



Platform
for Agricultural
Risk Management



Ethiopia

Facility on Capacity Development for Agricultural Risk Management (CD4ARM) Project Design Report

February 2022

Jointly designed by:

Ministry of Agriculture (MOA)
and Platform for Agricultural Risk Management (PARM)





PARM
PLATFORM FOR
AGRICULTURAL RISK
MANAGEMENT



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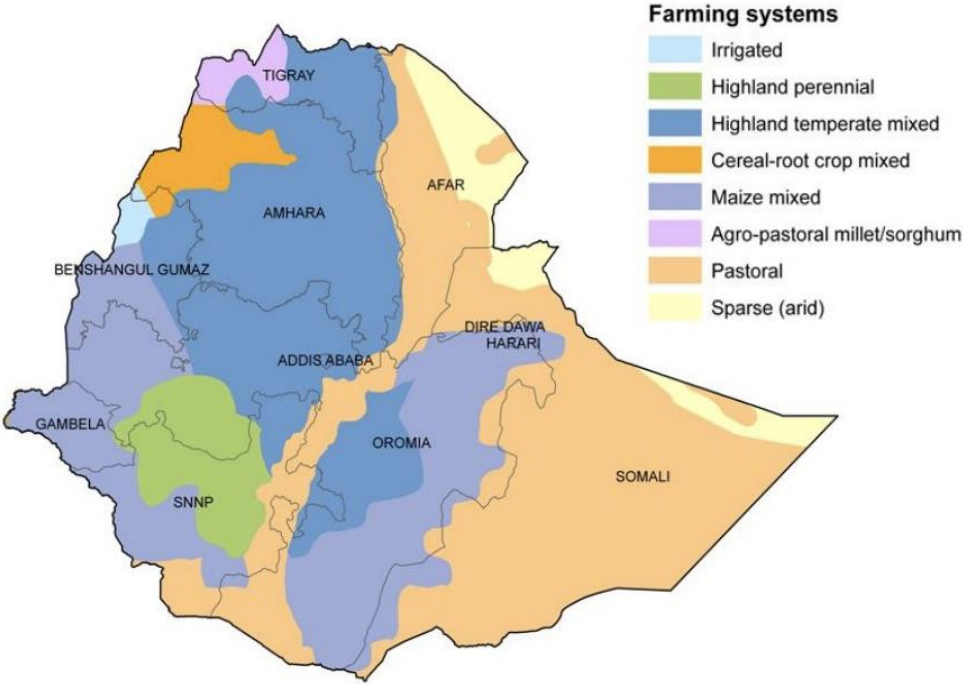
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Acronyms

ADPLACs	Agricultural Development Partners Linkage Advisory Councils
AFD	Agence française de développement
AfDB	African Development Bank
AICS	Italian Agency for Development Cooperation
AgDA	Agricultural Development Agent
AGP	Agricultural Growth Programme
ARARI	Amhara Regional Agricultural Research Institute ARARI
APARI	Afar Pastoral and Agro-pastoral Research Institute
ARM	Agricultural Risk Management
ATI	Agricultural Transformation Institute
ATVET	Agricultural, Technical Vocational Education and Training
AWPB	Annual Workplan and Budget
AEZs	Agro-Ecological Zones
BENEFIT	Bilateral Ethiopian-Netherlands Effort for Food, Income and Trade
BMGF	Bill & Melinda Gates Foundation
CBE	Commercial Bank of Ethiopia
CD	Capacity Development
CD4ARM	Capacity Development for Agricultural Risk Management
DRSLP	Drought Resilience and Sustainable Livelihoods Project
EARCS	Ethiopian Agricultural Research Council Secretariat
ECX	Ethiopian Commodity Exchange
EGTE	Ethiopian Grain Trade Enterprise
EIAR	Ethiopian Institute for Agricultural Research
ETB	Ethiopian Birr
EU	European Union
F/PTC	Farmer/Pastoralist Training Centre
FAO	Food and Agriculture Organisation
FCA	Federal Cooperative Agency

FCU	Facility Coordination Unit
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GOE	Government of Ethiopia
HERA	Homegrown Economic Reform
Agenda HLI	High Learning Institute
JICA	Japan International Cooperation Agency
IADP	Integrated Agricultural Development Programme
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFPRI	International Food Policy Research Institute
ILO	International Labour Organization
IPC	Integrated Food Security Phase Classification
ICT	Information and Communications Technology
KPI	Key Performance Indicator
LC	Learning Cycle (PARM)
M&E	Monitoring and Evaluation
MEAL	Monitoring, Evaluation and Learning
MF	Model Farmer
MOA	Ministry of Agriculture
MTR	Mid-Term Review
MZ	Mandate Zonation
NARS	National Agricultural Research System
NBE	National Bank of Ethiopia
NDRMC	National Disaster Risk Management Commission
PARM	Platform for Agricultural Risk Management
PCR	Project Completion Review
PIM	Project Implementation Manual
PSNP	Productive Safety Net Programme
RAB	Regional Agricultural Bureau
RAISE-FS	Resilient Agriculture for Inclusive and Sustainable Ethiopian Food Systems
RAS	Risk Assessment Study
RARIs	Regional Agricultural Research Institutes
RED&FS	Rural Economic Development and Food Security
RLE	Regional Learning Events
SACCOs	Savings and Credit Cooperatives
SDGs	Sustainable Development Goals
SECAP	Social, Environmental and Climate Assessment Procedures
SMS	Subject Matter Specialist
SNNP	The State of Southern Nations, Nationalities and Peoples
TA	Technical Assistance
TOT	Training of trainers
WB	World Bank
WFP	World Food Programme

Map of Ethiopia



Source: CAADP-CGIAR, 2015

Platform for Agricultural Risk Management



Preface

The Ministry of Agriculture, in particular the Extension Directorate jointly designed the Facility on Capacity Development for Agricultural Risk Management (CD4ARM) with the Platform for Agricultural Risk Management (PARM) in 2022. With the rural sector accounting for over 30% of Ethiopia's GDP, nearly 90% of its exports and 80% of the country's workforce, the importance of CD4ARM cannot be overstated. It seeks to address the limited technical capacity of Ethiopian farmers and pastoralists to assess, prioritise and manage risks, through a holistic approach. It will enhance the capacity of the country's extension services to equip farmers and pastoralists with tailored technologies to stabilise and diversify production and marketing. This initiative is an important element of government's efforts to modernise and de-risk agriculture to make it more resilient and attractive to investors.

CD4ARM has been developed with close support from PARM and in consultation with various sector partners. It is fully aligned with Government's sector policies and strategy. Its implementation will require technical and financial partnerships, which we are counting on from our sector development partners. Close consultations are envisaged to raise first the "seed money" required to establish and kick-start implementation, which will be followed by two rounds of resource mobilisation in years one and three of implementation.

We look forward to further discussions with potential partners and stakeholders to facilitate implementation of this important initiative.

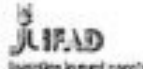
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Economico e delle Politiche
Regionali



Executive Summary

The **Facility on Capacity Development for Agricultural Risk Management (CD4ARM)** seeks to address the limited technical capacity of Ethiopian farmers and pastoralists to assess, prioritize and manage risks, through a holistic approach. This capacity constraint contributes to the large productivity gaps that entrench poverty and food insecurity, especially amongst smallholders. With the rural sector accounting for over 30 per cent of Ethiopia's GDP, nearly 90 per cent of its exports and 80 per cent of the country's workforce, the importance of CD4ARM cannot be overstated, especially in the era of COVID.

Mainstreaming ARM is pivotal in delivering improved resilience, stability, diversity, better food and nutrition security, reduced post-harvest losses, and increased incomes for all groups of Ethiopia's farmers and pastoralists. Given the economic importance of the rural sector to Ethiopia, these micro-level benefits will contribute to macro-level national goals, especially those of the Ten-Year Plan.

PARM's 2016 Risk Assessment Study demonstrated that risks in Ethiopia are both multiple and intrinsic to the country's rich agroecological diversity. They arise in *zones* that are highly vulnerable to climate variability and change, or environmental degradation/biodiversity loss, or pests and diseases – or a combination of these. At the national level, macroeconomic risks prevail, while the recent conflict may give rise to uncertainty about further investment (donor or private) in the rural sector. At the institutional level, a critical problem is the limited capacity of the country's extension services to educate farmers and pastoralists and equip them with tailored technologies to stabilise and diversify production and marketing. This allows a fundamental lack of resilience in the agricultural sector to persist. In recognition of these limitations, the Ministry of Agriculture (MOA) is instituting a "Mandate Zonation (MZ)" strategy, targeting both high-potential and high-risk areas in both highland and lowland *zones*. MZ aims to boost and stabilise production with customised agricultural technologies for such *zones* (e.g., drought-resistant crop varieties).

The proposed project is closely aligned with national and sectoral policies and with key ARM principles, in particular: (i) the need for an integrated, holistic, sustainable and inclusive approach to ARM; (ii) mainstreaming ARM in agricultural sector policy and programmes at all levels; (iii) employing ARM strategies and tools that are tailored to local conditions at *zonal* level and below in accordance with the MZ approach; (iv) retrofitting ARM principles into ongoing projects and programmes; and (v) facilitating "trickle up" whereby lessons learned at zonal level inform policy making at regional and federal levels.

CD4ARM will align itself to the MZ strategy. It is also aligned to the Government of Ethiopia's (GOE) recently announced roadmap Ethiopia 2030: The Pathway to Prosperity Ten Years Perspective Development Plan (2021 – 2030) with respect to the Plan's overall goals, and its vision for enhancing agricultural extension services. The Plan foresees a "pluralistic agricultural extension system" comprising public and commercial service providers, academia and research institutions as well as "model farmers", to enhance the capabilities of Ethiopia's farmers and pastoralists.

CD4ARM's **goal** is "*Smallholder farmers/agropastoralist resilience to multiple shocks boosted through enhancing their capacity to manage agricultural risks in a holistic manner*". CD4ARM's **objective** is "*Smallholder farmers/agropastoralists (including women and youth) empowered to identify, prioritize and holistically manage risks using the best available agricultural risk management (ARM) tools*". This objective will be achieved through capacity development (CD) activities for the pluralistic agricultural extension system, financed from multiple sources, to provide efficient and effective ARM services to the Project's beneficiaries in targeted mandated *zones*.

CD4ARM is structured in three components: (i) **Zonal ARM Profiling and Tools** to develop a comprehensive profile of agricultural risks in the target *zones* and a set of holistic and *zone*-specific ARM strategies and tools; (ii) **ARM Capacity Development**, to enhance institutional and professional capacity for ARM throughout agricultural research, extension, higher learning institutions, and other agricultural service-providers; and (iii) **ARM coordination and knowledge management**, which will coordinate CDARM initiatives under the MOA Extension Directorate umbrella and create a sustainable system for ARM development and knowledge management.

Ethiopia's high exposure to agricultural risks implies substantial **benefits** from better risk management. Mitigating shocks encourages farmers and pastoralists - and makes it easier for them - to invest in improving production, protects rural jobs, and safeguards household food security. Diversifying production systems and improving the management of natural resources nurtures biodiversity and sustainability. Empowering women and youth to manage risk strengthens food security. Most importantly, by reducing uncertainty, effective ARM in Ethiopia will create a more predictable environment for investment and sustainable rural transformation, while strengthening resilience.

Project costs, including price contingencies over five years, are estimated to be in the order of US\$12.1 million. Almost Two-thirds of CD4ARM's costs are allocated to CD activities. The Project is structured to maximise its impact: investment is 92 per cent of the budget and recurrent costs only 8 per cent.

1. Context

A. National Context

a) Economic and Social Context

1. Ethiopia has achieved rapid economic growth over several decades. Among the major economic sectors, agriculture, industry, and services have registered annual growth rates of 5.3 per cent, 17.2 per cent and 9.7 per cent respectively. Rural poverty has declined from 30.4 per cent in 2010 to 25.6 per cent in 2020, whilst urban poverty declined from 25.7 per cent to 14.8 per cent over the same period¹. The majority of GDP growth has come from industry and services. Agriculture has grown more slowly, and its share of GDP has declined. Rapid growth financed by Government borrowing, increased spending by state-owned enterprises, and infrastructure investment, have fuelled inflation, which has risen to over 15 per cent a year², as well as foreign exchange shortages.

2. To tackle these imbalances the Government of Ethiopia (GOE) put in place the Homegrown Economic Reform Agenda (HERA), which is incorporated in the Ten Years Perspective Development Plan (2021-2030). HERA was initiated domestically, with the aim of sustaining rapid growth, maintaining a stable macroeconomic environment by reducing debt vulnerabilities, and creating adequate and sustainable job opportunities. The economic reforms focus on the supply side of the economy by enhancing productivity and competitiveness, and a gradual transition from public to private sector-led growth. The goal is to ensure a stable macroeconomy more jobs to address high unemployment. The HERA incorporates macroeconomic reforms, sectoral reforms, and structural reforms. It is supported by grant funding from the World Bank and other development partners, including a major programme of budget support from the European Union (EU).

3. Apart from economic growth, GOE also aims to provide those below the poverty line with social protection measures such as the Productive Safety Net Programme (PSNP), providing food for work, and cash transfers. PSNP (now in its fifth phase) also aims to reduce income instability. It is therefore complementary to the objectives of the proposed project to identify and manage agricultural risks. A large proportion of Ethiopia's population yet to be vaccinated against the COVID-19 virus, so distributing cash has become more important than ever in protecting livelihoods and reducing the risk of food insecurity and malnutrition.

b) Poverty, Food Security, Smallholder Agricultural and Rural Development Context

4. Poverty has been declining rapidly since the 1990s. However, according to the World Bank's revised global poverty line, almost 31 per cent of the population still survives on US\$ 1.90 per day or less. The rural poverty rate exceeds the urban rate, and income distribution is skewed with the top 10 per cent earning approximately 29 per cent of net national income (World Development Indicators 2015).

5. Ethiopia's food security status exhibited marked progress over 2000-2015, with FAO's Prevalence of Undernourishment indicator showing a fall from 47 per cent to under 14 per cent over this period. However, progress appears to have stalled, with the indicator rising to over 16 per cent in 2020. This latter period also marks an increase in those who suffer from "moderate to severe food insecurity" to 60 per cent in 2018, and those who endure "severe food insecurity" to 15 per cent.

6. Although rising, per capita food supply (imports, stocks and production) has slowed in the past few years, limiting further progress in the number of calories consumed. In July 2021 the Integrated Food Security Phase Classification (IPC) system³, placed 4.4 million people at Phase 3 or higher, suggesting that they face "crisis, emergency or famine". This is a considerable improvement on the assessment of December 2020, which classified 7.2 million people at Phase 3+. Yet according to the IPC, desert locust upsurges, COVID-19, population displacement and high inflation continue to jeopardise food security.

Agriculture, forestry, and fisheries currently contribute around 32 per cent of GDP, nearly 90 per cent of exports, and employ 80 per cent of the country's workforce (HERA). However, the contribution of these sectors has declined over the past two decades, as the secondary and tertiary sectors have grown rapidly. The importance of the rural sector reflects the large rural population – which was 78 per cent of the total in 2020 (compared to 85 per cent in 2000). Urbanisation, and growth in non-agricultural sectors, account for the

¹ Ethiopia 2030: The Pathway to Prosperity Ten Years Perspective Development Plan (2021 – 2030)

² Source: Homegrown Economic Reform Agenda (HERA) (November 2019)

³ See: <https://www.ipcinfo.org/ipcinfo-website/ipc-overview-and-classification-system/en/>

declining influence of the rural sector. Over the past two decades, on average, almost five per cent of rural dwellers have moved to urban centres each year.

7. Data from the International Labour Organization suggest that agriculture's share of the labour force is declining, but that in 2019, it still employed around two thirds of the labour force, including 59 per cent of female workers (ILO, 2019)⁴.

8. Agricultural land accounts for 54 per cent of the land area, of which cropland is 14 per cent. The average farm size is 0.8 ha. Seventy-four per cent of farmers are smallholders, and 40 per cent have less than 0.5 ha (FAOSTAT⁵). Poverty among smallholder farmers is almost double the national rate. Lack of irrigation (less than two per cent of arable land is irrigated) accentuates smallholder farmers' exposure to weather and climate risk.

9. PARM's 2016 Risk Assessment Study⁶ aimed to identify and prioritize the key agricultural risks affecting Ethiopia. It found that farmers, especially smallholder farmers, in Ethiopia face a range of risks from pre-planting through to post-harvest. The major risk identified were:

- **Weather-related (including climate change):** Drought, floods and unseasonal rainfall and temperatures affect crops and livestock. The country is ranked fifth in the world in terms of drought exposure. Erratic weather patterns are increasingly attributed to climate change.
- **Biological and environmental risks:** Crop damage by pests (e.g., desert locusts) and plant and livestock diseases occur frequently and lead to significant income loss.
- **Input risks:** State distribution of inputs such as seeds and fertiliser has reduced quality variability. However, poor access to credit is a problem for farmers, and reduces their access to agricultural inputs and their capacity to invest in agricultural risk management (ARM) technologies.
- **Output market risks:** Farmers often lack reliable market information and market access, while price volatility poses a risk to profit margins.
- **Policy and institutional risks:** Land policy issues create tensions in some rural communities, particularly between farmers and pastoralists/agropastoralists, as does allocation of land to commercial farmers or state enterprises.
- **Macroeconomic risks** include export restrictions (e.g. maize) and price subsidies (wheat) as well as macroeconomic policies that influence interest and exchange rates.
- **Political and security risks** include civil unrest/conflict, theft, involuntary loss of land and displacement due to Government development projects.
- **Logistical and infrastructure challenges** include poor transport infrastructure that tends to increase transaction costs in output markets. Limited access to storage contributes to high post-harvest losses, which accentuate food security risks.
- **Health:** Smallholder farming is highly labour intensive, with labour provided by family members. Sickness or incapacity at planting or harvesting times pose enormous risks to production.

c) Gender and Youth

10. Gender and youth participation are key considerations in agricultural sector initiatives⁷. Although women make up more than 60 per cent of the agricultural labour force and head around 25 per cent of farming households, they have access to less land (on average 0.6 ha, compared with 1.0 ha for men) and other factors of production than men. Women receive lower returns than men from a given level of resource expenditure. Furthermore, female farmers cultivate fewer crops, use less agricultural inputs, and are less likely to access extension programmes and formal credit. They lack the required assets as collateral. These factors are associated with lower and highly variable agricultural production. Social norms, market failures, and institutional constraints prevent resources from generating the same levels of agricultural productivity as they would for men. In entrepreneurship, female owned firms underperform those owned by men in an array of critical dimensions including profitability, survival rate, average size, and growth trajectory.

⁴ https://www.ilo.org/wcmsp5/groups/public/---africa/---ro-abidjan/---sro-addis_ababa/documents/publication/wcms_759979.pdf

⁵ <https://www.fao.org/faostat/en/#home>

⁶ <https://www.p4arm.org/document/agricultural-risk-assessment-study-in-ethiopia/>

⁷ World Bank (2019) Ethiopia Gender Diagnostic Report: Priorities for Promoting Equity

11. The unmet potential of women in the workforce is intrinsically linked to the limited opportunities for women in education, health, and equal rights. Women are less literate (56 per cent of women versus 35 per cent of men are illiterate), suffer from poorer health, have more restricted access to land and asset ownership than men, and suffer from a lower social and human capital. Women's limited mobility is a challenge, especially in remote areas - restricting their access to agricultural services and markets. These wide and pervasive gender gaps hinder female livelihoods, and hold back poverty alleviation and growth.

