Monitoring and Evaluation Framework

of the AF-UNDP Project

"Addressing Climate Change Risks on Water Resources and Food Security in the Dry Zone of Myanmar"

Final Report

March 2016

Disclaimer: *The views and opinions expressed in this report are the sole responsibility of the consultant and do not represent the official opinion of UNDP.*

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In collaboration with the Ministry of Environmental Conservation and Forestry (MOECAF) and funded by the Adaptation Fund (AF), UNDP Myanmar is implementing the project named "Addressing Climate Change Risks on Water Resources and Food Security in the Dry Zone of Myanmar".

In the period January-March 2016 an assignment was carried out to support the UNDP-AF project in the development of a M&E framework and the design of an impact assessment survey. This final draft report focuses on the development of the M&E framework and intends to provide a concise manual for operational procedures of M&E activities during the implementation cycle of the project.

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A series of consultation meetings was organized at regional level for the Mandalay region in Mandalay. The representatives of these line departments, DZGD, DoA, DoF, WRUD, DRD, DMH, LBVD, are kindly thanked for their views on the project and their role in implementation and related monitoring. In the five Townships of Shwebo, Monywa, Nyaung U, Chauk and Myingyan Townships, consultation meetings were organized with kind support of the Township Administrators. In these meetings the local representatives of the line departments shared their local experiences and challenges and their expectations of the project implementation and their respective roles, which is much appreciated. During the field visit to the Townships a short visit was paid to a target village in each Township. During these visits smaller and larger groups of community representatives were met and their views and experiences were valuable (for which I thank them), to better understand the local conditions and key challenges in the Dry Zone.

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Mandalay and Heteren, The Netherlands, Hans van Noord

List of Abbreviations

AA	Action Aid
Ac	acre
AF	Adaptation Fund
APR	Annual Progress Report
APRC	Asia Pacific Regional Center (of UNDP)
AWD	Alternate Wetting and Drying (agricultural practice)
AWP/B	Annual Work Plan/Budget
BRH	Bangkok Regional Hub (of UNDP)
BTOR	Back-to-Office Report
CBDRM	Community-Based Disaster Risk Management
CBO	Community-Based Organization
CF	Community Forest
CO	Country Office
CRI	Climate Risk Information
DDA	Department of Development Affairs
DMH	Department of Meteorology and Hydrology
DoA	Department of Agriculture
DoEC	Department of Environmental Conservation
DoF	Department of Forestry
DoI	Department of Irrigation
DPC	Disaster Preparedness Committee
DRD	Department of Rural Development
DZGD	Dry Zone Greening Department
EC	Electric Conductivity
EGVP	Emerald Green Village Programme
EoP	End-of-Project
ERBM	Enhanced Results Based Management
FAO	Food and Agriculture Organization
FERD	Foreign Economic Relation Department
FMNR	Farmer Managed Natural Regeneration
GAD	General Administration Department
GEF	Global Environmental Facility
GIS	Geographic Information System
GPS	Global Positioning System
Ha	Hectare
HH	Household
IA	Impact Assessment
ID	Irrigation Department
IP	Implementing Partner
ITK	Indigenous Technical Knowledge
LBVD	Livestock, Breeding and Veterinary Department
M&E	Monitoring and Evaluation
MIMU	Myanmar Information Management Unit
MMK	Myanmar Kyat
MTR	Mid-Term Review
NGO	Non-Governmental Organization
NTFP	Non-Timber Forest Products
OECD	Organisation for Economic Co-operation and Development
PHL	Post-Harvest Loss

PT	Project Team
PPR	Project Performance Report
ProDoc	Project Document
PSC	Project Steering Committee
RRD	Relief and Resettlement Department
RTA	Regional Technical Advisor
SOP	Standard Operating Procedure
TA	Township Administrator / also: Technical Advisor
TAG	Technical Advisory Group
TDS	Total Dissolved Solids
TE	Terminal Evaluation
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNOPS	United Nations Office for Project Services
WRUD	Water Resources Utilization Department
WUG	Water User Group

1. Introduction

1.1 Background

UNDP Myanmar, with funding from the Adaptation Fund (AF) is initiating the implementation of a Climate Change adaptation project-"Addressing Climate Change Risks on Water Resources and Food Security in the Dry Zone of Myanmar". The project aims to reduce the increasing impacts of climate change on agricultural and livestock production cycles in the dry zone of Myanmar-the impacts of increasing temperature and evaporation, declining water availability, and intensifying weather events especially flash floods and cyclones. The project will operate in 5 Townships in the dry zone with as direct beneficiaries marginal farmers in rain-fed areas and landless workers. Special emphasis is placed on women and female-headed and vulnerable households. The project was officially signed in August 2014 and launched in February 2015 and has a project period of 4 years with a total budget of US$8.47 million, with US$7.91 million provided by the Adaptation Fund and co-funding by UNDP of US$0.62 million and by the Government of Myanmar with US$0.55 million. The Inception Workshop was organized in August 2015 and the Project Steering Committee (PSC) meeting was held in December 2015. On-the-ground implementation will start in 2016.

The project target sites in the 5 Townships comprise of 280 villages with almost 50,000 households. The three project components aim to ensure improved access to freshwater resources, promote and enhance climate-resilient agricultural and livestock practices and dissemination of climate risk information through use of short-term weather forecasts, medium-term seasonal forecasts, and longer term climate scenario planning. The project will make use of local NGOs and CSOs to implement specific work packages of the project components.

1.2 Objectives/Scope of Work

The project has developed a robust and practical monitoring and evaluation framework in order to ensure that targeted results are achieved and well-documented by the end of the project. Among others, the M&E framework will ensure that results achieved are in line with stated objectives and outcomes of the project, as well as with the results and resource framework prepared during the design phase and reflected in the ProDoc. The framework includes an implementation plan that will capture quantitative impact of some of the planned interventions.

The objective of the assignment is to design a M&E framework and related M&E implementation plan for the AF project. It includes an overall implementation plan for data collection and sampling methodology according to the project results framework (divided into three distinct project component and outcome areas) and developing, as a sub-component of the overall framework, an experimental (or quasi-experimental) survey design to capture quantitative impact of some of the planned interventions of the project. In addition, the consultant assisted the UNDP CO in identifying and procuring a suitable institution to carry out a household survey and analyze survey results at the baseline and termination of the project.

In line with the Terms of Reference, the assignment focused on two distinct tasks and related deliverables:

1. **Developing/designing the overall M&E framework and M&E implementation plan for the AF project**
    a. Developed methodologies for collecting information for every project Objective and Outcome indicator in the approved AF project result framework. These methodologies define how baseline information can be established/verified for each indicator, how data can be gathered to monitor the actual progress over the implementation period, with what frequency and by whom and how to report progress in accordance with donor and UNDP corporate requirements.

b. Provided training to project staff on the execution of the monitoring work, making use of the developed M&E formats.

2. **Developing an experimental (or quasi-experimental) survey design to capture the causal impact of the AF project, which includes:**
    a. Recognizing the complexity of attributing tangible welfare gains of project beneficiaries related to project activities, a methodology and conceptual framework design was developed to assist in collection of data to capture the impact of the project in three distinct areas:
        i. fresh water access,
        ii. food security, and
        iii. livelihoods for the landless.
    b. Designing a survey questionnaire for these three themes for impact assessment
    c. In consultation with the project team and the UNDP CO, identify a suitable institution capable of carrying out such a survey to establish a baseline and to be repeated at project termination. A ToR for this specific task was developed.

The deliverables of the impact assessment are reported separately, although the impact assessment survey forms part of the broader M&E effort of the project.

1.3 Methodological framework

Methodology and Phasing

The assignment made use of several data collection methods, to capture primary and secondary data, spread over three distinct phases. Primary data was collected through interviews, direct on-site observation, focus group discussions and key informant interviews by the consultant. Secondary data was collected through review of existing project documentation and relevant literature and other documents (see Figure 1 for an overview of data collection methods) illustrating that the key information sources were consulted through relatively rapid assessments, whereas the impact assessment in design will require a detailed, more systematic and formal approach. The three assignment phases were:

1. A desk review phase, preceding to the in-country mission, in which the consultant reviewed the ProDoc, the Inception Report, the Minutes of the first PSC, the draft PPR for the AF project and the AF M&E requirements.

2. A field mission and stakeholder consultation phase, divided into two three-week periods, to collaborate closely with the AF project team, consult key stakeholders for the implementation and monitoring of the project and conduct a reconnaissance field visit to understand local environmental and socio-economic conditions in the project sites and to meet project beneficiaries and local authorities. In this field phase, consultation meetings were held with 7 key line Departments involved with the working areas of the project. In each of the 5 Townships of the project, consultation meetings were organized with the main Township level stakeholders. In each Township community visits were carried out to assess local landscape and socio-economic conditions through community meetings with village representatives (see Table 1 for an overview of these consultations). Transcripts of these meetings at Regional and Township level are attached to the report as Annex 1.

Table 1 *Overview of stakeholders consulted*

Stakeholders consulted	Location	Date
Departmental Stakeholders		
Dry Zone Greening Department (DZGD)	DZGD Office, Patheyingyi	19-01-2016
Department of Meteorology and Hydrology (DMH)	DMH Office, Mandalay	20-02-2016
Livestock, Breeding and Veterinary Department (LBVD)	LBVD Office, Mandalay	20-01-2016
Stakeholders consulted	Location	Date
Department of Agriculture (DoA)	DoA Office, Mandalay	20-02-2016
Water Resources Utilization Department (WRUD)	WRUD Office, Mandalay	21-02-2016
Department of Rural Development (DRD)	DRD Office, Mandalay	28-01-2016
Department of Forest (DoF)	DoF Office, Mandalay	02-02-2016
Township Level Stakeholders		
Shwebo Township	GAD, Shwebo	25-01-2016
Monywa Township	GAD, Monywa	25-01-2016
Nyaung U Township	GAD, Nyaung U	26-01-2016
Chauk Township	GAD, Chauk	26-01-2016
Myingyan Township	GAD, Myingyan	27-01-2016
Village Level Stakeholders		
Tel Pin Village, Shwebo Township	Tel Pin	25-01-2016
Naint Ban Wan Village, Myonwa Township	Naint Ban Wan	25-01-2016
Kaung Nyo Village, Nyaung U Township	Kaung Nyo	26-01-2016
Ma Gyi Kone Village, Chauk Township	Ma Gyi Kone	26-01-2016
Kyauk Tan Village, Myingyan Township	Kyauk Tan	27-01-2016
Other Stakeholders		
Action Aid Myanmar, NGO	Nyaung U	26-01-2016

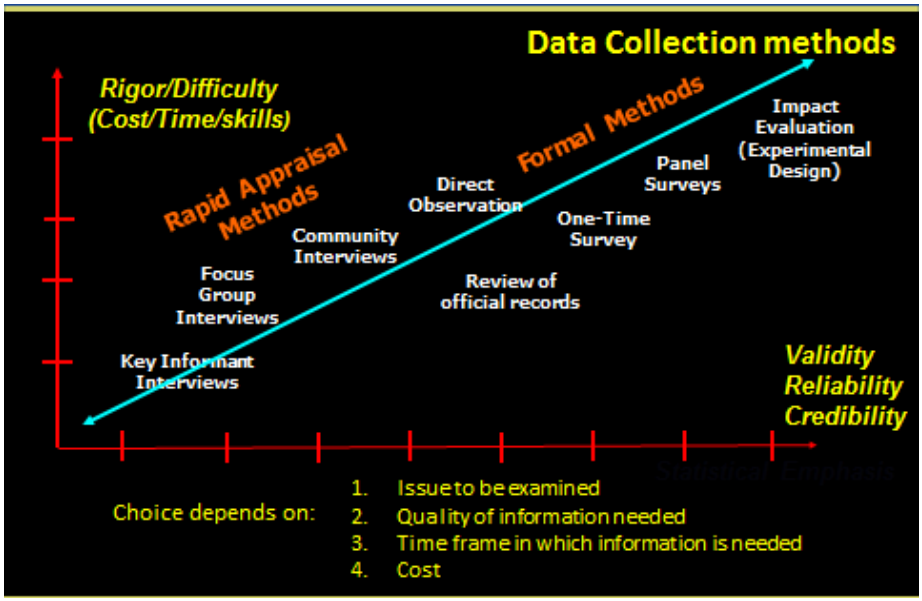


Figure 1 *Data collection methods and important variables Source: UNDP, 2015, Presentation on UNDP-GEF Project Document Guidance, for PPG/IP Consultants, October 2015*

An important element in this consultation process was the discussions and dialogue with the project team. This allowed for a better understanding of the approaches of the project and the specific challenges the project is facing. For each of the outcome areas and respective outputs, as defined in the ProDoc and the results framework, the implementation process was discussed, together with a (re)assessment of indicators, targets, verification methods and assumptions. Through this interactive

and iterative process the definition and wording of outputs, indicators and targets were in many cases adjusted, refined, based on the experience of the project team and their understanding of ground realities in the target Townships. The tuning and checking of the results framework formed an essential step to enhance consistency of the results framework and ensure completeness. The dialogue offered a reality check, trying to balance what was initially defined in the ProDoc with what is feasible and realistic and practical, taking into account the understanding of the actual ground realities in the project areas.

3. Reporting phase, at the end of each three week field mission period. At the end of the first mission the draft deliverables were compiled, incorporating comments and suggestions provided based on an initial presentation of the preliminary findings to the project team. Based on these drafts, and the feedback and guidance received, the expected deliverables were finalized at the end of the second mission.

1.4 Outline of report

After this introductory Chapter 1, the report continues with a narrative on the results framework, as starting point for the development of the M&E Framework. In Chapter 2, the roles of the stakeholders in the M&E process are described with definition of their respective M&E activities, responsibilities and outputs, added with a description of the timing schedule and frequency of these M&E activities (M&E planning matrices). This is followed by a more detailed description of the various components of the project and the re-assessment of outcomes, outputs, baselines, indicators, targets, means of verification and assumptions. The importance of the Annual Work Plans is discussed, as a tool to plan activities and to track actual implementation progress achieved, as key information for the M&E process. Chapter 3 provides an overview of guidelines and observations for the implementation of the M&E Framework, which together provide an Operational Manual or Standard Operational Procedure. The guidelines include a wide range of considerations related to financial reporting, the participatory dimension of M&E, evaluations, documentation and reporting of all key outputs and related processes, screening procedures, quality assurance, M&E as a continuum, linkage with the communication strategy, M&E formats, roles of NGOs/CSOs, sustainability and gender, external independent factors, the role of the M&E officer and the project data base. The final Chapter 4 presents some concluding remarks with regard to the challenges and opportunities of the project. Annexed to the report are the transcripts of the meetings conducted, the time schedule for the assignment, targets for the various sectors, the risk table, milestone table, and various templates (BToR, self-assessment, emerging good practice and lessons learned, and quarterly progress report).

2. A M&E Framework for the UNDP-AF project

2.1 A Monitoring and Evaluation Framework

The logical or results framework of a project gives structure to how its overall goals and objectives are subdivided into components and are linked to planned activities, expected outputs and outcomes and eventual impact. As a project moves from its design and inception phase towards actual implementation of planned interventions, it becomes necessary to define and decide how information generated by the project will be monitored, captured, documented and shared. This is often referred to as the M&E framework or M&E plan and tries to address a series of essential questions related to information:

1. What to monitor? What kind of information and at what monitoring level (activity, output or outcome)?
2. Who monitors? Who are the actors in the monitoring process and what are the respective roles and responsibilities of the different stakeholders of the project?
3. When to monitor? What are defined monitoring moments and with what frequency?
4. How to monitor? What are specific monitoring methods and tools? How to document the monitoring process?
5. What are the resources needed and available for monitoring? What human resources are available, what material and financial resources are needed?

In this Chapter these fundamental questions are addressed, defining the content of the M&E framework for the AF project.

M&E Roles

Monitoring of project progress is of interest to all project stakeholders with their respective roles and responsibilities in the project set-up. A series of entities have been formed to fulfil this joint responsibility and to steer and guide the project in its progress during implementation. These platforms for joint monitoring and guidance are essential for a transparent knowledge exchange and to keep all project partners informed and engaged. It needs to be clear at each level what the roles and responsibilities are with regard to M&E: what data are collected (the source), when data are collected (frequency), how data are collected (methodology), who collects these data, who reports these data and for whom data are collected?

Project Steering Committee (PSC)

This high-level national committee reviews and endorses the project objective, outcomes and outputs and the implementation arrangements and progress. The PSC review and endorses the annual work plans and keeps abreast of project progress through reporting by the project team. The PSC convenes two times a year. The PSC is co-chaired by the UNDP Country Director and the Deputy Minister of MOECAF. Approved members of the PSC are:

1. Country Director, UNDP (Co-Chair)
2. Deputy Minister, Ministry of Environmental Conservation and Forestry (Co-Chair)
3. Director-General, Dry Zone Greening Department
4. Director-General, Forest Department
5. Director-General, Environmental Conservation Department
6. Director-General, Water Resources Utilization Department
7. Director-General, Department of Meteorology and Hydrology
8. Director General, Department of Rural Development
9. Director General, Department of Agriculture
10. Director General, Livestock Breeding and Veterinary Department
11. Director General, Relief and Resettlement Department

The PSC includes representatives of Research Institutions (Yezin Agricultural University, University of Veterinary Sciences and University of Forestry). The PSC also liaises and coordinates between Union and Regional level government to be able to implement the project activities efficiently and effectively. The PSC publishes Minutes to document and record its discussions, recommendations and decisions.

Technical Advisory Group (TAG)

The TAG assists the project team on technical questions and provides overall technical guidance and advice on issues related to agriculture, water management, forestry, livestock, food security and climate risk information. The TAG:

- Analyzes technical gaps in the project and proposes technical specification to adjust them;
- Proposes strategies to update and adjust technical elements;
- Provides assistance and advice to the project team to correctly assess the technical feasibility of specific project activities and courses of action; and,
- Provides quality assurance for technical documents and studies produced by the project.

The TAG is intended as a technical backstopping body for the project team and in order to provide specific guidance and support, e.g. for the development of ToRs. The TAG consists of members from the key line Departments (DZGD, FD, ECD, DoA, WRUD, DRR, RRD, LBVD and DMH), UNDP and other UN agencies (such as FAO, UNOPS and UNHABITAT). The TAG convenes quarterly throughout the lifetime of the project and may meet more often as required. The TAG also publishes Minutes of its meetings to document the discussions and the technical advice provided to the project team.

UNDP

The project reports its progress through the UNDP Enhanced Results Based Management (ERBM) platform and the UNDP information management system, ATLAS. Based on information recorded in ATLAS, Project Performance Reports (PPRs) can be generated on a quarterly and annual basis. In Chapter 3 the required information for the reports, and the annual PPR and its various elements in particular, are discussed in more detail. Through the UNDP Country Office (CO) the project receives management and technical support during its implementation progress and the CO acts as a liaison to the UNDP Bangkok Regional Hub (BRH). The CO and BRH will conduct **joint monitoring visits** to project sites to take stock of progress and challenges and constraints. Members of the PSC and TAG will be invited to these joint monitoring visits as required. A field visit report or Back-to-Office-report (BTOR) of these joint monitoring visits will be compiled by UNDP to document key findings and recommendations. The joint monitoring visits are intended to keep all key stakeholders informed and engaged, ensure transparency and to provide a proper feedback and guidance mechanism. This forms part of the broader joint monitoring effort.

Project Team (PT)

The Project Team presently consists of 8 members with 4 sectoral specialists, with thematic focus on soil conservation and water harvesting, environment and forestry, livestock, and agriculture, a project assistant and a driver, a project manager and an international technical specialist. The position of a monitoring and evaluation officer is still vacant and will be vital for the monitoring, documentation and reporting by the project as implementation gets under way. The project team plays a pivotal role in continuously recording and documenting information on progress of interventions, achievements compared to set targets, but also, and crucial for a piloting project as the AF project, the documentation of lessons learned, good and best practices and overall learning generated by the project through its implementation process. The project team also has a key responsibility to ensure full involvement of all key partners and stakeholders in the M&E process through initiating regular PSC and TAG meetings and joint monitoring visits.

