme components, methods of implementation, monitoring arrangements, etc so that they could deliver the reports effectively. Reports prepared by the internal audit firm will be submitted to the attention of the Steering Committee and forwarded to IFAD.
40. **External Audit.** Proper set-up of audit TORs will be a key safeguard for all stakeholders. A single private auditor will be hired for the annual audit of ASPIRE. In addition to IFAD usual requirements, TORs will include visits to all implementing agencies at central and provincial level, review of relevant documentation, physical verification on infrastructures built, sample interviews to participants to extension trainings and people/companies awarded with grants.
41. The audit firm will be competitively selected through Quality and Cost Based Selection method of procurement with a weight age of 70:30 for quality and cost. The cost of the audit shall be paid from the Programme proceeds. The firm shall audit the Programme's consolidated annual financial statements and operations, in accordance with International Standards on Auditing complemented by terms of reference (TORs) acceptable to IFAD.
42. The auditor shall issue separate opinions covering the financial statements, statements of expenditures, management of designated accounts and programme bank accounts as well as a management letter outlining any internal control weaknesses and recommended remedies; more particularly, the auditor must ascertain that the information included in the annual financial statements are correct, reliable, and present a true and fair description of the Programme

financial position. The management letter will provide an update on the status of implementation of audit recommendations issued in previous years.

43. The audited financial statements and audit report shall be submitted to IFAD within six months after the end of each fiscal year and by the Programme closing date. The implementation status of the audit recommendations shall be provided by each Implementing Agency on a quarterly report to be submitted to the ASPIRE Secretariat and forwarded to IFAD.
44. Taxes. The proceeds of the IFAD financing may not be used to pay taxes which will be part of the contribution of RGC to the programme. Social security benefits (employee's portion) and income tax (employee deductions) are eligible for financing.

Appendix 8: Procurement

A. General Provisions

1. Procurement under the Programme shall be carried out in accordance with the revised Standard Operating Procedures applicable to externally funded projects (SOP, 2012) and other government rules and procedures⁶⁷ and as long they are consistent with IFAD Procurement Guidelines and Procurement Handbook (September 2010), otherwise, IFAD procurement Guidelines shall prevail. For each contract to be financed by IFAD proceeds, the types of procurement methods, the need for pre or post-qualification, estimated cost, prior review requirements and time-frame shall have to be agreed between the ASPIRE Secretariat and IFAD in the Procurement Plan to be submitted by the Implementing Agencies. IFAD's approval of the procurement plan is mandatory and any changes or modifications must be communicated and approved by IFAD.
2. As per IFAD's Procurement Guidelines, IFAD review of and no objection to the Programme procurement plans shall be compulsory, and any changes and amendments to the procurement plan shall be subject to IFAD's No Objection; the plans submitted by ASPIRE Secretariat must include as a minimum:
 - (a) A brief description of each procurement activity to be undertaken during the period and name of the implementing agency responsible for the procurement;
 - (b) The estimate value of each procurement activity;
 - (c) The method of procurement to be adopted for each procurement activity and.;
 - (d) The method of review IFAD will undertake for each procurement activity indicating either post review or prior review.
3. All procurement of goods, works and services financed from IFAD funds under the Programme shall require the use of proper bidding documents and the contracts to include a provision requiring suppliers, contractors and consultants to permit IFAD to inspect their accounts, records and other documents relating to the bid submission and contract performance, and to have them audited, if any, by IFAD-appointed auditors.
4. Procurement of civil works should be undertaken in sizable bid packages ensuring works are not split to accommodate contractor's financial capacities to qualify for the bidding or to intentionally avoid seeking IFAD prior review. Any civil works which are to be split into small bid packages due to specific implementation consideration must to clearly established and highlighted in the procurement plan.
5. The Programme shall include a number of actions to strengthen procurement capacity of IAs and mitigate procurement risks. In terms of capacity, the programme shall recruit a Procurement Adviser to provide procurement and fiduciary services to the programme (including training) in addition to ASPIRE Secretariat Procurement Officer.
6. The design of the programme internal control framework shall include measures to address key control gaps existing within the current procurement process. The Procurement Advisor shall support ASPIRE Secretariat and the implementing agencies in establishing these controls. Also, the accounting system would incorporate a vendor and contract management system, which will track contract performance and disbursement to vendors.

⁶⁷ Such as those provided for in the procurement law (enacted in 2012), NCDDA Administration and Financial Manual, and the regulations on the procurement by subnational administrations (SNA).

7. IFAD shall assess in due time the suitability of the procurement procedures of the District Administration and the Commune Councils for procurement of works or goods financed by the Climate Resilient Infrastructure Grants (under Component 4 of ASPIRE).

B. Procurement Methods and Thresholds

8. The International Competitive Bidding (ICB) shall be the mandatory procurement method for the following activities (per contract) :

- (a) Goods estimated to cost above USD 200,000
- (b) Civil works estimated to cost above USD 1,000,000
- (c) Services estimated to cost above USD 100,000

9. Procurement of **goods and works** shall be as per the following methods and thresholds:

Type	Procurement Method	Threshold (USD)
Goods	National Competitive Bidding (NCB)	25,000 – 200,000
	National shopping	3,000 – 25,000
	Direct contracting	Below 3,000
Works	National Competitive Bidding (NCB)	100,000 – 1,000,000
	National shopping	Less than 100,000

10. **Consultants and Service Providers.** Consulting service will include programme management technical assistance, implementation support technical assistance for different components, conducting studies, mobilisation/establishment of community groups, technical training and strengthening of community groups, and monitoring and evaluation. Services would be provided by consulting firms and individual consultants.
11. Each contract for the selection of consultancy firms or service providers estimated to cost USD 30,000 equivalent or above, shall be selected in accordance with the IFAD Procurement Guidelines, following any one of the selection methods listed below:
- (a) Quality and Cost Based Selection
 - (b) Fixed Budget Selection
 - (c) Least Cost Selection
12. Each contract for the selection of consultancy firms or services providers estimated to cost below USD 30,000 equivalent shall be selected in accordance with the IFAD Procurement Guidelines, following any one of the selection methods listed below:
- (a) Quality and Cost Based Selection
 - (b) Fixed Budget Selection
 - (c) Least Cost Selection
 - (d) Selection Based on Consultants Qualification
 - (e) Single Source Selection.
13. **Individual consultants** are selected on the basis of their qualifications for the assignment. They shall be selected through comparison of qualifications of at least three candidates among those who have expressed interest in the assignment or have been approached directly by the Programme Implementing Agency. They shall meet all relevant qualifications and shall be fully capable of carrying out the assignment. Capability is judged on the basis of academic background, experience and, as appropriate, knowledge of the local conditions, such as local language, culture, administrative system, and government organization.

14. Individuals may be selected on a sole-source basis with due justification in exceptional cases such as: (a) tasks that are a continuation of previous work that the consultant has carried out and for which the consultant was selected competitively; (b) assignments lasting less than six months; (c) emergency situations resulting from natural disasters; and (d) when the individual is the only consultant qualified for the assignment.

C. Review of Procurement Decisions by IFAD

15. **Prior or Post Review.** Except as IFAD may otherwise agree, the prior or post review of procurement decisions of the programme Implementing Agencies shall be defined as follows:

Procurement Method	Review Method	Comments
Procurement of Goods and Works		
ICB Works	Prior	
ICB Goods	Prior	
NCB Works	Prior	Except procurement valued below USD 150,000
NCB Goods	Prior	Except procurement valued below USD 100,000
Shopping for works (quotations)	Post	
Shopping for goods (quotations)	Post	
Direct Works	Post	Except first contract in each district
Direct Goods	Prior	Except procurement valued below USD 5,000
Recruitment of Consulting Firms		
Quality- and Cost-Based Selection (QCBS)	Prior	Except procurement valued below USD 100,000
Fixed Budgeted Selection (FBS)	Prior	Except procurement valued below USD 100,000
Least Cost Selection (LCS)	Prior	Except procurement valued below USD 100,000
Selection Based of Consultants Qualification	Prior	Except procurement valued below USD 60,000
Sole Source Selection (SSS)	Prior	Except procurement valued below USD 30,000
Recruitment of Individual Consultants		
Individual Consultants	Prior	Except procurement valued below USD 30,000

16. For the purposes of IFAD's Procurement Guidelines, the following procurement decisions shall be subject to prior review by the Fund for the award of any contract for goods, works estimated to cost USD 100,000 and above and consultancy services estimated to cost USD 50,000 and above:
- (a) Procurement of goods and civil works:
 - (i) Prequalification documents and shortlist when prequalification is undertaken;
 - (ii) Bid Documents for goods and works;
 - (iii) Evaluation Reports and Recommendations for Award; and
 - (iv) Draft contracts and contract amendments.
 - (b) Procurement of consultancy services and other services:
 - (i) Prequalification documents and shortlist when prequalification is undertaken;
 - (ii) Request for Proposal (RFP);
 - (iii) Technical Evaluation Report;

- (iv) Combined (technical & financial) evaluation report and the recommendation for award; and
 - (v) Contracts and contract amendments.
- 17. All direct contracts for goods and civil works and single source selection for service providers above the prescribed procurement and selection method thresholds shall be undertaken in accordance with the provisions of IFAD Procurement Guidelines for direct contracting and single source selection and subject to IFAD prior review.
- 18. The aforementioned thresholds may be modified by IFAD during the course of programme implementation.
- 19. All contracts, with or without prior IFAD approval, should be listed in the Register of Contracts with the dates of approval to facilitate the review and approval of payment requests on contracts. The Register shall have to be updated and submitted to the IFAD Country Programme Manager on a monthly basis.