12. Addressing these challenges is necessary to achieve development targets such as those of the Ten Years Perspective Development Plan, which seeks growth of almost 6 per cent growth in agriculture and allied sectors and to increase to 30 per cent the proportion of women farmers benefiting from extension services.

13. The Ministry of Agriculture (MOA) Gender Equality Strategy provides a framework to ensure gender equality as a means of transforming agriculture and increasing its role in economic development. In relation to extension services the Strategy proposes the following interventions:

- Enhance the level of awareness on gender at all levels.
- Strengthen gender mainstreaming actions.
- Improve the participation of women and youth in agricultural extension.
- Build capacity of extension staff and rural communities.
- Improve employment opportunities for women agricultural extension staff.
- Allocate adequate resources to gender related activities.
- Establish an accountability and responsibility mechanism.
- Strengthen the link between the Women's Affairs and Agricultural Extension Directorates and the Agricultural Transformation Institute (ATI).
- Strengthen collaboration and networking among other actors.
- Enhance effective monitoring and evaluation.

14. Gender-smart solutions and policy priorities relevant to ARM include: (i) expanding access to extension services by women farmers; (ii) tailoring interventions that address the gender gap in production prioritize productivity; (iii) promoting educational opportunities and job skills development through technical and vocational training for women; and (iv) improving women's access to key inputs in agriculture and entrepreneurship.

15. Ethiopia is a demographically young country, with 45 per cent of the population under age 15 and 71 per cent under 30. Youth – and young women in particular – have higher unemployment rates than the country average in both rural and urban areas. Most young people live in rural areas where livelihood opportunities are too few, particularly in parts of the highlands, where population densities are very high. Ethiopia's demographic transition can help speed economic growth, but also poses the challenge of youth employment. Low education levels among rural youth, combined with increasing gender gaps (only 72 per cent, of women aged 15 or more are employed, versus 86 per cent of men); and arable land shortages, make it increasingly difficult to ensure jobs for the rapidly expanding and largely unskilled youth population⁸.

16. The Ten Years Perspective Development Plan incorporates a gender and social inclusion plan focusing on empowering various sections of society and enabling them to benefit from economic development through skills development, capacity building and equitable participation. Particular attention will be given to strengthening the system of social protection in favour of women, children, youth, the elderly, persons with disabilities and other vulnerable citizens, to safeguard their security and underpin their rights; ensuring their equitable participation in leadership and decision making and enabling them to play a bigger role in economic and social affairs.

d) National Strategies, Policies and Programmes

17. **Agriculture and Rural Transformation** has been a core element of successive development plans as well as the current HERA and the recently announced Ten Years Perspective Development Plan, which emphasises the importance of agricultural and rural transformative processes. The main objectives of the Development Plan are:

⁸ World Bank Country Partnership Framework 2018-2022

- to raise the incomes and livelihoods of farmers and pastoralists and end poverty by making agriculture more productive and competitive,
- to play a major role in the structural transformation of the economy, especially to satisfy the food and nutritional needs of the nation by modernising agriculture,
- to supply raw material inputs for the industrial sector,
- to provide adequate quantities of exportable agricultural products that have added value, and
- to create sufficient job opportunities in rural areas, and to reduce the impact of climate change.

18. The activities foreseen are:

- reducing the reliance on rain-fed agriculture by developing irrigation capacity,
- expanding agricultural mechanisation services,
- enabling highly productive smallholder farmers to become investors by assisting them to have access to additional land; improving animal husbandry, fodder development and animal health,
- expanding horticultural development,
- expanding the participation of private investors in agriculture,
- building institutional implementation capacity within the sector,
- creating job opportunities, and
- rendering agriculture more resilient to climate change by reducing the impacts of environmental and climatological changes.

19. The **Agricultural Growth Program (AGP)**, now in its second phase, is GOE's principal strategy and investment programme for the agricultural sector. Now in its second phase, AGP supports agricultural productivity improvement and commercialisation focusing on high potential agricultural areas. Its objective is "to increase agricultural productivity and commercialisation of smallholder farmers targeted by the Program and also contribute to dietary diversity and consumption at household level". AGP II contributes to the higher-level goal of sustainable food security and agricultural transformation by developing untapped potential of well-endowed areas. AGP II operates in 157 *woredas* (districts) selected from seven regional states and one city administration, which have the highest growth potential, primarily based on agroecological conditions and access to markets. The Program components are: (i) Public Agricultural Support Services (including agricultural extension); (ii) Agricultural Research; (iii) Smallholder Irrigation Development; (iv) Agriculture Marketing and Value Chains; and (v) Project Management, Capacity Development, Monitoring and Evaluation.

20. AGP is in an additional financing phase to complete activities such as irrigation and warehouse development. A new AGP project (known as the Integrated Agricultural Development Programme – IADP) has been prepared but not yet approved by the World Bank. It is scheduled to begin in 2022. The PARM/GOE Project Design will make concerted efforts to align itself with the forthcoming IADP, as well as aligning with other relevant large-scale donor-funded initiatives.

21. The Project, to be known as Capacity Development for Agricultural Risk Management (CD4ARM) will align with the **Mandate Zonation (MZ)** approach which was recently initiated by MOA's Extension Directorate. MZ identifies areas for intervention taking into account the agroecological diversity and size of the country, with *zones* defined as "highlands, intermediary lands and lowlands". The approach calls for different organisations within regions, including research centres, academia and extension service providers, to work together for better technology introduction, testing and utilisation (e.g., new seed/livestock breeds, agronomic and animal husbandry packages) that will have greater impact on livelihoods. Furthermore, under the MZ approach the *zones* are further defined as either "high-potential" and "high-risk zones".

e) National Agricultural Extension Strategy

22. MOA's ten-year plan for agricultural transformation incorporates a new agricultural extension strategy. The key elements of the strategy are as follows:

- A **Pluralistic approach** involving a broad range of actors to provide demand-driven services to farming communities. A legal framework will be developed to facilitate the pluralistic system over the next ten years.
- A **fully-fledged extension system** tailored to the needs of beneficiaries for a sustainable market-oriented service. The extension system will be based on a value chain approach covering crops, livestock, natural resource management, irrigation, mechanisation, post-harvest management, food safety, value addition, nutrition, gender, climate change and marketing.

- Use of **multiple extension methods** to make services accessible to facilitate the dissemination of technology. Methods include individual, group, and mass methods (television, radio, video, mobile, internet, web, social media, and printed media) guided by a model Kebele (ward)/MZ approach. In the next ten years, 32 model kebeles will be established.
- A **gender and youth-sensitive approach** to ensure equal access to and benefit from the extension service. The extension system will provide training on gender and youth issues to extension professionals at all levels to create awareness and knowledge.
- **Mainstreaming nutrition** in extension to create a more nutritionally-diversified system. Nutrition-based extension services will be provided to all extension users to improve food production and nutrition. Nutrition-oriented demonstrations will be implemented at the Farmer/Pastoralist Training Centres (F/PTCs) and about 100 nutrition centres will also be created. Nutrition extension training will be provided to all Agricultural Development Agents (AgDAs).
- Providing extension services to **urban agriculture** and **private investors**.
- **Extension Targets:** It is planned to provide extension services to over 18 million rural dwellers: farmers, pastoralists and agropastoralists. It is planned that all female-headed households will be beneficiaries of the system.
- Creating an **enabling environment** by improving F/PTCs. To date 14,000 F/PTCs have been established with varying levels of functionality. Around 5,400 centres will be upgraded to basic, 4,700 to intermediate and 3,600 to advanced levels. The centres will be hubs for knowledge and information to support the transition towards modern commercial agriculture.
- **Information and Communications Technology (ICT)** will play an important role to transfer extension messages, exchange information (e.g. weather/climate forecasting, input and marketing information), provide training, strengthen linkages among development agencies, and modernise agricultural knowledge management.
- **Capacity Development (CD):** One of the major challenges is insufficient well-trained extension staff. CD will include short and long-term training to update and upgrade the skills of extension staff in areas such as value chain development, marketing, ARM, communication, facilitation, climate change, nutrition and gender. Certificate-level AgDAs will be upgraded to diploma levels, and those at diploma level will be trained in a degree programme.
- **Model farmers** who are relatively better educated, more experienced, and accepted by other village members will be supported to facilitate technology transfer and promotion. The model farmer approach will be continued with a gradual shift to village level development promoters.
- **Organisational Structure:** At federal level, MOA's Agricultural Extension Directorate provides extension services to all sectors (i.e., farming and horticulture, livestock, Natural Resource Management and investments)⁹. At Regional, *zonal*, and *woreda* levels, the Agricultural Extension Directorate can serve any one sector depending on the Region, *zone* and *woreda*.

f) Institutional Framework for Capacity Development in ARM

23. MOA, and the Regional Agricultural Bureaux (RABs) are the lead agencies responsible for agricultural policy formulation and implementation, with the Ethiopian Institute of Agricultural Research (EIAR) and Regional Research Institutes providing research support. While the Mandate Zonation Steering Committee is responsible for technical support, MOA and the RABs are responsible for coordinating the introduction, testing, validation and scaling of agricultural technologies in the different *zones*.

24. Other relevant institutions include: the Ethiopian Commodity Exchange (ECX) and the Ethiopian Grain Trade Enterprise (EGTE) which work together in managing food security policy; the National Bank of Ethiopia (NBE) which regulates, supervises and supports financial sector stakeholders; and the Commercial Bank of Ethiopia (CBE) and other commercial banks which provide financial services and products to rural clients. The Federal Cooperative Agency (FCA) supports collective action by farmers via farmer cooperatives as well as input distribution and output marketing, and also regulates and supports the financial cooperatives (savings and credit cooperatives, SACCOs). The Agricultural Transformation Institute (ATI) is a government agency created to help accelerate the growth and transformation of Ethiopia's agriculture sector, and is also focused on improving the livelihoods of smallholder farmers. The Early Warning and Emergency Response Directorate of the National Disaster Risk Management Commission (NDRMC) collects data on many themes: including

⁹ At the end of 2021, at the federal level, the Agricultural Extension Directorate's accountability was transferred to the Farming and Horticulture Development Sector.

meteorological assessments and forecasts from national and international sources; crop conditions; livestock conditions; water availability; human health; nutrition and food security; and market data (prices).

25. Ethiopian universities as well as the EIAR and Regional Agricultural Research Institutes (RARIs) provide a range of agricultural research and training services, with training of extension staff mostly undertaken by Agricultural Technical Vocational Education and Training (ATVET) Centres. Farmer/pastoralist training takes place through F/PTCs. Private sector and civil society, including private extension services, and rural finance institutions, should also be involved.

B. PARM

a) Context

26. PARM is a G20-initiative created in 2013 with the mandate to enable the integration of a holistic ARM approach into policy, planning, institutional capacities, and investment in the agricultural sector of least developed and lower middle-income countries. Its goal is to move away from a culture of coping with disasters towards smart management of risk and building resilience in the agricultural sector.

27. PARM phase 1 (Horizon 1, 2013-2019) aimed to mainstream ARM at global level and enable the integration of holistic ARM into the policy and investment plans in eight African countries, including Ethiopia. Phase 1 began with the launch of the PARM process in Ethiopia in late 2014 through a three-day workshop on ARM policy and innovative financial services. This was followed by the Risk Assessment Study in 2015-2016 including a national stakeholder workshop to agree on the priority risks and risk management approaches. In November 2016 PARM and MOA jointly developed a capacity development action plan for mainstreaming ARM into Ethiopian extension services. This led to feasibility studies on a sustainable investment plan for capacity development in ARM, and initial capacity development training.

28. This paved the way for PARM Horizon 2 (2019-2024) which aims to continue to bring evidence and build capacities for ARM at global and country level, dedicating more resources to the design of ARM investment programmes, with a more structured involvement of public-private-partnerships (PPPs) and direct support to meso-level (regional) players - extension services, financial intermediaries, women and youth groups, NGOs, farmers' enterprises and organisations.

29. Under PARM Horizon 1 in Ethiopia, PARM conducted: (i) a comprehensive Risk Assessment Study in 2016; and (ii) a Feasibility Study on sustainable investment for capacity development in ARM in 2018. The Feasibility Study contributed to the development of the CD plan, which also drew on the lessons learned under the learning cycles. PARM also undertook a five-day training course on ARM. MOA's Directorate of Agricultural Extension re-confirmed its engagement with PARM by signing a memorandum in December 2019 after the PARM Secretariat's mission to Addis Ababa.

30. Led by the Directorate of Extension and the Steering Committee of Mandate Zonation, an action plan was developed for PARM and national partners to design an investment project on ARM. The investment project is based on the relevant and evidence-based approaches in developing capacities, aligned to the Mandate Zonation approach of the Extension Directorate. MOA selected three *zones* in three Regions (Afar, Amhara and Oromia) to pilot the PARM learning cycles with the aim of scaling these up into a comprehensive ARM investment project.

b) Rationale for PARM Involvement

31. Ethiopia's vast cohort of farmers, agropastoralists and pastoralists are highly exposed to agricultural risk and are markedly poorer and less food-secure than the urban population. Failure to adequately address multiple and diverse risks in a holistic and integrated manner leaves them extremely vulnerable, and is a major barrier to the realisation of national aspirations for transformative agricultural development. PARM advocates for ARM as one of the most effective ways to develop agriculture, reduce poverty and hunger and contribute to gender equality.

32. PARM's holistic and integrated approach to ARM calls for a multi-pronged approach involving a core component of capacity development, complemented by initiatives to address the broad array of other ARM challenges identified in the Risk Assessment Study. This is crucial to increase production and boost prosperity amongst the rural poor and is fundamental to a productive, sustainable and healthy food system that is able to support a growing population of over 100 million, the largest in Eastern Africa. Strengthening resilience to shocks and economically empowering Ethiopian women and youth through gender-smart solutions to agricultural shocks is key to strengthening resilience in rural households and communities.

33. In Ethiopia, ARM can contribute to multiple Sustainable Development Goals related to climate change, food insecurity, gender and poverty. Improving the stability of agricultural systems and reducing the volatility of production, income, and prices are fundamental to achieve sustained economic development and poverty alleviation. By building on its achievements and upon partnerships already in place, PARM is uniquely positioned to support ARM mainstreaming through targeted investments to strengthen Ethiopia's agricultural sector resilience.

34. PARM and GOE have established a strong partnership and made considerable progress in risk assessment and capacity building to address the key issues mentioned above. The partnership included an institutional contract with MOA, signed in January 2021, to support capacity development activities and to mobilise resources for joint MOA/PARM design of the CD4ARM. In accordance with PARM's Horizon 2 mandate it is now time to progress towards an ARM investment project focussed on the CD priorities identified in the PARM Feasibility Study. We must start ARM capacity development in Ethiopia and pilot CD activities in three regions. This approach builds on PARM's comparative advantages as a leading ARM knowledge broker and facilitator.

35. PARM has aligned with Ethiopian national priorities to leverage the knowledge and evidence generated in Horizon 1 to develop a fundable ARM investment project, which responds to the risks previously identified. This responds to the request of the Government to design an ARM CD programme with a focus on strengthening the capacity of extension services. Under Horizon 2, PARM aims to stimulate investment in ARM, and is engaging technical and financial partners in the process to align with their priorities and funding cycles. PARM has also diversified and expanded its partnerships while continuing to focus on the guidance of the Government. Gender and social inclusion concerns have been integrated in Horizon 2 objectives and activities. PARM is reaching out to partners working on these issues whilst also engaging non-traditional donors that are not part of the PARM steering committee, NGOs and the private sector.

C. Capacity Development

a) Key Capacity Development Needs and Priorities

36. Agricultural extension services play a vital role in developing ARM. Ethiopia has invested heavily in creating a large agricultural extension system with some 69,325 extension agents (AgDAs) (a quarter of them women) servicing Ethiopia's rural households. There are estimated to be about 18.2 million rural households, implying that there is one AgDA for every 263 households. (MOA, 2021). However, the impressive expansion in the extension system has not resulted in the expected productivity growth. A 2018 study by the International Food Policy Research Institute (IFPRI) study¹⁰ attributed this to overburdened extension agents, under-resourced F/PTCs, and poor research-extension linkages. MOA acknowledges that the approach of cascading knowledge, skills and information down from top-levels (MOA and RABs) to farmers via model farmers and AgDAs did not work, and has called for an overhaul of the system. MOA's new agricultural extension strategy recognises these shortcomings and identifies appropriate solutions, including capacity development to address underperformance of the AgDAs. MOA wants to ensure AgDAs understand ARM and production, markets, finance, insurance products, etc.

37. There is a need for an improved set of ARM learning tools tailored to the circumstances and risk profiles of Ethiopia's diverse agroecologies for the targeted *zones* listed in Annex 3. These need to be supported by further development of ARM learning tools, support for knowledge sharing partnerships, resource mobilisation for mainstreaming ARM, and the establishment of a tracking/feedback mechanism for monitoring and learning about ARM.

38. The MZ approach highlights the importance of a pluralistic extension system involving not only, MOA and research and higher learning institutes, but also other advisory service providers, who will also receive and deliver CD support. These include NGOs and Microfinance Institutions, farmer cooperatives and Savings and Credit Cooperatives (SACCOs and their Unions), private sector value chain actors, businesses like agrodealers and agroprocessors, trading enterprises, and private extension agencies. All partners will be given equal opportunity to participate in jointly planning, identifying and formulating discussion agendas, and in evaluating and providing capacity building at all levels in a spirit of joint ownership. MZ includes the creation of sub-platforms for research, extension and higher education at regional level.

¹⁰ Berhane, G; Ragasa, C; Abate, GT.; and Assefa, TW. (2018). The state of agricultural extension services in Ethiopia and their contribution to agricultural productivity. ESSP Working Paper 118. IFPRI <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/132563>

39. The role of ICT is further highlighted as a way to help AgDAs reach out to farmers. Building an ICT system for extension will depend on farmers having devices, such as smartphones, with which they can access ICT-based services. To strengthen ICT in extension delivery, ATI is working with Digital Green's Digital Agricultural Advisory Services initiative, to pioneer ICT outreach through a toll-free farmer hotline and by harmonising information on agricultural extension in a digital repository - which would also be highly relevant for CD4ARM.

40. In view of the evolving nature of agricultural risks, a longer-term CD strategy is needed to ensure new and emerging risks and ARM solutions are integrated. AgDAs need continuous training and sensitization on risk evolution, prioritisation, and ARM tools, especially innovative ARM solutions (see Working Paper 7) and financial products, including, but not limited to, insurance.

b) PARM Approaches to Capacity Development

41. PARM supports CD activities oriented towards understanding the ARM cycle, and embracing the diversity of risks and risk management options. CD activities aim to drive sustainable institutional and behavioural change beyond conventional training approaches. ARM CD works towards empowering and strengthening the capabilities of all stakeholders affected by agricultural risk. CD involves transferring knowledge and expertise to build capacity to manage risks, and developing the necessary capacity to plan strategies and mainstream solutions in the national policy agenda.

42. In Ethiopia, PARM initiated pilot CD activities in three regions, Amhara, Afar and Oromia, employing a joint and iterative learning process to ensure sustainability and ownership. Three learning cycles (LCs) were implemented to inform the design of the project: LC1, Raising awareness and engaging key actors; LC2, Assessing and prioritising risks and assessing capacities to manage risks; and LC3: Co-vision and co-creation of an investment plan based on lessons learned from the three pilot regions. The objectives were: (i) to raise awareness and engage with the relevant organisations on the process of strengthening ARM capacities; and (ii) to coach and train resource persons, learning facilitators and value chain actors in each of the regions about the risk environment in agriculture and the PARM learning process.

43. The PARM CD approach is based on the principle of joint and iterative learning. Groups of trained facilitators implement what they have learned in a particular value chain or location, whilst also targeting and keeping policy makers informed and engaged. The process requires individuals to facilitate the process at different levels. These individuals are coached or mentored at the field level. Once they complete the in-depth ARM training of trainers (TOT), they are ready to facilitate ARM among several groups of value chain actors.