Departmental Stakeholders

The DZGD has been assigned as the focal agency for the implementation of the project. Other key line agencies of the Government with a mandate related to the intervention areas of the project, are the DoF, the DoA, the LBVD and the DMH. Other line Departments involved are the DRD, the Irrigation Department (ID), the WRUD and the RRD. These Departmental stakeholders have the mandate and technical expertise to support the project in the implementation of its interventions, give technical guidance through their participation in the TAG and/or in the PSC and during other bilateral consultations. The DZGD plays an important role as it not only hosts the project office on its premises, but also is the main Governmental partner for the project. The Project **Monthly Meetings** with the DZGD is another important platform to monitor jointly project progress and to engage in a continuous dialogue for technical guidance and information exchange. Minutes of the Project Monthly Meetings are produced to record the points of discussion and key action points and recommendations.

Township Level Stakeholders

At Townships level the General Administration representatives and the sectoral Departmental staff form the key stakeholders in the three regions where the project is active. The project team will need to ensure that the Township administrations, through the General Administration Department (GAD) and the related Township Administrators (TAs) are fully informed and involved in project implementation activities. The TAs formally supervises the technical officers of the line Departments (DoA, DoF, LBVD, DRD, ID, DZGD and WRUD) in their Townships and these officers are able to provide logistical and technical support and general quality assurance, as contribution to monitoring tasks.

Community Stakeholders

As the project targets explicitly rural communities at grass root level, these communities in the target villages of the Townships are important stakeholders. The project beneficiaries, mostly landless households and marginal farmers, have to be involved in the monitoring and evaluation processes. As the project intends to be inclusive in its operation, it is necessary to engage in a **participatory M&E approach** where the views and experiences of the beneficiary households are documented. Their individual stories and opinions will constitute important elements of the overall learning of the project as a whole. In the project Townships key representatives are the elected village tract administrators. At village level they are called "100 householder leaders". They are important informants to consult, but in a true participatory approach a broader selection of community representatives should be involved, including youth and older community members, women and households with varying land holdings.

NGOs/CSOs

The last group of stakeholders for the project are the NGOs and/or CSOs/CBOs. The project will be executed directly by UNDP through the engagement of NGOs/CSOs as service providers (or implementing partners (IPs)) and community organizers in the implementation of packages of activities (work packages). They will have an important role and responsibility to record and document knowledge and good practices emanating from the project execution at village level.

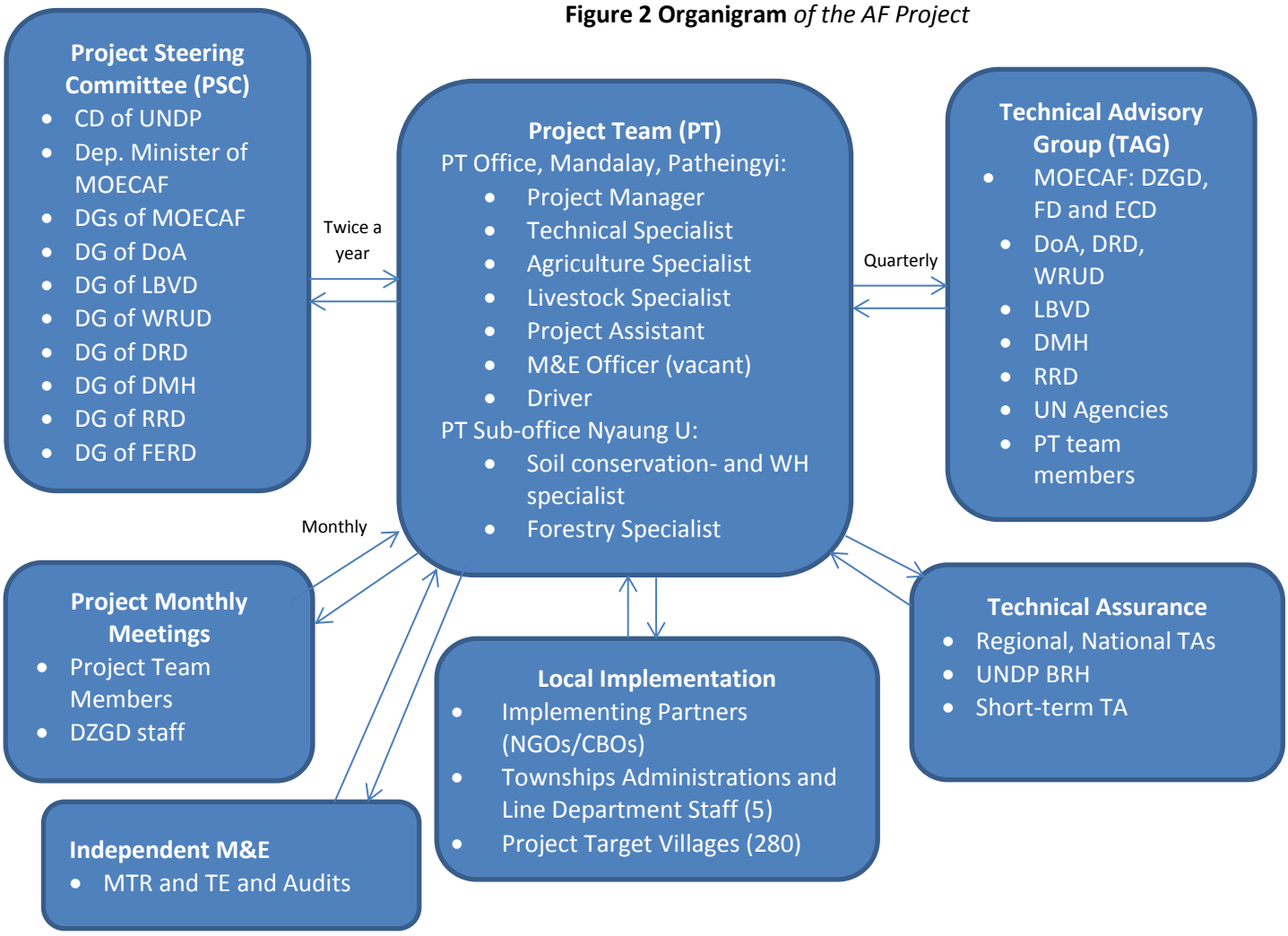
Joint M&E

In the context of Direct Implementation of the project through implementing partners in the Townships (NGOs/CBOs), an appropriate information exchange between the project team and the principal Governmental partners is essential. The present project set-up, as depicted in the organigram of Figure 2, ensures an adequate and timely information exchange and a platform for monitoring project progress and providing technical guidance. The PSC and TAG meetings provide high-level and technical guidance and support to the team and the regular monthly project meetings optimize a continuous knowledge exchange and infusion of local expert knowledge and guidance. Additional joint monitoring field visits with UNDP CO and Regional staff and selected PSC/TAG members will complement the joint monitoring effort.

Resources for M&E

To be able to execute all necessary M&E activities sufficient resources need to be made available for the project. This includes financial and material resources and also the necessary human resources. The **human resources** are presently still limited with a vacancy to be filled for a M&E officer. A more important constraint is seen in the reporting and analytical capabilities of the national staff of the project team. English as the reporting and documenting language presents a real barrier in the context of Myanmar. It might be an option to initially report the broader knowledge extraction and lessons learned initially in Myanmar language, in which the staff is much more comfortable and to translate these knowledge products into English. Monitoring and evaluation generally does not require much **material resources**, but for specific interventions of the AF project, some resources would be necessary to support adequate monitoring. For instance, water quality instruments are recommended to monitor water quality of deep- and shallow wells and other water sources. EC meters (for electric conductivity), pH meters and instruments for measuring total dissolved solids (TDS) are investments that could be provided to staff responsible for assuring the quality of drinking and irrigation water. Staff at Township level indicate not to have these instruments at present. They should also be supported with simple water quality test kits. The same applies for simple soil fertility kits for agricultural staff to test soil quality parameters and GPSs for forestry staff to measure, in an easy manner, total areas of plantation and/or afforestation areas. Lastly, **financial resources** need to be made available and budgeted to undertake all necessary M&E activities and to ensure all stakeholders can be supported and facilitated to carry out their M&E tasks in their respective roles.

Figure 2 Organigram *of the AF Project*



The results framework of the AF project constitutes a key reference document for the M&E framework. The results framework, with its structural division into objectives, outcome areas and related components, represents the logical set-up of the project. It defines measurable indicators and set targets for identified outputs and states means of verification and risk assumptions. The result framework therefore becomes an essential instrument to track progress of the project in achieving its objectives. It has to be noted that the results framework is not a static document, but is reflective of the state of knowledge during the project preparation and definition phase, a number of years ago (2013-2014). It defines in essence the question what needs to be monitored within the project. A results framework is a dynamic document, which will change and be adjusted over time as project implementation advances, lessons are learned and targets are re-assessed, altered or added. This is part of adaptive project management, in which the project team will have to adjust to changes in context, perception and external factors.

The results framework of the ProDoc, signed in August 2014, has been updated in the Inception Report of September 2015, Annex 4. This version of the results framework has been taken as reference and assessed for the need to refine with the project team now fully active and with implementation to be initiated soon. This refining can be done as considerable information on the target Townships and selected villages has been gathered and various work packages for the outcome areas are being defined. Baseline information and End-of-Project targets therefore can be more detailed and re-assessed and elaborated. The Project Results Framework is presented on the following pages as Table 2. There is also scope to check the framework for consistency (e.g., indicator, baseline and targets with the same units). It provides also a moment for reality check if the sectoral specialists feel comfortable with set targets or if one needs to adapt to change and adjust if needed. This is part of the learning-by-doing the project is going through as a pilot experience.

As an example: the ProDoc assumes a daily wage for labour contribution of community members of MMK 2,000, but this amount has now increased in 2016 to MMK3,600 (an average of MMK4,00 for men and MMK3,000 for women). This has clear implications for the budget available and area to be treated with a certain intervention, relying on labour (e.g. plantation). The project results framework as presented in the following section has been discussed in details with the project team in January/February 2016 and is checked for consistency, reinforced and detailed where possible and updated as of March 2016 after a follow-up iteration with the project team.

Sections of the results framework with the main changes and/or additions are discussed in brief.

Objective level:
At the objective level only a few minor changes have been made to enhance consistency and to adjust to minor changes in the End-of-Project targets:

- Consistent use of "households" instead of "farmers" to include landless households.
- Readjustment of End–of-Project (EoP) target to 11,550 households from 12,600 for agriculture and overall target to 17,850 from 18,900 households.
- To drop periodic field surveys (field surveys suffices).
- Add impact assessment and participatory M&E in sources of verification.

Outcome level
At the outcome level only slight changes have been made in rephrasing of indicators and targets and minor changes in targets.
Outcome 1:

- "% of households" instead of "number of farmers" for the indicator.
- Target EoP is adjusted to 60% of households (which is 80% of 74%, as it was originally phrased).

- The outcome indicator is phrased as "% of Dry Zone households reporting increased freshwater availability during dry periods", whereas the targets for the output 1.1 state numbers of physical infrastructure for enhanced water access. For each of these assets one should estimate how many households would benefit from this intervention. For instance communal ponds would mostly cater to a whole village with x number of households and y number of persons. It is important to record the exact number of beneficiaries, or other use the average household size as a proxy to estimate the total number of individuals. One of the core AF indicators is the number of beneficiaries, which should be derived from the cumulative beneficiaries of the targeted activities. In general, it has to be emphasized that both indicators and targets should have the same unit of measurement (if the indicator says %, the target should also be expressed in %).

Output level

At output level, more adjustments have been made with a combination of rephrasing, change of End-of-Project targets based on baseline data compilation and preliminary field observations and addition of additional output elements, which are thought to be important to add.

Output 1:

- "Improved access to" instead of "sufficient" fresh water for the output level.
- As target: 45 canals for water diversion constructed instead of 56. Based on preliminary field verification and baseline compilation.
- This also applies for communal tanks: reduction of target from 70 to 56.
- 1156 ha of land covered with "soil and water conservation techniques" instead of "terraces and soil storage dams". This reflects the fact that per site various soil- and water conservation techniques will be identified and implemented of which terraces and soil storage dams are just examples. The target has been reduced from 1,563ha as the increase of daily wages from MMK 2,000 to MMK 3,600 limits the budget available for labour. Eventually, it will be helpful to explicitly name the type and total area of intervention implemented (x ha terraces, y ha soil storage dams, z ha stone bunding etc.).
- The number of shallow tube wells has been adjusted from 56 to 40, as a result of higher projected costs for the construction of these wells as deeper wells are needed to reach groundwater tables.
- Planned trainings on various themes related to water management and soil- and water conservation have been added. Besides the themes of the trainings it would be necessary to record the exact number of trainings and participants disaggregated by gender.
- Number and types of community agreements, as Water User Groups, with agreed bye-laws and other forms of community agreements to manage and maintain water infrastructure and natural resources have also been added.

Output 1.2

- 6,141 hectares of micro-watersheds, instead of 4,200 hectares (related to increased EoP targets for protection and rehabilitation). The recent field verification mission for identification of suitable and feasible areas for forest plantation and watershed protection observed that there is community willingness to implement watershed management activities. The targeted area of natural forest protection has been increased from 2,160 to 3,913 ha. The targeted CF area has been increased from 680ha to 1,458 ha.
- Baseline increased to 1,500 ha (from 50 ha), based on field verification/baseline information gathering.
- EoP target: including #'s of CF management plans (as another concrete from of community agreement).
- Reduction of EoP target from 1,360 to 770 ha of tree planting on public land, as the original target was deemed too ambitious. Addition of specific locations/areas for interventions: 661

ha micro-watersheds, 35.5 ha road-side planting, 32.2 ha religious compounds, 38.5 ha schools, 2.8 ha clinics. The field verification mission has reduced targets for most of the specific plantation activities in public land, based on community dialogue and field estimations. Verification of these plantation areas has to rely on actual measurement with GPS to confirm planted areas and can be double checked with number of seedlings planted and seedling density (spacing per area).

Output 1.3

- 3,983 hectares of agro-forestry (instead of 5,100 ha) as a result of a lowered EoP target for farm boundary plantations. Farm-boundary plantations are apparently not appreciated by the communities consulted, as reported by the forest specialist and the watershed and forestry consultant, based on their field identification mission in February-March 2016. Farmers fear that the planted trees will result in too much shading to their crops, which will reduce yields. Expert opinion is deviating from farmer consensus, but the project does not want to force communities to take up activities they do not want. The EoP target is split up into: home gardens 1,000 ha, agro-silviculture 1,500 ha (farm-boundary plantation), demo plots 20 ha, silvopasture 2 ha and 3 ha of intercropping with tree species and taungya crops under trees 1,458 ha.
- Target EoP: 1,500 ha of farm boundary plantations (reduced from 3,400 (ProDoc) and 3,000 (Inception report) as farmer show less interest out of fear of shading and perceived negative impact on yields.
- Target village numbers slightly adjusted (76 from 110) for homestead gardening/agro-forestry.
- Trainings on CF establishment, agro-forestry, natural forest conservation, micro-watershed management and workshops on CF review have been added.

Outcome 2

- Indicator: slight rephrasing and "marginal farmers and landless households" instead of vulnerable farmers" to remain inclusive.
- Baseline: "pay only limited attention to" instead of "do not take into account", which seems too harsh as some extension workers pay some attention to CC risks.
- EoP target: slight rephrasing and increase of discrete practices from 5 to 6, including diversified livestock breeds.

Output 2.1

- Baseline: farmers have "only limited exposure" instead of "not been exposed" to climate-resilient farming techniques to account for some of the work done by agricultural staff in the Townships.
- EoP target: "Townships" instead of "villages" as also staff is targeted in the Townships.
- A series of trainings on climate-resilient farming methods (AWD, Thanakha intercropping, fruit tree drip-irrigation, organic farming and vermiculture and climate-resilient seed multiplication) have been added with recording of #s, and participants (m/f).
- Instead of "village-level research farm is operational" it is proposed to use "villages produce climate-resilient seed varieties".
- Add: At least 50 participatory demonstration plots on climate-resilient agricultural practices are established.
- Add: farmer field schools on climate change (#'s, m/f).

Output 2.2

- Add: "rains" at output level, as rains are often a main cause of post-harvest Losses (PHL).
- Indicator: "% of households" instead of "number of farmers".
- Baseline: "only few households" instead of "no farmers".

- EoP target: 9,240 of 11,550 instead of 10,080 of 12,600 households, based on baseline survey/AWP
- Add: explicit activities to illustrate Post Harvest Losses activities, such as: 140 multi-crop threshers, 140 thresher groups established, trainings and participatory assessment on PHL and 36 elevated storage systems.
- It is important for the IPs to collect detailed information on the existing PH losses, pre-activity, to be able to achieve a quantitative target of 80% of target households reporting reduced PH losses. This will be part of the planned PHL assessment by the IP.

Output 2.3

- The definition of "diversified livestock" can lead to different interpretations. It therefore needs a clear definition of what is intended to limit confusion. Diversity can be expressed in types of livestock, but also in more climate-resilient livestock, and also in both interpretations. For the AF project it is suggested to be interpreted in both diversity in types and numbers of livestock, as well as in adoption of climate-resilient livestock breeds.
- Indicator: "marginal and landless households" instead of "vulnerable households", added "assets".
- The baseline has been established, based on data available in the data base and livestock census: "Majority of impoverished households (either landless or marginal farmers with less than 2.5ha of land) in the Dry Zone have zero or small numbers of livestock (65% of landless and marginal farmers have no livestock, 35% of them have some livestock). The definition of marginal farmers is changed to farmers with up to 2.5ha of land to ensure that a majority of farmers in the target villages can be supported. Even with relatively larger land holdings the farming conditions in the Dry Zone are very challenging with poor soil fertility, recurrent droughts and low soil moisture affecting yields. Other constraints to be named are denudation and various types of land degradation and soil salinity, limiting the use of farm land and negatively affecting livelihoods conditions of farmers.
- EoP target: add what kind of diversity has been achieved: types of livestock provided (cattle, sheep, goat, pig, poultry, breeding bulls, climate-resilient breeds) with #'s.

Outcome 3

- "Households" instead of "farmers".

Output 3.1

- "Climate risk communication products" rephrase into "maps and scenarios".
- Target EoP: to update the climate hazard maps at least twice during the project life cycle seems too ambitious.
- Add: "vulnerability assessments completed for the target Townships" as essential element complementary to the hazard maps and risk scenarios. The Work Package focused on the vulnerability assessments and risk communication and early warning mechanism should require the Implementing Partner to be as detailed as possible. Variables as spatial resolution of the vulnerability assessment should be clearly set (Township level with possible further spatial resolution to be able to distinguish between larger areas within a Township). To bring the scale down to village tract level seems too ambitious and would require too much time for the IP to assess accurately. Also the types of vulnerabilities assessed should be specified: precipitation amounts, length of rainy/monsoon season, drought (frequency, intensity, definition) etc. A vulnerability assessment should be complemented with a coverage of natural hazards considered (drought, flood, storms etc.) and the related risk, as a product of vulnerability and hazard.

Output 3.2

- "Households" instead of "farmers".
- Define "local" level climate and disaster risk management framework, for output level. Is this village, village tract, Township or regional level? See comment under Output 3.1.