Appendix 9: Programme cost and financing

A. Main assumptions

1. Costs calculations are based on prices prevailing in Cambodia in December 2013. The base exchange rate for this analysis has been set at 4000 KHR to USD 1 as the average rate from January to December 2014. Domestic consumer price inflation for the period 2015-21 has been set at 5%, and international inflation at 1.6%, as per the Economist Intelligence Unit latest estimates.
2. Expenditure accounts conform to the new standard categories of expenditures established by IFAD in August 2013. Expenditure accounts, physical and price contingencies and rates for foreign exchange used in the analysis are shown in Table 2 below.
3. Physical contingencies apply to as follows: 5% on consultancies, 5% on equipment and materials, goods and services and vehicles, 5% on training and workshops, 0% on grant & subsidies, 0% on vehicle (car) and 5% for all recurrent costs. Taxes are levied at 10% on all goods and services, 0% for international consultant and 20% Vehicle procured through tax exempted UNWEB buy.

B. Programme Costs

4. Total programme costs are of around USD 82.2 million over a seven-year implementation period and include USD 4.1 million of physical and price contingencies. Foreign exchange accounts for about 10% of total programme costs, and duties & taxes make up approximately USD 3 million. Funds allocated to the ASPIRE Secretariat are about USD 10.6 million or 13% of the total Programme costs. The summary and detailed cost tables are provided in excel format.

C. Financing

5. An IFAD Loan of USD 26.1 million and an ASAP Grant of USD 15 million will finance a large share of the investment costs, except "workshop" expenditure category to be financed 100% from the Government Contribution. The International Initiative for Impact Evaluation (3iE), supported by a number of development partners and foundations, will provide financing for the Randomized Control Trials to be implemented by IFPRI under component 1: Knowledge Based Policy, and estimated at about USD 932,400. USAID will finance selected activities in Component 2.2 estimated to cost USD 329,423.
6. There is a total of USD 12.5 millions of unfunded costs. As detailed in the Component descriptions, the majority of these unfunded costs are allocated to cover (1) expansion of the Provincial Sub-Programmes to an additional 3 Provinces; (2) continuation of broadcast extension activities through Phase 3 of the programme and (3) expansion of the Performance Based Climate Resilience Grants to an additional 10 Districts. There are also two unfunded technical advisor positions identified to support climate resilient agriculture in Component 2.
7. Government funding is estimated at USD 11.4 million in cash or about 14.5 % of total programme costs, of which 3 USD million represents taxes and duties to both investment and recurrent costs. The government will co-finance all categories of expenditure including 28% of salaries and allowances, 10% of equipment and materials, 27% of training, 18% of Grants for Extension Services to Smallholders and 17% of Grants for Climate Resilient Productive Infrastructure. The Government also contribute in kind 100% salaries of Government staff seconded to the programme, and all programme Operating and Maintenance costs. In conformity with the principle that no taxes or duties would be financed out of the proceeds of the IFAD Loan / Grant, any future changes in the rates and/or structures of taxes and duties that apply to the programme will be taken up by the Government.

8. The following types of contributions in kind have been assumed in the cost tables: (1) beneficiary contribution of 7.3% or USD 5.8 Million in kinds for extension services under Component 3; (2) Co-financing of infrastructure by the Commune Councils (2:1 ratio for infrastructure financed by the PBCR Grants) of 8.89% or USD 7.2 Million; and (3) co-financing of 50% of the costs of PPP activities by the private partners of USD 3 million.

Table 1: Components Programme Cost Summary (USD)

Kingdom of Cambodia

Agriculture Services Project for Innovation, Resilience and Extension (ASPIRE)

Components Project Cost Summary

	(Local)			(US\$)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
1. Evidence Based Policy Development	3,898,320,000	8,200,800,000	12,099,120,000	974,580	2,050,200	3,024,780	68	4
2. Capacity Development for Extension Services	16,004,000,000	8,829,000,000	24,833,000,000	4,001,000	2,207,250	6,208,250	36	8
3. Improved Extension Services	151,885,520,000	5,392,880,000	157,278,400,000	37,971,380	1,348,220	39,319,600	3	50
4. Infrastructure Supporting Climate Resilient Agriculture	82,336,560,000	1,271,240,000	83,607,800,000	20,584,140	317,810	20,901,950	2	27
5. ASPIRE Secretariat	26,213,904,000	8,361,680,000	34,575,584,000	6,553,476	2,090,420	8,643,896	24	11
Total BASELINE COSTS	280,338,304,000	32,055,600,000	312,393,904,000	70,084,576	8,013,900	78,098,476	10	100
Physical Contingencies	2,949,527,200	1,088,648,000	4,038,175,200	737,382	272,162	1,009,544	27	1
Price Contingencies	11,406,802,793	1,155,846,525	12,562,649,319	2,851,701	288,962	3,140,662	9	4
Total PROJECT COSTS	294,694,633,993	34,300,094,525	328,994,728,519	73,673,658	8,575,024	82,248,682	10	105

Table 2: Expenditure Accounts Programme Cost Summary (USD)

Kingdom of Cambodia

Agriculture Services Project for Innovation, Resilience and Extension (ASPIRE)

Expenditure Accounts Project Cost Summary

	(Local)			(US\$)			%	% Total
	Local	Foreign	Total	Local	Foreign	Total	Foreign Exchange	Base Costs
I. Investment Costs								
A. Consultant National	21,559,600,000	-	21,559,600,000	5,389,900	-	5,389,900	-	7
B. Consultant Firm	3,337,000,000	3,337,000,000	6,674,000,000	834,250	834,250	1,668,500	50	2
C. Consultant 3IE	-	3,729,600,000	3,729,600,000	-	932,400	932,400	100	1
D. Consultant International	1,984,800,000	17,863,200,000	19,848,000,000	496,200	4,465,800	4,962,000	90	6
E. Equipment and Material	260,800,000	2,347,200,000	2,608,000,000	65,200	586,800	652,000	90	1
F. Goods & Services & Inputs	16,180,400,000	-	16,180,400,000	4,045,100	-	4,045,100	-	5
G. Grants & Subsidies to PDA	127,898,400,000	-	127,898,400,000	31,974,600	-	31,974,600	-	41
H. Grants & Subsidies to GDA	6,120,000,000	-	6,120,000,000	1,530,000	-	1,530,000	-	2
I. Grants & Subsidies to CC	20,400,000,000	-	20,400,000,000	5,100,000	-	5,100,000	-	7
J. Grants & Subsidies to DA	27,200,000,000	-	27,200,000,000	6,800,000	-	6,800,000	-	9
K. Training	4,469,200,000	-	4,469,200,000	1,117,300	-	1,117,300	-	1
L. Motorcycle	335,400,000	3,018,600,000	3,354,000,000	83,850	754,650	838,500	90	1
M. Vehicle	440,000,000	1,760,000,000	2,200,000,000	110,000	440,000	550,000	80	1
N. Workshop	6,181,800,000	-	6,181,800,000	1,545,450	-	1,545,450	-	2
O. Works	28,944,000,000	-	28,944,000,000	7,236,000	-	7,236,000	-	9
Total Investment Costs	265,311,400,000	32,055,600,000	297,367,000,000	66,327,850	8,013,900	74,341,750	11	95
II. Recurrent Costs								
A. Operating Cost	3,156,600,000	-	3,156,600,000	789,150	-	789,150	-	1
B. Salaries & Allow ances	11,870,304,000	-	11,870,304,000	2,967,576	-	2,967,576	-	4
Total Recurrent Costs	15,026,904,000	-	15,026,904,000	3,756,726	-	3,756,726	-	5
Total BASELINE COSTS	280,338,304,000	32,055,600,000	312,393,904,000	70,084,576	8,013,900	78,098,476	10	100
Physical Contingencies	2,949,527,200	1,088,648,000	4,038,175,200	737,382	272,162	1,009,544	27	1
Price Contingencies	11,406,802,793	1,155,846,525	12,562,649,319	2,851,701	288,962	3,140,662	9	4
Total PROJECT COSTS	294,694,633,993	34,300,094,525	328,994,728,519	73,673,658	8,575,024	82,248,682	10	105

Table 3: Expenditure Accounts by Component – Totals Including Contingencies (USD)

Kingdom of Cambodia
Agriculture Services Project for Innovation, Resilience and Extension (ASPIRE)
Expenditure Accounts by Components - Base Costs
(US\$)