44. LC1 was finalised in May 2021, when learning events in Oromia, Amhara and Afar, combined with interactive sessions using Google classroom and other virtual learning events were completed. Participants were jointly identified by the Agricultural Extension Director of MOA and the Mandate Zonation Committee members. Participants learned the basics of agricultural risk as well as the concepts of iterative and joint learning. LC2 activities were held in July 2021 to provide training in assessing and prioritising risks and tools in order to inform the project design. LC3 focused on designing the investment project, and engaged potential technical and financial partners to invest in ARM.

45. CD4ARM proposes to provide CD training at three levels (see Box 1 below) and in alignment with the agricultural extension strategy. These training packages will be adapted from comprehensive PARM training guidelines and materials that have been developed and applied in many countries, and in Ethiopia. Further details of the proposed approaches to CD training at various levels is given in Annex 5.

Box 1: Core Learning Packages and their Objectives

In-depth ARM, for a Core Group of Trainees (would become Core Group of Trainers) by the end of which, trainees would have:

- An in-depth comprehension of risk and the risk environment.
- Understanding of the ARM Cycle, and the holistic approach to ARM.
- Capacity to undertake a risk assessment (using quantitative and qualitative methodologies) at different levels (regional/woreda/kebele).
- Ability to identify tools and match them to the risks and capacities of the farmer/pastoralist or institution in question.
- Capacity to monitor the implemented tools and evaluate their success.
- Knowhow to undertake a basic gender analysis of their ARM activities and understand the importance of integrating social inclusion throughout the ARM cycle.
- An appreciation of the difference between perceived risk-associated losses with actual financial losses.
- Training strategies for training others.

Intermediate ARM, by the end of which, trainees would be able to:

- Understand the ARM Cycle, the holistic approach to ARM and its application to their work and especially farmers.
- Undertake a basic risk assessment at farm level (using quantitative and qualitative methodologies).
- Identify appropriate tools and match them to the risks and capacities of the farmer/pastoralist.
- Monitor the implemented tools and evaluate their success with the farmer/pastoralist.
- Tailor their advice, assessments and tools to the farmer/pastoralist depending on their gender, and hence be able to undertake a basic gender analysis and understand the importance of integrating social inclusion throughout the ARM cycle, and
- Have been provided basic training tips on how to train others.

Basic ARM, by the end of which, trainees would have know-how to:

- Identify and prioritize risks at farm level (for women and men).
- Identify appropriate tools that respond to priority risks (in a gender sensitive way).
- Implement specific strategies identified as priorities to build capacity in using the tools.
- Monitor and evaluate the tools implemented.

46. PARM has aligned with Ethiopian national priorities to leverage the knowledge and evidence generated in Horizon 1 to develop a fundable ARM investment project, which responds to the risks previously identified. This responds to the request of the Government to design an ARM CD programme with a focus on strengthening the capacity of extension services. Under Horizon 2, PARM aims to stimulate investment in ARM, and is engaging technical and financial partners in the process to align with their priorities and funding cycles. PARM has also diversified and expanded its partnerships while continuing to focus on the guidance of the Government. Gender and social inclusion concerns have been integrated in Horizon 2 objectives and activities. PARM is reaching out to partners working on these issues whilst also engaging non-traditional donors, NGOs and the private sector.

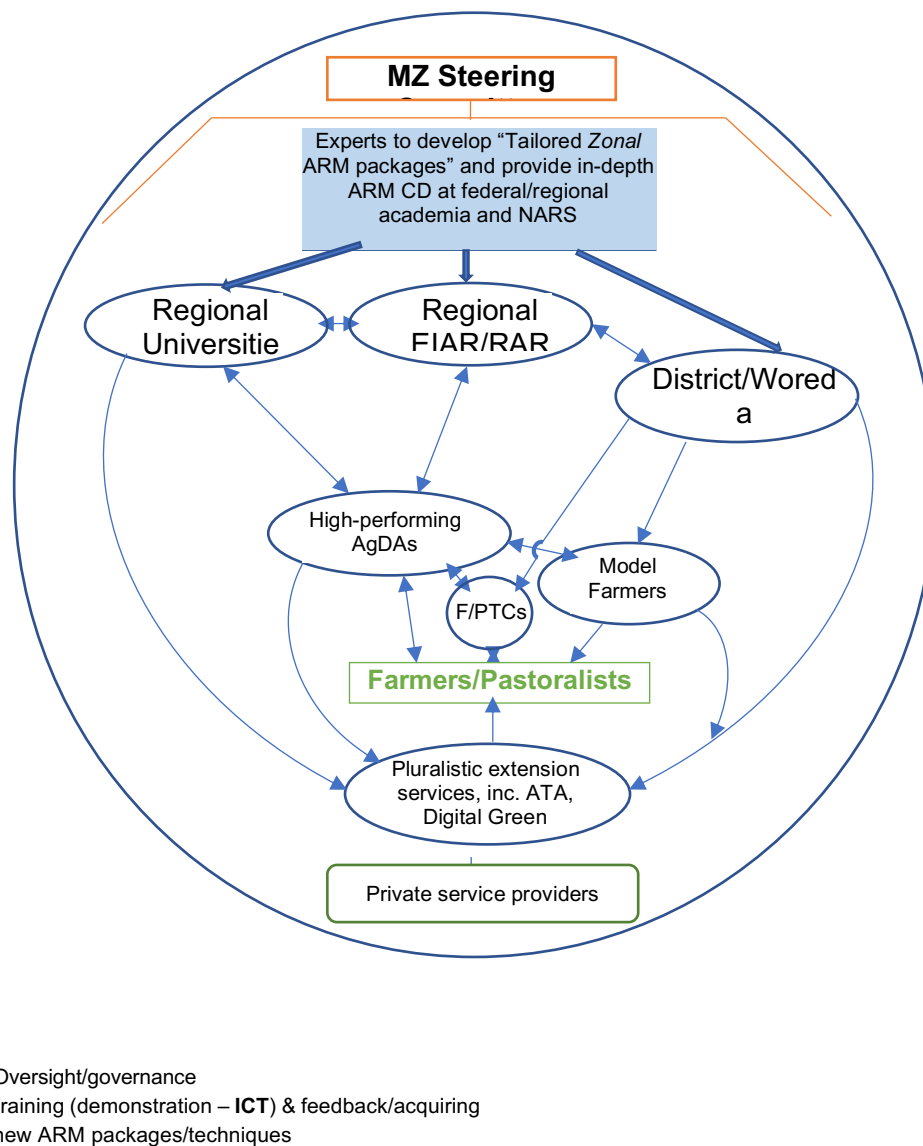
c) Mandate Zonation in CD4ARM and the New Extension System

47. Applying the concept of MZ to ARM calls for organisations such as research institutions, academia and public and private extension service providers to work together to select and use the most appropriate technologies. This is consistent with the new agricultural extension strategy and will be implemented as shown in Figure 1.

- The **MZ Steering Committee** will be responsible for technical support and will oversee the exchange of technologies and extension messages between research institutes and universities and farmer/pastoralists, and will ensure that ARM is mainstreamed in these messages.
- The **national group of trainers, and universities and agricultural research centre staff** (who will receive in-depth training of trainers by CD4ARM), supported by consultants, will be responsible for introducing ARM programmes at learning institutions with: (i) in-depth ARM training provided at University and EIAR/RARIs levels, as well as for a core group of trainers within MOA's Extension Directorate; and (ii) intermediate/basic ARM training at lower-level Higher Learning Institutes (HLIs) and ATVETs for extension experts and AgDAs.
- The **high-performing AgDAs** will impart knowledge directly to model farmers/pastoralists and other farmers/pastoralists or via F/PTCs, with materials translated into local languages.
- Outreach will harness and maximise **ICT products** and services, which will incorporate the latest advances in ARM strategies.
- **AgDA training** will be a two-way flow, in which AgDAs will also receive continuous training from Universities and EIAR/RARIs and will provide feedback to them about emerging risks.
- Universities, EIAR/RARIs, HLIs/ATVETs, AgDAs, and Model Farmers will form part of the **Pluralistic Extension System**. The System will also include national institutions, such as ATI, and donor-funded programmes, such as Digital Green,¹¹ and private service providers.

¹¹ See: <https://www.digitalgreen.org/ethiopia/>

Figure 1: Mandate Zonation in ARM CD



2. Project Description

A. General Approach

48. The Capacity Development for Agricultural Risk Management (CD4ARM) Facility will build on the risk profiling and ARM strategy formulation work undertaken with PARM over recent years, by disaggregating this work from national down to the *zonal* level, and connecting farmers, through the pluralistic extension system, to a range of ARM instruments or tools from which they can choose. The diverse range of ARM instruments/tools identified so far includes agronomic interventions (seed, fertilisers, pest and disease control, irrigation etc.), digital and ICT-based solutions to spread information, marketing innovations (forward contracting, warehouse receipts etc.), and a range of financial products including savings and insurance. Improved access to agroclimatic services (e.g., weather forecasting) has also been identified as a potentially valuable ARM tool. The project will adopt a flexible and non-prescriptive approach to ARM tools and instruments, recognising that the toolkit is rapidly expanding and diversifying. The project and the tools proposed will also respond to the different needs of women and youth to ensure they receive equal benefits from the interventions.

49. The approach is focussed on farmers and pastoralists, and will be implemented primarily through MOA’s extension system. This system will continue to evolve in accordance with the pluralistic extension approach and the concept of mandate zonation in the research and extension system. It will work through the system of F/PTCs, Model Farmers and AgDAs, and ATVET centres, recognising the critical need for gender and youth inclusive CD in ARM at all levels in this system.

50. In line with the farmer-focussed approach, the project will be initiated in 27 target Kebeles (see Annex 3)

encompassing a mix of high-potential and high-risk environments. It will engage smallholder farmers and pastoralists, with special measures to include women and youth. Where these exist, the project will work through farmer clusters, formal or informal farmer organisations, and cooperatives, and will also engage the private sector and civil society organisations.

51. The initiative will be a small investment project – given GOE's selection of the target area of 27 Kebeles and about 10,000 farming and pastoral households. However, being small presents an opportunity to design a facility that will develop CD in ARM aligned with MOA's MZ approach. It will aim to reach the "last mile" of extension end-users, that is farmers and pastoralists. A model will be developed and piloted in the target areas. If deemed sustainable, this model will be scaled-up and replicated elsewhere in the country. The CD4ARM Facility will support MOA in retrofitting or mainstreaming CD in ARM in its development programmes and projects, though the related costs will be paid by the programmes and projects concerned.

B. Project Goal and Objective

52. The overall **goal** of the project is "*Smallholder farmers/agropastoralist resilience to multiple shocks boosted through enhancing their capacity to manage agricultural risks in a holistic manner*". The goal reflects PARM's holistic and integrated approach to ARM which simultaneously addresses all key ARM challenges including both CD and complementary measures.

53. The **objective** is "*Smallholder farmers/agropastoralists (including women and youth) empowered to identify, prioritize and holistically manage risks using the best available ARM tools*". This objective will be achieved through CD activities within the pluralistic agricultural extension system, financed from other sources, to provide efficient and effective ARM services to the ultimate beneficiaries, who will be smallholder farmers, pastoralists and agropastoralists.

C. Geographic Area of Intervention

54. The MOA has identified an initial list of 27 Kebeles to be targeted (see Annex 3). These are in five regions (Afar, Amhara, Oromia, SNNP¹² and Tigray), 12 *zones* and 13 *woredas*. All of the selected *kebeles* are participants in the Mandate Zonation approach. About half are in high-potential areas and half in high-risk areas. There are around 10,000 rural households in the 27 *kebeles*; an average of 410 households per *kebele*.

55. The number of targeted *kebeles* and households is small relative to national totals. The MOA sees these as a starting point and expects ARM to be replicated much more widely once procedures and policies have been streamlined. The project area could also be expanded outside Mandate Zonation designated *kebeles* (in high-potential or high-risk areas) in partnerships with other development initiatives supported by Development Partners' programmes and projects.

D. Target Groups and Targeting Approaches

56. **Primary target group:** The project primarily targets three main groups: (i) farmers, (ii) agropastoralists and (iii) pastoralists (particularly smallholders - inclusive of women and youth) who are the most exposed to agricultural risks. About 10,000 farmer/pastoralist households are expected to be provided with risk management knowledge and tools in the priority *zones* and *kebeles*, with potential to at least double this number by scaling up to target beneficiaries of participating donor-supported projects.

57. The role of **AgDAs and other service providers** (NGOs, private sector operators) in the transfer of ARM skills is expected to grow as ARM is included in educational curricula and mainstreamed in agricultural programmes and projects. The AgDAs are based in *kebeles* (usually three per *kebele*) and use F/PTCs for training and demonstrations. Both Government and private sector extension service providers will also receive CD to reinforce their delivery of ARM extension.

58. The project will reach out to existing **Model Farmers** (MFs) who comprise about 10 per cent of the smallholder population. MFs are usually better-informed and among the early adopters of new technologies. They are generally more productive than other smallholder farmers, who learn from the MFs through observation. MFs are expected to be the most influential in their agricultural communities and will play an important role under CD4ARM in the transfer of ARM and other knowledge to other MFs and smallholder farmers.

59. **Various institutions will be** targeted as the apex bodies in the cascading training process, with a core group of trainers in the Extension Directorate, Subject Matter Specialists (SMSs), and high-performing AgDAs at the centre. EIAR and RARIs will be targeted initially. The aim will be to expand later to other relevant collaborating agencies (including NGOs and the private sector). They will provide ARM training to the selected Extension Directorate federal staff, ATVET centres, expert MFs who will pass this on to other AgDAs, and subsequently to F/PTCs, other MFs and the ultimate beneficiaries. The project will engage all service-providers

both in training and as future centres of excellence in different levels of ARM knowledge. Universities and National Agricultural Research System (NARS) institutions will be supported to mainstream ARM in their curricula, thereby improving the quality of AgDA training and giving those who aim to become self-employed agricultural entrepreneurs a clear understanding of the potential risks and returns.

60. **Policy-makers** targeted at the federal-level include: MOA Directorate of Agricultural Extension, Crop Directorate, Livestock Directorate, Inputs Directorate, Natural Resource Management Directorate, RABs, the MZ Steering Committee; the Gender Directorate; the Ministry of Education and ATVET centres; the NDRMC; Federal Cooperative Agency (FCA); and the ATI. MOA sets the policy framework for the sector and operates the extension system through the RABs. These institutions are key actors in identifying risks through data collection and analysis, and in responding to priority risks by orienting investment and mitigation strategies. Mainstreaming ARM starts with sensitising, advocacy and raising the awareness of policy-makers. This leads to robust risk management strategies and action across the sector. CD support will help MOA to improve its capacity for evidence-based ARM policy development. This has already started through CD activities of PARM, where national and regional policymakers have participated in awareness-raising and learning events.

61. **Gender and Youth Inclusion:** The Project will employ inclusive targeting strategies to ensure gender-responsive and youth-aware approaches and activities. It will target women AgDAs and MFs to strengthen their ARM skills and train all project participants on the importance of gender and youth-sensitive ARM. CD4ARM will also advocate at policy level for ARM approaches that recognise gender-based constraints, exposure to risks, and capacity to manage risks, so as to develop ARM tools and strategies that are relevant to the needs of women and youth. The project will: (i) set target a for a third of trainers to be women and youth; (ii) have women and youth within the project team at various levels; and (iii) ensure that at least 25 per cent of the matching grants in Sub-Component 1.2 are given to business ideas from young people.

E. Components, Outcomes and Activities

62. The project will have three Components, addressing both CD and complementary ARM measures, each of which will deliver its own outcomes:

- **Component 1: Zonal ARM Profiling and Tools**
- **Component 2: ARM Capacity Development**
- **Component 3: ARM coordination and knowledge management**

63. The components, subcomponents, outputs, activities, responsibilities, beneficiaries and accompanying institutional aspects are tabulated as follows:

Component 1: Zonal ARM Profiling and Tools

Develop a comprehensive profile of agricultural risks in the target *zones* and a set of *zone*-specific ARM strategies and tools.

Outcomes	
	<ul style="list-style-type: none"> • Enhanced understanding of agricultural risks and risk management options in each of the target <i>zones</i>. • Gender and youth responsive ARM approaches tailored to the needs of smallholder farmers in specific <i>zones</i>. • <i>Zone</i> level MOA staff made aware of agricultural risks and ARM tools tailored to specific <i>zones</i>.

Sub-Component 1.1: Disaggregate risk analysis and prioritisation in the target zones

Outputs	<ul style="list-style-type: none"> • Agricultural risks in each target <i>zone</i> identified, prioritized, and tailored to the needs of farmers and pastoralists
Activities	<ul style="list-style-type: none"> • Technical assistance to identify priority risks and holistic ARM strategies tailored to the characteristics of each target <i>zone</i>, and the needs and capabilities of different groups of smallholder farmers and pastoralists
Responsibility	<ul style="list-style-type: none"> • Facility Coordination Unit at MOA's Extension Directorate, counterparts at regional and <i>Zonal</i> levels with support from external expertise
Beneficiaries	<ul style="list-style-type: none"> • Pluralistic Extension System including AgDAs
Institutions	<ul style="list-style-type: none"> • Risk prioritisation, identification and tailoring to be completed at Universities, EIAR, HLIs and ATVET centres

64. Each participating *zone* faces a different combination of risks that need to be identified and prioritized. Risk prioritisation should be evidence-based in terms of probability and impact (potential financial losses). Perceptions about risks also need to be considered to engage the interest and participation of farmers and

pastoralists.

65. Sub-Component 1.1 will assess agricultural risks at the *zonal* level, breaking down which crops and livestock men and women in particular tend to produce, and at agroecological systems, so as to identify priority issues that have the greatest impact on the farm and the household. Resources can then be mobilised according to whether, for example, the main issue of concern is insect pests, or market access. Different *zones* may have very different priorities. Disaggregated analysis will help to improve ARM targeting.

66. Building on the national-level risk assessment completed by PARM in 2016, the Facility will prepare a risk assessment and ARM strategies specific to each of the 12 participating *zones*. National technical assistance (TA) teams will visit each *zone* for around a week to study conditions and consult local stakeholders including farmers and pastoralists, women and youth groups, and *woreda*-level staff of the RABs. These visits will be preceded by research and data collection, for example comparing data and zoning at national level, remote sensing data, yields, weather, financial inclusion, and socio-economic data. This will help to define the risk assessment issues and outputs for each *zone*.

67. Representatives from academia and the NARS will be invited to accompany the TA team and participate in the risk assessments to learn how these are conducted, and how risks are identified and prioritized under objective and evidenced-based methodologies. This will ensure local people are able to take over running the programme and scaling it up in the future.

68. It is envisaged that there will be two teams, each comprising an agricultural expert, a youth and gender inclusion specialist and an agricultural economist. At the end of each one-week assignment the TA team will present its findings and recommendations to stakeholders in a one-day *zonal*-level workshop. The *zonal* risk analyses will be completed in Year 1 and repeated in Year 3, drawing upon knowledge accumulated in the intervening period (including the participation of people previously trained). After each round is completed, the results will be presented in a national workshop and reviewed for inclusion in the ARM Platform, as described in Sub-Component 3.2.