Table 2 Project Results Framework

Project Strategy	Indicator	Baseline	Target at end of Project	Sources of Verification	Assumptions
Objective: To reduce the vulnerability of households in Myanmar's Dry Zone to increasing drought and rainfall variability, and enhance the capacity of households to plan for and respond to future impacts of Climate Change on food security.	% of households in target site implementing climate change adaptation livelihood measures introduced by the project % of Dry Zone households with access to early warning information on sudden onset of disasters % of Dry Zone households using climate risk information to adjust their livelihood behavior	Current agricultural and livestock rearing practices among subsistence farmers are based on historical climatic conditions and trends and are unsuited to increased drought conditions that are becoming increasingly frequent in the Dry Zone in Myanmar Currently climate risk information on sudden onset of disasters is delivered only to those houses with TV/radio and yet the level of interpretation and response is low. The outreach and understanding of information on slow onset of disasters are even lower.	By the end of the project, at least 61% of impoverished farming households or the landless, equivalent to approximately 17,850 households (11,550 agriculture and 6,300 livestock) benefit from and implement climate-resilient agriculture or livestock practice At least 50% of all households in target location (based on random sampling), equivalent to 25,000 households, report that they have changed their livelihood behavior based on climate risk information produced by the project At least 75% of all households in target location, equivalent to 38,000, receive early warning in a timely manner.	Project evaluation and technical reports Field surveys Impact Assessment Assessments during periodic mock drills Quarterly and annual project reports Participatory M&E with community members and stakeholders	The communal agreement made between livestock management committee and community members about distribution of livestock off-springs is strictly followed Climate-resilient farming practices introduced by the project demonstrate large enough difference compared to non-climate-resilient practices Seasonal climate risk information such as bulletins is produced and disseminated in a timely manner for farmers to adjust their behavior Climate risks are properly captured and disseminated to township DHM and Disaster Preparedness Committees from the national authorities

Project Strategy	Indicator	Baseline	Target at end of Project	Sources of Verification	Assumptions
OUTCOME 1 Continuous freshwater availability is ensured during the dry seasons in 280 villages in the Dry Zone	% of Dry Zone (farmers) households reporting increased freshwater availability during dry periods	74% of households in project targeted townships area currently face shortages of fresh water supply for domestic and agricultural use	At least 60% of households (facing water shortages) in 280 villages in the five project targeted townships report increased freshwater availability during dry periods	Project evaluation and technical reports Field surveys Participatory M&E Impact Assessment	Governmental department, mainly, Department of Development Affair (DDA) + Department of Rural Development (DRD), Irrigation Department (ID) and Water Resources Utilization Department (WRUD) will cooperate with local NGOs to perform water resources availability Higher-than-usual dry season rainfall during the implementation period do not distort perceptions of the farmers
OUTPUT 1.1 Water capture and storage capacities in 280 villages enhanced to ensure improved access to fresh water supply during dry periods	Additional community-based freshwater supply and storage infrastructure put in place in drought-prone villages	0 additional freshwater supply and/or storage infrastructure in drought-prone villages to account for climate change-induced increases in drought	45 canals for water diversion constructed 70 small scale water pumping systems installed 56 communal water tanks (equivalent to total capacity 5000 gallon) incl. pipes installed 150 communal ponds rehabilitated or constructed 10 deep tube wells (new & fixed/renovation) 1156ha of land covered with soil and water conservation techniques 40 shallow tube wells Trainings on (#/hh's/m-f): • Water infrastructure • Soil&water conservation • Operation&management Community agreements (WUGs) (#)	Project evaluation and technical reports Field surveys Quarterly and annual project reports Participatory M&E Impact Assessment	Government Ministers, line departmental staffs, local authorities (administrators) will continue to support in terms of in kind contribution and human resources expertise in water resources availability The project teams, local NGOs and line departments will mobilize women and female-headed households for income generation and soil-water conservancy measure activities

Project Strategy	Indicator	Baseline	Target at end of Project	Sources of Verification	Assumptions
OUTPUT 1.2 6,141 hectares of micro-watersheds are protected and rehabilitated through Farmer- Managed Natural Regeneration (FMNR) to increase natural water retention and reduce erosion	Hectares of watershed area protected through community-based afforestation, reforestation and regeneration practices	1,500 ha of natural forest conservation and community based reforestation practices in the critical watershed area in the project area	3,913 ha of natural forest conservation 1,458 ha of community forest establishment (including x# of CF management plans) 770 ha of tree planting activities on public land: • Micro-watersheds 661ha • Road-side planting 35.5ha • Religious compounds 32.2ha • Schools 38.5ha • Clinics 2.8ha	Field survey and inventory Project evaluation and technical reports	Main responsible department, Forest Department will cooperate for community forestry establishment and 30 years land lease certification process
OUTPUT 1.3 Community-based agro-fo plots are established on hectares of private and comr lands to conserve soil and wat	Hectares of land covered by systematic new agroforestry plantations	160 ha of traditional agro-forestry home garden and 430 ha of farm boundary plantations currently exist in 280 villages in five targeted Townships	1,000 ha of homestead gardening/agro-forestry plots established in 76 villages 1,500ha of farm boundary plantations in 95 villages Demo plots 20ha Silvopasture 2ha Intercropping 3ha Taungya crops – 1,458ha Training on (#/hh's/m-f): • CF establishment • Agro-forestry • Natural forest conservation • Micro-watershed management Workshop: CF review	Field assessment survey Quarterly and Annual reports Project evaluation and technical report	The village communities' willing to support to carry out the agro-forestry related activities at their private and communal homestead garden continues throughout the course of the project

Project Strategy	Indicator	Baseline	Target at end of Project	Sources of Verification	Assumptions
OUTCOME 2					
Climate-resilient agricultural and livestock practices enhanced in Myanmar's Dry Zone	Number of climate-resilient agricultural and livestock practices demonstrated and adopted to support adaptation of (vulnerable farmers) marginal farmers and landless households	Agricultural and livestock practices and extension services in the Dry Zone (do not take into account) pay only limited attention to climate change risks.	By the end of the project, at least 6 discrete agricultural adaptation and diversified livestock rearing practices are demonstrated including resilient varieties, on-farm water management techniques, soil management practices, planting techniques, post-harvest processing and diversified livestock breeds.	Field survey assessment Quarterly and Annual reports Project evaluation and technical reports Participatory M&E	Department of Agriculture and LBV Department continue their commitment to support agrciulture or livestock support activities and technical team and Local NGOs will collaborate with DoA/LBVD to carry out the tasks
OUTPUT 2.1 Drought-resilient farming methods introduced to farmers to enhance the resilience of subsistence agriculture in the Dry Zone	Number of Dry Zone farmers exposed to and involved in climate resilient farming techniques	In project target villages, farmers have (not been exposed) only limited exposure to climate-resilient farming techniques	By the end of the project, at least 11,550 (11,200 farmers plus 350 others) households, extension workers and CSO/NGO members in the target (villages) Townships are trained on climate-resilient farming methods Trainings on (#/hh's/m-f): • Climate resilient farming methods • Water smart practices (AWD) • Thanakha intercropping • Fruit tree drip irrigation • Organic farming and vermiculture	Project evaluation and technical reports Field surveys Impact assessment (survey) Quarterly and annual project reports Participatory M&E	Improved varieties perform convincing productivity for farmers to adopt new varieties
	Accessibility to drought-resilient seed varieties	Only (five) limited seed (banks) sources are available in the target Townships (target sites) (one per each Township)	At least 140 villages (-level (research farm is operational) produce climate-resilient seed varieties • Trainings on climate-resilient seed multiplication (#/hh's/m-f)		Volunteer farmers whose lands will be set up for seed production (as a research farm) continue their commitment that they indicated during the consultations
	Number of project and non-project community members participating in exchange visits and demonstration plots	Currently there is no initiative(s) in the Dry Zone promoting cross exchange between the Townships of practical knowledge on climate resilient farming techniques	At least 50 participatory demonstration plots on climate-resilient agricultural practices are established At least 20% of community participants in exchange visits and farmers field demonstrations are from non-project target villages Farmer field schools on climate change (#/hh's/m-f)	Participation lists during exchange visits and field demonstrations	

Project Strategy	Indicator	Baseline	Target at end of Project	Sources of Verification	Assumptions
OUTPUT 2.2 Resilient post-harvest processing and storage systems introduced to reduce climate-induced post-harvest losses (droughts, rains and floods)	% of (farmers) households who report reduced harvest losses due to improved post-harvest processing and storage	Only few households (farmers) apply improved post-harvest processing techniques	80% of target households (9,240 of 11,550) report reduced post-harvest losses through the use of improved processing and storage technology: e.g.: • 20 rice threshers and120 multi-crop threshers • Establishment of thresher groups (140) • Trainings and participatory assessments on PHL • Elevated storage systems (36)	Project evaluation and technical report Field Survey Quarterly and Annual Report	Continued support from DoA and Myanmar Agricultural Machinery Development Association in the use of post-harvest machines in cooperation with local NGOs
OUTPUT 2.3 Diversified livestock production systems are introduced in 6,300 households to buffer the effects of flooding and drought on rural livelihoods	Number of marginal and landless households (vulnerable households) with increased diversity of livestock assets	Majority of impoverished households (either landless or marginal farmers with less than 2.5 ha of land) in the Dry Zone have zero or small number of livestock (65% of landless and marginal farmers have no livestock, 35% of them have some livestock)	By the end of the project, at least 6,300 marginal and landless households (vulnerable households) have increased the diversity of livestock assets Diversity in types: • Cattle# • Sheep# • Goat# • Pig# • Poultry# • In climate-resistant/improved breeds#	Field survey Impact assessment (survey) Project evaluation and technical report	Local community enable to adopt cut and carry new system and receive training There are no serious or uncontrollable disease outbreaks in the target regions

Project Strategy	Indicator	Baseline	Target at end of Project	Sources of Verification	Assumptions
Outcome 3					
Timeliness and quality of climate risk information disseminated to Dry Zone households enhanced through use of short-term weather forecasts, medium-term seasonal forecasts, and longer-term climate scenario planning	% of Dry Zone households using climate risk information to adjust their livelihood behavior % of Dry Zone households with access to early warning information on sudden onset of disasters	Currently climate risk information on sudden onset of disasters is delivered only to those houses with TV/radio and yet the level of interpretation and response is low. The outreach and understanding of information on slow onset of disasters are even lower.	At least 50% of all households in target location (based on random sampling), equivalent to 25,000 households, report that they have changed their livelihood behaviour based on climate risk information produced by the project At least 90% of all households in target location, equivalent to 45,600, receive early warning in a timely manner.	Periodic field surveys Impact assessment (survey) Quarterly and annual project reports Assessments during periodic mock drills Quarterly and annual project reports	Seasonal climate risk information such as bulletins is produced and disseminated in a timely manner for farmers to adjust their behaviour Climate risks are properly captured and disseminated to Township DHM and Disaster Preparedness Committees from the national authorities
OUTPUT 3.1 Climate hazard maps and risk scenarios are developed in each Township to support community-based climate risk management and preparedness planning	Number of climate risk communication products such as maps and scenarios in active use by Township authorities, NGOs and CBOs to improve planning decisions and prioritize investment actions	No climate risk communication products such as maps and scenarios in active use by Township authorities, NGOs and CBOs to improve planning decisions and prioritize investment actions	Climate hazard maps and risk scenarios are available in each Township, based on vulnerability assessments.	Field survey in availability and application of hazard maps, use of instruments Local communities report on disaster risk preparedness plan Quarterly and Annual Reports Project evaluation and technical report	NGOs along with Government bodies such as DMH, DoA) and Ministry of Environmental Conservation and Forestry (MOECAF) cooperate on long term climate risk management planning
OUTPUT 3.2 Local level climate and disaster risk management framework strengthened for timely and effective communication of climate risk and early warning information	Number of local institutions that issue regular warning and forecasting communications to community-based organisations and vulnerable households The number of climate related information materials produced to assist Dry Zone households to adjust their livelihood behaviour	Currently no such information is available except weekly/monthly weather forecasts broadcasted over TV/radio	70 community based disaster risk management (CBDRM) committees are formed to relay climate early warning information from the Township DPC 5 Climate Risk Information sub-committees established within the Township DPC At least six agro-meteorological bulletins; two early warning and disaster response bulletins/posters; four guidance notes on resilient agricultural /livestock practices produced	TORs and other official documents noting the establishment of CBDRM Committees and CRI Sub-Committees Quarterly and Annual Evaluation Reports Project evaluation and technical reports Quarterly and Annual Report	Continuous commitment from the government is present throughout the life of the project

2.3 Annual Work Plan as tool for planning and monitoring

The results framework defines explicit end-of-project targets for the various components and related outcomes and outputs. It is necessary to narrow the time frame of these output areas to the annual targets that are set in the annual work plan (AWP). Through the yearly planning exercise of compiling the AWP realistic annual targets are set for explicit activities, linked to outputs. As the project is progressing the first AWP has been drafted and refined. These AWPs of the different sectoral specialists are a key tool to extract yearly targets and to update and refine the M&E framework. As an example the compiled AWP for forestry activities under Component 1, output 1.2 and 1.3, is presented as Table 3 with set targets for the coming three years. Important to note is that the annual targets for 2017 and 2018 will have to be adjusted at the end of 2016, taking into account actual progress in 2016 and reflecting the AWP for 2017.

Table 3. *Planned Forestry activities based on 2016 AWP, EoP target and break-down of targets for 2017 and 2018*

Output	Activities	Year				Total EOP target
		2016	2017	2018	2019	
1.2	Community Forestry Establishment		*730 ha* (10v)	728 ha - Not yet known	Asset value survey and evaluation in January and February	1458 ha
	Natural Forest Conservation		*1,956 h*a (6v)	*1,957 ha* (5v)		3913 ha
	Public Land Tree Planting					
	a. Micro watershed management		*330 ha - (6v)*	*331 ha - (6v)*		661 ha
	b. Road side tree planting		22.3 ha (25v)	13.2 ha (15v)		35.5 ha
	c. Religious compound	12.1 ha (20v)	12.1 ha (20v)	8 ha (15v)		32.2 ha
	d. School compound	10.1 ha (8v)	14.2 ha (12v)	14.2 ha (12v)		38.5 ha
	e. Clinic	1.2 ha (6 v)	0.8 ha (4v)	0.8 ha (4v)		2.8 ha
	Total	**23.4 ha**	**3,065.40**	**3,049.20**		**6,141 ha**
1.3	Home Stead Gardening	205 ha (10v)	397 ha (Not yet known)	398 ha(not yet known)		1000 ha
	Farm Boundary tree planting	500 ha (40v)	500 ha (40v)	500 ha (40v)		1500 ha
	Demonstration plots		10 ha (4v)	10 ha (4v)		20 ha
	Agrosilvoculture (Intercropping)		2 ha (4v)	1 ha (1v)		3 ha
	Silvopasture		1 ha (3v)	1 ha (3v)		2 ha
	Modify Taungya		730 ha (10v)	728 ha – (Not yet known)		1458 ha
	Total	**705 ha**	**1,640 ha**	**1,638 ha**		**3,983 ha**
	Training					
	a. CF establishment training (Including CF management plan)	125 persons	100 persons	100 persons		325 persons
	b. Agroforestry training	200 persons	150 persons	125 persons		475 persons
	c. NFC training	170 persons	150 persons	150 persons		470 persons
	d. Micro watershed management training	315 persons	150 persons	140 persons		605 persons
	Workshop					
	a. CF review workshop	125 persons	100 persons	100 persons		325 persons
	Total	**935 persons**	**650 persons**	**615 persons**		**2200 persons**

The planning of the sectoral activities is a critical step to assess the overall work load needed to be able to achieve the target set and to balance the work load over the years. The annual work plan process therefore also acts as a tool for work load planning for the project team, an important element of planning, which should not be underestimated and an important co-benefit of a proper planning process to attain a realistic work load and related targets. In this example, the emphasis of the training effort for awareness raising and building technical skills is planned in the first year to be of maximum use in the later years of project implementation. Other activities, such as forest plantation are more evenly spread over the years.

Besides the obvious value for planning and timing of activities and balancing work load over the project cycle, the work plan allows also to record the actual achievements for the various planned activities. This scoring at the end of the project year helps to build the overview of actual progress and to see where the project is able to meet targets, where it underachieves or where it surpasses the set targets. This annual scoring or recording is essential to keep track of progress, but also to pick up challenges or constraints if the project clearly underachieves.

This leads to researching what has caused this delay or underachievement: is this too ambitious planning, are there issues with seedling supply, is there a lack of labour contribution from the targeted villages? In recording the annual progress as much detail as possible should be retained or reported. Behind a simple figure of x ha of forest plantation should be a clear record in which village this has been done and with what kind of tree seedlings (30,000 seedlings of tree species Z and 60,000 seedlings of species Y). In the example of Table 4, the (hypothetical) actual achievement for community forestry establishment clearly is less than what was planned for (475ha in 45 villages planned with actual achievement of only 300ha in 35 villages). Here it is clear that the reasons need to be clarified why it was difficult to reach the set target. It could be, for instance, that there were administrative issues with land clearance (ownership certificates) that delayed the CF establishment process. These issues need to be flagged and documented and discussed with involved stakeholders to see if the existing constraints can be addressed.

In the same Table 4, one can see that the target for micro-watershed afforestation has been surpassed with more villages involved. Here, for example, neighboring villages located in the targeted micro-watersheds joined the plantation effort and through "spontaneous adoption" the reach of the project expanded beyond what was planned for. Also this should be properly documented as example how project initiatives lead to improved inter-village collaboration and spread of interventions beyond the project target area.

Actual achievements need **to be recorded annually**, but also **cumulatively** to follow progress towards the End-of-Project target.

Table 4 *Planned Forestry activities with indication of actual achievements (hypothetical example)*

Output	Activities	Year					Total EoP Target
		2016	2017	Actual	2018	2019	
1.2	**Community Forestry Establishment**		730ha (10v)	300ha (35v)	728 ha (not yet known)	Asset value survey and evaluation 2 months (January and February)	1458 ha
	Natural Forest Conservation		1956ha (6v)	747 (20v)	1957ha (5v)		3913 ha
	Public Land Tree Planting						
	a. Micro watershed management		330ha (6v)	460ha (40v)	331 ha (6v)		661 ha
	b. Road side tree planting		22.3 ha (25v)		13.2 ha (15v)		35.5ha
	c. Religious compounds	12.1 ha (20v)	12.1 ha (20v)		8 ha (15v)		32.2 ha
	d. School compound	10.1 ha (8v)	14.2 ha (12v)		14.2 ha (12v)		38.5 ha
	e. Clinics	1.2 ha (6v)	0.8 ha (4v)		0.8 ha (4v)		2.8 ha
	Total	**23.4 ha**	**3065.4 ha**		**3049.2 ha**		**6141 ha**
1.3	**Home Stead Gardening**	205 ha (10v)	397ha (not yet known)		398 ha (not yet known)		1000 ha
	Farm Boundary Planting	500ha (40v)	500ha (40v)		500 ha (40v)		1500 ha
	Demonstration plots		10ha (4v)		10 ha (4v)		20 ha
	Agrosilvoculture intercropping		2ha (4v)		1 ha (1v)		3 ha
	Silvopasture		1ha (3v)		1 ha (3v)		2 ha
	Modify Taungya		730ha (10v)		728 ha (not yet known)		1458 ha
	Total	**705 ha**	**1640 ha**		**1638 ha**		**3983 ha**
	Training						
	1. CF Establishment training	125 persons	100 persons	6#, 120p (50M/70F)	100 persons		325 persons
	2. Agro forestry training	200 persons	150 persons		125 persons		475 persons
	3. Natural forest conservation training	170 persons	150 persons		150 persons		470 persons
	4. Micro watershed management training	315 persons	150 persons		140 persons		605 persons
	Workshop						
	Community Forestry review workshop	125 persons	100 persons		100 persons		325 persons
	Total	**935 persons**	**650 persons**		**615 persons**		**2200 persons**

A breakdown of the annual work plans and targets for the various outputs (and sectors) is attached as Annex 3, in addition to the plans for the forestry sector presented above, based on the AWP of 2016 and the EoP targets. **Please note that these overviews will be revised each year**, based on the progress made in actual achievements. This will require the project team to adjust the targets to realistic values, while ensuring that the set End-of-Project targets can still be met.

2.4 Planning Matrices for M&E

An integral part of the M&E Framework is the temporal planning when M&E activities should be carried out. The ProDoc and the Inception Report present this temporal overview as the M&E plan (Inception report pages 79 and 80). Based on this overview and as consolidation and as source of reference, Table 5 presents an overview of M&E activities with indication of responsibilities, products and time frame.

Table 5 *Overview of M&E Activities with indication of responsibilities, products and time frame*

Type of M&E Activity	Responsible	Product	Time frame
Design of M&E Framework	PM, PT, M&E consultant	M&E Framework, Guidelines, M&E formats	March 2016
Defining annual targets and related indicators for project components	PM, PT, M&E officer	AWP/B	Q4 of each year
Measurement of means of verification of project progress	PM, PT, M&E officer	Updating M&E Framework	Continuous, reflected in quarterly reports
Annual Project Performance Report (PPR) including AF requirements	PM, PT, M&E officer	PPR (AF)	Q1 of each year
Progress Reports	PM, PT, M&E officer	Progress reports	Quarterly
PSC Meetings	PM, PT, Governmental Stakeholders, CO	PSC Meeting Minutes	Half-yearly
TAG Meetings	PM, PT, Governmental Stakeholders	TAG Meeting Minutes	Quarterly
Monthly project meetings with DZGD	Director and staff DZGD, PM, PT	Coordination meeting Minutes	Monthly
Mid-Term Review	PM, PT, CO, APRC, independent external evaluators	MTR report	At the end of Year 2
Audit	CO, PM and PT	Audit report	Yearly
Field Visits linked to distinct implementation activities (trainings, WS, NGO guidance, monitoring etc.)	PT	BToRs	After field visits
Joint Field Visits	CO, APRC, PT, Government stakeholders	BToR	Yearly
Documenting lessons learned, good and best practices	PT	Technical reports Fact sheets	As and when possible
Impact Assessment (Survey)	APRC, CO, PT, survey institution	Survey reports	Year 1 and Year 4
Terminal Evaluation	PM, PT, CO, APRC, independent external evaluators	TE report	End of Year 4

Design of M&E Framework. Elaboration of the M&E Framework with definition of roles, updating and detailing of targets and indicators and reporting formats.