	Evidence Based Policy Development	Capacity Development for Extension Services	Improved Extension Services	Infrastructure Supporting Climate Resilient Agriculture	ASPIRE Secretariat	Total	Physical Contingencies	
							%	Amount
I. Investment Costs								
A. Consultant Natonal	291,600	1,249,600	93,000	384,200	3,371,500	5,389,900	4.8	257,905
B. Consultant Firm	-	383,500	150,000	-	1,135,000	1,668,500	5.0	83,425
C. Consultant 3IE	932,400	-	-	-	-	932,400	-	-
D. Consultant International	1,222,000	2,149,000	-	285,000	1,306,000	4,962,000	3.8	186,600
E. Equipment and Material	20,000	46,000	306,800	26,400	252,800	652,000	4.5	29,105
F. Goods & Services & Inputs	-	640,600	3,404,500	-	-	4,045,100	2.5	102,255
G. Grants & Subsidies to PDA	-	-	31,974,600	-	-	31,974,600	-	-
H. Grants & Subsidies to GDA	-	-	1,530,000	-	-	1,530,000	-	-
I. Grants & Subsidies to CC	-	-	-	5,100,000	-	5,100,000	-	-
J. Grants & Subsidies to DA	-	-	-	6,800,000	-	6,800,000	-	-
K. Training	-	764,300	228,000	-	125,000	1,117,300	5.0	55,415
L. Motorcycle	-	-	819,000	19,500	-	838,500	4.8	40,350
M. Vehicle	-	50,000	325,000	25,000	150,000	550,000	-	-
N. Workshop	370,000	595,250	138,200	302,000	140,000	1,545,450	4.7	72,673
O. Works	-	-	-	7,236,000	-	7,236,000	-	-
Total Investment Costs	2,836,000	5,878,250	38,969,100	20,178,100	6,480,300	74,341,750	1.1	827,728
II. Recurrent Costs								
A. Operating Cost	47,150	92,600	315,500	141,100	192,800	789,150	4.8	37,998
B. Salaries & Allow ances	141,630	237,400	35,000	582,750	1,970,796	2,967,576	4.8	143,819
Total Recurrent Costs	188,780	330,000	350,500	723,850	2,163,596	3,756,726	4.8	181,816
Total BASELINE COSTS	3,024,780	6,208,250	39,319,600	20,901,950	8,643,896	78,098,476	1.3	1,009,544
Physical Contingencies	104,619	242,393	168,665	69,173	424,695	1,009,544	-	-
Price Contingencies								
Inflation								
Local	184,660	689,147	313,458	245,443	1,418,992	2,851,701	-	-
Foreign	63,099	30,034	61,897	12,771	121,161	288,962	-	-
Subtotal Inflation	247,759	719,181	375,355	258,214	1,540,153	3,140,662	-	-
Devaluation	-	-	-	-	-	-	-	-
Subtotal Price Contingencies	247,759	719,181	375,355	258,214	1,540,153	3,140,662	4.7	148,981
Total PROJECT COSTS	3,377,158	7,169,824	39,863,620	21,229,336	10,608,744	82,248,682	1.4	1,158,525
Taxes	244,476	722,022	669,428	211,854	1,075,994	2,923,774	4.0	115,852
Foreign Exchange	2,169,189	2,292,996	1,460,357	342,380	2,310,102	8,575,024	3.3	285,463

Table 4: Programme Components by Year - Totals Including Contingencies (USD)

	Totals Including Contingencies							Total
	2015	2016	2017	2018	2019	2020	2021	
1. Evidence Based Policy Development	490,430	465,268	502,721	534,470	680,321	346,316	357,632	3,377,158
2. Capacity Development for Extension Services	1,157,006	1,395,083	1,155,955	949,936	875,332	792,800	843,713	7,169,824
3. Improved Extension Services	598,788	2,474,328	3,338,089	5,620,648	9,735,205	9,170,221	8,926,342	39,863,620
4. Infrastructure Supporting Climate Resilient Agriculture	199,402	1,401,599	2,845,694	4,503,703	4,875,089	4,263,575	3,140,274	21,229,336
5. ASPIRE Secretariat	1,342,785	1,097,964	1,129,505	1,538,994	1,676,484	1,734,387	2,088,625	10,608,744
Total PROJECT COSTS	3,788,412	6,834,242	8,971,963	13,147,750	17,842,430	16,307,299	15,356,585	82,248,682

Table 5: Expenditure Accounts by Years - Totals Including Contingencies (USD)

	2015	2016	2017	2018	2019	2020	2021	Total
I. Investment Costs								
A. Consultant Natonal	584,764	903,693	813,666	819,392	1,163,009	1,212,132	1,270,579	6,767,235
B. Consultant Firm	348,691	117,114	213,254	395,598	269,376	178,329	441,704	1,964,065
C. Consultant 3IE	188,000	75,500	157,300	185,900	325,700	-	-	932,400
D. Consultant International	974,822	990,802	818,043	674,529	624,684	612,080	638,544	5,333,506
E. Equipment and Material	249,042	44,089	39,331	201,659	170,408	-	-	704,529
F. Goods & Services & Inputs	105,688	794,886	835,817	748,037	660,223	644,256	649,469	4,438,375
G. Grants & Subsidies to PDA	-	1,352,400	2,028,600	4,167,600	8,004,000	8,155,800	8,266,200	31,974,600
H. Grants & Subsidies to GDA	-	180,000	270,000	360,000	360,000	360,000	-	1,530,000
I. Grants & Subsidies to CC	-	400,000	1,000,000	1,700,000	1,300,000	700,000	-	5,100,000
J. Grants & Subsidies to DA	-	-	-	-	1,600,000	2,400,000	2,800,000	6,800,000
K. Training	298,511	227,482	209,547	191,369	142,069	136,810	143,651	1,349,440
L. Motorcycle	55,566	145,170	147,493	219,648	355,251	-	-	923,128
M. Vehicle	352,800	-	-	75,000	134,260	-	-	562,060
N. Workshop	154,603	259,168	263,975	318,061	337,590	291,879	295,331	1,920,607
O. Works	-	804,000	1,608,000	2,412,000	1,608,000	804,000	-	7,236,000
Total Investment Costs	3,312,487	6,294,303	8,405,027	12,468,794	17,054,570	15,495,287	14,505,477	77,535,945
II. Recurrent Costs								
A. Operating Cost	79,804	105,774	111,063	130,145	190,446	185,868	194,796	997,896
B. Salaries & Allow ances	396,120	434,165	455,874	548,811	597,414	626,145	656,312	3,714,842
Total Recurrent Costs	475,924	539,939	566,936	678,957	787,860	812,012	851,108	4,712,737
Total PROJECT COSTS	3,788,412	6,834,242	8,971,963	13,147,750	17,842,430	16,307,299	15,356,585	82,248,682

Table 6: Components by Financiers (USD)

	The Government		IFAD loan		IFAD grant		CFS		3iE		UNFUNDED		LC in Kinds		USAID		PPP		Total		Local (Excl. Taxes)	Duties & Taxes	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			For. Exch.
1. Evidence Based Policy Development	796,986	23.6	-	-	1,647,773	48.8	-	-	932,400	27.6	-	-	-	-	-	-	-	-	3,377,158	4.1	2,169,189	963,493	244,476
2. Capacity Development for Extension Services	2,109,822	29.4	664,739	9.3	2,886,480	40.3	-	-	-	-	1,179,360	16.4	-	-	329,423	4.6	-	-	7,169,824	8.7	2,292,996	4,154,805	722,022
3. Improved Extension Services	3,720,166	9.3	18,108,899	45.4	1,864,925	4.7	-	-	-	-	7,365,030	18.5	5,792,500	14.5	-	-	3,012,100	7.6	39,863,620	48.5	1,460,357	37,733,836	669,428
4. Infrastructure Supporting Climate Resilient Agriculture	1,711,716	8.1	7,362,000	34.7	1,097,870	5.2	7,236,000	34.1	-	-	3,821,750	18.0	-	-	-	-	-	-	21,229,336	25.8	342,380	20,675,103	211,854
5. ASPIRE Secretariat	3,111,421	29.3	-	-	7,497,322	70.7	-	-	-	-	-	-	-	-	-	-	-	-	10,608,744	12.9	2,310,102	7,222,648	1,075,994
Total PROJECT COSTS	11,450,111	13.9	26,135,638	31.8	14,994,370	18.2	7,236,000	8.8	932,400	1.1	12,366,140	15.0	5,792,500	7.0	329,423	0.4	3,012,100	3.7	82,248,682	100.0	8,575,024	70,749,884	2,923,774

Table 7: Expenditure Accounts by Financiers (USD)