Sub-Component 1.2: Provide appropriate ARM tools, and technologies, for dissemination, suitable for different *zones*, stakeholder groups and farming systems

Outputs	<ul style="list-style-type: none">• Innovative and inclusive ARM instruments developed in collaboration with NARS, the private sector, and other partners
Activities	<ul style="list-style-type: none">• Partner with selected NARS institutions and/or the private sector to develop, test and demonstrate innovative and inclusive ARM instruments
Responsibility	<ul style="list-style-type: none">• NARS and Private Sector Providers for innovative ARM
Beneficiaries	<ul style="list-style-type: none">• Pluralistic Extension System, Farmers/Agropastoralists and Pastoralists
Institutions	<ul style="list-style-type: none">• Feedback mechanism to PARM Secretariat, NARS and Private Sector Providers for possible refinement and further adaptation

69. The Facility will engage in partnerships to develop and refine an advanced toolkit of ARM instruments tailored to the needs of Ethiopian farmers and pastoralists (including those of women and youth), building on the results of the *zonal*-level risk assessment and ARM strategies identified in Sub-Component 1.1.

70. Private sector and other organisations will be invited to submit proposals for the development, testing and improvement or scaling-up of innovative and inclusive ARM instruments. This may include adapting existing tools or introducing them to farmers and pastoralists in a more efficient way. Applications will be welcome from NARS institutions, NGOs, private sector extension services, private sector value chain actors, agribusinesses, rural finance institutions and other organisations, including technology companies, rural finance institutions, and insurance companies. We will be seeking proposals for insurance products, ICT products, market derivatives and smartphone apps for pest and disease management, or to access and analyse weather forecasting data. Grant recipients will be expected to develop and test these instruments in conjunction with NARS institutions and beneficiaries in the target regions and *zones*.

71. There will be calls for proposals in each of the first three years. Proposals will be evaluated by a five-member panel of independent experts. Grants will be allocated on a cost-sharing basis, with the applicants expected to contribute at least 20 per cent of the cost. Around 14 grants are expected to be awarded up to a maximum of US\$30,000 each. When they have completed each assignment, the partners will present the results to a national workshop and publish/disseminate the findings to stakeholders.

Sub-Component 1.3: Provide sensitization training for *zonal*-level staff of MOA and other relevant institutions about the priority agricultural risks and the strategies and tools for managing them

Outputs	<ul style="list-style-type: none"> • <i>Zonal/woreda</i>-level workshops held to sensitize <i>zonal</i> and <i>woreda</i> staff to the importance of holistic ARM
Activities	<ul style="list-style-type: none"> • Conduct sensitization workshops for <i>zonal</i> and <i>woreda</i> level staff to familiarise them with key local-level risks, management strategies and tools
Responsibility	<ul style="list-style-type: none"> • Facility management and external expertise
Beneficiaries	<ul style="list-style-type: none"> • <i>Zone</i> and <i>woreda</i> level RAB staff
Institutions	<ul style="list-style-type: none"> • MZ Committee, MOA Extension Directorate, RABs will oversee activities

72. Sensitization workshops are needed to familiarize staff in *zones* and *woredas* with key local-level risks, management strategies and tools. This will enable effective delivery of the training and its benefits to farmers. These workshops for RAB staff and other local stakeholders will focus on the key risks and ARM strategies identified under Sub-Component 1.1, and with the ARM tools and technologies developed under Sub-Component 1.2 that are considered relevant to the respective *zones* and *woredas* and their farmers and pastoralists.

73. Sub-Component 1.3 will ensure that tailored ARM packages are presented to the key actors in the pluralistic extension system at *zonal* level, to help them understand the priority risks and to enable standard and innovative ARM instruments to be used to mitigate risks for farmers/pastoralists. Participation and oversight by the MZ Steering Committee and RABs will be important for further scaling-up.

Component 2: ARM Capacity Development

Enhance institutional and professional capacity for ARM throughout agricultural research, extension, and higher learning institutions, and other agricultural service-providers.

Outcomes	
	<ul style="list-style-type: none"> • Regions and <i>zones</i> have access to appropriate learning materials, translated into local languages where necessary. • MOA at federal level able to provide training of trainers at regional level. • Knowledge of ARM acquired by Universities, ATVETs, F/PTCs, AgDAs, MFs and smallholder farmers/pastoralists. • ARM CD activities scaled-up (subject to funding) within and beyond target regions, and in the participating donor-supported portfolios.

Sub-Component 2.1: Design ARM guidelines and training materials tailored to local needs and priorities, especially those of women and youth

Outputs	<ul style="list-style-type: none"> • ARM guidelines and training materials refined and tailored to a range of needs (including youth and women) and different levels.
Activities	<ul style="list-style-type: none"> • Technical assistance to refine PARM learning tools that address priority ARM issues at <i>zonal</i> levels, to match the needs and capabilities of the different groups of stakeholders who need to learn about ARM, from academics to smallholder farmers and pastoralists.
Responsibility	<ul style="list-style-type: none"> • External experts in the design of training materials and methods.
Beneficiaries	<ul style="list-style-type: none"> • Universities, EIAR, RARIs, ATVETs, extension system and farmers and pastoralists.
Institutions	<ul style="list-style-type: none"> • Training materials to be subject to review by MOA, RABs and the MZ Steering Committee.

74. Sub-Component 2.1 lays the foundation for CD4ARM by providing tailored training materials for use at all levels down to the primary beneficiaries, including women and youth. PARM has invested in the production of ARM CD training materials and delivered training in Ethiopia. While the training materials are highly relevant, they need to be adaptable and flexible to address the differing ARM needs of stakeholders from federal level down to the targeted *zones*, as well as being further differentiated to accommodate the specific needs of youth and women. Training materials will be reviewed for quality and relevance: MOA/RABs, and the MZ Steering Committee are best-placed to conduct the reviews.

75. More accessible and visible tools and training, designed in the language understood by farmers, are far more likely to be well-communicated and to deliver appropriate ARM and extension messages. PARM has developed a comprehensive set of ARM training guidelines and materials (see Annex 5) that have been used

to deliver CD training in Ethiopia and several other countries. These guidelines and materials now need to be refined, contextualised, and re-packaged to address the needs of Ethiopian stakeholders at three different levels:

- **In-depth ARM Training of Trainers:** Five-day course targeting a Core National Group of Trainers in MOA's Extension Directorate and staff of universities and agricultural research centres.
- **ARM Training of Trainers:** Five-day course targeting SMSs, ATVET staff, *woreda* level staff, and AgDAs at *kebele* level.
- **ARM Basics:** Two-day course targeting farmers/pastoralist and model farmers.

76. Development of the three packages of training guidelines and materials will be undertaken by a team of national and international consultants with specialist expertise in agricultural training and curriculum development. This will be undertaken from the first year and will be informed by the findings of the *zonal* level risks assessments and ARM strategies in Sub-Component 1.1. The Facility will convene a National-level workshop to validate the guidelines and materials, translate them into the languages of each participating region, and produce printed and audio-visual training materials.

Sub-Component 2.2: Provide training on CD4ARM to the core group of trainers at Federal level MOA (in-depth ARM)

Outputs	<ul style="list-style-type: none"> • Federal level core group of trainers in the Extension Directorate and others will be given the skills to act as ARM trainers
Activities	<ul style="list-style-type: none"> • CD4ARM training courses will be provided to a core group of trainers in MOA's Directorate of Extension as well as consultants and service providers tasked with training <i>zonal</i> level staff.
Responsibility	<ul style="list-style-type: none"> • External and national expertise
Beneficiaries	<ul style="list-style-type: none"> • Core group of trainers in the Directorate of Extension headquarters as well as consultants and service providers tasked with training <i>zonal</i> level staff
Institutions	<ul style="list-style-type: none"> • Feedback mechanism needed to further tailor and refine ARM guidelines and training materials to overcome any issues arising during training

77. Mainstreaming ARM at federal level will enable ARM CD to be delivered through the cascade system to regional, *zonal*, *woreda* and *kebele* levels and on to the farmer. The cascade is as strong as its weakest link, so it is important to provide a strong foundation of ARM training for a core group of trainers in MOA's Extension Directorate at federal level.

78. Based on the guidelines and materials developed in Sub-Component 2.1, in-depth ARM training will be provided to selected extension staff and service providers. These will become the core group of ARM trainers at federal level, who will be expected to then deliver training at all other levels under Sub-Component 2.3. To allow for staff turnover, in-depth ARM training will be delivered to three batches of extension staff, and three groups of service-providers, with a refresher course two years later. A total of 60 core trainers will be trained in this way. The trainees will be invited to participate in a training evaluation at the end of the course and will be provided with a training completion certificate.

Sub-Component 2.3: Deliver ARM CD training at various levels in the target regions, zones, woredas and kebeles (intermediate to basic ARM)

Outputs	<ul style="list-style-type: none"> • Training on ARM packages delivered via the multiple CD packages
Activities	<ul style="list-style-type: none"> • Implement the ARM CD activities at pilot-scale in the target areas
Responsibility	<ul style="list-style-type: none"> • Core trainers group from Extension DirectorateMOA
Beneficiaries	<ul style="list-style-type: none"> • Research and Extension System and farmers and pastoralists
Institutions	<ul style="list-style-type: none"> • Mandate Zonation Committee, MOA Extension Directorate, and RABs will oversee training

79. ARM must be fully mainstreamed at all levels through both federal and regional NARS institutions, ATVET institutions and the extension system, to incorporate relevant knowledge and methods within the cascade delivery system, and ultimately to help farmers manage risks. All levels of the MZ system must be equally trained. Sub-Component 2.3 will therefore deliver CD training at multiple levels as follows:

Training Package	Targets (Trainees)	No of Trainees
In-depth ARM TOT	Extension Directorate Core Group Trainers, Subject Matter Specialists (SMEs) at MOA	50
	Universities	

	NARS Research Centres	
Intermediate ARM TOT	Selected Extension Directorate/Federal Staff, ATVETs	50
	Regional Staff	50
	Zonal Staff	120
	woreda SME Staff	130
	AgDAs	110
ARM Basics	Farmers/Agropastoralists	15,000
	Total Trainees	15,510

80. The great majority of CD training will be at *kebele* level and will be provided directly to farmers and pastoralists. Out of the 10,000 households in the target intervention area, it is estimated that 90 per cent will participate in training, with a total of 15,000 persons trained as follows:

- Total number of farmer/agropastoralist households in target *kebeles* 10,000
- Number of households participating in CD training (90 per cent) 9,000
- Number of female household heads trained 3,000
- Number of husband and wife teams trained 6,000
- Total number of trainees: 3,000 female HH heads + 6,000 male spouses + 6,000 female spouses. At least 3,000 trainees will be youths 15,000

81. Sub-Component 2.3 is the most critical of the sub-components which will deliver tailored ARM training to all levels of the extension system. In this regard, representatives from the MZ Steering Committee, MOA Extension Directorate and RABs will be invited to the training as observers. Because of the diversity of the target beneficiaries and geographical diversity, "tailored ARM training" is a key component of the training activities. This encompasses varied geographies, diverse farm activities pastoral and farming , and gender and other social constraints and opportunities, etc.

Sub-Component 2.4: Support the roll-out of ARM CD within and beyond the target zones and regions and in other agricultural sector programmes and projects

Outputs	<ul style="list-style-type: none"> • Identify entry points in other Development Partners' portfolios and deliver ARM CD training
Activities	<ul style="list-style-type: none"> • Based on evaluation of the pilot-scale CD activities in Sub-Component 2.3, scale up ARM CD activities within and beyond the target areas and in the participating donor-supported portfolios
Responsibility	<ul style="list-style-type: none"> • External experts
Beneficiaries	<ul style="list-style-type: none"> • Farmers and agropastoralists
Institutions	<ul style="list-style-type: none"> • MOA Extension Directorate to provide guidance on where to scale up. • Facility to integrate/retrofit activities in relevant donor initiatives

82. Sub-component 2.4 will support the scaling-up of CD4ARM, subject to evaluation of results arising from Sub-Component 2.3 and in consensus with MOA and the key development partners. Upscaling and outreach is best facilitated by integrating/retrofitting CD4ARM in prospective/existing programmes and initiatives supported by the development partners. To this end, the Extension Directorate will identify ongoing and prospective initiatives in the agriculture sector to scale up CD4ARM via these initiatives. Some Donors - such as IFAD, JICA and AfDB - have indicated an interest in mainstreaming ARM and incorporating ARM capacity building in their project portfolios.

83. Donors such as IFAD and AfDB directly engage large numbers of farmers and pastoralist as beneficiaries in their projects. These would benefit from greater awareness and capacity in managing agricultural risks, along with the *zonal/woreda* level staff and AgDAs that support them. Under this sub-component, if Donors provide additional support, CD training will be delivered to a further 20,000 farmer and pastoralists as well as around 100 *zonal* staff, 100 *woreda* staff and 160 AgDAs engaged in the implementation of supported projects. In delivering this training the Facility will be acting as an ARM CD facilitator and training-provider within the management structures of the participating projects. There is potential for scaling-up CD activities further within the Donors' project portfolios beyond the levels envisaged here.

Component 3: ARM Coordination and Knowledge Management

Coordinate CD ARM initiatives under the MOA Extension Directorate umbrella and create a sustainable system for ARM development and knowledge management.

Outcomes

- Facility Coordination Unit (FCU) established within MOA's Extension Directorate to coordinate the development of inclusive ARM tools and deliver CD activities.
- Platform established for knowledge-sharing, learning, management of indigenous knowledge, and development of strategies combining different ARM tools as well as policies and programmes addressing constraints and broader issues.
- Resource mobilisation mechanism established for mainstreaming ARM in sector programmes and projects. ARM CD activities scaled-up within and beyond target regions, and in the Participating Donors-supported portfolios.
- ARM feedback and MEAL (Monitoring and Evaluation and Learning) system established within the FCU.

Sub-Component 3.1: ARM Facility (CD4ARM)

Outputs	<ul style="list-style-type: none"> • Federal CD4ARM Facility established • Focal personnel identified in each Regional Agricultural Bureau
Activities	<ul style="list-style-type: none"> • Establish the CD4ARM Facility in MOA's Directorate of Extension at federal level, with focal persons in the Extension Department of each of the five RABs
Responsibility	<ul style="list-style-type: none"> • MOA Extension Directorate
Beneficiaries	<ul style="list-style-type: none"> • Federal (CD4ARM) and RABs
Institutions	<ul style="list-style-type: none"> • Federal and RAB Extension Directorates

84. Sub-component 3.1 calls for the creation of an institutional framework for ARM in the form of the CD4ARM Facility to be established within both the federal and regional levels of the Extension Directorate. The Facility will be responsible for coordinating CD4ARM throughout the country, with an initial focus on the target areas. The priority is for the Facility to be established at the federal level, and for Extension Directorate representatives to be nominated subsequently as focal points within RABs. This will enable the Federal Extension Directorate to oversee the training programme and be involved in implementation of CD4ARM at the regional level.

85. A strong Facility management team is necessary to ensure that the ARM approach is mainstreamed at federal level and delivered through the regional and *zonal* levels and beyond. It will also help to ensure that MOA stays up to date on ARM as part of its Mandate Zonation approach. Sub-Component 3.1 will create and maintain the CD4ARM Facility Coordination Unit (FCU) within the Federal Extension Directorate over the five-year life of the Project, and beyond. The FCU will have a staff of six including: (i) the Facility Coordinator; (ii) Operational Deputy Coordinator; (iii) Administration and Finance Officer; (iv) Monitoring and Evaluation (M&E) Officer; (v) Office Manager; and (vi) a Driver. In each of the five participating regions there will also be a Regional Focal Point based in the RAB Extension Department as well as a Mandate Zonation Representative and an Extension *Zone* Coordinator. The establishment and operation of the FCU will be supported by national (36 months) and international (6 months) technical assistance as well as a vehicle, office equipment, and a budget for studies, staff training and workshops. Functions to be performed by the FCU are detailed in Section 4 on implementation arrangements.

Sub-Component 3.2: ARM Platform

Outputs	<ul style="list-style-type: none"> • ARM Platform established within MOA Extension Directorate • Partnerships with donor programmes open to help them de-risk their interventions or mainstream ARM • Knowledge sharing and learning partnerships
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Activities	<ul style="list-style-type: none"> • Establish an ARM Platform for knowledge-sharing, learning, strategies, policies, and programmes within the MOA Extension Directorate • Identify partnership opportunities for de-risking selected development projects by mainstreaming and/or retrofitting ARM principles and approaches • Develop knowledge-sharing and learning partnership arrangements with major agricultural programmes and projects to facilitate mainstreaming and scaling-up of ARM
Responsibility	<ul style="list-style-type: none"> • MOA Extension Directorate
Beneficiaries	<ul style="list-style-type: none"> • Donor development programmes, farmers, and pastoralists
Institutions	<ul style="list-style-type: none"> • MOA could use its influence in donor initiatives where it participates in implementation to encourage adoption of ARM within programmes

86. Sub-component 3.2 will establish an ARM knowledge platform in the Federal Extension Directorate. The Platform will ensure ARM is mainstreamed into knowledge sharing, advocacy, sensitization, learning and policy advancement. Given the many risks, tools and initiatives, and the changing nature of risks, information needs to be made readily accessible to users. Such data can be organized online in a searchable database accessible in different languages. Because some groups have more difficulty in gaining access to ARM knowledge and techniques, and because risks are many, tools and strategies will be diverse and must also address the needs and conditions of women and youth. The Platform will facilitate collaboration, by fostering partnerships with RED&FS relevant working groups, agricultural investment programmes/projects, private sector operators and academic institutions, and with initiatives to address specific risks. It will supply up-to-date information to identify strategic opportunities for de-risking major projects and programmes. This will facilitate incorporation of CD4ARM in development partner activities, or a simpler ARM approach.

87. The key functions to be performed by the Platform are detailed in Section 4 on implementation arrangements. The Platform will include a repository of information on agricultural risks and management strategies (including youth and gender-responsive strategies) to facilitate integration of ARM in policies and planning, as well as for knowledge-sharing and learning. The Project will provide consultancy support for preparation of a Platform business plan, stakeholder consultations on its establishment, and a launch workshop. Funds are also allocated for the development and maintenance of the Platform website, communications, related social media activities, and half-yearly stakeholder consultation meetings.

Sub-Component 3.3: Ongoing resource mobilisation for investment in ARM

Outputs	<ul style="list-style-type: none"> • Funding secured for further investment in and scaling-up of ARM in its intervention areas
Activities	<ul style="list-style-type: none"> • Liaise with GOE and selected development partners to procure funding and advocate for increased investment in CD4ARM and scaling-up of activities
Responsibility	<ul style="list-style-type: none"> • MOA Extension Directorate
Beneficiaries	<ul style="list-style-type: none"> • Farmers and pastoralists
Institutions	<ul style="list-style-type: none"> • GOE understands how CD4ARM can play an important role in de-risking initiatives

88. Resource mobilisation will allow CD4ARM to continue its implementation and to be scaled up in high-risk areas where farmers/pastoralists face a tough risk environment. It will also enable high-potential *zones* to sell, and export, more products. MOA's ten-year plan calls for ARM strategies to be embedded into the new agricultural extension system. This sends a strong signal to development partners to incorporate ARM principles in the programmes and projects they support.

89. The progressive financing strategy (see Section 4.H) envisages at least three rounds of resource mobilisation: (i) an initial injection of seed money to establish the Facility and plan the ARM mainstreaming process, (ii) Round 2 resource mobilisation to cover implementation of years 2 and 3; and (iii) Round 3 resource mobilisation to cover years 4 and 5. The proposed financing strategy will enable the project to cover its pilot-scale activities in the initial five regions, comprising 12 *zones*, 13 *woredas* and 27 *kebeles*. The scaling-up process will also include rolling-out ARM within other donor-supported projects under Sub-Component 2.4 and will also depend on obtaining additional development partner(s) and GOE support for mainstreaming ARM on a wider scale within the proposed five-year life of the Project and beyond. The ongoing resource mobilisation process will be supported by an annual report detailing achievements and lessons learned, creation of an interactive map/dashboard of GOE and development partner support to ARM, and by consulting development partners at an annual workshop.