Defining annual targets and related indicators for project components. Based on the records of the actual achievements, annual targets for the next year of implementation should be assessed and re-adjusted if deemed necessary.

Measurement of means of verification of project progress. Continuous reporting of progress and challenges: quarterly reports will be the main mechanism to present progress, but reporting should be a continuous process with team members reporting progress, learning, challenges and good practices and failures (as example how to learn from mistakes) when they can.

Annual Project Performance Report (PPR) including AF requirements. The annual PPR for UNDP is a key reporting document with a yearly compilation of progress for all project components and includes a section with specific AF questions to be answered (see Chapter 3, section 3.8 for details).

Progress Reports. Quarterly progress reports of UNDP, based on the Enhanced Results Based Management (ERBM) Platform and linked to the Information Management System (ATLAS) of UNDP (see Chapter 3, section 3.8 for details).

PSC Meetings. Half-yearly meetings of the Project Steering Committee with PSC Minutes of the main recommendations and decisions.

TAG Meetings. Quarterly meetings of the Technical Advisory Group with TAG Minutes of the main recommendations.

Monthly Project Meetings. Monthly meetings between the DZGD Director and Staff and the project team with Minutes of the monthly meetings to record discussions and recommendations/action points.

Table 6 *Timing and frequency of specific M&E activities in the project cycle*

	2016				2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
QR																
PPR																
AWP																
IA																
BToR																
TR																
PSC																
PMM																
TAG																
NGO's																
Audit																
MTR																
TE																

QR: quarterly report, PPR: project performance report, AWP: annual work plan, IA: impact assessment, BToR: back-to-office report, TR: technical report, fact sheets, documentation of best practices, PSC: Project Steering Committee, PMM: Project Monthly Meetings, TAG: Technical Advisory Group, MTR: Mid-Term Review, TE: terminal Evaluation

Mid-Term Review. Planned at the end of the second year of implementation, the MTR offers a critical evaluation moment for independent stocktaking of progress, challenges and opportunities of the project. The MTR will focus on principle evaluation criteria as defined by the OECD, such as validity of

design, effectiveness, efficiency, adaptive management, and sustainability. The MTR dialogue forms a proper platform to re-assess the project's implementation progress and arrangements. If necessary, targets can be reconsidered and adjustments made for enhanced implementation during the remaining years of the project. As the AF project is in many ways a piloting exercise in the Dry Zone and in a broader sense in Myanmar , the focus of the MTR will be put on the knowledge building and lessons learning originating from the project implementation. Another key element will be the assessment of the validity of the design of the AF project and the central role of NGOs/CSOs as implementing partners at Township level. The MTR is also a timely opportunity for introspection and self-assessment, in which the project team should proactively bring forward their learning, challenges and recommendations in the form of a self-assessment. See also section 3.3 on Evaluations.

Audit

Audits of the financial reporting of the project, with a focus on annual budget, expenditure and procurement, will be carried out in accordance with UNDP's Financial Rules and Regulations and applicable audit policies and procedures and frequency. The audits serve as a quality assurance to monitor the appropriate application of financial rules and regulations, assess financial reporting and procurement processes and to track and monitor the ability of the project to achieve financial expenditure in accordance with its annual planned budgets (delivery rate). If one foresees that expenditure in a year is more than 500,000 USD, then the project is highly prone to audit next year. A budget allocated for audit is needed to cover the cost of audit, either to be shared or fully to the project (if it is the only project to be audited). For NGO execution, the project will always be audited every year and the CO will have to go through selection process to select the audit company.

Field Visits linked to distinct implementation activities. Regular field visits of the technical specialists of the project team, to provide or guide trainings, workshops or supervise implementation of specific project interventions, are a key element to monitor implementation progress. Reporting back key findings, action points, recommendations and challenges can be facilitated by compiling concise back-to-office-reports (BTORs), which together form a good repository of field monitoring and implementation successes and challenges. They will also be useful to record the guidance and support to NGO's/CO's in their implementing roles. See the BTOR template as attached as Annex 4.

Joint Field Visits

Periodic joint visits to the project areas by the UNDP CO, the UNDP BRH and selected stakeholders from the PSC and TAG will provide fist hand opportunities to jointly assess progress and challenges in project implementation. Involvement in the field visits of DZGD representatives, as focal agency for the Government, will be essential. Findings and recommendation will be recorded in a BTOR prepared by UNDP. Joint field visits are an excellent means to get first hand insight in implementation progress and challenges and get direct feedback from primary beneficiaries and stakeholders in the Townships. Experience from other projects indicate that joint field visits are instrumental in ensuring engagement and involvement of PSC and TAG members and facilitates specific technical guidance and advice, based on discussions on constraints in the field.

Documenting lessons learned, good and best practices

The overarching goal of the project is to pilot adaptation practices in the Dry Zone and to extract good and best practices and lessons learned for a broader national, regional and global audience. This documentation of key lessons, both successes and failures, has to be the main responsibility of the project team and should result in various documents, ranging from fact sheets and technical reports to videos and manuals. Although emphasis for documentation will be in the later stages of the project when implementation has progressed and lessons and impact are emerging, there will be ample opportunities to document knowledge building and good practices in the earlier stages of the project as well. See a more elaborate section on documenting lessons learned and best practices in Chapter 3, section 3.4.

Impact Assessment (Survey)

A separate survey is being developed to assess the type and degree of impact the project is able to make in the target areas. This impact assessment will establish a baseline in an initial survey at the start of implementation and record impact and change with a follow-up survey in the last year of implementation. The survey will interview a representative sample group of households in the target villages and a control group in non-target villages in the project Townships . The assessment will help to answer questions of attribution in weighing which factors determine impact on critical areas of livelihood and wellbeing of the project beneficiaries. The survey will focus on three distinct areas: water access, food security and livelihoods of landless and marginal households. The first survey will be valuable to build on the already existing baseline data and to better understand the livelihood conditions of the target beneficiaries. The survey design and ToR are being developed separately by the M&E consultant and will be presented as a separate deliverable.

Terminal Evaluation

An independent Terminal Evaluation will be conducted in the last few months of project implementation and assess overall delivery, efficiency and management of the project. The evaluation will weigh the impact of the project interventions and assess the likely sustainability of results considering the exit strategy of the project. The contribution to knowledge building and good practices development will be another important element to evaluate, considering the specific piloting character of the project. In preparation for and as contribution to the Terminal Evaluation, the project team will prepare the Project Terminal Report. This comprehensive report will address key results achieved and lessons learned, together with main challenges and constraints and contain recommendations to maximize permanence of impact and potential for upscaling and replication of best practices. See also section 3.3 on Evaluations.

NGOs/CBOs reports

In the implementation arrangement of the AF project, NGO's and CBO's are key partners and their reporting on implementation progress will be essential contributions to the monitoring system. The work packages and related ToRs of the implementing organisations require them to adequately report implementation progress and document their experiences in quantities (quantitative perspective of number of seeds and seedlings, area treated and inputs provided) and lessons (qualitative narrative of successes and challenges, lessons learned and recommendations). The project specialists will have the prime responsibility in guiding and supervising the implementing organisations, but the reporting and documenting tasks of the organisations will be essential information to gather. Content and frequency of the reporting of the NGOs/CSOs needs to be specified in their ToRs and closely guided and monitored by the sectoral specialists. The information contained in these reports should have a clear quantitative and detailed overview of provided inputs as well as qualitative sections on beneficiary feedback and documentation of challenges and constraints in the implementation effort of these organisations. See section 3.9 for more details on the M&E of NGOs/CBOs (Implementing Partners).

3. Implementation Plan for the M&E Framework: Guidelines and Observations

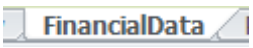
In this Chapter a series of guidelines and observations is presented, which together provide an implementation plan for the M&E process. The various guidelines define a form of a Standard Operational Procedure (SOP) or Operational Manual (OM) and are intended to serve as a reference document for the M&E officer and all project team members involved with M&E.

3.1 Financial Reporting

A distinct area of monitoring is focused on the financial management of the project, in documenting and recording the **actual expenditure** compared to the **planned budget** amount. The project makes use of standing financial procedures within UNDP (to record in ATLAS) and these procedures allow to generate expenditure and balance overviews. An important element of the financial reporting contains the procurement of input and services, following standing procurement procedures of UNDP. The planned financial expenditure is expressed in the AWP and its related budget (AWP/B), with temporal steps of a quarter and consolidated in annual budgets.

In a broader sense, the financial reporting gives insight in the ability of the project to carry out the interventions as planned for a given period, the ratio of what was actual expenditure and what was planned for in financial terms. This gives the **delivery rate [%]** as indicator for the efficiency of the project. In general the project will go through a learning curve in its ability to deliver and the delivery rate can be a good indicator to monitor this progress over time (in general delivery rates above 80% are considered commendable in projects focusing on NRM management). The data on expenditure and disbursement also give the possibility to compare delivery rates between the sectors, components or between geographic areas. For the project this could mean comparison between Townships or between the three Components.

A more complex element of financial monitoring and reporting is the documentation of the **Government's contribution** to the AF project budget, US$ 554.181. These co-financing resources are an in-kind contribution in the form of office space, staff time and technical inputs, interventions and resources and it is recommendable to document annually the actual total amounts of this contribution. For this, one needs the summation of monthly office space costs provided (AF offices in Patheingyi and Nyaung U), the summation of the number of days Government staff are engaged with the project and their respective salaries and the summation of the technical inputs and interventions provided (see Annex J of the ProDoc for details, Parallel co-financing contribution from the Government of Myanmar). In the Project Performance Report (PPR) a section is dedicated to recording the actual co-financing expenditure under the **FinancialData** Tab:



→*Estimated cumulative actual co-financing as verified during Mid-term Review (MTR) or Terminal Evaluation (TE).*

It asks for verification during MTR and TE, but it is recommended to keep track of actual cumulative co-financing annually, but not report it in the PPR, except during the MTR and TE.

3.2 Participatory dimension and inclusiveness

In line with the goal of the project to target the grass root level and rural communities in its approaches as key beneficiaries, the project has to be inclusive in its M&E methodologies. This means that the key beneficiaries should not only be consulted for their opinion on progress, but to be truly participatory, be part of continuing dialogue. In targeted focus group discussions the various community representatives should be consulted, including the older and younger villagers, female-headed

households, the landless and marginal farmers. Participatory also means involvement of other key stakeholders at Township and regional Departmental level.

Participation of rural communities in the project goes beyond planning of activities and should include continued and repeated monitoring and evaluation of the progress and impact of planned activities. Monitoring and evaluation, which is the critical assessment to see if planned activities are implemented in a timely manner, in accordance with technical guidelines and mutual agreements and to the satisfaction and benefit of the land user, is carried out in different forms, using different tools. The participatory M&E also serve different purposes:

- They offer a platform for feedback from the beneficiaries, as key target group and main stakeholders;
- They enable the project team and implementing partners to assess progress in implementation, identify technical issues regarding implementation and re-assess or adjust implementation approaches and guidelines;
- They provide the project staff with information on quantitative achievements for chosen indicators against set project targets,
- They offer an opportunity for learning and interaction, as a check and balance of project objectives and need for adjustment of direction or approaches.

The continuous participatory monitoring should focus on extracting views and experiences of beneficiaries beyond simple, progress oriented queries if they got certain inputs. It should be geared towards asking questions such as - what has been the impact of the inputs? What are your challenges with the inputs? How can we improve our approach? What are yield differences? How much have you actually earned compared to baseline conditions? This kind of feedback is essential to learn and enhance implementation. It will also enable to pick up local technical knowledge on certain climate-resilient practices (ITK or Indigenous Technical Knowledge) of farmers who have often generation-old knowledge on how to cope with climate extremes. This requires the project team to go back to communities and ask their opinion during and after implementation to pick up change in opinion and awareness and to assess community response and appreciation and ultimately willingness to adopt and replicate activities post-project. This dialogue helps in overall awareness building on climate-resilient practices, builds capacity and enhances the ownership and commitment of the communities. ***Overall, the participatory dimension of M&E offers an essential feedback mechanism to learn, improve methodologies and approaches and ultimately to become better implementers.***

It is often a challenge to distil key information and learning from M&E reports and to translate and condense this information into knowledge products with a wider application potential. But this should always be a key driver of collecting in a participatory manner M&E information: what have we achieved, but also what has been the impact and what are key challenges and how can we improve?

Participatory M&E has another important advantage in that it helps transparency and accountability by engaging the key stakeholders and giving the communities a real voice in enabling them to voice their opinion by valuing their views and suggestions.

The project team has to ensure that implementing partners such as NGOs and CBOs will make use of participatory approaches in their implementation and monitoring approaches. This requires careful guidance and explicit mentioning of these tasks in their ToRs.

Core Participatory M&E questions can be divided into the following 9 specific groups:

1. Has what was agreed in the work plan been done in your village?
2. What did you expect from the intervention/activity?
3. How is the intervention performing?

4. What difference do you see in terms of the environment and your livelihoods?
5. What are your future plans for the intervention/activity?
6. What is the most significant change as a result of the project/interventions?
7. Do you see any (negative) social impact?
8. Do you see any (negative) environmental impact?
9. How else could the project resources be used to allow greater benefit?

Benefits of participatory M&E:
Community involvement in the M&E process has some general advantages beyond the overall value for progress monitoring. Some of the benefits relate to the following areas:

- *Experience sharing and check-and-balance*. By collecting the feedback and experiences of the community members, as key beneficiaries, one is able to get a better understanding of the appreciation of the various interventions (the pros and cons). This serves as a check-and-balance mechanism to evaluate project interventions and appreciation by the project beneficiaries.
- *Putting pressure.* A known appreciation by communities of engagement in M&E is they express to feel pressure to deliver expected results for the project intervention, which helps and motivates to implement activities in a timely manner. Simultaneously, the communities can put pressure on the project staff and IPs to deliver the inputs and technical assistance as planned.
- *Adjustments.* The gathering of beneficiary feedback on constraints and challenges helps to identify areas for improvement to enhance the implementation process. Through this learning-by-doing feedback mechanism, the communities can express ideas how to improve technical and implementation approaches of the project and adjust for the better.
- *Collective approach.* Through the participatory process, communities will feel engaged and involved and they will appreciate that their opinion is taken seriously. It will deviate from a hierarchal top-down process, but build on a shared participation and reciprocal feedback.
- *Verification and picking up technical issues.* A participatory monitoring process allows to verify if implementation is done according to set standards (compliance) and actually completed (verification of activities by sector specialists of work done by IPs). But it also will provide the opportunity to pick up technical issues related to implementation (construction/renovation or practices) and to tackle these technical constraints and challenges.

3.3 Evaluations

Independent external evaluations of the project, foreseen for the Mid-Term Review (MTR) and the Terminal Evaluation (TE), are key events in the project cycle. In particular, the MTR offers a moment of stocktaking and stepping-back and assessing if the project is progressing well towards the set targets and if implementation arrangements are still the best option, as envisaged during the time of project design. Evaluations rely heavily on information provided by the project's monitoring processes and products and form a quality check of these monitoring methods and products.

It is recommended to the project team to see the evaluations, and in particular the MTR, as an opportunity to adjust the course of the project, if felt necessary. It should be considered as more than a formal obligation, and a chance to share experiences and challenges and enter a constructive dialogue with the evaluation partners to tune and adjust the project to enhance impact and sustainability. An option to enter the evaluation in a pro-active manner, is by producing, as a project team, a self-assessment. Such a self-assessment can focus on key lessons and challenges, main successes and failures and suggestions to adjust and/or improve implementation approaches. The MTR offers also a critical moment to re-assess the set targets of the M&E framework and to decide if targets should be changed or added. A template for a Self-Assessment in preparation of the MTR is attached as ANNEX 6.

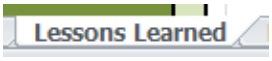
3.4 Documenting Key Learning and Good- and Best practices

It has been stressed earlier that it is important to record all significant outputs of the project, both the material and immaterial achievements as well as the process through which outputs were obtained. This should go beyond compliance ("did they do it?"), but focus as much as possible on contribution to outcomes and impact ("so what?"). The documentation effort is thus more than recording achievement, but includes the description of the process and the challenges and failures that were met and the learning that comes out of this process ("learning-by-doing"). As the project is in many ways a piloting experience, the M&E process should be directed towards capturing and disseminating quality knowledge products. Good- and best practices and key learning in the context of climate-resilient practices in the Dry Zone should be documented and presented in various products for enhanced communication, as detailed in the project's communication strategy (AF project 2015):

- Project brochures, leaflet, education document, poster, case study, fact sheets, billboards at project sites, and other communications material
- Online presence via Photo Essays, blog posts, Success Stories, and periodically updated project profile: www.undp-alm.org/projects/af-myanmar
- Photos and Videos
- Information pack to be distributed to regional, district and Township level institutions and organizations. The information pack could include: calendars, brochures, posters, T-shirts, caps, etc.
- Awareness raising materials for schools

The sectoral specialists should be aware of their responsibility to take the lead in their respective fields and document their experiences, both successes and failures. Often failures provide important messages to share and are often neglected as one tends to focus on reporting success stories. The communication strategy of the project contains clear recommendations, including communication document templates, to be followed and deserves attention of the project team in their efforts to produce quality knowledge products and to disseminate these widely.

See the section in the PPR on Lessons Learned under the **Lessons Learned** Tab:



In different sections explicit information is asked for specific lessons learned with regards to **Implementation and Adaptive Management:**

Table 7 *Overview of Lessons Learned with regards to implementation and adaptive management*

Implementation and Adaptive Management	Response
What implementation issues/lessons, either positive or negative, affected progress?	
Were there any delays in implementation? If so, include any causes of delays. What measures have been taken to reduce delays?	
Describe any changes undertaken to improve results on the ground or any changes made to project outputs (i.e. changes to project design)	
How have gender considerations been taken into consideration during the reporting period? What have been the lessons learned as a consequence of inclusion of such considerations on project performance or impacts?	

Another section, under the same Tab in the PPR needs to be filled out **only for the MTR and TE**, but contains a series of questions that deserve attention in general and that can be guiding to develop and document lessons learned:

- Climate Resilience Measures
- Concrete Adaptation Interventions
- Community/National Impact
- Knowledge Management.

Table 8 *Overview of Lessons for Adaptation from the PPR*

Lessons for Adaptation	Response
Climate Resilience Measures	
What have been the lessons learned, both positive and negative, in implementing climate adaptation measures that would be relevant to the design and implementation of future projects/programmes for enhanced resilience to climate change?	
What is the potential for the climate resilience measures undertaken by the project/programme to be replicated and scaled up both within and outside the project area?	
Concrete Adaptation Interventions	
What have been the lessons learned, both positive and negative, in implementing concrete adaptation interventions that would be relevant to the design and implementation of future projects/programmes implementing concrete adaptation interventions?	
What is the potential for the concrete adaptation interventions undertaken by the project/programme to be replicated and scaled up both within and outside the project area?	
Community/National Impact	
What would you consider to be the most successful aspects for the target communities?	
What measures are/have been put in place to ensure sustainability of the project/program results?	
What measures are being/could have been put in place to improve project/program results?	
Knowledge Management	
How has existing information/data/knowledge been used to inform project development and implementation? What kinds of information/data/knowledge were used?	
If learning objectives have been established, have they been met? Please describe.	
Describe any difficulties there have been in accessing or retrieving existing information (data or knowledge) that is relevant to the project. Please provide suggestions for improving access to the relevant data.	
Has the identification of learning objectives contributed to the outcomes of the project? In what ways have they contributed?	

In addition to these sections in the PPR, two templates are annexed to support the project team in documenting emerging good (or best) practices and lessons learned. Annex 7 is a template for Emerging Good Practices with distinct questions why a practice should be considered as a good practice and what are causal factors and the broader context. Annex 8 provides a template for documenting lessons learned with instructions how to describe the context and preconditions of the lesson learned, the challenges or negative lessons and/or the success factors behind a lesson learned.