	The Government		IFAD loan		IFAD grant		CSF		3iE		UNFUNDED		LC in Kinds		USAID		PPP		Total		Local (Excl. Taxes)	Duties & Taxes	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%			For. Exch.
I. Investment Costs																							
A. Consultant Natonal	2,225,622	32.9	-	-	4,332,993	64.0	-	-	-	-	208,620	3.1	-	-	-	-	-	-	6,767,235	8.2	-	6,090,511	676,723
B. Consultant Firm	707,064	36.0	-	-	1,257,002	64.0	-	-	-	-	-	-	-	-	-	-	-	1,964,065	2.4	927,929	839,730	196,407	
C. Consultant 3iE	-	-	-	-	-	-	-	-	932,400	100.0	-	-	-	-	-	-	-	932,400	1.1	932,400	-	-	
D. Consultant International	567,822	10.6	-	-	3,412,659	64.0	-	-	-	-	1,107,000	20.8	-	-	246,024	4.6	-	5,333,506	6.5	4,800,155	-	533,351	
E. Equipment and Material	70,770	10.0	-	-	570,849	81.0	-	-	-	-	62,910	8.9	-	-	-	-	-	704,529	0.9	634,076	-	70,453	
F. Goods & Services & Inputs	595,017	13.4	2,043,358	46.0	-	-	-	-	-	-	1,800,000	40.6	-	-	-	-	-	4,438,375	5.4	-	3,994,538	443,838	
G. Grants & Subsidies to PDA	2,416,720	7.6	15,353,280	48.0	-	-	-	-	-	-	5,400,000	16.9	5,792,500	18.1	-	-	3,012,100	9.4	31,974,600	38.9	-	31,974,600	-
H. Grants & Subsidies to GDA	153,000	10.0	1,377,000	90.0	-	-	-	-	-	-	-	-	-	-	-	-	-	1,530,000	1.9	-	1,530,000	-	
I. Grants & Subsidies to CC	385,200	7.6	3,214,800	63.0	-	-	-	-	-	-	1,500,000	29.4	-	-	-	-	-	5,100,000	6.2	-	5,100,000	-	
J. Grants & Subsidies to DA	652,800	9.6	4,147,200	61.0	-	-	-	-	-	-	2,000,000	29.4	-	-	-	-	-	6,800,000	8.3	-	6,800,000	-	
K. Training	367,030	27.2	-	-	890,911	66.0	-	-	-	-	8,100	0.6	-	-	83,399	6.2	-	1,349,440	1.6	-	1,214,496	134,944	
L. Motorcycle	202,875	22.0	-	-	691,904	75.0	-	-	-	-	28,350	3.1	-	-	-	-	-	923,128	1.1	830,816	-	92,313	
M. Vehicle	114,360	20.3	-	-	387,699	69.0	-	-	-	-	60,000	10.7	-	-	-	-	-	562,060	0.7	449,648	-	112,412	
N. Workshop	1,837,807	95.7	-	-	-	-	-	-	-	-	82,800	4.3	-	-	-	-	-	1,920,607	2.3	-	1,728,546	192,061	
O. Works	-	-	-	-	-	-	7,236,000	100.0	-	-	-	-	-	-	-	-	-	7,236,000	8.8	-	7,236,000	-	
Total Investment Costs	10,296,086	13.3	26,135,638	33.7	11,544,018	14.9	7,236,000	9.3	932,400	1.2	12,257,780	15.8	5,792,500	7.5	329,423	0.4	3,012,100	3.9	77,535,945	94.3	8,575,024	66,508,421	2,452,500
II. Recurrent Costs																							
A. Operating Cost	123,038	12.3	-	-	848,577	85.0	-	-	-	-	26,280	2.6	-	-	-	-	-	997,896	1.2	-	898,106	99,790	
B. Salaries & Allow ances	1,030,987	27.8	-	-	2,601,775	70.0	-	-	-	-	82,080	2.2	-	-	-	-	-	3,714,842	4.5	-	3,343,357	371,484	
Total Recurrent Costs	1,154,025	24.5	-	-	3,450,352	73.2	-	-	-	-	108,360	2.3	-	-	-	-	-	4,712,737	5.7	-	4,241,464	471,274	
Total PROJECT COSTS	11,450,111	13.9	26,135,638	31.8	14,994,370	18.2	7,236,000	8.8	932,400	1.1	12,366,140	15.0	5,792,500	7.0	329,423	0.4	3,012,100	3.7	82,248,682	100.0	8,575,024	70,749,884	2,923,774

Appendix 10: Economic and Financial Analysis

A. FINANCIAL ANALYSIS

- ASPIRE proposes the use of three comparative models of extension to respond to farmer's training needs and demand for technical assistance. Several crop budgets and production models have been prepared to illustrate the potential benefits expected from each type of extension services.
- Model 1: **Public extension services**, to be delivered by the District Agriculture Office (DAO) through an improved PADEE Farmers Field School (FFS) approach and a Farmer to Farmer Learning Network. This model is expected to reach about 45,000 poor and medium poor farmers in the ASPIRE pilot provinces, by providing 3-year learning and support programme to about 1,800 Smallholder Learning Groups (SLGs) of 25 farmers each in the 30 pilot districts. Additional 22,500 farmers would be reached within the PADEE provinces from 2018 to 2021. Subject to project performance and successful mobilization of the necessary resources, ASPIRE may be able to expand to 3 further provinces after Mid-Term Review, in which case the total number of farmers reached through FFSs would add up to 81,000.

Table 1: Number of Beneficiaries Assumed in Analysis

Provinces	Pilot Provinces	PADEE Provinces	Total for 10 Provinces scenario	3 Additional Provinces	13 (Pilot + PADEE + expansion post MTR)
Districts	30	15	45	9	54
SLGs	1,800	900	2,700	540	3,240
Farmers reached through FFSs (25 per SLG on average)	45,000	22,500	67,500	13,500	81,000
PPPs*	15,000	7,500	22,500	4,500	27,000
Contracting out model**	20,000	10,000	30,000	6,000	36,000
Climate resilient infrastructure ***	33,000	17,000	50,000	20,000	70,000
* 50% of which are also beneficiaries of ASPIRE extension services					
Total number of beneficiaries	96,500	48,500	145,000	34,000	179,000

* 3,000 farmers in each pilot province and 1,500 farmers in each expansion province

** 4,000 farmers in each pilot province and 2,000 farmers in each expansion province. 25% in special needs category

*** assumes beneficiaries will benefit from both PBG and SPG

- Each SLG will participate in three training modules over three years, that will typically address improved farmer agronomic practices in rice and vegetable cultivation, climate change adaptation techniques (such as SRI) and small livestock production (mainly pig and poultry). For paddy production, three crop budgets have been developed to account for the adoption of SRI, wet season double cropping, and ICPM practices. For vegetable production, seven crop budgets show the impact of more efficient input use on irrigated and non-irrigated crops. Two small livestock models illustrate incremental benefits of improved animal husbandry. Expected increases in yields, gross margins and returns to labour derived from the application of these techniques are shown in the tables below.

Table 2: Farmer Field Schools - Expected benefits from improved rice cultivation techniques (USD/Ha)

	SRI				Double Cropping		Rice ICPM			
	Without Project		With Project		Without Project	With Project	Without Project		With Project	
	Dry	Wet	Dry	Wet	Wet	Wet	Dry	Wet	Dry	Wet
Yield (kg/ha)	3,000	2,000	3,450	2,518	2,000	4,400	3,000	2,000	3,750	2,500
Value of production * (USD/ha)	626	614	720	770	614	1,350	626	614	783	767
Inputs costs (USD/ha)	234	115	172	73	115	291	233	114	300	165
Gross margin (USD/ha)	392	499	548	697	499	1,059	393	499	482	602
Hired Labour (p-d/ha)	30	35	75	56	35	70	30	35	30	35
Gross margin (incl. hired labour)	311	402	343	545	402	866	311	403	400	505
Family Labour (p-d/ha)	50	50	50	50	50	106	50	50	50	50
Return to family labour (USD/p-d)	6	8	7	11	8	8	6	8	8	10
Net incremental Income (USD)	-	-	33	142		463			90	103

* Including by-products

Table 3: Farmer Field Schools - Expected benefits from improved vegetable cultivation techniques (USD/ha)

	MAIZE-U		MAIZE-I		CASSAVA-U		MUNGBEAN-U		LONGBEAN-I		CUCUMBER-I		WATERMELON-I	
	WoP	WP	WoP	WP	WoP	WP	WoP	WP	WoP	WP	WoP	WP	WoP	WP
Yield (T/ha)	2	2.2	3	3.3	9	9.9	0.5	0.55	6	6.6	8	8.8	10	11
Value of production * (USD/ha)	303	333	454	499	446	491	260	286	1,190	1,309	992	1,091	1,116	1,227
Inputs costs (USD/ha)	89	87	231	232	56	56	89	87	429	424	362	363	362	363
Gross margin (USD/ha)	214	246	222	267	390	435	172	200	761	885	630	728	754	864
Hired Labour (p-d/ha)	33	33	50	50	35	35	20	20	70	70	100	100	80	80
Gross margin (incl. hired labour)	124	157	89	133	296	341	117	145	578	702	350	448	538	649
Family Labour (p-d/ha)	42	42	50	50	35	35	40	40	45	45	45	45	65	65
Return to family labour (USD/p-d)	3	4	2	3	8	10	3	4	13	16	8	10	8	10
Net incremental Income (USD)	-	33		45		45		28		124		98		111

Table 4: Farmer Field Schools - Expected benefits from improved animal husbandry (USD/household)

	Pig Production		Poultry Production	
	Without Project	With Project *	Without Project	With Project *
Value of production (USD/year)	87	160	58	129
Inputs costs (USD/year)	61	95	22	44
Gross margin (USD/year)	27	65	35	85
Hired Labour (p-d/ha)	0	0	0	0
Gross margin (incl. hired labour)(USD/year)	27	65	35	85
Family Labour (p-d/ha)	12	16	23	20
Return to family labour (USD/year)	2	4	2	4
Net incremental Income(USD/year)		38		49

* full production yr 2

4. **Model 2: Public Private Partnerships**, that can include a variety of arrangements between input sellers, private companies, NGOs and the private sector. It will primarily target better-off farmers with strong links to market, but is also expected to reach a high proportion of poorer

farmers, that will benefit from specific advice on agriculture techniques and more efficient use of inputs, resulting in high increases in productivity. Each pilot province will be required to engage in at least one PPP arrangement per year during the first two years of programme support, with at least 1,000 farmers per PPP as the ultimate beneficiaries. For purpose of the economic analysis, it is assumed that the final number of less poor and poor farmers benefitting from this model will be 22,500 in the pilot provinces, 7,500 in the PADEE provinces and a further 4,500 potentially in the 3 additional expansion provinces (Table 1). The rate of output will scale up reach a maximum by the end of the project. This model is expected to promote a rather intensive use of inputs and therefore the 'with project' situation assumes higher productivity increases than the FFS for the same crop models. Results are shown below.