Sub-Component 3.4: ARM feedback and MEAL (Monitoring and Evaluation and Learning)

Outputs	<ul style="list-style-type: none"> • ARM knowledge database established to map risks, with management tools. • M&E system established. • Lessons learned derived and published.
Activities	<ul style="list-style-type: none"> • Develop and maintain an ARM knowledge database that includes risks identified and risk management tools. • Monitor implementation results, derive lessons, and share knowledge among ARM stakeholders in Ethiopia. These lessons will inform policy formulation.
Responsibility	<ul style="list-style-type: none"> • MOA Extension Directorate
Beneficiaries	<ul style="list-style-type: none"> • PARM for outreach, including other countries (such as Burkina Faso, Niger, and Senegal)
Institutions	<ul style="list-style-type: none"> • Resources required to establish and maintain M&E system for reporting and to generate lessons learned.

90. Monitoring the use of ARM through the extension system will show which initiatives have worked well and should be replicated or reinforced. Sub-Component 3.4 will develop the Facility's M&E system to track and monitor the Project's achievements. It will undertake baseline and other surveys as needed, and develop an ARM knowledge database (in conjunction with the ARM Platform in Sub-Component 3.2). This will provide an inventory of information and knowledge to enable ARM and related policies to be analysed, and to inform decisions about management of the Facility and its reporting requirements. These activities will also monitor progress in achieving equal benefits for all target groups, will generate lessons and enable the sharing of knowledge about social inclusion.

F. Theory of Change

91. The **core problem** to be addressed is the limited capacity of Ethiopian farmers to manage agricultural risks in a holistic way, as proposed by IFAD's 2016 Risk Assessment Study (RAS) – a problem exacerbated by other risks that have emerged since. The problem is accentuated by farmers' exposure to multiple elements that interact and exacerbate risks across a very diverse range of agroecological conditions. The underlying causes of the problem include climate variability and change, environmental degradation and the loss of biodiversity, pest and diseases, conflict, infrastructure constraints, macro-economic factors such as exchange rates, interest rates and inflation. Other factors include financial constraints such as the timing and amount of income, competing financial obligations, market volatility, limited institutional capacity, low awareness of risk and risks management options, and poor access to knowledge and technologies. High risk exposure reduces farmers' access to finance, which in turn limits their ability to invest in risk management measures. The global COVID-19 pandemic has amplified many of these causal elements, further aggravating the problem. Furthermore, gender-based constraints and other social constraints aggravate and affect the level of exposure to risk and the capacity to manage risks of farmers and pastoralists.

92. The inability to analyse and manage risks perpetuates poverty and lack of resilience. There are many ways to address risks, all of which require knowledge, along with inputs appropriate to the risk identified. However, there is a general lack of awareness about available ARM tools even among Model Farmers, AgDAs, and *zonal* and regional extension officers, because they have limited access to knowledge and information about agricultural risk management. Moreover, risks are constantly evolving, and this calls for research and innovation in mitigation and response measures, via the Mandate Zonation approach. Knowledge about such measures often already exists, either in Ethiopia or internationally, in the private sector. The challenge is to communicate it to those who need it, in an accessible form.

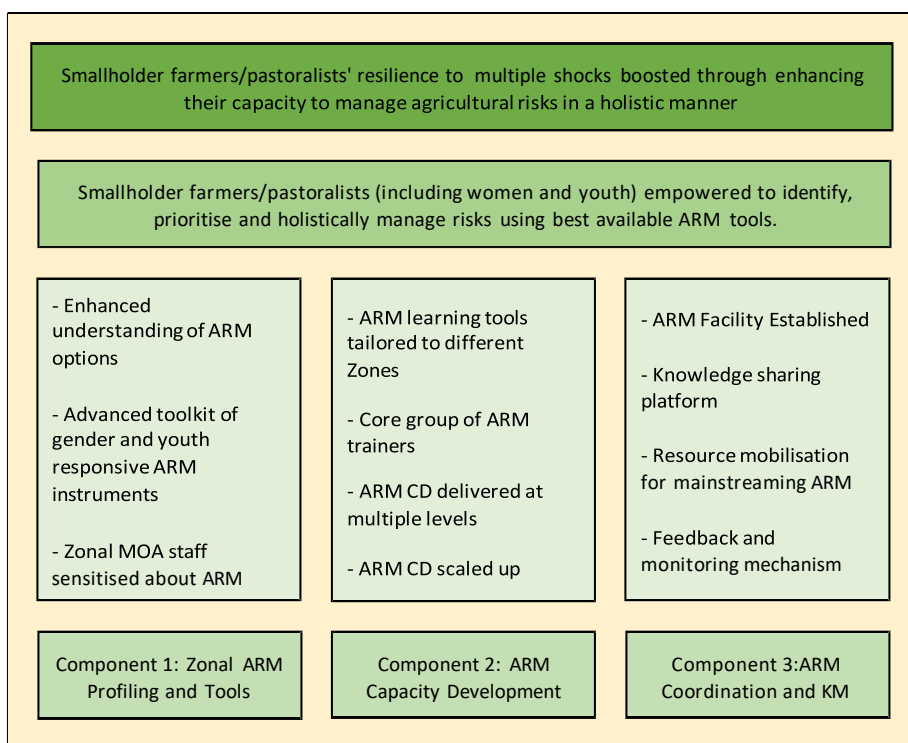
93. Farmers' lack of ARM capacity has multiple **consequences**. Ethiopian smallholder farmers and pastoralists tend to be risk averse. This makes them reluctant to invest in enhanced technologies. It also limits their ability to benefit from "upside" risks, such as favourable seasonal conditions or prices, and forces them to rely on traditional coping mechanisms and emergency relief measures, which can erode their livelihoods in the medium and long-term. Women and youth also face particular constraints. They are often more exposed to risks yet less well equipped to respond to those risks. These factors all contribute to high (although declining) levels of rural poverty and food insecurity, especially among vulnerable and disadvantaged groups, including women and youth.

94. PARM's risk analysis has identified a menu of potential **solutions**. These have been considered in the design of the project. Because of its expertise and experience, PARM has a comparative advantage in

advancing knowledge-based solutions, and in particular in channelling knowledge to address demand-driven needs. It will deliver practical, useful support that the beneficiaries need, including: (i) development impact; (ii) collaboration with partners and an attractive funding proposition; (iii) approaches and tools that can be replicated and scaled up nationally and in other African countries; and (iv) greater awareness of ARM among the agricultural development community.

95. The **theory of change** underlying the Project, as shown in Figure 2, is aligned with the overall theory of change for PARM Horizon 2. It involves a three-pronged approach to catalysing change combining: (i) further development of ARM tools and policies tailored to Ethiopia’s particular needs; (ii) Capacity Development in ARM at all levels; and (iii) ARM knowledge management and feedback activities.

Figure 2: Theory of Change



96. The theory of change envisages that defining the risk profiles of Ethiopia’s diverse agroecological conditions, and the development of an enhanced package of ARM profiling tools, will result in an improved understanding of ARM options at all levels. It also foresees the development of an advanced toolkit of ARM instruments and teaching staff in *zones* about ARM principles and methods, and related areas of social protection, disaster risk management, and food and nutrition security. The core CD activities will develop an improved set of ARM learning tools tailored to the prevailing circumstances, and will provide CD training through knowledge transfer at many levels. These results will be supported by the setting up of the Facility Coordination Unit and a knowledge-sharing platform, whilst mobilising resources to mainstream ARM in other programmes, and creating a tracking and feedback mechanism for monitoring and learning about ARM.

G. Alignment, Ownership and Partnerships

a) Alignment with Key National Policies, Strategies and Programmes

97. CD4ARM is aligned with the UN 2030 Agenda objectives, more especially with SDG1: ending poverty; SDG2: ending hunger and enhancing food security (in the context of smallholder agriculture and rural development); and SDG5: gender equality and empowerment, SDG 10: reducing inequalities, and SDG 13: responding to climate change.

98. The objectives of the project are consistent with major sector policies and development programmes including: (i) the GOE Ten Years Perspective Development Plan; (ii) the new MOA agricultural extension strategy; (iii) MOA’s Ten Year Plan; (iv) the National Policy and Strategy on Disaster Risk Management; (v) the (forthcoming updated) National Technical and Vocational Education and Training Strategy; and (vi) the 2017 Gender Equality Strategy for Ethiopia’s agricultural sector.

99. Furthermore, the GOE and the implementation partners are committed to CD4ARM. The programme that has been designed in close collaboration with the MOA Extension Directorate, is closely aligned to MOA's Mandate Zonation Strategy, targets priority geographical areas and involves the key actors in each *zone* to integrate ARM at various levels.

b) Alignment with PARM Corporate Priorities

100. CD is a pillar of ARM and of PARM's country process. Learning is one of the four main services provided by PARM in Horizon 2. Furthermore, PARM's Horizon 2 mandate is to turn theory into action and design fundable ARM projects or programmes based on the knowledge and evidence built in Horizon 1. These are aligned to the country's priorities, and developed in close coordination with national counterparts. Gender responsiveness, youth awareness, and social inclusion are key areas of focus in PARM Horizon 2, and are embedded in its logical framework.

101. MOA identified CD as the most effective strategy to respond to the priority risks identified by PARM in 2016. A CD programme promoting a holistic approach to ARM, both within policies and extension advisory services, that is gender and youth responsive, and developed at the request of its national counterpart, is well aligned with the priorities of PARM's Steering Committee, PARM's Horizon 2 Logical Framework, and its global mandate. The proposed project will contribute to PARM's objective, which is to strengthen the capacity of Ethiopia to move away from a culture of coping with disasters towards smart management of risks.

c) Partnerships

102. The project will leverage existing relationships between GOE and MOA and their Development Partners. Mainstreaming ARM, capacity development, and embedding the MZ approach in the extension system will require dialogue and coordination with Partners supporting the agricultural sector. The proposed financing strategy involves continuing discussions on possible partnership and funding support from GOE and MOA and key Development Partners. The response to the proposed initiative has been positive. Most Development Partners expressed interest in partnering with the project. PARM and the MOA are discussing partnership opportunities with the Netherlands Embassy, JICA, the European Union (EU), AfDB, and IFAD, and others.

- The Netherlands Embassy agreed to explore the possibility of financing ARM initiatives in relation to the horticultural export, seed, and dairy value chains, with a focus on private sector engagement in the pluralistic extension system.
- JICA would like to partner with the Facility through its ongoing Climate Resilience project in Oromia Region. JICA asked wants to identify other potential opportunities.
- Discussions with the EU concentrated on the need to integrate ARM principles in food systems. The current Scoping Mission for the next seven-year phase of EU support will consider incorporating ARM principles and possible collaboration with the CD4ARM initiative.
- Discussions with the AfDB identified a possible partnership entry point for CD4ARM in the upcoming "Programme to Build Resilience for Food and Nutrition Security" to be implemented by MOA.
- Discussions with IFAD's in-country office identified possibilities for IFAD support in ARM policy development within the Rural Economic Development and Food Security (RED&FS) framework; as well as the possibility of retrofitting ARM methodologies within the portfolio of IFAD-supported projects.

H. Costs, Benefits and Financing

a) Project Costs

103. Detailed project cost estimates by Component and Sub-Component are shown in Annex 4 and summarised in Table 1 below. Total project cost, including price contingencies over five years, is estimated to be US\$12.1 million, equivalent to ETB 605 million. Almost two thirds of costs are allocated to the CD activities in Component 2. Investment costs comprise 92 per cent of the total and recurrent costs are only 8%.

Table 1: Project Costs (US\$ thousands)

Component/Sub-Component	Base Cost (USD'000)						Percent
	Year 1	Year 2	Year 3	Year 4	Year 5	Total	
Investment Costs							
Component 1	138	96	282	181	170	867	8
Component 2	285	1,328	1,862	2,113	1,383	6,972	63
Component 3	881	372	465	182	354	2,253	20
Total Investment Costs	1,304	1,796	2,609	2,476	1,907	10,092	92
Recurrent Costs	59	219	219	219	219	935	8
Total Base Costs	1,363	2,015	2,828	2,695	2,126	11,027	100
Price Contingencies (3% p.a.)	41	123	262	338	339	1,103	
Total Project Cost	1,404	2,138	3,090	3,033	2,465	12,130	

b) Project Financing Strategy

104. CD4ARM will establish a model for integrating ARM within the Mandate Zonation approach. It will have an initial duration of five years comprising some activities within MOA, and others focussed in the initial 27 selected *kebeles*.

105. A progressive financing strategy is proposed including “seed money” to establish the Facility (governance, management, and some key start-up activities) and to plan the ARM mainstreaming process. Subsequent resource mobilisation will be undertaken in two additional rounds, as shown in Table 2 below, with the first round to finance activities in Years 2 and 3, and the second and final round for activities in Years 4 and 5. If the CD4ARM intervention area overlaps those of other donor-supported projects, resources could be mobilised to finance and mainstream ARM training activities within those projects. Discussions on resource mobilisation are continuing between PARM/GOE and development partners. With support from PARM and as the owner of CD4ARM, MOA will take the lead in the resource mobilisation rounds (seed money, resource mobilisation rounds 1 and 2) to secure funding for the timely implementation of CD4ARM.

106. Recurrent costs, amounting to around US\$0.9 million will be financed by GOE and other national stakeholders, with the remainder funded by Development Partners via the two-resource mobilisation rounds described above.

Table 2: Proposed Financing Plan (US\$ thousands)

Component/Sub-Component	Seed Money	Resource Mobilisation			Financing		
		Round 1	Round 2	Total	GOE	Partners	Total
Investment Costs							
Component 1	138	378	350	867		867	867
Component 2	285	3,191	3,496	6,972		6,972	6,972
Component 3	881	836	536	2,253		2,253	2,253
Total Investment Costs	1,304	4,406	4,383	10,092		10,092	10,092
Recurrent Costs	59	438	438	935	935		935
Total Base Costs	1,363	4,844	4,821	11,027	935	10,092	11,027
Price Contingencies (3% p.a.)	41	363	699	1,103	93	1,009	1,103
Total Project Cost	1,403	5,207	5,519	12,130	1,028	11,101	12,130

c) Benefits and Economic Justification

107. Ethiopia’s high exposure to agricultural risks implies that better risk management will yield substantial benefits. Mitigating shocks induced by weather, pests and diseases, price spikes, and so on, encourages farmers to invest in diversification, stabilisation, marketing and other risk management measures, protects rural jobs, and safeguards household food security, whilst facilitating these investments. Diversifying production systems and improving the management of natural resources, including soil, water, forests, and rangelands, nurtures biodiversity and sustainability. Empowering women to manage risks strengthens food security. Most importantly, by reducing uncertainty, effective ARM in Ethiopia will create a more predictable environment for investments and sustainable rural transformation.

108. While awareness of agricultural risks is widespread, the intended benefits to farmers can only be delivered through improved management of these risks. The benefits of mainstreaming ARM are substantial. A holistic approach can improve diversification and food and nutrition security, reduce post-harvest losses, and increase rural incomes for all groups of farmers and pastoralists. These micro-level benefits will contribute to macro-level national goals incorporated in the Ten Years Perspective Plan and the Homegrown Economic Reform Agenda.

109. The application of ARM tools at household level will help to avoid or mitigate losses from events such as adverse weather, pests and diseases, and market supply, demand and price fluctuations. It will focus on preparing for and managing such events rather than upon disaster response, coping mechanisms and emergency relief. Improved agricultural practices can also increase average production levels and reduce variability, thereby mitigating the impact of events that threaten the livelihoods of poor and vulnerable households. Improved ARM also enhances the benefits from favourable events such as good seasonal conditions or product prices. For example, better access to market information can increase returns during

good seasons when prices may otherwise be low. Conversely, increasing awareness about new technologies helps farmers to capture upside opportunities.

110. Improved ARM can help to improve the supply of private and public finance for agricultural investments by commercial banks and impact investors. In particular, ARM can help build partnerships between public and private actors to mobilise blended finance for climate risk adaptation and mitigation.

3. Risks

A. Project Risks and Mitigation Measures

111. Risks relevant to the Project, and proposed steps to mitigate them, are:

Risk	Level	Mitigation
Conflict. There is a high risk that the conflict in northern Ethiopia that began in late 2020 could be protracted and might deter financing from development partners. Ongoing conflict could also destabilise CD initiatives, by preventing PARM international staff and consultants from entering the country and disrupting internal travel.	Medium	Postpone/suspend project activities until a lasting political solution is achieved (and recognized by donors).
COVID-19. In early 2022, the pandemic remained firmly rooted in Ethiopia, and a third wave appeared underway. Vaccination rates were very low, with only one per cent of the population (partially or fully) vaccinated. Restrictions either to enter the country or to travel to regional sites could impede project implementation.	High	GOE must make concerted attempts (inc. assistance by international donors) to vaccinate more many people.
Extreme weather events. Although managing climate (particularly rainfall) variation is a major thrust of the project, implementation could be disrupted by extreme weather events, which farmers do not yet have the capacity to manage. This could lead them to revert to traditional coping mechanisms such as asset sales that may have irreversible consequences for farmers' livelihoods and undermine project progress.	High	Ensure farmers and pastoralists have risk management solutions to avoid asset sales while retaining access to basic necessities (food, healthcare and education).
Donor Financing. There is a risk that donors may reduce funding if reporting on Key Performance Indicators (KPIs) is perceived inadequate.	High	Stress the importance of reporting on ARM in any donor initiative. Integrate/retrofit CD4ARM into prospective/respective donor Initiatives.
Institutional knowledge retention. High turnover of Learning Facilitators could jeopardise knowledge transfer.	Medium	Incentivise high-performing AgDAs.
Enabling environment. Implementation of the project, and investment in capacity development, may be hindered by overly bureaucratic processes, and/or lack of official buy-in, or any failure by Government authorities to regard it as a priority.	Low	The agricultural sector is an important contributor to GDP, and it employs many people. GOE is implementing policies to strengthen the rural sector.
Narrow focus on productivity. Experience has shown that measures to increase productivity do not automatically translate to higher and more stable incomes for farmers. Technologies such as high-yielding varieties and livestock breeds often increase farmers' risk exposure through higher costs and susceptibility to biological and weather-related stressors. Higher yields can also create marketing problems unless parallel measures are in place to address market constraints.	Low	ARM techniques shared with farmers and pastoralists will also address production and marketing issues.

B. Environmental and Social Category

112. IFAD's social, environmental and climate assessment procedures classify environmental and social risks as Category A, B or C, in decreasing order of severity. Assessing the project according to the eight criteria (biodiversity, resource efficiency and pollution prevention, culture heritage, indigenous peoples, labour and working conditions, community, health safety and security, resettlement, financial intermediaries and direct investments) suggests that it will have little adverse environmental and social impact. The core CD and institution-building elements of the project could therefore be classified as Category C (least risky). However, some activities to be implemented at farm household level could be considered riskier from an environmental and social perspective: for example, high input agricultural packages involve increased use of agrochemicals,

while some risk management tools likely to be promoted may not be easy for vulnerable and disadvantaged groups, women, and youth to take up. The project has an environmental risk classification of **Category B**.

113. Since the Project is to provide CD and knowledge management about how to analyse and respond to risks affecting household income and food security, social impacts are expected to be overwhelmingly positive. ARM provides an opportunity to train beneficiaries about sustainable agricultural practices that benefit people and the environment. The project also uses a gender responsive and youth sensitive approach to strengthen women's empowerment, and youth inclusion, It recognizes and responds to social and cultural norms and differences regarding gender and youth roles and access to opportunities which may affect equal distribution of benefits. It will spot where possible and build upon indigenous knowledge and socially inclusive local practices to identify and mitigate risks.