3.5 Screening Procedures

UNDP has standing procedures to assess projects for any negative social or environmental impact though the SESP, Social Environmental Screening Procedure, January 2015 www.undp.org/content/undp/en/home/librarypage/operations1/undp-social-and-environmental-screening-procedure.html.
These screening procedures are applied to projects being developed, but screening procedure have also their value during actual implementation of project interventions. Although all planned interventions essentially are geared towards generating a positive impact for the beneficiaries, it could happen that **unforeseen effects** arise with negative implications. Screening while planning these activities is a method to **filter out possible negative impacts** or to minimize these negative impacts through mitigation measures. Such screening procedures could include to ensure that the project is **being inclusive** and does not exclude certain vulnerable groups from participation. It should also screen that access to natural resources is not limited to community members if through group formation agreements are made for use and access to land and resources. Screening should also not be limited to just the planning phase, but should be continued during and after implementation to assess if no unintended negative impact or effects are reported. The participatory monitoring of activities with community members should bring forward and alert these possible negative impacts.

Social and environmental screening is the process used to identify, avoid, and mitigate the potential negative environmental or social impacts of planned interventions. Screening is more than a single event during the planning phase, but forms a continuous iterative process during planning, implementation and evaluation and impact assessment. Two distinct steps can be distinguished in the screening process:

- **Initial screening out** of intervention and activities, during the planning stage, that fall outside the project mandate or are not in line with overall project objectives;
- **Continued screening**, as part of the participatory M&E approach, to see if any negative impacts arise that have not been foreseen during planning, but which need mitigative action, or should be reconsidered or discontinued.

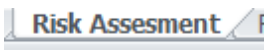
During the project preparation and formulation phase the emerging project design was screened for potential negative impact making use of the Social and Environmental Screening Procedure (SESP) of UNDP. Now the project has initiated implementation, one still has to be careful that possible adverse and undesirable effects could develop as a consequence of the implementation of certain activities. This can be done with help of a simple screening procedure, to be carried out generally for a planned activity (activity level, not for specific implementation in village X or Y, but at AWP level). Recurrent screening should be included in participatory M&E exercises during and after implementation, to pick up any negative feedback or other unintended adverse impact. ***It is not the intention to burden the project team and implementing partners with comprehensive (paper) documentation, but it is recommended to be continuously alert for potential negative impacts and monitor implementation progress and try to identify possible indirect or unforeseen adverse effects. At the same time, it is valid to say that the project interventions will contribute to enhancing livelihood conditions and improving environmental conditions. Significant negative social and environmental impacts are considered to be unlikely.***

More details for the screening procedure are attached in ANNEX 9.

Linkage with Risk Assessment

It is not anticipated that the screening of project activities during implementation will result in identification of major risks to the overall project. As long as appropriate mitigation measures are put into place and sufficient attention is given to the perceived possible negative impact, the overall effect to project should remain minor. The ProDoc in Table 5 (pages 75-76) provides an overview of identified risks, impact probability and proposed mitigation measures, attached as ANNEX 5. Proper mitigation plans and identification of potential adverse effects should safeguard the project from additional risks.

However, in the rapid transition period the country is presently going through, the project team has to be alert to identify new or unforeseen risk for project implementation. If these arise, they should be added to the risk table and be duly addressed.



The yearly progress reporting in the PPR format asks specifically under the Risk Assessment Tab if new risks have been identified or if risk perception of exiting risks has changed. If so, these need to be recorded in the PPR and the risk table (ANNEX 5) needs to be updated accordingly.

3.6 Quality assurance and compliance

An important element of the monitoring process is not only recording and documenting the project's progress and achievements and eventual outcomes, but also to ensure that the inputs and outputs are of proper quality and that existing norms and regulations are followed (**compliance**). This quality assurance task is a responsibility of the project team members with their respective technical expertise and experience. It is also their role to monitor, supervise and guide the implementing NGOs/CSOs in quality delivery. Quality assurance goes beyond just handing over quality seedlings to community members, but includes proper training on planting and management practices to enhance survival rate of these seedlings. Where possible and effective, existing rules and regulations should be followed, such as existing Community Forestry Rules. Also in the procurement process the project should pay attention to ensure that supplied inputs and services meet the required specifications (compliance with specifications as set out in the ToRs and procurement notices (e.g. registered and certified seeds).

3.7 M&E as continuous process

Monitoring and Evaluation is a continuous process, which is not limited and determined by deadlines and reporting milestones. It forms a non-stop "finger at the pulse" of the project to assess if tangible progress is made, what challenges arise and what opportunities exist or could be explored. It is a process that goes beyond inputs and achievements, but towards outcomes and impact and describes, following the piloting character of the project, the lessons and learning in dealing with climate change extremes in the Dry Zone. The M&E plan as presented in Table 5 indicates the frequency and timing of specific M&E activities, but this should be interpreted as only indicative. M&E activities will be a continuous responsibility of the project team and the project stakeholders.

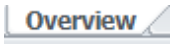
3.8 Reporting formats and timeline

The AF project has to report on its progress, challenges and achievements making use of reporting formats. In this section these reporting format templates are presented and discussed. The formats are intended to report in a concise and focused manner on key information brought forward by the M&E process.

Quarterly Progress Reports. The quarterly progress reports are required by UNDP each quarter and are the responsibility of the project manager. A template for the quarterly progress report is annexed as Annex 11. It contains three main sections:

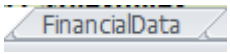
- *Project Risks and Issues log*, updating the existing risk table if any new risk have been identified or if risk status has changed,
- *Project Performance*, a description if the implementation progress in a short bullet-wise overview at output level, and
- Activity Performance, a narrative at sub-output level with the requirement to fill out a table, divided over the three project Components.

Annual Project Performance Report (PPR) (*version of January 2016, with AF section*)
The annul Project Performance Report is required by UNDP and AF to be completed annually by the AF project in the second quarter of each project year. The PPR is a comprehensive report in the form of a excel sheet, which need to be filled out, divided over various tabs. These tabs and related information sections are discussed in the following section. An important tab is the AF results tracker, which requires reporting on core AF indicators and key outcome and output indicators (the AF results tracker needs to be submitted for baseline information and at MTR and TE). The latest version of the PPR has been discussed with the project team and a digital copy, with detailed comments is handed over to the project manager and technical specialist.

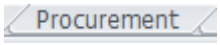


Overview Tab: General Project information, will mostly remain the same. Update project contacts if and when needed

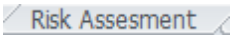
→*List documents/ reports/ brochures / articles that have been prepared about the project.*
This needs to updated according to tangible products of the project in the reporting period.



Financial Data Tab: Report disbursement, expenditure and planned expenditure. Also give indication of co-financing as committed actually has been realized (in-kind contribution of Government Department staff (salaries) and office space etc.), see comments made under 3.1.



Procurement Tab: Report all contracts awarded with details (amount, contracted party, date etc.). Report all received bids and justification for selection of the winner.



Risk Assessment: Overview of identified risks, current status and possible changes and mitigation steps.
→*List all Risks identified in project preparation phase and what steps are being taken to mitigate them(see Annex 5, Risk Table*
This needs to be updated as changes in or new risks are identified. Special attention for:
→*Critical Risks Affecting Progress (Not identified at project design) None*, and
→*Risk Measures: Were there any risk mitigation measures employed during the current reporting period? If so, were risks reduced? If not, why were these risks not reduce.*

→ ***See section 3.5 Screening Procedure on identification of new, unforeseen risks and how to mitigate these.***

Rating Tab: Rating on implementation progress with progress on key milestones per output with expected progress and progress to date. To be reported by the project manager and by the implementing agency (UNDP CO Pillar coordinator). Reference is the table with identified milestones in the ProDoc (pages 90-96), with **specific milestones indicated in red** and **gender-specific indicators indicated in green**.

Project Indicators Tab: Overview table of indicators at Objective, Outcome and Output level with baseline level, progress to date and End-of-Project targets. To be taken from the latest Result Framework version.

Lessons learned Tab: Overview of qualitative measures and lessons learned. Contains sections on:
→*Implementation and Adaptive Management*, added with lessons for adaptation to be defined at MTR and TE. See specific comments under 3.4.

Results Tracker **Results Tracker Tab:** Specific overview for AF projects. See for specific guidance for this tracker:
www.adaptation-fund.org/sites/default/files/Results%20Framework%20and%20Baseline%20Guidance%20final.pdf
→*Please select the relevant Fund level Outcome and Output indicators that align with the project objectives and outcomes*. A new PPR results tracker as of January 2016 requires alignment with the AF strategic results framework and tracks indicators with baseline, targets at End-of-Project and at MTR and TE. **The Results Tracker therefore requires reporting only at baseline, MTR and TE. See the digital copy of this file with comments for various indicators.**

Annual scoring achievements against planned targets. At the end of each year of implementation the project team should report on the actual achievement for that year compared to what was planned for each activity. In Table 4 an example is presented how per sector the actual achievements can be reported with related details. This information will be the key data source for the progress reporting under the project indicators tab of the PPR and in the Results Framework. It is recommended to report the progress achievement on an annual basis with all details available (how many hectares achieved under output 1.2 in 2017, how many shallow tube-wells constructed in2017, specifics on number and sex of participants, beneficiary households, inputs provided (x kg of seed variety Z, W# of tree seedling type Y), but also on a cumulative basis. In the project indicator tab section the cumulative achievement (summation of project years since inception) should be reported, as base for comparison with the target set for the End-of-Project.

3.9 Implementing Partners (IPs) and M&E

The direct implementation modality of the AF project requires the project to make use of service providers (implementing partners) to implement the activities as foreseen in the ProDoc. Divided over the various components and sectors, the sector specialist have compiled work packages (WPs). These WPs contain distinct activities to be carried out by the IPs in their respective thematic areas and geographic regions. Implementation Guidelines (Guiding Principles) have also been written for these WPs, detailing to the IPs how they are expected to implement the tasks, complemented with reporting formats. The IPs will be guided in a two-day Orientation Workshop on these Implementation Guidelines, in which specific attention will be given to the expected planning process at village level by the IP and the implementation process.

In the ToR of the IPs a distinct section on Monitoring and Reporting is included which stipulates:
*"The Implementing Partner is expected to submit updated work plan and **monitoring framework with clear indicators prior to implementation**. The Implementing Partner is expected **to provide monthly progress report**s including detailed updates on implementation progress, results against deliverables and forward planning, one week following the end of the month. Also **provide a comprehensive narrative and financial completion report** including lessons learned, one month following the end of the project. The Implementing Partner will agree on the specific monthly, quarterly and completion reporting formats. In addition, the Implementing Partner is expected to maintain regular communication with technical specialist and the project team in Patheingyi, Mandalay to provide regular feedback on implementation progress, results, challenges and limitations."*

Per activity a detailed description is given of expected outputs with definition of deliverables and measurable outputs, see Table 9 for an example.

Table 9 *Example of expected deliverables and measurable outputs of an activity of a Work Package*

No.	Deliverable	Measurable outputs
1	Submit updated work plan, monitoring framework and clear indicators for UNDP review and endorsement	Work plan, monitoring with indicator submitted
2	Prepare detailed questionnaires on "Participatory assessment of climate-resilient farming methods"	Assessment matrix
3	Formulate climate-resilient training topics which are relevant to agro-climatic conditions of Shwebo and Monywa	Complete set of training modules
4	**Trainees' selection:** Set criteria for trainee selection both farmers and extension staff *Farmer trainee numbers: 2 trainees per village - one male & one female; 120 trainees for Shwebo and 100 for Monywa* *DOA extension staff numbers: 15 trainees per township from township, district and regional* *CDD extension staff numbers: 5 trainees per township including female staff*	Set criteria Selection process Complete trainee lists before training 240 trainees
5	Finalized lists of trainees (Validate with village authority and trainee' consent)	Confirmation of trainees' consent

A **Completion Report** (to be signed by the sector specialist) is a document to certify satisfactory completion of a specific activity as described in the contract of the IP. The IP is responsible for preparing a Completion Report for the evaluation by the sector specialist. The completion report will document that beneficiaries have received the support provided through the project assistance and the overall satisfactory completion of the activity.

IPs are expected to organize and conduct regular **coordination and review meetings** at Township level to ensure that all Township stakeholders are properly informed of implementation progress and challenges.

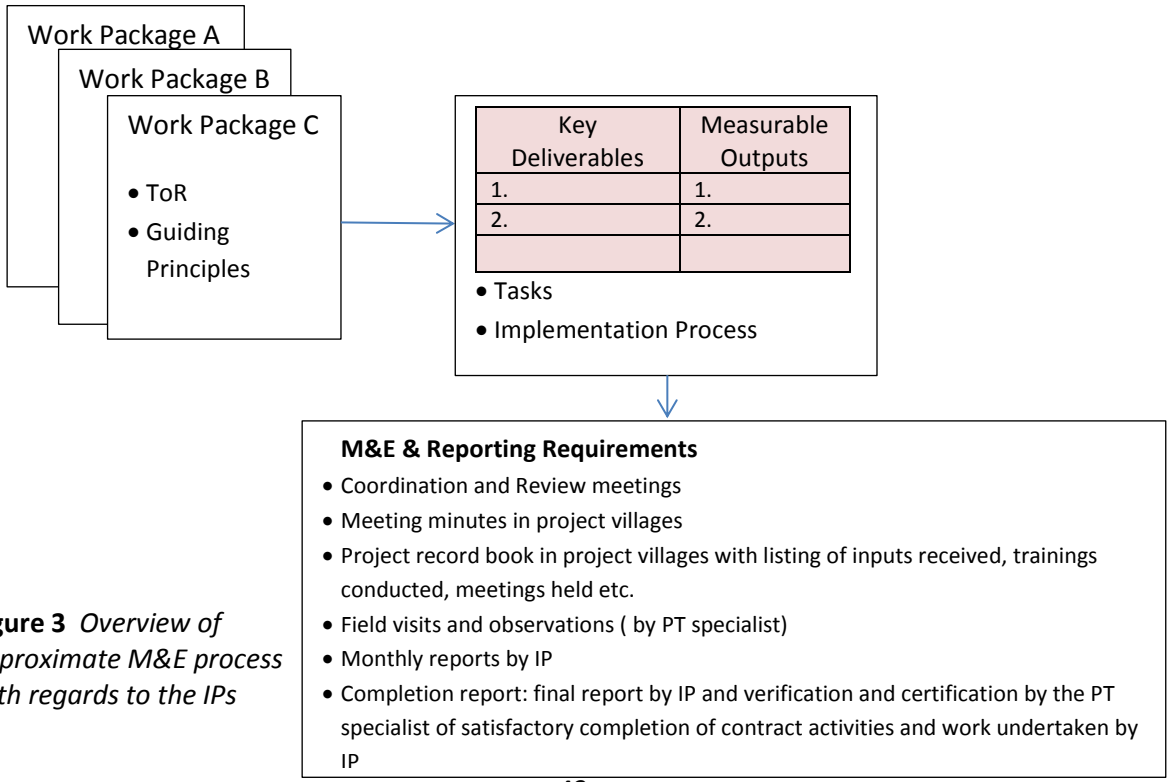


Figure 3 *Overview of approximate M&E process with regards to the IPs*

3.10 Sustainability

In reporting and documenting project activities and interventions sustainability of impact forms an important dimension to monitor. Ways to enhance post-project permanence of impact, such as for example community agreements on management of water infrastructure or natural resources (WUGs and CFs), are important to document and deserve special attention. In the Results Framework these various community agreements have been explicitly added, as important indicator for sustainability post-project. Approaches and interventions that offer good scope for replication and adoption (beyond target villages or target Townships) are often good practices and should be considered to be incorporated in an emerging **project exit strategy**. At this moment of time, as actual field implementation has yet to start, this is still relatively premature, but as implementation progresses and lessons are learned, it will be necessary to draft a project exit strategy, in particular running up towards the MTR.

3.11 Gender

A balanced participation of both sexes is an ideal approach each project should strive for. Reality is often more complex and proactive approaches need to be followed to ensure the project to be inclusive and offering access to project activities and inputs to all targeted vulnerable groups, including women-headed households. A comprehensive gender approach goes beyond simple recording and reporting of participation information with sex disaggregation, but should be serious in recognition and documentation of women's role in rural communities (getting water, transplanting, weeding, harvesting, knowledge/expertise etc.).

In the overview of project milestones, in an untitled Table in the ProDoc (pages 90-96), separate attention is given to gender disaggregated milestones for key planned activities, see ANNEX 10. These milestones, mostly refer to proactive actions of the project towards gender mainstreaming in terms of "encouraged", "facilitated", "monitored", "clearly identified", "target primarily women", "data will be gender-disaggregated", "gender-disaggregated participation record", "gender-differentiated vulnerabilities" and "will have women representatives". In the M&E effort of the project team this has to be continuously taken into mind in the context of a proactive gender project strategy.

3.12 External independent factors: climate

The AF project is geared towards reducing the vulnerability of rural communities for climate change induced impacts through a series of targeted interventions to enhance access to water, improve livelihood conditions and access to climate-resilient agriculture and livestock practices and improve communication of climate risk information to village communities. The climate change impact is primarily driven by climatological parameters in the form of precipitation (expressed in amount and intensity, number of days and length) and temperature (expressed in average (or mean) and minimum and maximum temperatures). The variation or temporal variability of these parameters are to be considered as independent and external factors, over which the project has no control. These factors however are of key importance for livelihood conditions of the target communities. A good monsoon season with above average and timely rainfall will boost agricultural yields, improve water availability and positively impact livelihoods. Whereas a bad monsoon season with below average and late or short rainfall will seriously hamper agricultural yields, deteriorate water availability and negatively impact livelihoods. The documentation of these key climatological factors is therefore important to weigh the actual impact the project is able to make. The statistical data base of the Government of Myanmar, www.mmis.gov.mm, gives access to key climatological parameters for the country, but only 3 out of the 5 project Townships are listed (Monywa, Shwebo and Nyaung U): By SUBJECT: GEOGRAPHIC/CLIMATE/monthly rainfall at selected stations, AND, monthly mean temperatures at selected stations. Other sources of climatological data are DMH and DoA. It is recommended to collect and report these data explicitly for all 5 project Townships for later impact assessment and to better weigh the effect of project interventions in the light of the reported climatic variations and extremes.

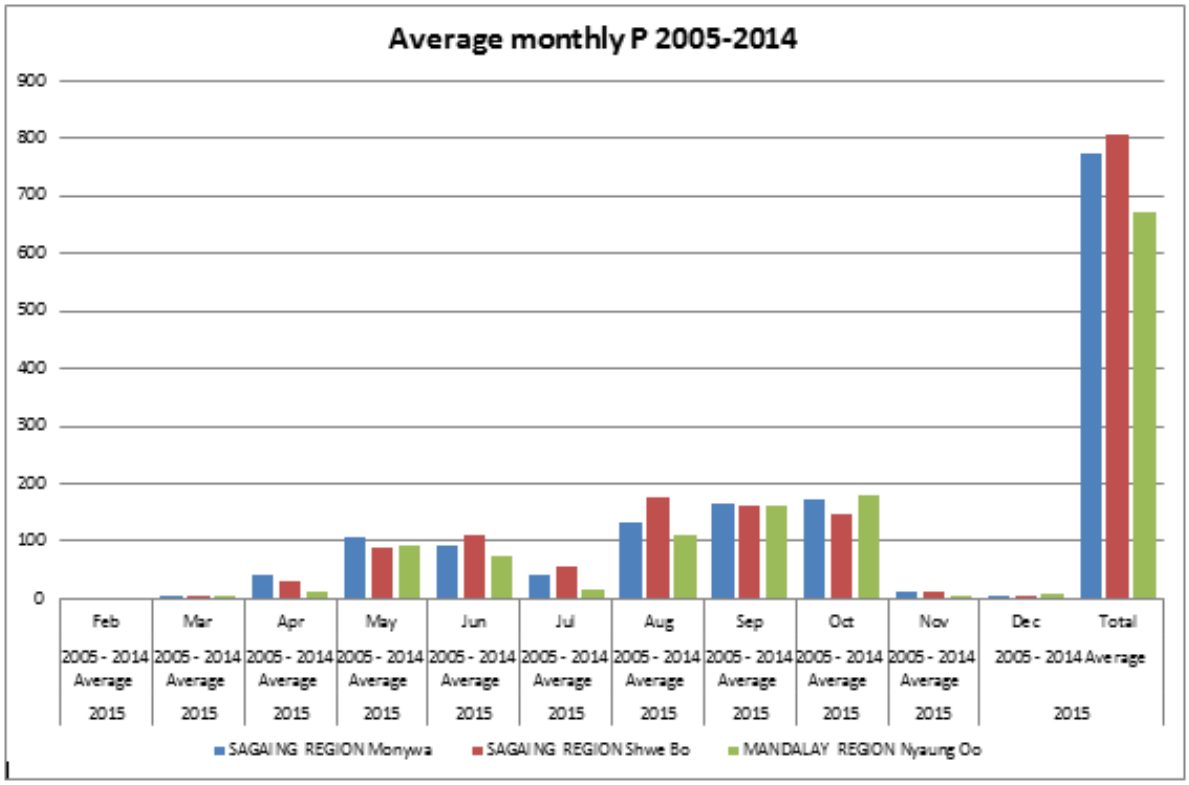


Figure 4 *Average monthly precipitation for selected Townships for the period 2005-2014 (MMIS data)*

3.13 M&E Officer as focal point for effective M&E management

The position of M&E officer for the AF project team will be essential to manage the various M&E tasks. The M&E officer will be responsible to gather and collect the needed information from the sector specialist in a timely and comprehensive manner. The officer will also have to take care of compiling this information into M&E formats for regular reporting:

- quarterly reports with a distinct M&E section on progress and challenges,
- the annual PPR with progress reporting on project indicators and the results tracker for AF,
- screen the project implementation for possible new risks and if identified report these in the risk table and update the PPR under the risk assessment tab,
- updating achievements scored against set targets for the various components and outcome and output areas (based on the AWPs and actual achievements and to reflect this cumulatively in the Results Framework and under the project indicators tab of the PPR),
- maintain and update the project data base and include actual inputs and support provided to individual households,
- record and update the meteorological/climatological information gathered for the 5 project Townships as important independent external factor for later impact assessment and to better weigh the effect of project interventions in the light of the reported climatic variations and extremes,
- guiding the team in collecting comprehensive and detailed information on implementation progress:
    - Actual numbers of trainings and participants, disaggregated by sex,
    - Actual numbers of inputs supplied (kg of seeds, number of seedlings and types, etc.),
    - Actual numbers of physical infrastructure constructed or rehabilitated (pumps, wells, ponds, channels etc.),
    - Actual areas of land (acres / hectares) treated with climate-resilient practices (and by what practices: soil- and water conservation techniques (which?), AWD agriculture, agroforestry etc.