Table 5: PPPs - Expected benefits from improved rice cultivation techniques (USD/Ha)

	Rice			
	Without Project		With Project	
	Dry	Wet	Dry	Wet
Yield (kg/ha)	3,500	2,500	4,375	3,125
Price (USD/kg)	0	0	0	0
Value of production * (USD/ha)	731	769	914	961
Inputs costs (USD/ha)	272	145	366	212
Gross margin (USD/ha)	460	623	548	748
Hired Labour (p-d/ha)	40	60	40	60
Gross margin (incl. hired labour)	348	457	437	582
Family Labour (p-d/ha)	50	40	50	40
Return to family labour (USD/p-d)	7	11	9	15
Net incremental Income (USD)		89		125

* Including by-products

Table 6: PPPs - Expected benefits from improved vegetable cultivation techniques (USD/ha)

	MAIZE-U		MAIZE-I		CASSAVA-U		MUNGBEAN-U		LONGBEAN-I		CUCUMBER-I		WATERMELON-I	
	WoP	WP	WoP	WP	WoP	WP	WoP	WP	WoP	WP	WoP	WP	WoP	WP
Yield (T/ha)	2	2.4	3	3.75	9	11.25	0.5	0.65	6	6.9	8	9.6	10	11.5
Value of production * (USD/ha)	303	364	454	567	446	558	260	338	1,190	1,369	992	1,190	1,116	1,283
Inputs costs (USD/ha)	89	115	216	274	56	86	89	128	429	450	362	383	362	413
Gross margin (USD/ha)	85	249	237	293	390	472	172	210	761	919	630	807	754	870
Hired Labour (p-d/ha)	33	33	50	50	35	35	20	30	70	70	100	100	80	80
Gross margin (incl. hired labour)	124	160	103	159	296	378	117	128	578	735	350	527	538	655
Family Labour (p-d/ha)	42	47	50	55	35	40	40	40	45	50	45	50	65	75
Return to family labour (USD/p-d)	3	3	2	3	8	9	3	3	13	15	8	11	8	9
Net incremental Income (USD)		35		56		82		11		157		177		117

* Including by-products

- Model 3: Contracting out model, designed to provide specialist types of training. Most contracting out activities will involve broadly similar beneficiaries and technology to the public extension models, i.e. poor and vulnerable farmers, but will be used in case of: (i) demonstration of specific best practices; (ii) increase of capacity beyond what can be accomplished with the PDA/DAO human resources; (iii) transfer of specific technologies that PDA do not have capacity for and (iv) targeting of groups with special needs which would include the beneficiaries of social land concessions. The number of beneficiaries of contracting out in the pilot provinces is expected to be 20,000. It is assumed that there will be a further 10,000 beneficiaries in the PADEE provinces and a further 6,000 in three additional provinces,

giving a total of 36,000 beneficiaries. Twenty-five percent (25%), or 9,000 households, would fall into the special needs category. Incremental benefits for these models are comparable to those presented in tables 1 to 3.

B. SMALL PRODUCER MODELS

6. Seven small producer models have been prepared:

7. Small Producer Models FFS:

- (a) **FFSs small producer model 1** shows a very poor farmer, with average land size of 0.4 ha, not irrigated. This producer could benefit from 162 USD incremental net income per year with the adoption of new cassava and rice cultivation technology (traditional practices to SRI), combined with increased cropping intensity and improved animal husbandry.
- (b) **FFS small producer model 2** presents a medium poor farmer, with 0.7 ha in average and access to irrigation, that can generate 378 USD additional net income by switching from one crop of wet season rice plus longbean and irrigated maize in the dry season, to double cropping of rice in the wet season and increased vegetable productivity.
- (c) **FFS small producer model 3** illustrates a medium-poor farmer, with 1.2 irrigated hectares, that obtains 216 USD net incremental income by applying ICPM techniques to one crop of dry and wet season rice, cucumber, watermelon and mungbean.

8. Small Producer Models PPPs:

- (a) The three small producer models for the PPP scheme assume higher and more efficient use of inputs that result in increased productivity, averaging 25% for wet and dry rice crops and ranging from 15% to 25% for vegetables.
- (b) **PPP small producer model 1:** characterizes a medium poor farmer, with 0.8 irrigated ha, that obtains an annual net income increase of 180 USD, mainly from dry season rice (64 USD) and wet season rice (90 USD), in addition to cassava and longbean productivity increases.
- (c) **PPP small producer model 2** shows a similar farmer to model 1 (0.8 irrigated ha) that benefits from 321 USD additional income by producing only dry and wet season rice.
- (d) **PPP small producer model 3** exemplifies a better off farmer with 2.1 ha of irrigated rice and maize that obtains the highest incremental net benefits, 391 USD per year.

9. Contracting out model: It is assumed that most of the beneficiaries of the contracting out model (about 75%) will be poor and vulnerable farmers with similar characteristics to FFS small producer model 1, whereas the rest will be farmers with special needs. Social Land Concession farmers are used as a proxy for the latter, assuming a low level of production before the training, and 523 USD annual net benefits as a result of increased cropping intensity (from 50% to 100%) for 2 ha of somewhat unproductive land, combined with improved animal husbandry.

10. More details on increases in incomes and returns to family labour for the small producer models can be found in the annexed excel files.

C. INFRASTRUCTURE MODELS

11. Districts with a high level of climate vulnerability will benefit from a Climate Resilience Infrastructure Fund, that will support investments by sub-national governments at District and / or Commune level through two types grants: (i) a Performance Based Climate Resilience Grant (PBCRG) which will be an annual allocation to each participating District (three annual allocations per district); (ii) a Specific Project Climate Resilience Grant (SPCRG) suitable for financing of larger sub-project (one grant for district that demonstrate good performance in implementing PBCRG financed activities). The IFAD Loan and RGC contributions would finance

these grants in 24 districts within the five ASPIRE pilot provinces and the PADEE provinces, with the intention of mobilizing financing for 10 additional Districts in 3 additional provinces.

12. The Grants can be used to: (i) climate proof existing productive infrastructure (market roads, small and medium scale irrigation systems etc.), in which case the Fund will provide up to 33% contribution to the overall cost, or to (ii) construct or rehabilitate infrastructure for climate resilience (principally be water management infrastructure for irrigation or domestic water supplies), for which the Fund would finance up to 90% of the total cost. It is envisaged that about 50,000 households will directly benefit from climate resilient infrastructure investments (or 70,000 if the model is expanded to 13 provinces).
13. Two infrastructure models have been made to illustrate both type of investment modalities: repair of an earth dam (climate proofing existing infrastructure) and construction of a pumped intake and 1km of irrigation canal (construction of infrastructure for climate resilience)⁶⁸.
14. The first model shows the potential benefits that would accrue from repairing an earth dam to enclosing a 1 square kilometre reservoir on 3 sides, that would provide wet season irrigation, enabling farmers to grow two wet season crops. Total investment costs are around 50,000 USD including project design and supervision. O&M will be contributed by the beneficiaries, about 143 household with an average 0.70 has of rice cultivated land. The Economic Internal Rate of Return for this investment is 36%, and Net Present Value is 138,773 USD.
15. The second model illustrates the benefits that would arise from constructing a pumped intake and 1 kilometre of main canal, providing irrigation for two dry season irrigated rice crops for about 250 poor families with an average of 0.4 has of land per household, in a total area of 100 has. Overall costs are 125,000 USD, EIRR 32%, and NPV of the investment 48,987 USD.
16. The switching value method applied to test the robustness of two types of investments show that none of the models are sensitive to decreases in benefits, increases in costs, or to delays in benefits.

Table 7: Infrastructure models – Economic results (USD)

	Estimated Investment Costs (USD)					Annual Net Benefits	Incremental annual net benefits per 1USD of investment (USD)	EIRR	NPV
	IFAD Loan		Local Government		Total				
	%	USD	%	USD	USD			%	USD
Repair earth dam enclosing 1 square km reservoir on 3 sides	33%	33,000	67%	67,000	100,000	42,099	0.42	36%	138,773
Construct pumped intake and 1km of main canal	90%	39,150	10%	4,350	43,500	16,329	0.38	32%	48,987

Table 8: Infrastructure models – Switching values

Model/Switching values	Incremental Revenues (inflows)	Incremental Recurrent Costs	Incremental Investments	Incremental Outflows
Repair earth dam enclosing 1 square km reservoir on 3 sides	-51%	421%	135%	102%
Construct pumped intake and 1km of main canal	-45%	341%	110%	83%

⁶⁸ Costs for these models are based on rehabilitating tertiary and small-scale irrigation infrastructure, to reflect the fact that national Government in Cambodia usually invests in major works but not in the necessary distribution systems.

D. ECONOMIC ANALYSIS AND SENSITIVITY ANALYSIS

Main assumptions

17. **Scenarios:** two different scenarios have been considered for the calculation of the overall economic analysis of the programme. Scenario one assumes expansion from the pilot provinces into 5 additional provinces in 2018 (PADEE provinces) using the resources available (no funding gap), whereas scenario two assumes that enough resources are mobilized to enable expansion to a total of 8 provinces (PADEE provinces + three further provinces to be identified at Mid-Term Review). Benefit and cost streams for each option have been estimated separately in order to calculate the respective NPV, EIRR and sensitivity analyses.
18. **Period of analysis:** a fifteen year period of analysis has been assumed for the economic analysis, which includes the seven year project implementation period.
19. **Benefit stream:** the analysis identifies quantifiable benefits directly related to the project activities, taking into account benefits from the three models of extension and climate resilient infrastructure fund, as well as assumptions on number and phasing of beneficiaries described in section one of this Appendix and in the “Economic Analysis” page of the annexed excel files. Given the complexity of the project and a number of implementations risks that could prevent the full achievement of the project objectives, a 75% success rate has been applied to the cumulative stream of benefits.
20. **Costs stream:** economic costs are net of duties, taxes and price contingencies, but inclusive of physical contingencies. O&M costs for infrastructure have been counted in the calculation of the net incremental benefits of individual infrastructure models. The total economic costs of the project amount to about USD 64 million (for 10 provinces) or USD 76.5 million (including a funding gap to expand to 3 further provinces). Project costs include beneficiary contributions, calculated as an opportunity cost of 2.5\$/day per farmer participating in FFFs.
21. **Shadow prices:** due to free trade, absence of taxes or duties on agricultural inputs or outputs and competitive markets in trade of agricultural commodities and inputs within the country, it is estimated that overall economic prices of the main traded commodities and inputs closely mirror financial prices. Export parity prices for rice and maize have however been calculated, as have import parity prices for DAP and urea. A standard conversion factor of 0.71 (equal to the one derived for DAP import parity price) has been used for other traded inputs (herbicides, etc.).
22. **Labour:** the shadow wage rate is assumed to be 90% of the financial labour wage rate used, i.e. around KHR 9,000 for women and KHR 10,800 for men. This is quite conservative given the high underemployment in many of the project areas and among the project target group.
23. **Discount rate** is estimated at 12%.