C. Climate Risk Classification

114. IFAD's Social, Environmental and Climate Assessment Procedure (SECAP) guidelines can also be applied to determine the project's exposure to climate-related risks, categorised as "high", "moderate" or "low" based on historic climate hazard occurrences, current climate trends, and future climate change scenarios. Climate risk management is a key element of the project. The great majority of potential beneficiaries are farmers and livestock keepers practising rainfed agriculture. Many are in marginal rainfall areas, and are extremely vulnerable to dry spells, droughts and other weather extremes. This supports a **moderate risk rating**, which recognizes that the project will avoid any initiative that accentuates climate risks.

4. Implementation

A. Governance Arrangements

115. MOA's Extension Directorate will be the lead agency responsible for oversight and implementation. The Project will be implemented by the CD4ARM Facility operating under the oversight of a Steering Committee and supported by a Technical Committee.

116. The **Steering Committee** will oversee implementation and will provide policy and strategic leadership and guidance. It will meet twice a year to approve the Facility annual workplan and budget (AWPB), review implementation progress, and resolve any policy issues that may arise during implementation. Its core responsibility will be to provide overall policy and strategic guidance and advice to the Facility for effective, and accountable implementation. Membership of the Committee will include:

- MOA State Minister (Chair)
- Extension Director (Co-Chair)
- ATI Chief Executive Officer; and
- Deputy Heads of RABs (representing the five regions)

117. Representatives from Technical Ministries may be invited to join committee meetings to discuss specific topics of relevance to their respective mandates. The FCU Coordinator will act as Secretary of the Committee.

118. A **Technical Committee** will be responsible for: (i) providing technical guidance to the FCU; (ii) updating the Steering Committee on technical and operational issues; (iii) facilitating technical and operational partnerships with stakeholders within the government to advance operational/coordination issues; (iv) preparing meetings on behalf of the MOA Extension Directorate, and mobilizing resources with technical/donor counterparties to ensure funding for the Facility; (v) providing technical and operational guidance to AWPBs and quarterly and annual progress reports and work plans; and (vi) participating in periodic monitoring of the project. The Technical Committee will meet quarterly and as often as needed during the early phase of implementation. Membership of the Committee will include:

- Extension Director of MOA as Chair
- MOA Directors of Technical Directorates (crops, livestock, and natural resources)
- Women, Youth and Child Director
- MZ technical committee Members
- Director at ATI
- Five RAB Extension Directors
- RAISE-FS country Director

119. Any CD4ARM Facility stakeholder may be invited to join committee meetings to discuss specific topics of relevance to their respective responsibilities. The FCU Coordinator will act as Secretary to the Technical Committee.

120. The **CD4ARM Facility** will be based in the Federal Extension Directorate Headquarters. Management, coordination and implementation of the Facility will involve various government institutions and funding partners as well as private entities that will play roles at various levels for effective delivery of activities. The process will be governed by five key principles: (i) alignment with GOE systems and procedures, especially those governing public expenditure and procurement; (ii) integration into relevant institutions in decentralised government structures; (iii) empowerment of farmers to take the lead in implementing CD and ARM activities; (iv) cooperation with private service providers; and (v) resource mobilisation through partnerships and harmonisation with development partners and other stakeholders.

121. At the **regional level**, the Facility will be managed by the respective Regional Governments with the Heads of the Bureaux of Agriculture and Extension providing leadership. The regional level coordination and management structure of CD4ARM will be a light structure to ensure that the regions have adequate capacity to implement CD in ARM and mainstream ARM in accordance with the overall strategic priorities and contribute to the achievement of the Project objective.

122. The **Regional Mandate Zonation Steering Committees** chaired by the respective Heads of RABs, will be expanded to include the different organisations (research centres, academia, and extension service-providers) working together at the regional level. They will be supported by a CD4ARM Extension Focal Point who will be responsible for the day-to-day management of the Project at regional level. At the *zonal* level, a designated Extension *zone* Focal Point will work with a team of technical experts of the Mandate Zonation structure and coordinate the required technical support, capacity building activities, and experience sharing. This person will also provide the link between *woredas* and regional Mandate Zonation Steering Committees. At the *woreda/kebele* level, a *woreda* Coordinator will work with teams of AgDAs and their supervisors to implement activities in *kebeles*. In *kebeles*, the AgDAs at F/PTCs will provide ARM training to farming households, and provide ARM tools to ensure Project objectives are attained.

B. Implementation Arrangements

a) Project Coordination

123. **Facility Coordination Unit (FCU)**. The Federal Directorate of Extension of MOA will be the Lead Agency and will host the Facility. It will establish the FCU to coordinate and manage implementation of all the proposed activities. The FCU will take care of operational aspects relating to implementation and will release funds under the direct responsibility of FCU. It will also coordinate the mobilisation of resources from Funding Partners, and collect, analyse and report implementation results. The FCU will coordinate implementation with partners at the regional, *zonal*, *woreda* and *kebele* levels and will facilitate outreach of implementation. It will set up an effective M&E system at every level of intervention. The implementation arrangements for all CD4ARM components will be detailed in a Programme Implementation Manual (PIM).

124. The FCU will be responsible for coordinating implementation of the core technical components i.e., Component 1, Component 2 and Sub-Components 3.2, 3.3 and 3.4. It will be responsible for:

- Preparing and executing the AWPBs.
- Drawing up implementation progress and financial reports for submission to the Technical Committee, which will review them, add comments and forward them to the Steering Committee.
- Monitoring and evaluating Project implementation.
- Fiduciary and procurement systems.
- Undertaking all fiduciary functions in compliance with GOE Guidelines.
- Working closely with the target regions, *zones* and *woredas* to plan and conduct activities consistent with the objectives of CD4ARM.

125. The FCU will support MOA Extension frontline staff (AgDAs) with the dual objectives of strengthening their capacity and thereby strengthening the ARM capacity of farmers and pastoralists. The FCU will work with other local partners and service providers who form part of MOA's pluralistic extension services. The FCU will be responsible for mainstreaming gender and youth in all activities through close collaboration with the MOA Gender, Youth and Child Directorate, ensuring that gender and youth are treated as an important target group of the Facility.

126. The FCU will function as a service provider with a mandate to mainstream ARM through capacity development of the Extension services and farmers and pastoralists. It will be required to mobilise resources to implement its activities. It will do this by: (i) ensuring that the interactive Donor and programmes/project

dashboard is fully operational; (ii) supporting MOA to maintain dialogue with Development Partners to mobilize resources; and (iii) conducting successive resource mobilisation campaigns. The FCU will also ensure liaison, synergies and linkages with all relevant Development Partners, projects and programmes that seek to mainstream ARM in their operations.

127. The FCU will support the establishment of an **ARM Platform** (Sub-Component 3.2) led by the MOA Extension Directorate. The Platform will be multi-faceted and open to participation by all agricultural and rural sector stakeholders. It will provide:

- A repository of information on Ethiopia's agricultural risks, including the disaggregated and inclusive risk studies to be undertaken under Sub-Component 1.1, and subsequent risk analyses.
- An inventory of ARM strategies, tools and technologies available for dissemination in different *zones*.
- An interactive and routinely-updated mapping/dashboard of GOE and Development Partner support for ARM. This will identify risks associated with ongoing investments and gaps or opportunities, enabling policy-makers and planners to prioritize future support and investments.
- Integration of ARM into policies and planning.
- Project risk reduction by mainstreaming and/or retrofitting ARM principles and approaches.
- Promotion of knowledge-sharing, monitoring, evaluation and learning.
- The ability to spot any new ARM trend.

128. **Adaptive Programming:** The Facility will be implemented using a modular approach, enabling activities and interventions in different locations to proceed when PARM CD and MOA Mandate Zonation approaches are ready to be implemented. Developing the capacity of farmers and pastoralists requires an adaptive and flexible approach, adapted to the context in different regions and *zones*. Features of adaptive programming include:

- Encouraging implementation working with local partners, including academia, research centres, NGOs, and the private sector.
- A realistic gender and youth sensitive approach that will ensure women and youth are trained in ARM.
- Involvement and ARM capacity development in regions, *zones*, *woredas*, and *kebeles*.
- The ability to mobilise resources and to link up with existing projects and programmes locally.
- Flexibility that allows for adjustment and restructuring of facility interventions when needed.

b) Implementation Readiness and Start-up

129. As soon as "seed money" resources have been allocated to establish the Facility and begin key activities in Sub-Components: 1.1, 1.2, 1.3 and 3.1; a draft AWPB, procurement plan, and draft Project Implementation Manual (PIM) will be prepared for the first year with the help of national and international technical assistance. The FCU will also prepare a resource mobilisation strategy to guide MOA in seeking funding to launch CD activities under Components 1 and 2. During the start-up period, work will also be initiated to establish the ARM Platform and its functions, including the interactive GOE and Donor Investment dashboard.

c) Supervision, Mid-Term Review and Completion

130. **Supervision** arrangements will largely follow the procedures of the main funding Partner. Supervision missions will be undertaken at least once a year to review implementation progress, assess achievements and lessons learned, and support implementation to ensure the effective and efficient delivery of results.

131. A **Mid-Term Review** (MTR) will be undertaken midway through implementation to consider whether the Facility is on course to achieve its objectives. It will identify constraints and recommend any re-orientation required to achieve the objectives. The timing and scope of the MTR will be influenced by the level of progress and through discussion with the Government. The MTR will also be a critical point for assessing the sustainability and scalability CD4ARM Facility, and whether it can be replicated in other ongoing programmes and projects, and in other regions.

132. The **Project Completion Review** (PCR) will be led by GOE in close coordination with its funding partners. Its purpose is to ensure accountability, reflect on performance and draw lessons to inform future programme/project design, and to define an appropriate post-project strategy. GOE and its Development

Partners will draw upon lessons from this project when designing and implementing ARM principles in future programmes and projects. The process will also identify opportunities for scaling-up best practices. A Beneficiary Impact Assessment will be undertaken to inform the PCR.

C. Financial Management¹³

133. **Accounting:** The FCU Administration and Finance Officer, reporting to the Facility Coordinator, will be responsible for the accounting functions of the Project, including consolidation of CD4ARM Facility accounts, preparation of annual financial statements, periodic financial reporting and, overseeing the arrangements for audits, in accordance with GOE procedures. Participating regions and *woredas* will nominate staff to manage the accounting requirements at their level. They will be required to share information with the Administration and Finance Officer of the FCU.

134. **Auditing:** The Internal Audit department of MOA will include the FCU in its internal audit plans and undertake an audit. Six monthly internal audit reports will be submitted to the Steering Committee. The Audit Department will be required to submit management action plans and recommendations about the progress of implementation as part of the mandatory annual report. The audit will be undertaken yearly and will be conducted under Terms of Reference aligned with the main Funding Partners' audit guidelines.

135. **Flow of Funds:** A dedicated account for the project will be maintained at the National Bank of Ethiopia. Funds from the designated account will be transferred to the Facility operating account (in a commercial bank acceptable to the Main Funding Partner) in local currency and managed by the FCU. Funds will be released to regions and implementing partners based upon activity budgets for the initial Project implementation stage, and subsequently on the basis of justifications rather than general advances. The implementing partners will be required to open and operate separate bank accounts to facilitate the traceability of funds.

136. **Expenditure Justifications and Reporting:** Participating Regions and implementing partners will open dedicated bank accounts for CD4ARM. Specific activity-tagged cash advances for the first AWPB will be transferred by the FCU to implementation partners to facilitate proper reporting and monitoring of both physical and financial progress. Subsequent transfers will be based on justifications submitted to the FCU. To facilitate budget monitoring and reporting at the regional level, measures will be introduced to ensure accountability at every level of implementation.

137. **Procurement** of goods and services will be in accordance with national procurement systems where they can be shown to be compatible with the requirements of the main funding partner(s).

D. Innovation and Scaling-up

a) Innovation

138. The first innovation that CD4ARM is proposing is to integrate holistic approach to ARM through CD activities in Ethiopian agriculture and the extension service. Agriculture is a risky activity and all sectoral actors respond to risks in one way or another. PARM's approach to ARM, and to identifying and assessing risks holistically with a robust scientific methodology to quantify risk impacts, is unique however, and new to the Ethiopian agriculture sector. CD4ARM proposes to strengthen the sector's capacity to identify and respond to risks, and to integrate this approach and change of mindset at different levels of MOA, and with different actors. The aim is to turn risks into opportunities, and to move away from a culture of coping with disasters towards smart management of risk and building resilience. This will be achieved by creating and maintaining Ethiopia's first ARM knowledge centre. This will generate and share knowledge and information and, best practices, and bring together key ARM actors at national level. The ARM knowledge centre will support the development of ARM policies to underpin rural economic development and food security.

139. The second innovation of CD4ARM is its approach to CD, based on that of PARM. Already piloted in three regions of Ethiopia, it has been integrated into MOA's Mandate Zonation Strategy. Experience has demonstrated the need for testing and validation prior to wider adoption of new technologies, especially in regions of agroecological diversity. Recognising the need for a coordinated effort, MOA approved a National Research Cluster and implementation strategy in August 2019 Mandate Zonation is expected to introduce the research cluster approach. Members of the NARS can play an important role in timely testing and validation of agricultural technologies, including the ARM CD approach.

¹³This section will be adjusted to reflect procedures and reporting requirements of funding partners accordingly during the preparation of the PIM.

b) Scaling up

140. PARM has implemented, in close collaboration with MOA's Extension Directorate and its MZ strategy actors, a small pilot of ARM CD in three regions (Amhara, Oromia and Afar). This approach to ARM and CD is based on PARM's standard methodology and holistic approach. It has been adapted and used in nine countries, and is easily scaled-up and replicated. In Ethiopia, this methodology and approach can be (and has been) applied from the federal level, and intermediate levels all the way down to individual farms. It can and will be further tailored and adapted to the targeted *zones*, to farmers and pastoralists, to specific value chains, and across five regions, including those where it has been piloted. It was first piloted in Ethiopia in 2021 in the dairy value chain in Oromia as part of FAO's AgrInvest project.

141. If funds allow, it is planned that in a second phase, capacity development, in particular, will be scaled-up to more beneficiaries by either increasing the number of target *zones* (and thus *woredas* and *kebeles*) in a region, or by replicating the model in other regions.

c) Project Target Group Engagement and Feedback

142. The design mission consulted Government, development and financial partners and civil society organisations at various levels:

- **Government** including MOA, including the Extension Directorate, the Mandate Zonation Steering Committee, and the ATI, and NDRMC. Authorities (such as RABs from three regions) were consulted at federal, regional and *woreda* level during the design mission. This included a field trip to Bishoftu, Oromia; online consultations, and consultations with research centres, including EIAR, APARI, ARARI, DRSLP).
- **Development and financial partners:** Because PARM is a technical platform rather than a funding body, the Mission held discussions on possible partnership and funding support with Development Partners, including IFAD, AFD, AICS, EU, the Embassy of the Netherlands, BMGF, the AfDB, JICA, GIZ, WB, IFC. Other development partners include: WFP, FAO, WB Gender innovations lab, IFPRI, CABI, ICRISAT, UN Women.
- **Civil society:** multiple meetings were held with AgDAs, model farmers, the Farmers' Cooperative Union in Oromia, and NGOs (such as CARE), and with the universities of Bahir Dar, Amhara and Ambo, Oromia. These consultations also aimed to engage partners specialised in gender equality and youth to add their perspectives to the project.

143. The Co-Vision Workshop, organized by PARM and MOA, was held on 28 October 2021 in Addis Ababa, and gathered more than 50 participants. It engaged participants from relevant institutions, and technical and financial partners, to identify innovative and solution-oriented in ARM initiatives to help design the project. The design team drew upon the lessons to shape its response to the sector's risk management needs.

144. A technical workshop was held on 29 October 2021 for key ARM actors in Ethiopia. It discussed the CD4ARM components and approaches to get feedback and improve commitment notably within MOA, and involvement of these actors in the roll-out of CD4ARM. The consultation helped shape this Project Design Report.