- Establishing unit costs per practice/per area (per pump, per pond, per ha CF etc.). These unit costs will be important to report and share with stakeholders to facilitate replication and scaling-up of climate-resilient activities.
- Collecting information on challenges, constraints, issues, conflicts, failure and in particular the cause-effect relation: what are driving factors behind success and behind failure?

Another important task for the M&E officer will be to collect the lessons learned and emerging good- and best practices, based on the piloting in the Dry Zone. The officer will have to encourage the sector specialist to document striking examples as case studies and fact sheets to communicate with a wider audience and disseminate the key learning with regards to adaptation to climate extremes in the Dry Zone.

3.14 High-resolution satellite imagery as communication tool

Open access to high-resolution satellite imagery through web-based applications as Google Earth provides the opportunity to acquire detailed georeferenced landscape imagery free of cost. In combination with a GPS and marking points of interest for project activities (villages, irrigation channels, forest plantation areas etc.) these images offer great communication power. They can be excellent material to illustrate fact sheets and case studies or stories about best practices, with description of where, what and how the project learned lessons or developed good practices. An important co-benefit is that these images are easily understood by community representatives and can be used for demarcation of areas for project intervention (or even actual measurement of areas, in combination with GPS data). The landscape of the Dry Zone is excellent to showcase the land-based issues with climate change, experienced by the local communities. The imagery will help to underpin and illustrate the land-based nature of the project. The project Townships apparently are all covered by recent HR satellite imagery, which is a wealth of information that should be explored.

Figure 5 *HR satellite image of Kyee Oke village, Monywa Township. GPS location of village meeting. Note the village pond which is drying up, which forces the population to make use of a tanker for water supply already in January. The pond is used by 4 neighbouring villages and the deep tube-well in the village is presently dysfunctional because of bad quality.*

3.15 Project Database

A comprehensive database has been compiled by the project based on secondary information sources of the 5 project Townships and the project target villages, combined with additional primary information collected by the project team in the Townships. The database is built up in Excel and has a primary division into the 5 townships. The project database offers essential baseline information and is and will be used to extract quantitative information on beneficiaries. It offers also the opportunity to store all project interventions and record beneficiary numbers and details of inputs received.

For each Township the project villages are described with:

- Village tract code
- Village code (MIMU)
- Village name
- Village code (AF project)

For each project village individual household profiles are compiled with information on:

- Name of household (head)
- Name of father
- Beneficiary code (AF project)
- Number of male and female in the HH
- Total number of persons
- Occupation
- Labour force in the HH
- Area of land:
  - Upland (Dryland)
  - Orchard
  - Paddy
  - Irrigable area
- Livestock types and numbers
- Fish ponds
- Physical infrastructure/assets for water access: pump, well etc.
- Farm machinery [type]

It is the intention to make use of the present database to record, at individual household level, the type of inputs each beneficiary has received and in what project activities (as trainings, farmer field schools etc.) the beneficiary has participated. It will require that the project team gives clear instruction to all IPs to record beneficiary household in a uniform manner, compatible with the present data base build up (linkage per individual household with code). Per project component columns will be added to record distinct project activities and inputs. This will offer the project team a powerful means to have a quantitative overview of distribution of inputs and degree of participation.

4. Concluding Remarks

At the end of this report a number of concluding remarks are presented. These concluding remarks are partly outside the precise scope of this report, but are considered to be valuable to be shared with and considered by the project team and its stakeholders. The remarks are linked to the present set-up and implementation modality and approach of the project and based on the discussions with the project team members and stakeholders and the field visits during the first mission.

1. The project is faced with **the dilemma of being inclusive**. The present ambition level with reaching out to all households in the 280 target villages in the five project Townships brings along a distinct **risk of dilution of impact**. Being inclusive, through a community-based, bottom-up implementation approach, means reaching out explicitly to vulnerable groups. It also entails, at the same time, giving access to project inputs and activities to less vulnerable households. This can result in spreading too thinly the project support to many with a real risk of eventual lack of visual impact, if not tangible impact.

2. To address this perceived risk of dilution of impact one could consider **the option to focus on some distinct geographic areas to demonstrate tangible impact (focal villages/demo plots** etc.) for advocating (integrated) climate-resilient approaches. By bringing together a number of interrelated climate-resilient practices in one location, such a site will have greater visual demonstration power to showcase best practices during farmer field schools, exchange visits and field visits of interested stakeholders and partners. This could be part of a two-tier approach in which the project remains as inclusive as possible, giving access to project support and interventions to all target villages, but targeting a limited amount of budget and attention on selected focal sites. Farming households can be rather skeptical in taking up and adopting new practices and often will wait and want to see first how these practices perform. Targeted demonstration sites will be helpful in convincing these farmers of the beneficial impact of climate-resilient best practices.

3. A number of **long-term land-based interventions** are difficult to be taken up by vulnerable households. Activities such as community forestry, plantation in micro-watersheds and soil- and water conservation techniques and practices will need considerable time before the benefits will be tangible for the beneficiaries. Especially the more vulnerable households will have more difficulty in participating in these activities as their land base is mostly more limited and they often have a more limited labour force in the household. The long-term land-based interventions often require considerable labour, which could be a constraint for participation. Most importantly, these vulnerable households need direct impact of project activities and interventions as they need food and cash and direct livelihood benefits and have less buffers to wait for the long-term benefits. A possible pathway to address these constraints and risk of exclusion of vulnerable households, is to consider forms of packaging direct short-term inputs and/or benefits with the indirect long-term activities: e.g. supply of quality climate-resilient seeds and a treadle pump with participation in soil-and water conservation interventions.

4. The project team is faced with a dynamic project environment in which there is a need for **adaptive management** to adjust to the changing conditions and learning curve typical for a piloting set-up. Although within the AF context the project outcomes and outputs cannot be adjusted, project activities can be adjusted (added or changed) in reaction to advancing insight and learning. The project team and the supporting entities of PSC and TAG should feel the freedom to adjust project activities, in line with initial defined outcomes and outputs, but based on their joint learning and understanding of driving factors for emerging good practices and emerging constraints and possible failures.

5. The close collaboration between UNDP and the focal agency of the Government of Myanmar, the Dry Zone Greening Department, is considered to be a key factor for successful implementation. It

ensures continuous exchange of information between the project partners and infusion of local expertise into the implementation process. It also emphasizes the shared responsibility of the project partners in delivering meaningful impact to the beneficiaries in the Dry Zone. The close exchange, with monthly project meetings with the joint teams, will be essential to enhance sustainability of impact post-project with clear governmental engagement, a sense of shared responsibility and ownership.

Annexes

1. Transcripts of consultation meetings
2. Time schedule
3. Annual targets of the various sectors as break-down of the EoP targets
4. Back-to-Office-Report (BToR) Template
5. Risk Table
6. Self-Assessment Template
7. Emerging Good Practice Template
8. Lesson Learned Template
9. Screening Procedure: examples and mitigation plan
10. Table of project milestone with indication of milestones in red and distinct gender-disaggregated milestones in green
11. Quarterly report template

Annex 1 Transcripts of Consultative Meetings

Dry Zone Greening Department (DZGD)

Tuesday 19th January, DZGD Office, Mandalay
Mr. Ba Kaung, Director of Planning, DZGD, Ministry of Environmental Conservation and Forestry (MOECAF), Karma Rapten, Myint Wai, Hans van Noord

Courtesy Call to U Ba Kaung, as Director of Planning of DZGD and key partner and stakeholder of the UNDP-AF project. A brief explanation was given on the objectives of the assignment and the main deliverables.

- The mission will focus on two distinct outputs. The first output is the development of a M&E Framework for the project, based on the present Results Framework, to guide the project in the monitoring of its progress over time.
- The second output is the design of a survey to assess the impact the project is able to make on specific areas of interest: water access, food security and livelihood of the landless and marginal farmers. This will require a different approach with an initial survey at household level to establish a baseline and another survey toward project completion to assess the impact the project has been able to make.
- As the DZGD is the key partner for the project, it is important to hear the views of the Director on M&E of activities and their role and expectations in this process.
- Mr. Ba Kaung expressed his interest in a proper M&E framework and the role the DZGD plays in the project, as main partner. He stressed the importance of the involvement of the key stakeholders in the M&E cycle and the need for joint monitoring events.
- The upcoming Technical Advisory Group (TAG) meeting will be important to bring together the views of the various stakeholders and to brief the stakeholders on the progress and key findings of the M&E Framework development.

Department of Meteorology and Hydrology (DMH)

Wednesday 20th January 2016, DMH Office, Mandalay, 10.00-11.00

Mr. Kyaw Lwin Oo, Director Upper Myanmar region, DMH
Karma Rapten, Myint Wai, Hans van Noord

Mr. Kyaw Lwin Oo has been involved with the project since the inception stage and is happy to provide any information needed and to participate in the project activities, in particular the activities under Component 3, related to climate and weather scenarios, forecasts and warnings. In the project preparation phase he has shared information on the longer term data series related to key meteorological parameters such as temperature and precipitation (T and P) and length of monsoon period.

- DMH has functional (hydro)-meteorological stations in all 5 Townships of the project area. These stations have long-lasting data series (going back 40-50 years), which is important to set reference levels for key meteorological data as temperature and precipitation. This will provide the project reference levels to compare with during its implementation period. It is important for the project to collect these data series for the 5 Townships and compile/derive average levels of T and P for these stations as baseline levels, taking into account the inherent climate variability.
- DMH compiles a simple drought index, based on a 10 day period average compared to the historical average for that period. If rainfall is below that historic average it can be designated as a drought or dry period. DMH intends to use a more advanced method in future to indicate dry periods (as developed and applied by ESCAP).
- DMH has only very limited knowledge and expertise on long-term forecasting and the forecast therefore have been limited to a relatively short period (up to 2 days).
- Mr. Kyaw Lwin Oo makes use of a Facebook page, since 1st of January 2015, to disseminate meteorological information to the broader public, which is followed by up to 100,000 people. He provides simple forecasts in plain language to reach out to a broad section of the general public.
- It was discussed that there would be good scope to develop, under Component 3 of the project, a mobile application to share meteorological information with rural communities, to bridge the information gap between Township administration levels and the villages. DMH will think of opportunities to collaborate on this idea.
- DMH has also the formal mandate for flood warning. This is centrally organized and any warning message has to be directed to national level administration (part of the DRR command structure). At present this system is still rather coarse and rigid and takes considerable time to issue formal warnings to the population involved.
- DMH is also the institution issuing information to the DRR committee on cyclone conditions. The situation is rather similar to the flood warning set-up with a relatively slow response system, due to the existing top-down structure.
- DMH functions under the Ministry of Transport.
- As of now, there is no formal national system for forest fire warnings. Although the prolonged dry spells of the Dry Zone could induce risk of forest fires it apparently is not perceived as a serious hazard to deal with. The Forestry Department apparently has no warning system for forest or wild fires in place (to be double checked with the Forestry Department).
- The present El Niño Cycle could have implications for the upcoming 2016 monsoon season in the Dry Zone. Historical trends suggest that the present cool January conditions could coincide with a relatively active monsoon season with above average precipitation.

Livestock, Breeding and Veterinary Department

Wednesday 20th January 2016, DoL Office, Mandalay, 13.00-14.00

Mr. Kyaw Kyaw Swe, Deputy Director, Department of Livestock Mandalay
Karma Rapten, Myint Wai, Hans van Noord

Mr. Kyaw Kyaw Swe has not been involved with the project so far, as other colleagues have participated in previous meetings in the project preparation and start-up phase. He was shortly briefed by the PM on the objectives of the project and our intended collaboration with the Livestock Department. Our interest in the LBVD's role in implementation, supply of livestock and their involvement in M&E in project implementation was explained and views on their role with regards to M&E were solicited.

- LBVD's experience is that in the Dry Zone sheep and goat are most suitable and provide better productivity. The landless, a prime beneficiary group of the project, have no access to their own grazing land, but can make use of common grazing land.
- Karma informed if LBVD is able to buy livestock themselves and what kind of distribution system do you make use of? Mr. Kyaw Kyaw Swe responded that there are different supply possibilities.
    - Linkage to private providers to get access to livestock to buy
    - Through the system of the Emerald Green Village Project, a Government funded project, with a focus on landless and small farmers. LBVD has developed bye laws with recipients.
- LBVD collaborates with the University of Veterinary Sciences on the development of climate resilient sheep and goat. The research however, is carried out in India.
- Animal Feed and Fodder is the mandate of a separate section of the LBVD .
- Over the years, the population of sheep and goat has been stable to slightly increasing in the Dry Zone, but the cattle population has been decreasing because of the ongoing mechanization (change of draught animal for tractors/power tillers) and the selling of cattle for good prices to a.o. China.
- The LBVD carry out the livestock census and can provide relevant baseline information on the 5 Townships of the project area. The Mandalay LBVD office has the Census data for only 2 Townships
- The demand for local variety poultry has been decreasing, while the demand for hybrid varieties is on the rise.
- To what extent does LBVD follow-up after supply of livestock? Is there a monitoring system in place aimed at survival rate, yield, milk production, income from produce/meat sold etc.? Mr. Kyaw Kyaw Swe explained that in the Emerald Green Village model there a village committee is formed that organizes community meetings and discusses the interest in supply of livestock (types, quantities etc.). Cash is transferred from LBVD into the committee account and the committee purchases the livestock through the contacts provided by LBVD. DLBV supports quality control and veterinary services. The system regulates that the committee members pay the revenue of the offspring they sell to the committee.
- DLBV confirmed that the project can make use of this existing model of a village livestock committee, as developed for the Emerald Green Village Programme. In contrast to this, LBVD supplies directly to committees in the so-called Livestock Banking System.
- There is also a third way of supply, which is direct contract farming. After supply by LBVD the first offspring is retained by the owner, whereas the second and third offspring will go to LBVD.
- The committee monitors at monthly intervals and looks into the population and possible offspring.

- The Livestock Banking System is relatively new, just a year old. Therefore no follow-up monitoring data is yet available.
- It was discussed and agreed that the project will seek advice from LBVD as how to proceed with regards to livestock supply and has collected the existing agreement format with the committee (Emerald Green Village model)
- LBVD also takes care of veterinary services through its extension system (vaccination, etc.).
- LBVD also supplies livestock to farmer groups, such as poultry groups.

Department of Agriculture

Wednesday 20th January 2016, Department of Agriculture Office, Mandalay, 15.00-16.00

Mr. Myint Oo, Director, Department of Agriculture, Mandalay
Karma Rapten, Myint Wai, Hans van Noord

A brief explanation was given to Mr. Myint Oo on the objectives of the consultation meeting in the context of the M&E consultant his assignment to develop a M&E framework for the AF project. As key stakeholder for the project Mr. Myint Oo is asked about his role in the implementation of the project and standing procedures within his Department for monitoring of activities at field level.

- DoA is responsible for two Townships of the AF project in the proximity of Mandalay.
- Quality seed for drought resistant crops is available through the agricultural research institution and a seed bank for climate resilient crop varieties.
- Extension staff in the Townships carry out field research on climate resilient crop varieties:
    - E.g. trials with contract farmers on shortened life varieties (shorter grow period, earlier harvesting)
    - Paddy: research into short-life hybrid rice varieties, that require less water. (No SRI trials have yet been carried out by DoA, although in-country experience is existing, see http://sri.ciifad.cornell.edu/countries/myanmar/index.html).
- Irrigation is only limited to some areas in the proximity of larger rivers, making use of electric pump systems. The Water Resources Utilization Department and Irrigation Department are responsible for these interventions.
- In general, more technical support can be given by DoA here at regional level, whereas implementation level support and guidance can be provided through the DoA staff at Township level.
- DoA is responsible for the Agricultural Census, which is essential to establish a sound baseline for the project. It is surveyed at Township level and looks into types of crop of the farmers and specific yearly yield.
- Mr. Myint Oo recommends the establishment of demonstration plots and/or farms, as an effective method to show improved agricultural practices and climate resilient crop varieties.
- He also suggest to give preference to crops and varieties that are in demand by the recipients, but test these varieties at farm level and limit the overall number of crops.
- DoA has only limited experience with SLM approaches and only some limited research has started.
- Mr. Myint Oo also strongly recommends the farmer field schools: they now have only a limited geographical scope, but could be expanded through the project support. At the schools a broad range of subjects is taught:
    - Seeds/seeding
    - Weed management
    - Harvesting approaches
    - Post-harvest management etc.

  Through the FFSs one can slowly change the mindset and awareness levels of the farming communities.
- Karma Rapten asked what are the best inputs to provide for improved Post-Harvest management? Mr. Myint Oo answered that at individual farmer level this would be silo's, but at group level (up to 100ac) this can be a complete set-up with a storage facility, (electrical) dryer and thrasher.
- Information of climate change and climate change resilient crops and cropping methods is now brought to famers mainly through the existing network of extension staff of DoA, through face-

to-face meetings. Specific meteorological and/or climatic information is produced by DMH and send to the Township and district level, making use of faxes.

- For soil fertility management famers generally rely on a combination of chemical (mostly compound) and organic fertilizers. Farmers practice leaf fertilizing or foliar spray. (Foliar application has been shown to avoid the problem of leaching-out in soils and prompts a quick reaction in the plant).

Water Resources Utilization Department (WRUD)

Thursday 21st January 2016, WRUD Office, Mandalay, 10.15-11.30

Mr. Win San Director Water Resources Utilization Department, Mr. Min Min Zaw, Executive Engineer and Mr. Khyaw Swa Oo, Distict Officer WRUD.
Karma Rapten, Myint Wai, Hans van Noord

A brief explanation was given to Mr. Myint Wai on the objectives of the consultation meeting in the context of the M&E consultant his assignment to develop a M&E framework for the AF project. As key stakeholder for the project Mr. Win San is asked about the role of WRUD in the implementation of the project and standing procedures within his Department for monitoring of activities at field level.