Results of the analysis

24. **Overall Estimated Return of the Proposed Project:** the economic analyses show a satisfactory Economic Internal Rate of Return of 15% for either scenario, along with net present values of USD 6.3 million for 10 provinces and USD 6.5 million for 13 provinces. Main benefits accrue from the PPP model, followed by the public extension services, the contracting out model and the climate resilient infrastructure fund.
25. **Sensitivity Analysis:** a sensitivity analysis assessed the effect of variations in benefits and costs and for various lags in the realisation of benefits in both scenarios.. In scenario 1, fall in total project benefits by 30% and an increase in total project costs by the same proportion would reduce the base EIRR to about 10% and 8%, respectively. The switching value for decrease of total project benefits is about -20%, while for increase of project costs it is approximately 15%. A one-year delay in project benefits reduces the EIRR to 12%. With a two-year delay in project benefits, the EIRR falls to approximately 8%.The alternative scenario with funding gap shows

very similar results in terms of sensitivity to unexpected cost increases or underachievement of the anticipated benefits.

Comment

26. The economic analysis reported above considers only tangible benefits arising from Component 3.1 (Provincial sub-programmes) and Component 4 (climate resilient infrastructure). Additional intangible benefits are expected from Component 1 (policy), Component 2 (capacity development), Component 3.2 (innovations) and Component 3.3 (mass media extension) which together represent 16% of the total programme cost. With the partial exception of some capacity development activities under Component 2.1, these intangible benefits are independent of and additional to the tangible benefits counted in the analysis and are expected, through improved national systems, capacity and knowledge and through direct outreach to farmers via mass media, to provide benefits to a much larger number of farmers in the ASPIRE target group, although the size of these benefits cannot be realistically estimated. This point should be taken into consideration in interpreting the result of the analysis which shows a relatively small but positive net present value for the programme as a whole.

Table 9: Scenario one with 10 provinces - Economic Analysis – Costs and Benefits Stream (USD)

Project Economic Analysis		2015	2016	2017	2018	2019	2020	2021	2022	2023 to 2029
Incremental net benefits per activity										
FFS	USD	0	0	0	0	0	1,205,444	3,214,517	4,419,961	7,232,663
PPPs	USD	0	0	658,233	1,974,699	3,949,398	6,911,446	10,860,844	10,860,844	10,860,844
Contracting out model	USD	0	0	0	0	180,709	361,418	722,836	1,264,964	1,987,800
Climate Resilient Infrastructure	USD	0	0	0	159,274	318,548	477,822	382,258	222,984	222,984
Total cumulative incremental benef	USD	0	0	658,233	2,133,973	4,448,655	8,956,131	15,180,456	16,768,753	20,304,292
Project Success Rate	0.75									
Total cumulative incremental net benefits ASPIRE after success		0	0	493,675	1,600,480	3,336,491	6,717,098	11,385,342	12,576,565	15,228,219
Economic Costs	USD	3,243,612	6,047,198	7,863,421	9,696,907	14,235,586	12,148,067	10,898,587		
Total Incremental Net Benefits		-3,243,612	-6,047,198	-7,369,746	-8,096,427	-10,899,095	-5,430,969	486,755	12,576,565	15,228,219

NPV @ 12%	6,324,802
IRR	15%

Table 10: Scenario one with 10 provinces - Sensitivity Analysis and Switching Values (USD)

Sensitivity Analysis (15-year period)	Base case	Costs Increase			Increase of Benefits		Decrease of Benefits			Delay of Benefits	
		+10%	+20%	+30%	+10%	+20%	-10%	-20%	-30%	1 year	2 years
IRR	15.2%	13%	11%	10%	17%	19%	13%	11%	8%	12%	8%
NPV (USD)	6,324,802	2,460,935	1,402,932	5,266,799	10,821,149	15,317,496	1,828,455	2,667,892	7,164,239	-976,765	-7,496,022
Discount rate	12%										
Switching values											
NPV incremental benefits	31,366,309	25,041,508	-20%								
NPV incremental investment cost	41,766,590	48,091,391	15%								

Table 11: Scenario two with 13 provinces - Economic Analysis – Costs and Benefits Stream (USD)

Project Economic Analysis		2015	2016	2017	2018	2019	2020	2021	2022	2023 to 2029
Incremental net benefits per activity										
FFS	USD	0	0	0	0	0	1,205,444	3,214,517	4,902,139	8,679,196
PPPs	USD	0	0	658,233	1,974,699	3,949,398	7,503,856	12,638,074	12,638,074	12,638,074
Contracting out model	USD	0	0	0	0	180,709	361,418	722,836	1,373,389	2,313,077
Climate Resilient Infrastructure	USD	0	0	0	159,274	318,548	477,822	581,350	422,076	501,713
Total cumulative incremental benefi	USD	0	0	658,233	2,133,973	4,448,655	9,548,540	17,156,777	19,335,677	24,132,059
Project Success Rate	0.75									
Total cumulative incremental net benefits ASPIRE after succ		0	0	493,675	1,600,480	3,336,491	7,161,405	12,867,583	14,501,758	18,099,044
Economic Costs	USD	3,342,432	6,234,038	8,263,761	12,311,337	16,829,256	15,338,137	14,180,557		
Total Incremental Net Benefits		-3,342,432	-6,234,038	-7,770,086	-10,710,857	-13,492,765	-8,176,731	-1,312,974	14,501,758	18,099,044

NPV @ 12%	6,533,368
IRR	15%

Table 12: Scenario two with 13 provinces - Sensitivity Analysis and Switching Values (USD)

Sensitivity Analysis (15-year period)	Base case	Costs Increase			Increase of Benefits		Decrease of Benefits			Delay of Benefits	
		+10%	+20%	+30%	+10%	+20%	-10%	-20%	- 30%	1 year	2 years
IRR	14.9%	13%	11%	9%	17%	19%	13%	10%	8%	11%	8%
NPV (USD)	6,533,368	1,993,885	-2,545,597	-7,085,079	11,726,187	16,919,006	1,340,549	-3,852,270	-9,045,090	-1,982,713	-9,586,357
Discount rate	12%										

Switching values			
NPV incremental benefits	35,600,188	29,066,820	-18%
NPV incremental investment cost	49,192,657	55,726,025	13%

Appendix 11: Draft Programme Implementation Manual: Annotated Table of Contents

	Section and Sub-Section	Notes
INTRODUCTION, PURPOSE, STRATEGY AND CROSS-CUTTING ISSUES		
1	INTRODUCTION	
	Introduction to ASPIRE	
	Introduction to the PIM	
	Intended users of the PIM	
2	PURPOSE OF ASPIRE	
	Reason for ASPIRE	Brief summary of the diagnosis that lead to the design of ASPIRE
	Expected results	Description of the expected results of ASPIRE with reference to the Results Framework (which will be a an annex)
3	ASPIRE IMPLMENTATION STRAGTEGY	Describes key assignment of roles, the phased approach to implementation and the main features of each phase
	Programme Budget	Defines how ASPIRE is integrated with Programme Budget, phase by phase (more details to be provided in the component descriptions)
4	ASPIRE PRINCIPLES	
	Inclusiveness	Defines core principles of ASPIRE for inclusive dialogue and participation at all levels
	Gender Mainstreaming	Defines core principles for mainstreaming gender in ASPIRE
	Mainstreaming Climate Resilience	Defines how CCA / climate resilience is mainstreamed in all parts of ASPIRE and how this is systematically verified.
5	ROLES AND RESPONSIBILITIES	
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	MAFF and its agencies	
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	Sub-National Administrations	
	The ASPIRE Secretariat	
COMPONENTS, OUTPUTS AND ACTIVITIES		
6.1	COMPONENT 1: EVIDENCE BASED POLICY	
	Results and Performance Measurement	Defines the time-bound results of Component 1 and how performance will be measured
	Sub-Component 1.1: Policy Development and Coordination	Describes the activities and outputs of Comp 1.1
	Sub-Component 1.2: Policy Research and Analysis	Describes the activities and outputs of Comp 1.2
	Planning and AWPB Preparation	Describes how Comp 1 is integrated with PB and how the AWPB for Comp 1 is prepared.
6.2	COMPONENT 2: CAPACITY DEVELOPMENT	
	Results and Performance Measurement	Defines the time-bound results of Component 1 and how performance will be measured
	Sub-Component 2.1: Improving Extension Quality	Describes the activities and outputs of Comp 2.1