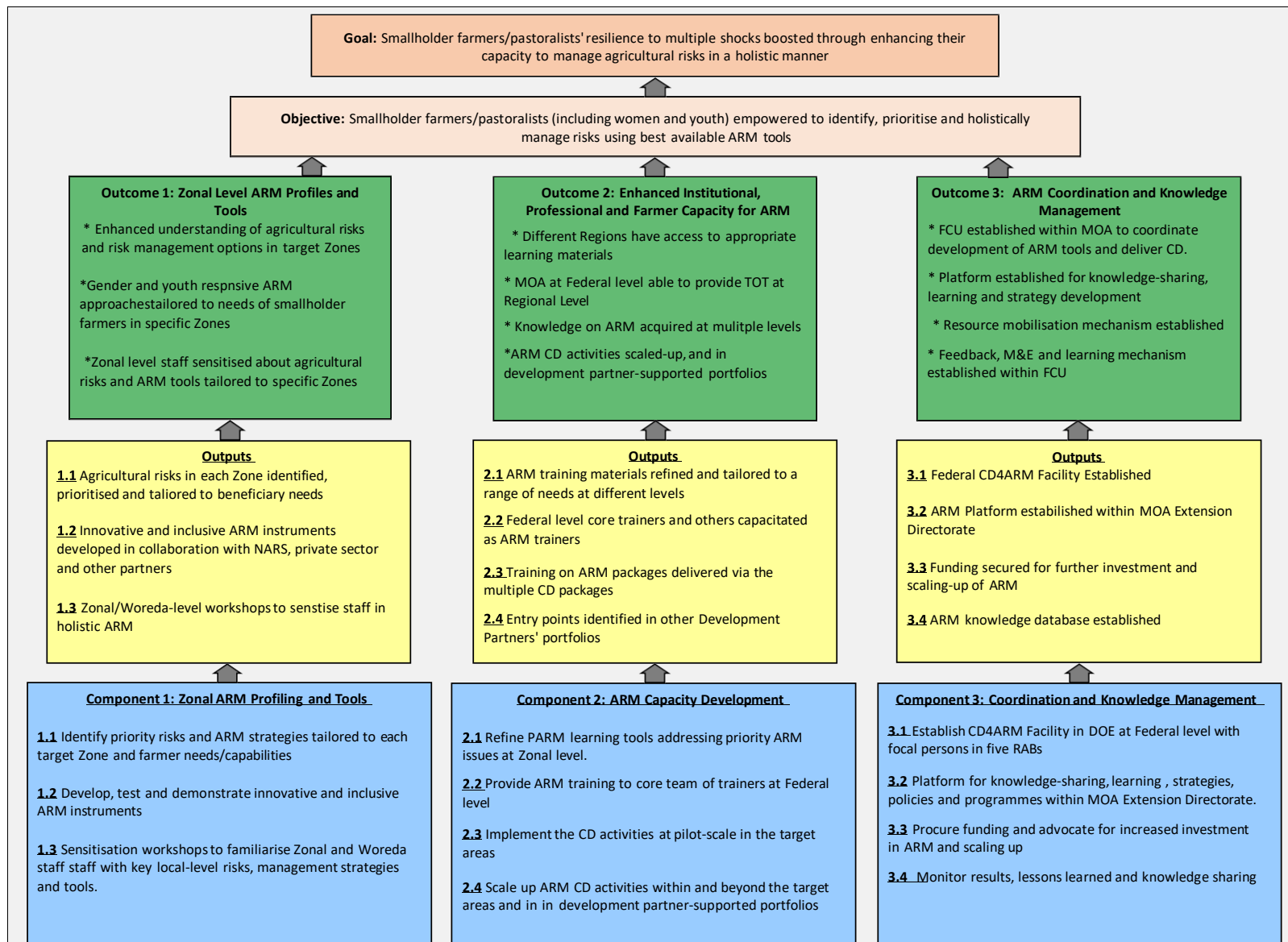
Annex 1: Logical Framework

Narrative Summary	Indicator*	Means of Verification	Assumptions/Risks
Goal: To boost smallholder farmer and agropastoralist resilience to multiple shocks by enhancing their capacity to manage agricultural risks holistically.	<ul style="list-style-type: none"> No of households in target areas suffering lost income or greater food insecurity due to unforeseen events 	<ul style="list-style-type: none"> No of households in target areas receiving disaster relief from NDRMC 	
Objective: Empowering smallholder farmers and agropastoralists (including women and youth) to identify, prioritize and holistically manage risks using the best available ARM tools.	<ul style="list-style-type: none"> No of households (target 10,000) in target areas employing systematic ARM approaches to underpin income and household food security 	<ul style="list-style-type: none"> Follow up surveys of beneficiaries who have received ARM training to assess adoption behaviour 	<ul style="list-style-type: none"> Households receiving training are prepared to modify their risk management behaviour
Component 1: Zonal ARM Profiling and Tools			
Outcome 1.1: Enhanced understanding of agricultural risks and management options in each of the target zones.	<ul style="list-style-type: none"> No of risks identified and ARM strategies prepared in each of the target zones 	<ul style="list-style-type: none"> Zonal level reports prepared by risk assessment teams 	<ul style="list-style-type: none"> Risk assessment teams are able to identify key risks at zonal level and formulate ARM options
Outcome 1.2: Gender and youth responsive ARM approaches tailored to the needs of smallholder farmers in specific zones.	<ul style="list-style-type: none"> No of new ARM tools developed under cost-sharing partnerships 	<ul style="list-style-type: none"> Reports provided by partners selected to design new ARM approaches and tools 	<ul style="list-style-type: none"> Potential partners are willing to enter into cost-sharing arrangements for developing ARM tools
Outcome 1.3: Zonal level MOA staff sensitized about agricultural risks and ARM tools tailored to specific zones.	<ul style="list-style-type: none"> No of zonal staff (target 120) taught to assess risks and formulate ARM plans 	<ul style="list-style-type: none"> Workshop reports and evaluations 	<ul style="list-style-type: none"> Zonal staff are available to participate in sensitization training
Component 2: ARM Capacity Development			
Outcome 2.1: Diverse regions have access to appropriate learning materials, translated into local languages where necessary.	<ul style="list-style-type: none"> No of ARM learning materials for each of the target regions and zones 	<ul style="list-style-type: none"> Training guidelines and materials 	<ul style="list-style-type: none"> PARM training guidelines and materials can be adapted to the ARM context of each region and zone
Outcome 2.2: MOA at federal level able to provide training of trainers for regional officers.	<ul style="list-style-type: none"> No of ARM trainers (target 50) who have completed TOT courses 	<ul style="list-style-type: none"> List of trainees completing TOT course and training evaluation reports 	<ul style="list-style-type: none"> Suitable candidates for the core group can be identified
Outcome 2.3: Knowledge on ARM acquired by Federal Extension Directorate, Universities, SMEs, ATVETs, F/PTCs, AgDAs, MFs and smallholder farmers and pastoralists.	<ul style="list-style-type: none"> No of trainees from Universities, SMSs, ATVETs, F/PTCs, kebeles, woredas and farmers and pastoralists (target 15,508) 	<ul style="list-style-type: none"> List of trainees completing ARM courses and training evaluation reports 	<ul style="list-style-type: none"> Suitable candidates for training can be identified For farm and kebele level training women and youth training candidates can be identified
Outcome 2.4: ARM CD activities scaled-up (subject to funding) within and beyond target regions, and included in the projects of Participating Donors.	<ul style="list-style-type: none"> Number of beneficiaries in projects of Participating Donors receiving ARM training 	<ul style="list-style-type: none"> M&E reports from projects supported by Participating Donors 	<ul style="list-style-type: none"> GOE and Participating Donors will agree to extend ARM training to project beneficiaries
Component 3: ARM Knowledge Management			

Narrative Summary	Indicator*	Means of Verification	Assumptions/Risks
Outcome 3.1: Facility Coordination Unit (FCU) established within MOA's Extension Directorate to coordinate the development of inclusive ARM tools and deliver CD activities.	<ul style="list-style-type: none"> Facility established at MOA Federal level and staffed, and focal persons appointed in five RABs 	<ul style="list-style-type: none"> FCU Implementation progress and annual reports 	<ul style="list-style-type: none"> Suitable candidates for FCU positions can be identified and recruited
Outcome 3.2: Platform established for knowledge-sharing, learning, management of indigenous knowledge, and development of strategies combining different ARM tools as well as policies and programmes addressing constraints and broader issues.	<ul style="list-style-type: none"> Platforms established at federal and regional levels and functioning as planned 	<ul style="list-style-type: none"> FCU Implementation progress and annual reports 	<ul style="list-style-type: none"> Stakeholders are interested in accessing the services offered by the Platform
Outcome 3.3: Resource mobilisation mechanism established for mainstreaming ARM in sector programmes and projects. ARM CD activities scaled up (subject to funding) within and beyond target regions, and in projects supported by Participating Donors.	<ul style="list-style-type: none"> Amount of funding secured for further investment in scaling-up ARM training 	<ul style="list-style-type: none"> New financing agreement(s) for mainstreaming ARM 	<ul style="list-style-type: none"> Development Partners will be willing to commit additional resources to facilitate scaling-up
Outcome 3.4: ARM feedback and MEAL (Monitoring and Evaluation and Learning) system established within the FCU.	<ul style="list-style-type: none"> Knowledge database and M&E system established 	<ul style="list-style-type: none"> M&E system design report and periodic M&E reports 	<ul style="list-style-type: none"> Appropriately skilled M&E staff can be recruited and retained

*All indicators to be gender, youth and age disaggregated.

Annex 2: Design Overview



Annex 3: Target Regions, Zones, Woredas and Kebeles

Region	Zone	Woreda	High Potential Kebeles	High Risk Kebeles
Amhara	West Gojam	Bure	Denbun	Woyanima Amba
	East Gojam	Debre Elias	Genat	Yegorat
	Awi	Ayh Gaggusa	Chiba Chibas	Abesheb
Oromia	West Shoa	Ejersa Lafo	Chelelqa Bobe	Sostu Jabela
	East Arsi	Dodola	Eddo	Simbo Gore
	East Wollega	Wayu Tuqa	Bonaya Mole	Danisa Tanqe
SNNP	Gamo	Arbaminch Zuriya	Chano Mile	Baqa
	Gurage	Cheha	Yesharina Qondarina	Gute
	Silte	Alicho	Yebune Seqama	Gida Abalo
Tigray	South West	Raya Azabo	War Giba	Danchakachamoochale
	Central	Qafta Humara	Mikadera	Dubisa
Afar	Zone 1	Chifra	We'ama	Puchare
		Afanbo	Alasabolo	Mesgido
Total Regions 5	Total Zones 12	Total Woredas 13	Total High Potential 13	Total High-Risk 14

Annex 4: Project Cost Estimates

Table 1: Total Project Cost Summary

Component/Sub-Component	Base Cost (USD'000)						Percent
	Year 1	Year 2	Year 3	Year 4	Year 5	Total	
Investment Costs							
Component 1: Zonal ARM Profiling and Tools							
Sub-Component 1.1	138	0	138	0	0	276	3
Sub-Component 1.2	0	72	144	157	170	543	5
Sub-Component 1.3	0	24	0	24	0	48	0
Sub-Total	138	96	282	181	170	867	8
Component 2: ARM Capacity Development							
Sub-Component 2.1	253	30	60	0	60	403	4
Sub-Component 2.2	32	32	64	32	32	191	2
Sub-Component 2.3	0	555	754	924	572	2,805	25
Sub-Component 2.4	0	711	985	1,157	719	3,573	32
Sub-Total	285	1,328	1,862	2,113	1,383	6,972	63
Component 3: Coordination and Knowledge Management							
Sub-Component 3.1	401	158	203	50	73	884	8
Sub-Component 3.2	308	51	19	19	19	415	4
Sub-Component 3.3	12	12	12	12	12	60	1
Sub-Component 3.4	160	151	231	101	251	894	8
Sub-Total	881	372	465	182	354	2,253	20
Total Investment Costs	1,304	1,796	2,609	2,475	1,907	10,092	92
Recurrent Costs							
Component 3							
Sub-Component 3.1	59	211	211	211	211	903	8
Sub-Component 3.2	0	8	8	8	8	32	0
Total Recurrent Costs	59	219	219	219	219	935	8
Total Base Costs	1,363	2,015	2,828	2,694	2,126	11,027	100
Physical Contingencies							
Price Contingencies (3% p.a.)	41	123	262	338	339	1,103	
Total Project Cost	1,403	2,138	3,091	3,033	2,465	12,130	

Table 2: Cost Estimates: Component 1: Zonal ARM Profiling and Tools

Sub-Component/Activity	Note	Unit	Quantities						Unit Co USD'000	Base Cost (USD'000)					
			Year 1	Year 2	Year 3	Year 4	Year 5	Total		Year 1	Year 2	Year 3	Year 4	Year 5	Total
Investment Costs															
Sub-Component 1.1: Disaggregate Risk Analysis															
Consultants for Zonal risk assessment	a	day	252		252			504	0.4	101	0	101	0	0	202
Zonal workshops	b	W/shop	12		12			24	2.4	29	0	29	0	0	58
National workshop	c	W/shop	1		1			2	8.4	8	0	8	0	0	17
Sub-Total										138	0	138	0	0	276
Sub-Component 1.2: ARM Tools and Technologies															
Call for proposals	d	LS		1	1	1		3	2	0	2	2	2	0	6
Proposal evaluation	e	LS		1	1	1		3	10	0	10	10	10	0	30
Challenge fund grants	f	Grant		2	4	4	4	14	30	0	60	120	120	120	420
Validation workshops	g	W/shop			1	2	4	7	8	0	0	8	17	34	59
Publishing/dissemination of tools	h	LS			2	4	8	14	2	0	0	4	8	16	28
Sub-Total										0	72	144	157	170	543
Sub-Component 1.3: Sensitisation Training															
Zonal sensitisation workshops	i	W/shop		12		12		24	1.0	0	12	0	12	0	23
Woreda sensitisation workshops	j	W/shop		13		13		26	1.0	0	12	0	12	0	25
Sub-Total										0	24	0	24	0	48
Total Investment Costs Component 1										138	96	282	181	170	867

- a/ National TA Team to visit each of the 12 Zones for factfinding, consultations and Zonal risk assessment
Two teams to do six zones each, one week per zone to include agriculturist/gender and youth specialist/economist 12 zones x 3 consultants x 7 days = 252 days
- b/ One day workshop in each Zone for 50 persons, repeat in year 3
- c/ National Workshop to present findings of Zonal level risk analysis: 50 participants
- d/ Cost of preparing and publishing tender documents. Annual calls for proposals in years 1-3
- e/ Evaluation panel of five national experts x 5 days per call
- f Maximum of USD 30,000 per grant
- g/ National level workshops to present results of challenge fund grants. One day workshops for 50 people
- h/ Lump sum for publications per grant
- i/ 12 Zones: workshops in years 3 and 5, one day x 20 participants
- j/ 13 Woredas: workshops in years 3 and 5, one day x 20 participants

	Seed Money
	First round of resource mobilisation
	Second and final round of resource mobilisation

Table 3: Cost Estimates: Component 2: ARM Capacity Development

Sub-Component/Activity	Note	Unit	Quantities							Unit Co USD'000	Base Cost (USD'000)					
			Year 1	Year 2	Year 3	Year 4	Year 5	Total	Year 1		Year 2	Year 3	Year 4	Year 5	Total	
Investment Costs																
Sub-Component 2.1: ARM Guidelines and Training Materials																
International TA	a	month	3						3	22.5	68	0	0	0	0	6
National TA	b	month	6						6	12.0	72	0	0	0	0	7
Workshop to validate guidelines/materials	c	W/shop	1						1	8.4	8	0	0	0	0	
Translation costs	d	LS	5						5	3.0	15	0	0	0	0	1
Production of materials	e	LS	1		1			1	3	60	60	0	60	0	60	18
Audio-visual equipment	f	Set	6	6					12	5	30	30	0	0	0	6
Sub-Total											253	30	60	0	60	40
Sub-Component 2.2: Training for Core Group of Trainers at Federal Level																
DAE Extension Staff First batch	g	trainee	10		10				20	1.6	16	0	16	0	0	3
DAE Extension Staff First batch		trainee		10		10			20	1.6	0	16	0	16	0	3
DAE Extension Staff Third batch		trainee			10			10	20	1.6	0	0	16	0	16	3
Service Providers First Batch	g	trainee	10		10				20	1.6	16	0	16	0	0	3
Service Providers Second Batch		trainee		10		10			20	1.6	0	16	0	16	0	3
Service Providers Third Batch		trainee			10			10	20	1.6	0	0	16	0	16	3
Sub-Total											32	32	64	32	32	19
Sub-Component 2.3: Training at Multiple Levels in Target Regions																
Number of Staff/Individuals Trained																
Universities	h	trainee		5	7	7	6	25	0.71	0	4	5	5	4	1	
Research Centres		trainee		5	7	7	6	25	0.71	0	4	5	5	4	1	
ATVETs		trainee	10	14	14	12	50	0.48	0	5	7	7	6	2		
Regional Staff		trainee	10	14	14	12	50	0.48	0	5	7	7	6	2		
Zonal Staff		trainee	20	35	35	30	120	0.48	0	10	17	17	14	5		
Woreda Staff		trainee	20	40	40	30	130	0.48	0	10	19	19	14	6		
AgDAs		trainee	20	30	30	28	108	0.48	0	10	14	14	13	5		
Farmers		trainee		3,000	4,000	5,000	3,000	15,000	0.17	0	510	680	850	510	2,55	
Sub-Total			0	3,090	4,147	5,147	3,124	15,508			0	555	754	924	572	2,80
Sub-Component 2.4: Roll-out in Other Programmes and Projects																
Zonal Staff		trainee		20	30	30	20	100	0.48	0	10	14	14	10	4	
Woreda Staff		trainee		15	27	32	26	100	0.48	0	7	13	15	12	4	
AgDAs		trainee		30	47	47	36	160	0.48	0	14	23	23	17	7	
Farmers		trainee		4,000	5,500	6,500	4,000	20,000	0.17	0	680	935	1,105	680	3,40	
Sub-Total				4,065	5,604	6,609	4,082	20,360			0	711	985	1,157	719	3,57
Total Investment Costs Component 2																
											285	1,328	1,862	2,113	1,383	6,97

- a/ International TA to refine and adapt PARM guidelines, curricula and training materials to be used at three different levels: In depth TOT, ARM TOT and ARM Basics
- b/ National TA to refine and adapt PARM guidelines, curricula and training materials to be used at three different levels: In depth TOT, ARM TOT and ARM Basics
- c/ National level workshop for 50 participants
- d/ Guidelines and materials to be translated into a different language for each Region
- e/ Printed, social media, audio-visual, pamphlets, posters etc.
- f/ One set per zone
- g/ Three batches trained, including training and refresher after two years to allow for staff turnover
- h/ Refer to Table 7 for schedule of training

	Seed Money
	First round of resource mobilisation
	Second and final round of resource mobilisation

Table 4: Cost Estimates: Component 3: ARM Coordination and Knowledge Management: Investment Costs

Sub-Component/Activity	Note	Unit	Quantities					Unit Co USD'000	Base Cost (USD'000)					Total	
			Year 1	Year 2	Year 3	Year 4	Year 5		Year 1	Year 2	Year 3	Year 4	Year 5		
Investment Costs															
Sub-Component 3.1: ARM Facility (CD4ARM)															
Vehicle	a	vehicle	1					1	50.0	50	0	0	0	0	50
National TA	b	month	6	12	12	3	3	36	12.0	72	144	144	36	36	432
International TA	b	month	3		2		1	6	22.5	68	0	45	0	23	135
FCU Office Equipment															
Laptops	c	laptop	27					27	1.0	27	0	0	0	0	27
Desktop		desktop	1					1	1.0	1	0	0	0	0	1
Printer/Photocopier			1					1	8.0	8	0	0	0	0	8
Printers			4					4	1.0	4	0	0	0	0	4
Accounting software	d	package	1					1	20.0	20	0	0	0	0	20
Projector		item	3					3	1.0	3	0	0	0	0	3
Server	e	item	1					1	20	20	0	0	0	0	20
Office furniture	f	set	30					30	2	60	0	0	0	0	60
Conference furniture		set	1					1	9	9	0	0	0	0	9
Sub-Total										342	144	189	36	59	769
Studies, Training and Workshops															
FCU Implementation Manual		Manual	1					1	30	30	0	0	0	0	30
Workshops		W/shop	2	2	2	2	2	10	7	14	14	14	14	14	70
Staff Training		LS	1					1	15	15	0	0	0	0	15
Sub-Total										59	14	14	14	14	115
Sub-Component 3.2: ARM Platform															
Platform design and business plan	g	LS	1					1	300.0	300	0	0	0	0	300
Consultation on establishment		W/shop	1	1				2	8.4	8	8	0	0	0	17
Launch workshop		W/shop		1				1	8.4	0	8	0	0	0	8
Website development		LS		1				1	15.0	0	15	0	0	0	15
Communications, social media		LS		1	1	1	1	4	2.0	0	2	2	2	2	8
Half yearly consultations		meeting		2	2	2	2	8	8.4	0	17	17	17	17	67
Sub-Total										308	51	19	19	19	415
Sub-Component 3.3: Ongoing Resource Mobilisation															
Annual donor consultations		LS	1	1	1	1	1	5	7.0	7	7	7	7	7	35
Annual report preparation		LS	1	1	1	1	1	5	5	5	5	5	5	5	25
Sub-Total										12	12	12	12	12	60
Sub-Component 3.4: ARM Feedback and MEAL															
Development of M&E System		LS	1					1	50	50	0	0	0	0	50
Baseline and Other Surveys		LS	1	1	1		1	4	50	50	50	50	0	50	200
Develop ARM knowledge database		LS		1	1	1	1	4	12	0	12	12	12	12	48
Policy analysis support		month		2	2	2	2	8	12	0	24	24	24	24	96
Annual supervision costs		LS	1	1	1	1	1	5	40	40	40	40	40	40	200
Annual follow-up mission		LS	1	1	1	1	1	5	20	20	20	20	20	100	
Mid-Term Review		LS			1			1	80	0	0	80	0	0	80
Project Completion Mission		LS					1	1	100	0	0	0	0	100	
Miscellaneous costs		LS		1	1	1	1	4	5	0	5	5	5	5	20
Sub-Total										160	151	231	101	251	894
Total Investment Costs Component 3										881	372	465	182	354	2,253

- a/ Station wagon
- b/ To support establishment and operation of FCU
- c/ 12 at Zonal level, 5 for MZ Representatives, 5 for Regional Focal points, 5 for FCU = total 27
- d/ Internationally recognised software licences plus training and support
- e/ Includes server, software and un-interruptible power supply
- f/ Desks, chair, lamp and filing cabinet
- g/ To include national and international TA, platform manager, software purchase and related costs
- h/ As part of ARM Platform

	Seed Money
	First round of resource mobilisation
	Second and final round of resource mobilisation

Table 5: Cost Estimates: Component 3: ARM Coordination and Knowledge Management: Recurrent Costs