- Mr. Win San explained that the WRUD has two main activities:
    - Pump irrigation projects (14 in the 2 Townships they are responsible for: 9 in Nyang U and 5 in Myingyan) with a total area of 55,000ac.
    - Tube wells, also meant for irrigation (main function) and to a lesser extent for drinking water supply.
- Water User Groups have been set up for the pump irrigation projects, with monthly to seasonal monitoring by the WRUD.
- According to the agreements/bye-laws signed by the WUGs they are responsible for the feeder channels leading to the villages and farmer fields. The main irrigation channel and the pump facility are maintained and monitored by the WRUD. An official hand-over document is given to the WUG, but it seems that no detailed bye-laws or formal agreements are defined with indication of the rights and obligations of the WUG: e.g. fees, penalties, sanctions, maintenance scheme/duties etc.
- The pumps utilized are electric and the electricity bills are paid by WRUD directly to the related government agency. Farmers need to pay a fee for the irrigation service provided and pay 6,000/ac for paddy land and 3,000/ac for dryland crops.
- Tube wells are another key area for the WRUD. Before installation of a tube well the WRUD does a feasibility study, looking at water quality and depth of the water table/aquifer. For irrigation use the water is tested for EC (electric conductivity, pH and TDS (total dissolved solids)). For drinking water use there is a more extensive testing required (including content of arsenic etc.), for which water samples are sent to Yangon to the laboratory at national HQ.
- Follow-up water quality monitoring is done monthly/seasonally by the WRUD.
- WRUD have data on water quality and this information is accessible for the AF project to look at planned tube well sites. There is a dedicated hydro-geological map available for the region, depicting key parameters to consider for water availability/ground water depth and water quality. It was discussed that the AF project should get a copy of this map and use it for its planning purposes.
- According to the WRUD, groundwater levels are generally variable according to season, but there are no serious problem reported with decreasing groundwater levels/increasing depths of the groundwater table. (A recent study confirms this: Water Resource Assessment of the Dry Zone, LIFT (2014). A key conclusion from this study states: *"Water quality issues associated with salinity and arsenic are evident in some areas"*.)
- It was reported that often the top of the water table is of lesser quality, whereas the deeper levels of the aquifer provided water of better quality.
- The total costs for the installation of a tube well vary between $10,000-15,000, depending on depth and soil conditions, and take on average 2 months to construct/install. This includes a diesel pump and a water storage tank. It was not discussed if this is a deep or a shallow tube well: it would be recommendable to establish approximate costs of both types.

- There would be an opportunity to make use of the equipment and skills of the WRUD in installing tube wells at AF project sites. It will require a formal request by the regional WRUD to HQ, but could offer a possibility to bring down costs and install more tube wells with budget available. It also depends on availability of equipment and staff of the WRUD.
- The Rural Development Department has also drilling equipment and able to install tube wells.
- For both the tube wells as the pump irrigation schemes, the WRUD will hand-over the facilities to the community, who formally manages it. It is important to prepare a more detailed agreement/bye-law for the communities with clear description of responsibilities, duties and management.
- It was discussed that some communities express a preference for ponds/retention ponds instead of groundwater/tube wells. This is most likely linked to water quality issues and depending on geographic location (issues with salinity/sediment/carbonates, see also the LINK report).
- The village administrator has a set of rules and regulations for management of irrigation and drinking water. This could be used as a pathway for monitoring if there are no formal community agreements on irrigation/drinking water.
- Retention ponds have multiple purpose:
    - Drinking water (less frequent)
    - Irrigation purposes (homestead/home garden)
    - Livestock (mostly key function)

  The General Administration Department has the formal mandate for the development of these ponds.
- Water harvesting techniques (collection from rooftop gutters and connected storage tank) is not yet common in the Dry Zone.

McCartney, Matthew; Pavelic, Paul; Lacombe, Guillaume; Latt, K.; Zan, A. K.; Thein, K.; Douangsavanh, Somphasith; Balasubramanya, Soumya; Rajah, Ameer; Myint, A.; Cho, C.; Johnston, Robyn; Sotoukee, Touleelor. 2013. Water resources assessment of the dry zone of Myanmar: final report for component 1. [Project report of the Livelihoods and Food Security Trust Fund (LIFT) Dry Zone Program] Water resources assessment of the dry zone of Myanmar: final report for component 1, 52p. [Project report of the Livelihoods and Food Security Trust Fund (LIFT) Dry Zone Program] Last Updated: Tuesday, June 16, 2015 - 06:07

Department of Rural Development

Thursday 28th January 2016, Department of Rural Development Office, Mandalay, 13.00-14.00

U Myo Naing Aung, Director, Department of Mandalay Region Rural Development, Mandalay and 4 of his staff members: Chief Engineer, Executive Engineer, Staff Officer and Assistant Engineer
Karma Rapten, Myint Wai, Ruat Pwee, Hans van Noord

A brief explanation was given to Director Myo Naing Aung on the objectives of the consultation meeting in the context of the M&E consultant his assignment to develop a M&E framework for the AF project. As key stakeholder for the project Mr. Myo Naing Aung is asked about the specific mandate and interventions of his Department and standing procedures within his Department for monitoring of activities at field level.

- The mandate of DRD primarily lies in the field of rural development in the form of:
    - Roads and bridges
    - Water supply
    - Solar electrification
    - Housing plans.
- The department is active since 2013 and an overview of the key water supply system activities was presented as in the following table:

No	Fiscal Year	Type of Water Supply System							Amount (million Kyats)
		Shallow well	Deep well	Dug well	Water collection pond	Other water sources	Other supply: tanks/pipes etc.	Total tasks	
1	2013-14	25	181	20	72	88	34	420	3330.29
2	2014-15	30	258	0	64	11	66	429	4533.03
3	2015-16	31	223	4	47	23	42	370	2929.60
4	2016-17	4	215	22	55	12	34	342	4864.19
Total		90	877	46	238	134	176	1561	15677.11

- Main Challenges for DRD:
    - Availability of machinery for deep-well drilling
    - Kits for water quality monitoring/testing needed (would cost roughly USD100 per kit)
- Q: what are selection criteria for DRD for interventions?
- A: Partly based on available geo-hydrological information as in maps, but this only indicates availability and possible depth (no indication of quality).
- At Township level they have an average assessment, to be used for selection.
- In cases, they ask for more detailed geophysical survey for a feasibility assessment. They have the possibility to ask their HQ for such an investigation.
- After hand-over of the water supply system a village committee is set up for the management of the system. In principal will minor issues be taken care of by the committee through the fee collection system they have, but for major issues the committees ask DRD for assistance.
- **There is clear scope to develop jointly a manual and/or community agreement for water supply systems such as deep-wells, shallow-wells and ponds.** Such a manual should establish

clear guidelines and rules for the community for proper management and maintenance of the system, with identification and definition of obligations and duties, a fee system etc. It would be possible to create such agreements/manuals for each of the main water supply system activities: ponds, deep-wells, shallow-wells.

- DRD started in 2014-15 with support through the Emerald Green Village Programme (EGVP) approach in 362 villages in the Mandalay region and with a budget of Kyat10,800 million.
- Activities supported are:
  - Livestock
  - Fishery
  - Electrification
  - Small scale manufacturing
  - Vocational training
- Under the same program loans are given to the village committees, who collect interest payments form the members taking up the activity and related loan.
- About 40% of the loans relate to the agricultural sector (seeds, fertilizers, machinery etc.) and about 42% to livestock (improved breeds etc.).
- Shallow-wells are wells of less than 200 feet (Kyat5 million on average) and deep-wells are over 200 feet (Kyat20 million on average).
- **Drilling equipment is tendered out partly to private companies as there is a shortage of this type of equipment within the government. Rates of selected suppliers could be used by the project as benchmark values and provide a series of "preferred suppliers" under a long-term agreement/framework**.

Department of Forest

Tuesday 2nd February 2016, Department of Forest Office, Mandalay, 09.00-10.00

U Than Oo, Director, Regional Office of the Department of Forest, Mandalay Region
Karma Rapten, Myint Wai, Khin Maung Htay, Hans van Noord

A brief explanation was given to U Than Oo on the objectives of the consultation meeting in the context of the M&E consultant his assignment to develop a M&E framework for the AF project. As key stakeholder for the project U Than Oo is asked about his key mandates and challenges in implementation of forestry activities and standing procedures within his Department for monitoring of activities at field level.

- The DoF faces clear challenges in the Dry Zone:
    - Climate Change induced droughts and extremes pose serious challenges for developing forestry activities (lack of water, droughts, survival rate of seedlings etc.).
    - Labour shortage in the Dry Zone is another challenge for forest plantation works. The livelihood conditions of many community members lead to (temporary) migration of the young labour force out of the Townships.
    - Limited awareness among communities on the value of forest and the environmental services it provides for.
    - Poverty levels force vulnerable groups to depend for their livelihoods on forest resources, which is a main cause of forest degradation and unsustainable usage.
- The roles of the DoF are diverse, but include:
    - Creation of village firewood groups
    - Teak and hardwood afforestation/plantation concessions to private enterprises
    - Watershed area management in catchment areas, including gap filling and plantation in degraded areas.
    - Forest conservation area management.
- The DoF has 10-year forest management plans with identified areas for forestry activities. The DOF is responsible for execution of these plans, which are existing for each Township. It would offer an opportunity to collaborate on these identified areas and activities, but apparently the DoF will execute these plans themselves.
- Q: **Community agreements** are essential for the AF project as a means to ensure post-project sustainability of forestry activities. What kind of community agreements are existing within DoF?
  A: In the past the government did not allow for any community ownership of forested land, but this has now changed. Afforested areas in the communities were initially handed-over to the communities after 5 years after plantation. This has now been reduced to 1 year after plantation to make this ore attractive for the communities. Upon hand-over agreements on the forest management are signed. (How detailed are these? Are they clearly defining duties, rules, management responsibilities? Does the project have copies? Do these agreements need to be amended/improved, or can they be used as they are?).
  Another form of agreements are the CF management plans for CF's. They have rules and regulations referring to the CF Instructions of 1995.
- DoF is faced with common encroachments by farmers into forested areas for agricultural purposes. Farmers convert forest even into paddy land. If so, they will receive a certificate for permitted land use. Forest converted to dryland constitute a potential area for CF development (but this would have social implications if the present marginal land users are forced to leave the land and lose their source of livelihoods).

- The DoF gives out certificates for agroforestry activities. The standing rule is that 75-50 trees per acre of land can be considered as agroforestry. This could also include perennial trees as tanakha or other agroforestry trees. Unlike in the past, when fruit trees in forest land were not allowed by the government.
- Main purpose in the Dry Zone is to green the land, so the Department is flexible.
- Q:The supply of tree seedlings is critical for the AF project with an ambitious goal of several thousand hectares of afforestation: this will require millions of tree seedlings, preferably with drought-resilient species. Is it possibly to purchase seedlings from DoF?
  A: Yes, this is possible if there is sufficient stock in the nurseries, as there is yearly supply of seedlings to the communities. **(To plan this carefully to seek sufficient supply from DoF, DZGD and private nurseries of enough and quality seedlings).**
- Q: The project intends to supply considerable numbers of livestock to the communities. The communities say that the free-grazing custom will not lead to forest degradation. What is your opinion?
  A: As long as the young seedlings are protected (physical fenced or social-fencing) they will grow tall enough to survive the free-grazing. **This requires clear community bye-laws/agreements.**

Township Stakeholder Consultation
Time: 25 January, 10.30-12.00
Location: **Shwebo Township**, General Administration Department (GAD) Shwebo
Details: DoL, DRD, DoF, DoA, Township AO, DZGD

Introduction was given by the PM on objectives of this consultation meeting in the context of the M&E framework development and the collaboration with the Township stakeholders in Shwebo. Hans van Noord stressed the importance of M&E in tracking and taking stock of progress in achieving what was planned and targeted for. But also the importance of assessing the impact one is making, which requires often a more detailed survey into changes in livelihood of beneficiaries and their perception and awareness.
The stakeholders were asked about their local expectations with regards to the AF project and the challenges they face in implementation of their sectoral activities and how they carry out monitoring.

Department of Rural Development (DRD)

- The officer has recently joined and is compiling village data on water infrastructure. She notes that maintenance is a general issue.
- The Western part of Shwebo is relatively green and lush with good water availability. The Eastern part however, is much dryer, more undulating and more limited access to water. It takes up to 5ooft. to reach groundwater, whereas hand pumps or brick wells only service up to 40-50 ft. and quality is mostly not good.
- Q: how to tackle the maintenance issues expressed? There is often no clear management agreement with the communities after handover. After supply of the pump, there is a 1 year pump agreement, after this 1 year period there is no formal binding agreement. ***It would be key to develop a better community agreement to monitor and manage maintenance of the water infrastructure supplied.***
- ***No testing kits or equipment are in place at Township level to check water quality, which is a requirement for proper monitoring at district level. It seems important to support supply of e.g. an EC meter, pH meter, DST meter and a water quality testing kit for drinking water (arsenic etc.).***

Department of Forest

- For forestry activities there is very limited land available, mostly only along the agricultural land edges.
- Yearly they provide 35,000 seedlings out of their 3 nurseries in the Township. Mostly provided in June-July. A survival survey in December shows on average 70-75% survival rate.
- There is limited scope for CF establishment as there is a plan to convert part of an existing forest conservation area for group purposes. A CF management plan needs to be defined and it would provide an opportunity to support. Apparently there are some issues as famers ask compensation for the use of the land they presently use as intercropping land in the forest reserve. ***Support to CF establishment through the project would be welcome.***
- 81% of the hh's make use of charcoal or firewood, which they buy from other Townships.
- There is no private nursery, the project will have to buy from elsewhere to supply tree seedlings.

Department of Agriculture

- The officer joined 3 months ago.
- In the Eastern part there is only limited paddy land. It is suggested to try here short-life variety and for dryland preference is given to green gram and groundnut.
- For winter-cropping improved seed varieties are not available, only short-life paddy variety (for monsoon).

- A key constraint is water availability and the availability of good quality/improved seed. How to solve this?--> close collaboration with DoA to solve this (timely procurement).
- They collect yearly agricultural data from a standard plot, mainly on paddy and groundnut. Trends are erratic and determined by monsoon (length, arrival and total precipitation).
- There are also issues with pest incidence affecting yields: e.g. rice stem borer (life cycle with clear outbreaks and impact).
- They request:
    - pH kit for soil quality testing
    - Assistance for water access improvement (well construction).

Dry Zone Greening Department (DZGD)

- Is setting up a nursery presently.
- Provide seedlings for firewood purposes.
- Supply fuel-efficient improved stoves to communities.
- Intend to create a CF for improved fire wood supply on marginal land (stony, not very suitable for agricultural practices).

Livestock, Breeding and Veterinary Department

- Officer is here since 1 year.
- They support through the Emerald Green Village Project 1 village tract, DRD another village tract, a third village tract through the Fishery Department. They distribute funds to the village committee account, which act as a revolving fund, with interest paid back on a monthly basis by the members.
- The Department also provides veterinary services and Artificial Insemination (AI) support.
- For the EGVP monitoring of accounts is done monthly, and there is no restriction on purchase of livestock only (other small enterprises can also be undertaken).
- They do not use the livestock banking system: members have to provide money (revenue of sale of offspring) instead of life animals.
- Every year a livestock census is done (January/February): 2015 data are available for all project villages. This includes some production data as dairy production and eggs, no income data are collected.

Village community meeting
Time: 25 January, 9.30-10.15
Location: **Shwebo Township**, **Tel Pin Village**
Details: 391hh, meeting with 4 village elders

Tel Pin village has road access and electricity. There is only limited paddy (145ac) and main agricultural activities are on dryland (5,193ac): green gram, sesame and pigeon pea key crops. Livestock forms an important livelihood source.

- Seed availability is an issue: quality goes down after three years and the availability is limited for the farmers.
- The landless have their main income source from labour for others and free-grazing livestock (in the dry season), mostly cattle. They are used as draught animals and sold for meat. Best support to them would be to provide livestock (sheep and goat) for roadside grazing.
- Forestry opportunities are very limited and trees can mainly be found along cropland boundaries and in some communal areas. Important are fruit trees as mango and also tanakha.
- Water: deep wells, including tube-wells are available and providing good water quality. Water availability is no issue, good supply all year round, also sufficient for livestock (making use of surface water).
- The village is 6 miles away from the river and on a higher position with hampers irrigation access. The soils are stony and it is difficult to drill deep wells.
- The expectations of the village elders are:
    - Support in seed supply
    - Support to the landless through supply of livestock (as their main source of income)
    - There are about 30+ women-headed households: they could be supported through livestock or cash-grant for e.g. setting up of a shop.
    - Farm machinery is another area for support: thrasher (multi-crop) or power tiller

Township Stakeholder Consultation
Time: 25 January, 15.30-17.00
Location: **Monywa Township**, General Administration Department (GAD) **Monywa**
Details: LBVD, WRUD, DoF, DoA, Township Administrator, DZGD

Introduction was given by the PM on objectives of this consultation meeting in the context of the M&E framework development and the collaboration with the Township stakeholders in Monywa. Hans van Noord stressed the importance of M&E in tracking and taking stock of progress in achieving what was planned and targeted for. But also the importance of assessing the impact one is making, which requires often a more detailed survey into changes in livelihood of beneficiaries and their perception and awareness.
The stakeholders were asked about their local expectations with regards to the AF project and the challenges they face in implementation of their sectoral activities and how they carry out monitoring.

GAD

- There is 170,000ac arable land, of which only 9,113 paddy land.
- Main crops are: green gram, pigeon pea, groundnut, pulses, chickpeas.
- There is only limited water availability for irrigation. The reservoir is just sufficient for drinking water and there is only limited rainfall in the Township.
- Drinking water is generally not a problem over the last 5 years. In future this might change for the worse.
- Pulses and beans are key livelihood crops together with *tanakha* (15,592 ac).

DoA

- Seed availability for paddy is not a problem, but for dryland crops this is more difficult, especially to get improved seeds (hybrid varieties, drought-resistant varieties).
- Seems to be a real challenge as they are key livelihood/cash crops. ***They are trying this with single farmers as contract farmers for seed production. It would be an opportunity to scale this up to AF villages.***

LBVD

- Main livestock is sheep and goats, pigs and cattle and some poultry.
- Free grazing is practiced on fallow land and in winter on bare paddy/dryland.
- Modality of supply: 1 village tract through EGVP, RDR another village tract. No banking system, loan-based: only cattle.
- Q: what kind of activities could support the landless and most vulnerable? A: pigs (on their yard) and poultry.

WRUD

- There are 96 deep-tube wells in Monywa, which in some areas even makes paddy cultivation feasible.
- Every 2 year samples of the wells are sent to Yangon for water quality testing.
- 5 wells are defunct because of quality issues.
- No test kits or test equipment is available at Township level.
- The water table trend is apparently stable with no clear changes in level/depth.

DoF

- CF is new for Monywa, there is very little forest area available. There are better opportunities in Chauk.
- There are 2 nurseries in Monywa, used for supply of tree seedlings to hh's, mainly teak seedlings.

- It is difficult to find any larger area for afforestation/reforestation. The existing Forest Reserve area is an option, but it poses difficulties in land issues to convert it to a CF.

DZGD

- Create new earthen ponds and maintain existing ponds, mainly for irrigation and livestock use.
- They have 1 nursery, to supply tree seedlings to communities to plant along roads to provide shade.

GAD

- Responsible for monitoring of water supply and irrigation infrastructure. After hand-over there is no real management plan existing. No regular monitoring is carried out: communities will come forward if larger issues arise. ***(Clear scope for development of standard bye-laws/community agreement with simple responsibilities and general rules).***

Village community meeting
Time: 25 January, 13.00-13.30
Location: **Myonwa** Township, **, Naint Ban Wa Village, Kyee Oke Village Tract**
Details: 174hh, 787 people, about 100 landless hh's: meeting with large group of community members (50+)

Naint Ban Wa village has road access and electricity.

The PM gave an introduction on the objectives of our visit and asking the community members to share their challenges and opportunities they see for project support.

- The key livelihood sources are beans and corn and livestock (mainly sheep, goat and cattle).
- Farmers need to combine agriculture with livestock to gain enough income and to be self-sufficient. In the past it was easier to rely solely on agriculture.
- Yields are going down compared with 10 years ago, a trend linked to a changed climate: in amount of rainfall, later arrival of monsoon and of shorter duration.
- Drinking water is the main problem: the pond is drying up, 4 villages rely on this pond and the present 2016 level is very low.
- The deep tube-well is defunct: salty and bitter. 400 ft. deep. Since 2007 defunct.
- In coming summer the village will need a tanker for drinking water supply.
- Need for a better feasibility where to construct a new well.
- Asked what could be option for livelihood improvement the community had not a direct answer or solution. Maybe livestock supply they suggested, as they have enough fallow land because of the lack of rain.
- Landless: main income sources are day labour and gypsum collection. Per day they earn about Kyat5,000 (men)/Kyat3,500 (women). About 2/3 of time is dedicated to day labour and 1/3 to gypsum collection.
- Livestock is preferred as support option, also for the landless.

Action Aid Myanmar Consultation
Time: 26 January, 9.30-10.00
Location: **Nyaung U Township**, Action Aid Office, Nyaung Oo
Details: Meeting with Nyi Nyi Zaw, M&E officer (also met shortly Herault Simone TA of the Socio Economic Development Network (SEDN of Acton Aid)).