	Section and Sub-Section	Notes
	Sub-Component 2.2: Strengthening Human Resources	Describes the activities and outputs of Comp 2.2
	Planning and AWPB Preparation	Describes how Comp 2 is integrated with PB and how the AWPB for Comp 2 is prepared.
6.3	COMPONENT 3: SERVICE DELIVERY	
	Provincial Sub-Programmes	Defines the concept of a Provincial Sub-Programme, its scope, accountability for results and relationship to PB
	Results and Performance Measurement	Defines the key results of the Provincial Sub-Programmes and how performance is measured
	Allocation and Eligible Expenditures of Extension Services Grants	Defines how the allocations are determined, the rules for what the grants can be spent on, phase by phase, and also applicable rules for determining acceptable costs / levels of expenditure per activity type.
	Provincial Agriculture Strategic Plan	Defines the PASP and the process for preparation of the PASP
	District Work Plans <ul style="list-style-type: none"> • Readiness • Smallholder Learning Groups <ul style="list-style-type: none"> ○ Formation ○ Work Planning ○ Implementation • Farmer to Farmer Learning 	Defines the District Work Plan and describes the public extension model including FFS delivered by the DAO and the farmer-to-farmer learning model supported by the CEW Explains how the CEW role is different from in previous IFAD projects
	<ul style="list-style-type: none"> • Public-Private Partnerships 	Defines the essential features of the PPP model and the arrangements for piloting PPP in Phase 1
	<ul style="list-style-type: none"> • Contracted Out Extension Services • 	Defines the essential features of the contracting out model and the arrangements for piloting PPP in Phase 1
	Planning and AWPB preparation	Describes how the Provincial Sub-Programme is consolidated with the AWPB
	Sub-Component 3.2: Innovation Grants	
	Results and Performance Measurement	Defines the expected results and the performance measurement approach for the Innovation Grants
	Eligibility	Defines the eligible expenditures of the innovation grants
	Selection Process	Describes the process for selection of innovations and award of innovation grants
	Planning and AWPB preparation	Describes how the innovation grants are consolidated in the AWPB
	Sub-Component 3.3: Mass Media Extension	Defines the expected results and the performance measurement approach for the Mass Media campaign
	Results and Performance Measurement	Defines the expected results and the performance measurement approach for the Mass Media campaign
	Outputs and Activities	Describes the outputs and activities for comp 3.3
	Planning and AWPB preparation	Describes how the mass media activities are consolidated in the AWPB

6.4	COMPONENT 4: CLIMATE RESILIENT INFRASTRUCTURE	
	Results and Performance Measurement	Defines the expected results and the performance measurement approach for the PBCR and SPCR Grants
	Eligible Expenditures of Climate Resilience Grants	Describes how the grants are allocated. Defines the eligible expenditures of the grants including co-financing rules
	Minimum Conditions and Performance Measures	Defines the minimum access conditions and the performance measures for the grants, including the performance measurement process
	Planning Activities	Describes the planning process including preparation of the District Climate Resilience Strategy
	Implementation	Describes implementation arrangements
	Planning and AWPB preparation	Describes how the climate resilient infrastructure activities are consolidated in the AWPB
	PROGRAMME MANAGEMENT	
	Key management responsibilities	
	Preparation and consolidation of the AWPB	
	Key approval and reporting instruments	
7	MONITORING, EVALUATION AND REPORTING	
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	Farmer Tracking	
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9	FINANCIAL MANAGEMENT, PROCUREMENT AND ADMINISTRATION	
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8	PROGRAMME IMPLEMENTATION WORK PLAN	
	Work Plan	Presents a consolidated, Gantt-Chart format implementation plan including highlighting of critical path and cross-linkages between components

Appendix 12: Compliance with IFAD policies

A. Targeting

1. The design of ASPIRE complies with the IFAD policy on targeting. The core target group of ASPIRE are poor and vulnerable smallholder farmers who have potential to take advantage of improved access to opportunities for agricultural production.
2. The design of ASPIRE reflects the findings of the important Baseline Poverty Analysis prepared for IFAD as part of the preparation of the RB-COSOP 2013-18. This analysis in particular reflects the rapidly changing nature of rural poverty in Cambodia, the constraints faced by the rural poor and especially women in escaping from poverty and the continued importance of agriculture in the livelihoods of the poor. The Baseline Analysis also found that although poverty headcount has fallen rapidly in Cambodia in recent years, a large number of rural families remain only a little above the poverty line and at risk of falling back into poverty due to climate related, market related or domestic shocks. This is also supported by the newly released World Bank Poverty Assessment which finds that the impact of losing an income of about \$0.30 would throw an estimated 3 million Cambodians back into poverty.⁶⁹
3. ASPIRE will target the poor primarily through self-selection based on providing access to learning opportunities that are designed to meet the needs of the productive poor. This approach will complement geographical targeting taking poverty (and potential for poverty reduction through improved agricultural incomes) into account. The climate resilient infrastructure component will specifically target Districts identified as vulnerable to climate change and will use participatory Vulnerability Reduction Analysis to identify the needs of the most vulnerable groups.
4. The outcome of the self-selection approach to targeting will be carefully monitored, including recording the proportion of direct beneficiaries who are classified as poor using the Government's ID-Poor system. In line with the relevant policy, targeting effectiveness will be assessed by an evaluation exercises including the mid-term review.
5. Further verification of compliance with IFAD targeting policy is provided in Checklist 1 annexed to this Appendix.

B. Gender Mainstreaming

6. The programme also complies with IFAD's policy on "Mainstreaming Gender". A high proportion of Cambodian smallholder farmers are either in women headed households or in households where the men frequently migrate to seek work, leaving the women primarily responsible for agriculture production.
7. The ASPIRE design is based on the Baseline Poverty Analysis (see above) which includes gender dimensions, accounting for differences in the roles of women and men in rural areas and how they can benefit from programme activities;
8. Specifically, ASPIRE will:
 - (a) Ensure that women have equal opportunities to participate in all programme activities including in leadership positions (e.g. in farmer groups) and equal opportunities for programme employment;
 - (b) Ensure that extension materials and activities are specifically designed to meet the needs of women farmers;

⁶⁹ Where have all the poor gone? Cambodia Poverty Assessment 2013: World Bank 2014. Reported in Cambodia Daily 21/02/2014

- (c) Carefully monitor gender outcomes including the proportion of women who participate in the activities and any differential benefits gained or lost by women-headed households;
 - (d) Ensure that a gender aware approach including recognition of the economic importance of women farmers for smallholder production, and the need to address the specific needs of these farmers, is included in policy development.
9. Detailed verification of compliance with IFAD gender policies is provided in Checklist 2 annexed to this Appendix.

C. Environment and Natural Resource Management

10. The programme's environmental classification is Category "B". This Category is recommended basing it on the potential environmental implications and public health concerns associated with agricultural intensification and infrastructure development, if not adequately addressed. The design is fully aligned with both the ENRM Policy and CC Strategy.

11. An Environment and Climate Change Assessment (ECCA) Report that was produced as part of preparation for the RB-COSOP 2013-18 and has been referred to in preparation of this Annex.

12. The overall impact of the programme on the environment and sustainable management of natural resources is expected to be positive. In particular, the programme will mainstream awareness of and adaptation to climate change into agriculture extension and will support mainstreaming of climate change adaptation into local development planning together with investments for climate resilience.

13. The Evidence Based Policy component will ensure that environmental sustainability and promotion of climate resilience and adaptive capacity are integrated into policy for extension services.

14. The capacity development component will enhance the capacity of MAFF and extension service providers to assess the needs of farmers, including in relation to environmental and climate change issues, and to develop and disseminate appropriate extension messages.

15. The combined effect of the programme's service delivery components should mitigate the effects of pressure on land, poor agricultural practises, and degradation of land, and fisheries. These impacts can be summarised as follows:

- (a) Improving the delivery of extension services and the introduction of environmentally friendly and climate smart practises;
- (b) Appropriate use of agriculture chemicals, particularly fertiliser and pesticides, will be integrated into trainings. Cambodian farmers are under increasing pressure to use agricultural chemicals but lack the information and skills to use them responsibly. Non-chemical solutions including composting and integrated pest management will be introduced to all trainings where appropriate.
- (c) Livestock in all programme districts are raised on an extensive, scavenging system. The programme will promote housing of all livestock at night as part of the livestock improvement trainings. Manure collected from bovine and pig housing will be composted with crop residues and other vegetative material to form compost, which will be placed on the agricultural land.

16. The anticipated increase in the use of certified or quality seed will have a positive effect on the environment as it should lead to a reduction, albeit modest, in the amount of weed seed sown by farmers. It is also anticipated that the adoption of IPM technology to control insect pests in rice will lead to a reduction in the use of potentially harmful pesticides.

17. The intensification of agriculture, especially the increased use of mineral fertilizer and agro-chemicals that is expected under the programme, could have modest environmental implications. As far as the increased use of fertilizer is concerned the environmental implications are not expected to be significant as very few farmers will be able to afford to apply large quantities of fertilizer. The risks

of eutrophication arising from leaching of fertilizer into the ground water and river systems is considered to be very low partly because of the limited amount of fertilizer to be applied, but also because of the tremendous dilution of any leachate by the heavy rainfall and flooding during the rainy season. Furthermore maintenance of on-farm soil fertility will be addressed by incorporating training about soil fertility and the importance of adding organic matter to the soil into all cropping programmes, and wherever possible by introducing legumes into the cropping pattern.

18. The increased use of pesticides and some herbicides could have harmful effects. Most agricultural sprays sold in Cambodia are manufactured in either Thailand or Vietnam, and few have Khmer labels. A study undertaken in 2000 found that only eight out of 77 input suppliers could read the foreign labels. A CEDAC study in 2001 found that the majority of farmers mixed two or more pesticides together. Since many of these are highly toxic, it is very important that input suppliers have the correct product knowledge and can advise farmer clients accordingly. It is envisaged that farmer training will include safe use of agro-chemicals and that during the programme the circular on an inspection system for fertilizer and pesticides approved by the council of Ministers (July 2007) will become law. This should provide a legal framework to the supply and sale of fertilizers and pesticides requiring amongst other things product labelling in Khmer and dealer training.