Sub-Component/Activity	Note	Unit	Quantities					Unit Co USD'000	Base Cost (USD'000)					Total	
			Year 1	Year 2	Year 3	Year 4	Year 5		Total	Year 1	Year 2	Year 3	Year 4		Year 5
Recurrent Costs															
Sub-Component 3.1: ARM Facility (CD4ARM)															
FCU Central Level															
Salaries and Allowances															
Facility Coordinator		year	1	1	1	1	1	5	10.0	10	10	10	10	10	50
Operational Coordinator		year	1	1	1	1	1	5	8.0	8	8	8	8	8	40
Admin and Finance Officer		year	1	1	1	1	1	5	8.0	8	8	8	8	8	40
Procurement Officer		year	1	1	1	1	1	5	8.0	8	8	8	8	8	40
Office Manager		year	1	1	1	1	1	5	6.0	6	6	6	6	6	30
Driver		year	1	1	1	1	1	5	4.0	4	4	4	4	4	20
FCU Regional Level															
Extension Regional Focal Point		year		5	5	5	5	20	8.0	0	40	40	40	40	160
Mandate Zonation Representative		year		5	5	5	5	20	8.0	0	40	40	40	40	160
Extension Zonal Coordinator		year		12	12	12	12	48	6.0	0	72	72	72	72	288
Operating Costs															
FCU office rent		year	1	1	1	1	1	5	10.0	10	10	10	10	10	50
Travel costs		year	1	1	1	1	1	5	5.0	5	5	5	5	5	25
								0		0	0	0	0	0	0
								0		0	0	0	0	0	0
Sub-Total										59	211	211	211	211	903
Sub-Component 3.2															
Website maintenance		year		1	1	1	1	4	8	0	8	8	8	8	32
								0		0	0	0	0	0	0
Sub-Total										0	8	8	8	8	32
Total Recurrent Costs Component 3										59	219	219	219	219	935

- GOE contribution to seed money
- GOE contribution to first round of resource mobilisation
- GOE contribution to second and final round of resource mobilisation

Table 6: Unit Costs

International Consultants		USD
Fee	day	500
DSA	day	150
Inernational Travel	USD 2,000/20 days	100
Total/day		750
Total/month		22,500

National Consultants		USD
Fee	day	350
DSA	day Field work only	50
Total/day		400
Total/month		12,000

National Workshops - 50 participants		USD
Travel	50 participants x USD 50	2,500
DSA	50 participants x USD 50	2,500
Faciltiation		400
Venue, catering etc		3,000
Total		8,400
Total/participant/day		168

Regional Worshops - 30 participants		USD
Travel	30 participants x USD 30	900
DSA	30 participants x USD 20	600
Faciltiation		400
Venue, catering etc		1,000
Total		2,900
Total/participant/day		58

Zonal/Woreda Workshops - 20 participants		USD
Travel	20 participants x USD 20	900
DSA	20 participants x USD 20	600
Faciltiation		400
Venue, catering etc		500
Total		2,400
Total/participant/day		48

Table 6 (Continued): Unit Costs

ARM Training Costs

Core Group: National and Regional Levels: Addis Ababa

Duration (days)	5
No of trainees	10
	USD
Trav 10 participants x USD 100	1,000
DSA 10 participants x USD 100 x 5	5,000
Venue, catering etc	5,000
Trai 2 x 7 days x USD 350	4,900
	Total
	15,900
	Total/trainee
	1,590

University and Research Centres: Addis Ababa or Regional

Duration (days)	5
No of trainees	25
	USD
Trav 25 participants x USD 100	2,500
DSA 25 participants x USD 50 x 5	6,250
Venue, catering etc	4,000
Trai 2 x 7 days x USD 350	4,900
	Total
	17,650
	Total/trainee
	706

ARM Training of Trainers: ATVETs, Zonal, Woreda and Ag

Duration (days)	5
No of trainees	25
	USD
Trav 25 participants x USD 50	1,250
DSA 25 participants x USD 50 x 5	6,250
Venue, catering etc	2,000
Trai 2 x 5 days x USD 250	2,500
	Total
	12,000
	Total/trainee
	480

ARM Basics: Kebele, F/PTC

Duration (days)	2
No of trainees	25
	USD
Trav 25 participants x USD 10	250
DSA 25 participants x USD 20 x 2	1,000
Venue, catering etc	500
Trai 2 x 5 days x USD 250	2,500
	Total
	4,250
	Total/trainee
	170

Figure 1: Implementation Plan

Component 1: Zonal ARM Profiling and Tools	Year 1	Year 2	Year 3	Year 4	Year 5
1.1 Disaggregate Risk Analysis					
1.2 ARM Tools and Technologies					
Proposals					
Challenge Fund Grants					
Workshops/Publishing					
1.3 Sensitisation Training					
Zonal/Woreda Workshops					
Component 2: ARM Capacity Development					
2.1 : ARM Guidelines and Training Materials					
Production of Materials					
Procurement of Equipment					
2.2 Training of Core Group of Trainers					
Extension Staff					
Service Providers					
2.3 Training in Target Regions					
2.4 Roll-out in Other Programmes/Projects					
Component 3: ARM Coordination and KM					
3.1 ARM Facility					
Procurement of Equipment					
National TA					
International TA					
Implementation Manual					
Workshops and Training					
3.2 ARM Platform					
Design and Business Plan					
Consultation on Establishment					
Launch					
Operation					
3.3 Resource Mobilisation					
3.4 ARM Feedback and MEAL					
Development of M&E System					
Baseline and Other Surveys					
ARM Knowledge Database					
Annual Supervision Support					
Mid-Term Review					
Project Completion Mission					

Annex 5: ARM Training

1. Overview

CD training will be delivered at multiple levels through three different training packages as follows:

Training Package	Trainers	Targets/Trainees	Days	No of Trainees
In-depth ARM TOT	PARM Service Providers	Core Group Trainers of Extension Directorate of MOA, Subject Matter Specialists at MOA	5	50
		Universities		
		NARS Research Centres		
Intermediate ARM TOT	Core Group Trainers	Extension Directorate Federal Staff, ATVETs Staff	5	50
		Regional Staff (inclusive of SMSs of MOA)		50
		Zonal Staff		120
		Woreda Staff		130
		AgDAs		110
ARM Basics	AgDAs, <i>woreda</i> SMSs	Farmers and agropastoralists	2	15,000
Total Trainees				15,508

For **in-depth ARM training**, selected national experts and selected MOA staff will train academics (regional universities), researchers (federal EIAR), or MOA staff at the national level. Staff at regional BoA, ATVETs and HLIs may not have the necessary capacity to benefit from in-depth ARM training. After being trained, senior staff at the universities and the EIAR/RARIs (NARS) and regional BoA SMSs will then cascade training to “core national trainers” (possibly appointed by Extension Directorate and/or Mandate Zonation Steering Committee) and also possibly “high-performing AgDAs” (also nominated by MOA). The Extension Directorate/MOA will ensure that its staff (from federal to *woreda* and *kebele* levels) are properly trained to provide ARM training and given the tools and skills to become trainers. This includes Subject Matter Specialists (SMSs) at every level.

International and National Technical Assistance (TA) will assist the Extension Directorate/MOA to tailor **ARM packages** for designated mandated *Zones* (taking into account agroecology, highlands, intermediary lands and lowlands, and both high-risk and high-potential areas). The consultative process of tailoring ARM will be collegial and will include consultations with academics and researchers as well as members of the federal core trainer group of the Extension Directorate/MOA to ensure that expert knowledge is imparted locally to ensure sustainability. These packages will then be peer-reviewed by relevant institutions, such as the MZ Steering Committee.

For **intermediate ARM training**, Core Group Trainers will be involved in training qualified staff at the MOA (federal, regional, *zonal* and *woreda* levels), and at ATVETs and HLIs. Once this group has been trained, they will cascade their training to other staff. MOA staff at regional, *woreda* and *kebele* levels will be responsible to training AgDAs. ATVETS and HLIs will also provide training to AgDAs. High-performing AgDAs will be responsible for training staff at F/PTCs, with staff at the F/PTCs cascading their knowledge to other F/PTCs. High-performing AgDAs will train expert Model Farmers and other AgDAs, who will cascade their ARM capacities to other Model Farmers. It is important to note that beyond gender responsive training, a specific effort and quota to train all AgDAs in the selected *kebeles* will be installed.

For **basic ARM training** the target is farmers. F/PTCs, expert Model Farmers, AgDAs and *woreda* Subject Matter Experts will impart their knowledge of basic ARM to farmers, who will then cascade their acquired knowledge to other farmers.

At the core of this schedule are **feedback mechanisms** that allow all trainers at every level of ARM training to solicit advice from higher-level experts. This is critically important since new risks are expected to emerge (e.g., through climate change and transboundary pests) and new ARM solutions will need to be developed. Trainers will also need to refresh their knowledge on ARM innovations, which should be added to the AgDA’s tailored ARM packages.

Those who have acquired advanced and intermediate skills in ARM will train many more farmers in other mandated *zones*, which will help the project to scale up, provided sufficient resources are available.

2. Learning Objectives for all Training

Module 1 Understanding the risk environment in agriculture

- 1.1. What is a risk?
- 1.2. What are the risks at farm level and their characteristics?
- 1.3. What are farmers' preferences and approaches regarding risk?
- 1.4. What is agricultural risk management?
- 1.5. What is a holistic approach to risk?

Module 2 Assessing risk in agriculture

- 2.1. What are the basic elements for assessing risks?
- 2.2. Information needs and types
- 2.3. How can we measure risks and impacts?
- 2.4. Prepare your own risk assessment
- 2.5. Prioritization of the risks

Module 3 Agricultural risk management tools

- 3.1. How To Deal With Risks
- 3.1. Risk Mitigation
- 3.1. Risk Transfer
- 3.1. Risk Coping

Module 4 Planning, implementing and evaluating ARM strategies

- 4.1. What is an ARM strategy?
- 4.2. Assessment and selection of ARM tools
- 4.3. How to implement an ARM strategy
- 4.4. Why do we need tool monitoring and evaluation activities?

3. In-Depth ARM TOT

Objective

- Train resource people to become ARM trainers capable of trainings at different levels around the country.
- Train a core group of experts on ARM to be deployed at regional level to cascade the training and train MOA regional and *woreda* staff, and AgDAs.

Target Trainees

- Targets higher level participants (from the MOA, extension service at national and regional, university professors and researchers).
- First round will train a core group of trainers/resource persons/learning facilitators. They will be based at national and regional level.
- For the core team of resource persons (TOTs) target 2 people per region (10 in total, for 5 regions).
- The core group of trainers will agree to be TOTs and to cascade the learning and training from regional to *zone* levels. They are links in a chain.
- Women trainers should be targeted and trained as TOTs, with the aim that a third of trainers are women.

Trainers

- The first round by PARM trained resources persons could be learning facilitators, Extension Directorate Core Group of Trainers, university professors, and any other experts).
- In the second round the training, the core team will train Extension Directorate Staff, university and research centres by university experts, trained experts on ARM.

Training Format

- Five days.
- Location: in Addis Ababa or an easy-to-reach location for national participants and those from all five regions.
- Budget should include: per diem allowance, hotel, lunches, materials etc.

Learning Objectives

- See the general learning objectives above.
- An in-depth comprehension of risk and the risk environment.
- Understanding of the ARM Cycle, the holistic approach to ARM and its application to their work.
- Be capable of undertaking a risk assessment (using quantitative and qualitative methodologies) at different levels (regional/*woreda*/farm).
- Be capable of identifying tools and matching them to the risks and capacities of the farmer or institution in question.
- Have gained the capacity to monitor the tools implemented and evaluate their success.
- Know how to undertake a basic gender analysis of their ARM activities and understand the importance of integrating social inclusion throughout the ARM cycle.
- Be able to offer basic training tips on how to train others.

Required Content

- Agriculture Risk Management in Developing Countries: a learning course for practitioners (PARM CD2).
 - Introduction
 - Module 1: Understanding the risk environment in agriculture
 - Module 2: Assessing risk in agriculture
 - Module 3: Agricultural risk management tools
 - Module 4: Planning, implementing, and evaluating ARM strategies
- CD2 material available online, should be translated to Amharic.
- Include a session on the importance of gender in ARM, and how to conduct a gender analysis for ARM, and integrate gender throughout the other sessions (by using gender-inclusive language, case studies on women and men, and sex-disaggregated data collection. Highlight gender-based constraints at different stages of ARM cycles...).
- Joint exercises on risk assessments - (Module 2 is key to this TOT).
- Expert presentations on tools available at national or regional level (depends on target participants) – to be as context/*region*/*zone*-specific as possible.
- Trainees to develop and present case studies, such as risk profiles of their region or on the potential strategies to identified risks (participatory and joint learning approach).
- Homework throughout the training: exercises on the four basic modules to prepare for the next session, and documents to read.
- Field examples - when possible- in farms or bureaus who have done an assessment and responded to their risks (for example).
- A session on how to train others – pedagogical goal throughout the training.
- Give ARM e-learning modules as homework (only for strong English/French speakers).
- Create and share an evaluation form at the end of the training to assess the learning of the participants, as well as the response to the needs and quality of the training for the participants. Questions should cover all four modules and the four steps of the ARM cycle, including the importance of gender and youth (social inclusion) in ARM.
 - Option 2: action plan for the participants to detail and track how ARM will be integrated into the work of each participant, and who will be trained when, and how.
- Provide certificates for incentive.
- Prepare the material to be accessible online (all slides online or on a USB key) and hard copies, when possible, to leave with a package of resources to be reused.

- Access should be given to these materials (printing, copying etc., for the trainings given later by the trainers).

Resources and Learning Material

- Hawassa University 2018 CD2 material
 - agenda
 - training manual adapted to Ethiopia
 - session PPTs
- The virtual LC2 in Ethiopia - resources
 - agenda /session plan
 - Slides
 - Exercises /homework
 - Resources for trainees
- CD2 learning resources – available [online](#)
- Use the CD1 approach to adapt the CD2 level content to create and distribute:
 - A Manual for the trainer
 - A Handbook for the trainee, and Guidelines on how to train and organize a training.
 - Suggested slides (for content, graphics etc.)
- PARM/ARM [video](#)- to be tailored to Ethiopia and translated to Amharic/local language

4. Intermediate ARM TOT

Objective

- Lighter ToT for farm/*kebele* level trainings.
- Two level training: ToT of the MOA and ATVETs/*woreda* staff who will train the AgDAs/*kebeles*.

Target trainees

- *Zone* and *kebele* level staff who will be trainers will train:
 - MOA Staff
 - ATVET staff
 - AgDAs
 - *Kebele* coordinators and leaders
- Female AgDAs working in *zones/woredas/kebeles* will be targeted for training.
- Extension Directorate/MOA will select women from the different levels of extension to be trained as ToTs, with the aim that a third of the trainers will be women.

Trainers

- For MOA and ATVETs and *woreda* administrators:
 - Core team
 - Other trainers who have participated in the In-Depth ARM TOT (regional and national representatives, researchers, and university staff)
- For AgDAs & *kebele* (leaders/coordinators)
 - MOA Staff
 - *Woreda* administrators
 - Research and university staff
 - Core team as quality check

Training Format

- 5 days
- Location (MZ locations)
 - The training venue should be in FTC/PTCs where feasible, Special consideration should be given to female farmers to ensure that they would participate in the ARM training. Their mobility and availability should be the determining factors when selecting a training venue.
- Budget should include: per diem allowance, hotel, lunches, materials, etc.

Learning Objectives

- See the basic learning objectives above.
- Understanding of the ARM Cycle, the holistic approach to ARM and its application to their work and especially that of farmers.
- Be capable of undertaking a basic risk assessment at farm level (using quantitative and qualitative methodologies).
- Be capable of identifying appropriate tools and matching them to the risks and capacities of the farmer/pastoralist.
- Able to monitor the implemented tools and evaluate their success with the farmer/pastoralist.
- Tailors their advice, assessments and tools to the farmer/pastoralist depending on their gender. Can undertake a basic gender analysis and understands the importance of integrating social inclusion throughout the ARM cycle.
- Have been provided basic training tips on how to train others.

Required Content

- Follow the contents of the [CD1 material](#) - Managing risks at Farm Level.
 - Manual (for the trainer).
 - Handbook (for the trainees).
 - Guidelines (on how to conduct a training for the trainer).
 - Slides (suggested PowerPoints in PDF with key content and graphics).
- CD1 material adapted to Ethiopia context, in Amharic and in the local languages of each region of intervention for the trainees, and to be distributed to the trainers for their own trainings.
- Same basic concepts as CD2 but lighter and focused on meso- and farm-level (as opposed to higher levels for CD2). As this training is a TOT some elements of modules 2, 3 and 4 should be strengthened and made applicable to ensure the trainers can use this knowledge at farm level.
- Integrate a session on the importance of gender, acknowledging the differences between men and women farmers and how to take those into account. This should cover how to integrate the basic elements of a gender analysis in the risk assessment and identify appropriate tools. Gender should be a cross-cutting theme throughout the TOT.
- Adapt and focus on exercises and concrete examples of real farms, and those of the AEZs where the trainees work, and on the existing tools at *zone/woreda/kebele* level.
- Create and share an evaluation form at the end of the training to assess how much participants have learned, and how well the course met the needs participants, and its quality. Questions should cover all 4 modules and the 4 steps of the ARM cycle, including the importance of gender and youth (social inclusion) in ARM.
 - Option 2: action plan for the participants to detail and track how ARM will be integrated into the work of each participant, and who will be trained, when, and how.
- Provide certificates for incentive.
- Prepare the material to be accessible online (all slides online or on a USB key) and provide hard copies when possible, so that participants leave with a package of resources to be reused.
 - Access should be given to these materials (printing, copying etc., for the trainings given later by the trainers).

Resources and Learning Material

- CD1 Zambia
- [CD1 in Liberia](#)
 - Agenda
 - PowerPoint slides
 - The “ARM Aware Game” – a short evaluation game based on the “who wants to be a millionaire” game principle
- [LC1 Ethiopia](#)
 - Regional Learning Events (RLE) reports
 - Budget
 - Note: the LC1 does not cover all modules/sessions of the ToT

- PARM/ARM [video](#) to be tailored to Ethiopia and translated into Amharic/local languages

5. ARM Basics

Objective

- Train farmers and pastoralists and model farmers to identify and prioritize their risks to better respond to them

Target Trainees

- Farmers and pastoralists
- Model farmers
- All female headed households should be targeted. Training for couples will ensure the training reaches all women working in agriculture
- At least one third of participants should be women farmers

Trainers

- Core Trainers, SMSs, AgDAs and *kebele* coordinator and leaders
- Core team, Mandate Zonation members as quality control, are available at minimum or present if possible and follow the trainings
- Other trainers who have participated in the In-Depth ARM TOT (regional and national representatives, researchers and university staff)

Training Format

- 2 days
- Location (MZ locations), *kebele* level, F/PTCs
- Per diem allowance and meals
- Favor areas close to the farm cluster, to minimize the distance farmers must travel

Learning Objectives

- See above
- How to identify risks at farm level
- How to prioritize risks at farm level (for women and men)
- How to identify existing and appropriate tools that respond to priority risks (for women and men)
- How to implement specific strategies identified as priorities to build capacity on the tools
- How to monitor and evaluate the tools implemented

Required content

- Follow the contents of the CD1 material - Managing risks at Farm Level, especially the handbook for participants

Resources and Learning Material

- CD1 material to follow the handbook
- Translate the manual and the handbook for participants into Amharic and regional languages
- Turn the handbook into pictorial material with little or no text
- Use the PARM/ARM [video](#) and translate it into Amharic and local languages
- Tailoring the training modules and content to farmers should be part of the core team's and the ARM TOT participants' role and "homework"



Managing risks to improve farmers' livelihoods



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