CHECKLIST 1: TARGETING

	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)?	ASPIRE's main target group is defined as smallholders and poor farmers, and corresponds to the IFAD's target group.
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?)	ASPIRE target group characterisation follows the COSOP (Key File 4) typologies of 'poor rural households with potential to engage in commercial agriculture', 'indigenous ethnic minority households' and 'poor women and women-headed households'.
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 programme components and activities by principal beneficiary groups completed?)	Recent and ongoing IFAD projects (RPRP, RULIP and PADEE) targeting the households with similar characteristics have shown their active participation in activities related to technology transfer.
4. Does the design document describe a feasible and operational targeting strategy in line with the Targeting Policy, <i>involving some or all of the following measures and methods:</i>	See Section on Programme area and target group in the main text and Appendix 2 for details.
4.1 <i>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</i>	ASPIRE's Provincial Sub-Programmes and Climate Resilient Infrastructure activities will be piloted in five provinces initially, with an expansion to a further five later. While the selection of pilot provinces will be finalised at Appraisal, the currently proposed provinces match those of RULIP and PADEE selected on the basis of poverty combined with agricultural potentials.
4.2 <i>Direct targeting - when services or resources are to be channelled to specific individuals or households</i>	Under the contracting-out model of extension service delivery, members of 'special needs groups', such as new land recipients of Social Land Concessions, may be identified and directly targeted.
4.3 <i>Self targeting – when goods and services respond to the priority needs, resource endowments and livelihood strategies of target groups</i>	Extension messages to be delivered to the targeted farmers will be formulated on the basis of their identified needs and interests. The public delivery model ('District Work Plans') primarily aims at improving basic farming skills and knowledge of the poor farmers, and it will mainly attract those farmers with the contents specifically designed to respond to their constraints and opportunities.
4.4 <i>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</i>	ASPIRE will support extension delivery to targeted smallholders and poor farmers who otherwise have little or no access to information on agriculture technologies, therefore are not empowered to improve their livelihoods. One of the main extension delivery methods will be group-based learning to facilitate knowledge sharing among the participants (Smallholder Learning Groups). The programme will also support 'Farmer to Farmer Learning Network' which aims to promote knowledge sharing and communications between farmers and other actors at the local level (extensionists, traders, farmer organizations, etc.) on a sustainable basis. ASPIRE will finance a mass media campaign with a view to bringing extension messages to a broader rural audience.
4.5 <i>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</i>	ASPIRE will support policy formulation processes and capacity development on extension which aim to make a new national extension programme responsive to farmers' needs and demands, including those of the poor and the vulnerable. Various measures are featured in the design to this effect,

	including systematic approach to information analysis (Extension Hub), formulation of actionable plans addressing their needs at national and provincial levels, and inclusion of farmer representatives in the key decision making processes. It is hoped that the enhanced national agricultural extension policy using programme budget would facilitate other development partners' investment in extension services.
<i>4.6 Attention to procedural measures - that could militate against participation by the intended target groups</i>	Not applicable.
<i>4.7 Operational measures - appropriate project/programme management arrangements, staffing, selection of implementation partners and service providers</i>	Service providers will be selected for the delivery of extension services under public-private partnership and contracting out models. The selection criteria would include experience in working with smallholders, including poor households.
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?	Programme M&E incorporates a self-assessment by farmers (Farmer Tracking) on the results of the extension programme. This will include recording whether farmers are registered as poor using the official "ID-Poor" system, and robust proxy indicators such as land holdings. Key indicators in the logframe are gender-disaggregated.

NB. This checklist should be completed and included in Annex XII of PDR and ideally should be accompanied by key file on target group characteristics.

CHECKLIST 2: KEY FEATURES OF GENDER-SENSITIVE DESIGN AND IMPLEMENTATION

	Design
<p>1. The programme design report contains – and programme 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 programme activity from the gender perspective to address any unintentional barriers to women’s participation.</p>	<p>Country and rural development contest section and Annex 2 provide analysis on gender dimensions of poverty and challenges of rural women. The programme design reflects the recognition that women are key players in agriculture, especially for food production, and mainstreams women in all activities.</p>
<p>2. The programme design report articulates – or the programme implements – actions with aim to:</p> <ul style="list-style-type: none"> Expand women’s economic empowerment through access to and control over productive and household assets; 	<p>ASPIRE will economically and socially empower poor female farmers, including heads of households, through improvement of their farming knowledge and livelihood practices. This will enable them to optimize returns to their labour and make best use of their productive assets.</p>
<ul style="list-style-type: none"> Strengthen women’s decision-making role in the household and community, and their representation in membership and leadership of local institutions; 	<p>As demonstrated by past and ongoing IFAD projects with similar approach to extension delivery method (Farmers’ Field School), women’s participation in extension meetings enhance public recognition of women as key players in farming. Women gain and improve knowledge on farming by participating in such meetings, which will also strengthen their livelihood-related decision makings at household level.</p>
<ul style="list-style-type: none"> Achieve a reduced workload and an equitable workload balance between women and men. 	<p>Not applicable.</p>
<p>3. The programme design report includes one paragraph in the targeting section that explains what the programme will deliver from a gender perspective.</p>	<p>The programme will mainstream gender in the overall agricultural extension system (needs analysis, communications and service delivery) by making inclusion of and outreach to women being an integral part of the extension policy formulation.</p>
<p>4. The programme design report describes the key elements for operationalizing the gender strategy, with respect to the relevant programme components.</p>	<p>Extension and Research Advisory Board will be sensitized on gender concerns, and promote gender mainstreaming in extension hub activities. Monitoring and demand assessment and extension content development will take into consideration needs for gender differentiation and inclusion of women in extension services will be considered as one element of the standard to be evaluated in the extension quality assurance mechanism. This will make the content of extension messages directly responsive to what poor women will be interested and can control (vegetable production, chicken rearing, etc.).</p>
<p>5. The design document describes - and the programme implements - operational measures to ensure gender- equitable participation in, and benefit from, programme activities. These will generally include:</p>	
<p>5.1 <i>Allocating adequate human and financial resources to implement the gender strategy</i></p>	<p>No specific gender earmarking in determining human and financial resources is considered necessary. Based on experience of previous and ongoing IFAD programme female participation in trainings is expected to be high. An indicative target of 50% is set for female participants in all farmer trainings, and 25% for professional training under Human Resources Development Strategy (see below)</p>

<p><i>5.2 Ensuring and supporting women's active participation in programme-related activities, decision-making bodies and committees, including setting specific targets for participation</i></p>	<p>The programme Steering Committee membership will include gender-informed members. Under capacity building and training activities (Component 2), women are encouraged to participate in all ASPIRE supported trainings (MAFF staff, RUA and other agricultural schools, and other agencies). An indicative percentage (50%) is set for female participants in the farmer trainings. Under a Human Resources Development Strategy for extension (Sub-Component 2.2), female professionals and technical experts will have an opportunity to participate in all ASPIRE supported training activities (a minimum of 25% of the participants will be women).</p>
<p><i>5.3 Ensuring that programme/programme management arrangements (composition of the programme management unit/programme coordination unit, programme terms of reference for staff and implementing partners, etc.) reflect attention to gender equality and women's empowerment concerns</i></p>	<p>Members of the programme management unit, Steering Committee and Extension Advisory Board will be sensitized on gender at the onset of the programme. This will build on existing awareness among key policy makers and practitioners at national and provincial levels of IFAD's strong focus on gender mainstreaming from their exposures to past and ongoing projects, as well as participation in the recent COSOP process.</p>
<p><i>5.4 Ensuring direct programme/programme outreach to women (for example through appropriate numbers and qualification of field staff), especially where women's mobility is limited</i></p>	<p>Women will be equitably represented among Commune Extension Workers (CEWs). Under the past and ongoing IFAD projects, 50 % of CEWs are women.</p>
<p><i>5.5 Identifying opportunities to support strategic partnerships with government and others development organizations for networking and policy dialogue</i></p>	<p>ASPIRE's support to establishment of a gender-mainstreamed national extension programme could attract some development partners with interest in gender equity to invest in extension delivery.</p>
<p>6. The programme's logical framework, M&E, MIS and learning systems specify in design – and programme M&E unit collects, analyses and interprets sex- and age-disaggregated performance and impact data, including specific indicators on gender equality and women's empowerment.</p>	<p>Key indicators in the logical framework are gender disaggregated.</p>

Appendix 13: Contents of the Programme Life File

1. Working Paper 1 – Knowledge Based Policy
2. Working Paper 2 – Alignment with Programme Budgeting
3. Working Paper 3 – Capacity Needs Assessment
4. Working Paper 4 – Climate Smart Agriculture (forthcoming)
5. Working Paper 5 – Public-Private Partnerships
6. Working Paper 6 – Feasibility of Commune Agriculture Centres
7. Working Paper 7 – Climate Resilient Infrastructure Fund
8. Working Paper 8 – Farmers on New Land
9. Working Paper 9 – Communications Strategy
10. Working Paper 10 – Mass Media Campaign
11. Working Paper 11 – Randomised Controlled Trials
12. RB-COSOP Background Paper 1: Baseline Poverty Assessment
13. RB-COSOP Background Paper 2: Environmental and Climate Change Assessment
14. RB-COSOP Background Paper 3: Linking Farmers to Markets
15. RB-COSOP Background Paper 4: Programme Based Approach
16. Programme Implementation Manual (forthcoming)