Action Aid is focusing on economic and social development of women through vocational training on handicraft skills. They have created women groups and provided support in the form of tools and equipment.

- There are in total 77 groups with in total 656 women.
- Action Aid started in 2013 and support the groups with handicraft design, they run the handicraft shop and market the handicraft products in Bagan to the tourists and hotels.
- They also provide daycare centers and meals for the women and their children and provide them with non-formal education.
- To monitor progress, committee meetings are organized monthly to track outputs (#products) and to identify needs and challenges. A standard form for monitoring is used, which also includes recording income generation in cash (about USD20/month).
- Before the women had no or very little access to cash income. Focus of AA is on women-headed hh's.
- Expenses from AA support per woman are roughly USD250, including the 3 month intensive training program they are enrolled in.

Township Stakeholder Consultation
Time: 26 January, 10.15-12.00
Location: **Nyaung U Township**, General Administration Department (GAD) **Nyaung U**
Details: LBVD, WRUD, DoF, DoA, DRD, Township Administrator, DZGD

Introduction was given by the PM on objectives of this consultation meeting in the context of the M&E framework development and the collaboration with the Township stakeholders in Nyaung U. Hans van Noord stressed the importance of M&E in tracking and taking stock of progress in achieving what was planned and targeted for. But also the importance of assessing the impact one is making, which requires often a more detailed survey into changes in livelihood of beneficiaries and their perception and awareness.
The stakeholders were asked about their local expectations with regards to the AF project and the challenges they face in implementation of their sectoral activities and how they carry out monitoring.

GAD

- Water access is a key problem in Nyaung U.
- Climate resilient livestock supply is required to assist the communities in coping with the changing conditions.
- Climate information is now distributed by the Township administration to the village tract only, but does not reach the villages and the individual hh's and farmers.
- There are 70 AF villages selected in Nyaung U.

DoA

- Five irrigation pumps for river water supply to paddy land are installed. In some areas two harvest per year are possible.
- Of these 5 only 2 produce enough for double cropping (summer/winter paddy).
- An additional inlet channel is needed as the present inlet is too sandy and shallow because of sand banks, hampering inflow.
- Dryland cropping: mainly groundnut, pigeon pea and sesame. Sandy soil conditions.
- Attempt to change to more short-life crops, but farmers are rather reluctant as they find seeds too expensive.
- There is a collaboration with JICA on seed production for pulses: improved seeds are therefore available.
- Green gram is affected by fungus infestation, which reinforces the need to opt for short-life varieties.
- There is a Research Farm assisting in seed production.
- DoA would be happy with collaboration on farmer field schools and/or demonstration farms.

LBVD

- There is very little pasture and free-grazing is mainly practiced along roads and field edges and on crop residue (after harvest). Impact of this free-grazing is seen as limited, no real degradation as a result.
- Landless prefer sheep and goat, it is generally too dry for cattle.
- Through the EGVP 2 village tracts are supported.
- LBVD does a yearly livestock census, but not including income generation linked to livestock (only under EGVP villages).

DRD

- Support 15 EGVP villages
- They include in these villages support to small business development, with provision of small loans for grocery shops set-up and other small manufacturing purposes.

- River water pump systems are installed to serve as drinking water source and for livestock.
- Some deep tube-wells are installed: collect water user fee and a drilling set is available here in Nyaung U, able to drill down to 1000ft.
- No test equipment or test kit is available. Through a collaboration with JICA on water resources, monthly drinking water samples are sent to Nay Pyi Taw for analysis.

DZGD

- They have a nursery
- They manage a natural forest conservation area.
- They provide fuel-efficient stoves to the communities
- Construct earthen ponds (65X50X4ft.)
- Are interested in CF development
- To protect upper watersheds, they support soil- and water conservation practices, mainly tree planting
- Hand-over small forest plots to communities in a collaboration with JICA/KOICA.

WRUD

- Five river pump stations for irrigation installed
- Farmers contribute a water users fee of 2*Kyat6,000 for 2 cropping system
- There are 100 deep tube-wells in Nyaung U and WRUD has a role in quality monitoring: in general water quality is good. Only in a few village tracts water quality is not good.
- HQ has a drilling set able to drill up to 1,200 feet deep

DoF

- Afforestation of government owned land to hand-over to the community after 1 year.
- Extension service is challenged by lack of properly trained staff.
- There is 1 nursery, providing hh's with teak and CC resilient local varieties (about 10 species).
- Land is expensive, which makes it more difficult to develop forestry activities.
- Clear need to water seedlings to enhance survival rates.
- Able to distribute seedlings (free of cost) to UNDP.
- For CF development fencing of planted areas is necessary.

Village community meeting
Time: 26 January, 13.00-13.30
Location: **Nyaung U Township**, **Kaung Nyo Village**
Details: 189hh, 1064 people, 116 landless hh's: meeting with selected group of community members (10+)

Kaung Nyo village has road access and electricity.

Mr. Yan Naing Tun gave an introduction on the objectives of our visit and asking the community members to share their challenges and opportunities they see for project support.

- The trend in the villages indicates a later arrival of the rainy season and shorter in duration. It forces the community to postpone seeding from June-July to July-August.
- Pigeon pea and sesame are best suited for the dryer conditions, in particular short-life varieties, and with practicing intercropping.
- Incomes and livelihood conditions have deteriorated and forces migration out of the village of the younger generation. More than 100 young people (about 10%, male and female) have moved away for labour opportunities.
- Drinking water is an issue here: the deep tube-well provides water of bad quality. Since this year they have to buy drinking water, brought by tanker: 50 gallon barrel = Kyat2,000.
- They collect water from their earthen pond and store it in clay pots.
- Earlier: there was enough in the pond until March-April. Now already dried up.
- Livestock drinks the tube-well water.
- The livestock population is limited: few pigs, mostly goats and some cattle.
- Fodder is found through free-grazing and by growing sorghum as fodder base.
- The landless are mostly engaged in on-farm and off-farm labour (10 months) and tamarind collection (2 months).
- There are about 20 women-headed households.
- The community suggest for AF support:
    - Renovation of the earthen pond (deepening/dredging)
    - Checkdams in streamlets to retain sediments and limit erosion
    - (LIFT has already supported the excavation of about 100m^3).

Township Stakeholder Consultation
Time: 26 January, 15.00-16.10
Location: **Chauk** Township, General Administration Department (GAD) Chauk
Details: WRUD, DoF, DRD, Township Administrator, DZGD

Introduction was given by the PM on objectives of this consultation meeting in the context of the M&E framework development and the collaboration with the township stakeholders in Chauk. Hans van Noord stressed the importance of M&E in tracking and taking stock of progress in achieving what was planned and targeted for. But also the importance of assessing the impact one is making, which requires often a more detailed survey into changes in livelihood of beneficiaries and their perception and awareness.
The stakeholders were asked about their local expectations with regards to the AF project and the challenges they face in implementation of their sectoral activities and how they carry out monitoring.

GAD

- Mr. Maung Maung Thet, the Township administrator, explained that water shortage for man and livestock and irrigation is a widespread issue in Chauk.
- There are 2 river pump stations, but these provide only water for 800ac.
- Rainfall is mostly less than 20 inches per year.
- Forest seedling survival is therefore also low.
- The Department of Forest manages a Forest Reserve, which offers a good opportunity to hand-over in some form to communities (in form of CF or other conservation/social forestry forms).

DRD

- Support through EGVP of 11 villages, mostly livestock and infrastructure.
- Water is a key issue: of the 230 villages in the Township **35 have no functional tube-well as drinking water source at all!**
- Tube-well are drilled up to 1,300 ft. deep, and if the village is at a distance from the river depths vary between 600 to 1,200ft.
- Quality is on average good for wells closer to the river, at distance the quality is more variable.
- For 2015: 14 deep tube-wells were planned, of which 12 were completed (2 proved to be difficult). Of these 12, 1 well had water not-suitable for drinking.
- Collaboration with JICA for drilling equipment.
- **They have no test equipment themselves.**
- The supply of livestock is a bit problematic because of the lack of pasture and fodder.
- Cropping selection is also limited because of limited growing season, due to water shortage.
- Earthen ponds have less priority, as the sandy soils in Chauk make these less feasible. Preference should be given to locations with more clay-rich soils.

WRUD

- Nine (9) river pump stations installed, planned to serve 4,782 ac, but only reaching 1,000ac in practice. Two pump stations serve paddy land.
- The inlet is shallow and sandy. Main channel is about 4 miles, with 4 branches or feeder channels. Water is also used as drinking water.
- The 2015 floods caused a fair bit of damage to the pump system (inlet, channels etc.).
- User fee is Kyat9,000 for summer paddy and Kyat6,000 for winter paddy. The system provides drink water to 5 villages.
- Constraints:
    - Limited budget
    - Not able to do proper maintenance due to budget limits
    - Need for budget/inputs for upgrading/lining of trunk/distribution channels (brick)

- Not doing deep tube-wells at the moment.

DoF

- Manages 4 protected forests (25,108ac, 1,800ac, 2,600ac and one proposed of 7,300ac).
- Supports creation of village fuelwood forests (50ac), but trees grow at slow growth rate.
- Distribute 20 seedlings to all hh's, through its nursery.
- **Plan to establish a CF, welcomes collaboration on this.**

DZGD

- They have a nursery
- They manage a natural forest conservation area, 2,300ac.
- They provide fuel-efficient stoves to the communities.
- The late and limited rainfall limits plantation/afforestation opportunities.
- Need to use local drought-resistant species.
- Recommend to use river sediment in dug planting pits, just before planting of seedlings.
- Scope for replication of fuel-efficient stove distribution?
- **Some of the selected AF villages are among the 35 villages without drinking water access.**

DoF

- Afforestation of government owned land to hand-over to the community after 1 year.
- Extension service is challenged by lack of properly trained staff.
- There is 1 nursery, providing hh's with teak and CC resilient local varieties (about 10 species).
- Land is expensive, which makes it more difficult to develop forestry activities.
- Clear need to water seedlings to enhance survival rates.
- Able to distribute seedlings (free of cost) to UNDP.
- For CF development fencing of planted areas is necessary.

Village community meeting
Time: 26 January, 17.00-18.00
Location: **Chauk Township**, **Ma Gyi Kone Village**
Details: 184hh, 845 people, 37 landless hh's: field visit with DRD staff

Ma Gyi Kone village has road access and electricity.

- The main irrigation channels reaches the villages and a diversion channel, unlined brings the water closer to the village.
- Soils are very sandy and appear to be less suited for paddy cultivation and longer-term inundation.
- Of the initially planned 5,400ac only 1,000 can be cultivated as paddy.
- The channel is 16 year old and yields on average are 80 baskets (=80*20=1,600kg per ac, whereas the national average is about 70 baskets).
- In 3 days after inundation water has percolated, as the soil is very permeable (15 days is the normal time for water to have percolated).
- Peanut and sesame are main dryland crops.
- Tube-wells are present in the village, but not sufficient for all hh's.
- **This seems representative for poor planning, targeting an area for paddy cultivation with soils that are not very suitable for rice cultivation and with excessive irrigation water losses in the feeder channels because of the permeable properties of the soils. Any support by the project in construction and/or rehabilitation of such schemes would be not recommendable. It proves that the project should undertake feasibility studies for the larger investments, such as irrigation channel renovations, to secure longer-term impact of investments and post-project sustainability of interventions.**

Township Stakeholder Consultation

Time: 27 January, 10.30-12.00
Location: **Myingyan Township**, General Administration Department (GAD) **Myingyan**
Details: DoA, LBVD, WRUD, DoF, DRD, Township Administrator, DZGD, Dep. Of Irrigation

Introduction was given by the PM on objectives of this consultation meeting in the context of the M&E framework development and the collaboration with the Township stakeholders in Myingyan. Hans van Noord stressed the importance of M&E in tracking and taking stock of progress in achieving what was planned and targeted for. But also the importance of assessing the impact one is making, which requires often a more detailed survey into changes in livelihood of beneficiaries and their perception and awareness.
The stakeholders were asked about their local expectations with regards to the AF project and the challenges they face in implementation of their sectoral activities and how they carry out monitoring.

DoF

- Firewood plantation shave been set-up in 6 villages, but land ownership are frequent and need to be resolved first before distribution of seedlings. The dry conditions require follow-up watering of seedlings to increase survival rate, but the salty water makes this more difficult.
- There is a need for more salt-resistant varieties. There is one nursery, able to provide 70,000 seedlings yearly.
- Scope for CF development is there in Myingyan: at the moment there is plan for 1 CF.

DZDG

- Have supported the establishment of 100ac hardwood village forests.
- Supplied in 2 villages to 150hh 20 seedlings of hardwood.
- Also supply fuel-efficient stoves, 255 yearly.
- Have 2 nurseries.

Dep. Of Irrigation

- Myingyan can be divided into two part:
    - W: ok, relatively good conditions close to the river, development of river pump irrigation schemes.
    - E: difficult, far from access to river water, rely on earthen ponds: there is a clear need for these ponds.
- Agree that soil- and water conservation is needed upstream from earthen ponds and support the AF project in its plans to roll this out.
- They see scope for rain water harvesting methods, as CGI sheets become more available, which offers the possibility to install simple gutters and collection systems.
- The Dep. has a back hoe available for construction/renovation of ponds (from DRD).

DRD

- Focus on the development of deep tube-wells and shallow tube-wells.
- Quality of the wells varies with location: close to the river water is generally of good quality, at further distance water quality is less reliable.
- The present wells are not sufficient to ensure a stable drinking water supply.
- There are clear management issues with the wells: it proves often difficult for the community to collect the water usage fees, which hampers the purchase of diesel and a continuous operation of the pump.
- Do not have water quality testing kits: have to send this to Mandalay. **Would like to have kits/equipment.**
- **Recommend to provide earthen ponds: construction and/or renovation.**

- They do not see any health risk related to the ponds (malaria/dengue fever) as the ponds are mostly sunny and exposed, which mosquito's don't like.
- They also recommend the construction of a proper access point for easy water collection and possible fencing to keep livestock away from the intake point.

DoA

- Temperatures and evapotranspiration is very high in the Township, which results in poor water quality. Salinity and soil fertility are negatively affected and are a real issue to address.
- This also creates a need for salt-resistant varieties.
- There is also a need to change the cropping systems away from mono-cropping to more diverse multi-cropping/intercropping and crop rotation systems.
- They collaborate with JICA and AUSAID on setting up demonstration farms to produce quality seed.
- JICA provides also improved varieties and some funding for earthen ponds.
- Improved seeds are not yet available: initiatives have only started recently.
- Recommendation to prefer short-life variety to minimize CC induced stress on the crops/as coping mechanism.
- JICA supports farmer field schools and demo plots.
- Carry out yearly agricultural census on yearly yields and acreages.
- **Request the supply of soil fertility kits to test salinity/fertility/suitability of soils.**

LBVD

- The Department has only limited staff (4) and require more capacity building of extension staff to guide and train the communities (community livestock health officers).
- Provide breeding bulls and other male livestock to improve livestock breeds.
- The dry conditions in the Township require climate resilient pasture varieties.
- There is a high level of worm infestation of livestock.
- Main livestock is sheep and goats, followed by cattle.
- Fodder availability is an issue, but in the eastern part of the Township larger areas are lying fallow, which makes grazing relatively easy in these areas and offers possibilities for pasture development.
- Only very little attention to a transition to a more integrated farming system with FYM sheds, cut-and-carry pasture development, stall-feeding and FYM for soil fertility and yield increase on agricultural land.

GAD

- Supports the sectoral experts with their recommendations.
- A focus is required for the benefit of the communities: project intentions are clearly geared towards the communities, so that is good.
- Q: what about landless and female-headed hh's? Recommendations for support?
- A: discuss with village leaders
- Even without land they can have a good income base: inform yourself well!
- Comment form the departments: NGO's: have yet no authority to go into the field and work with the communities: the project needs to introduce them to the Township administrations and monitor and communicate this timely and adequately with the sectoral Departments in the Townships.

Village community meeting
Time: 27 January, 13.00-14.00
Location: **Myingyan Township**, **Kyauk Tan Village, Gway-Pin-Yoe village tract**
Details: 150hh, 608 people, 96 landless hh's: meeting with large group of community members (60+: 20+ male, 40+ female)

Kyauk Tan village has road access and no electricity.

Mr. Yan Naing Tun gave an introduction on the objectives of our visit and asked the community members to share their challenges and opportunities they see for project support.

- Drinking water availability and irrigation water access are the key issues in the villages.
- There are 2 dug-wells, locally doe, 2—30 years old, which can be used. There are 4 in total, but one can only be used for washing/bathing.
- They received a donation for the installation of a deep tube-well, but the quality of the water is poor (salty).
- In summer there are many shallow dug-wells.
- Key crops are: cotton, groundnut, pigeon pea and sorghum (for fodder).
- The have their own seed stock, but yields and quality decrease over time.
- Yields decrease as a trend because:
    - Rainfall decreases
    - No possibility for additional irrigation
- There are only few pigs, mainly sheep and goat and cattle.
- Fodder availability is ok, as they move around with the herds, going towards the river in the dry season. Have an agreement with the villages there to graze on their land in return for manure.
- **Possible interventions:**
    - Poor access to weather information: no electricity here.
    - Small dams/check dams to create ponds in gullies for livestock
    - Supply of good quality breeds and/or breeding bull
    - For landless, livestock support is a good option.
- Women-headed hh's: main source of income in this village is cigar rolling. Most women do this, earning Kyat2.5 per cigar, and producing 1,000-1,300 cigars a day, with long working hours (08.00-20.00).
- Homestead supply of fruit trees is a good idea, but villagers worry about the dry conditions and soil fertility: will the seedlings survive?

Annex 2 Time Schedule

Date	Activity	Location
Monday 18 January	Arrival on PG709 BKK-Mandalay, transfer to hotel, first meeting with Karma Rapten and Ruat Pwee	Mandalay
Tuesday 19	PT office, meeting with team. Courtesy Call with Director of Planning, Dry Zone Greening Department, Mr. Ba Kaung. Meeting with team on expectations, time schedule, progress so far, data base development, guidance etc., suggestions for stakeholders to meet	Mandalay Project Office Mandalay DZGD Office
Wednesday 20	Meeting with Mr. Kyaw Lwin Oo, Director of Department of Meteorology and Hydrology (DMH), Upper Myanmar Region. Meeting with Mr. Kyaw Kyaw Swe, Deputy Director LBVD. Meeting with Mr. Myint Oo, Director of Department of Agriculture.	Mandalay, DMH office Mandalay, LBVD Office Mandalay, DoA Office
Thursday 21	Meeting with Water Resources Utilization Department, Mr. Win San Director WRUD, Mr. Min Min Zaw and Mr. Khyau Swa Oo Preparation of work plan/inception report	Mandalay Office, WRUD AF project office
Friday 22	**Submission of Inception Report with draft work plan**, outlining the scope of work, methodology and stakeholders to meet/consult	AF project office
Saturday/Sunday 23/24		
Monday 25	Project site visit in Shwebo and Monywa Townships; Village meeting in Tel Pin village, consultation meeting in Shwebo and Monywa, Visit to Naint Ban Wa village; night at Monywa	Shwebo and Monywa
Tuesday 26	Project site visit Nyaung U and Chauk Townships, meeting with Action Aid, consultation meeting in Nyaung U and and Chauk. Visit to Kaung Nyo village (Nyaung U) and to Ma Gyi Kone (Chauk); night at Nyaung U	Nyaung U and Chauk
Wednesday 27	Consultation meeting in Myingyan Township, visit to Kyauk Tan village; return to Mandalay by night	Myingyan
Thursday 28	Compiling draft M&E framework/survey/ToR Meeting with Rural Development Department Discussion with team on M&E of components	Mandalay
Friday 29	Discussion with team on M&E of components Skype Call with Yusuke, Karma and Babatunde on survey design	Mandalay
Saturday/Sunday 30/31		
Monday February 1	Compiling draft M&E framework/survey/ToR	Mandalay
Tuesday 2	Compiling draft M&E framework/survey/ToR	Mandalay
Wednesday 3	Compiling draft M&E framework/survey/ToR	Mandalay

Date	Activity	Location
Thursday 4	Compiling draft M&E framework/survey/ToR Debriefing of team on preliminary findings, PPT presentation	Mandalay
Friday 5	Skype Call with Babatunde and Karma on survey design; Monthly coordination meeting with DZGD, presentation on progress; Travel to BKK	Mandalay
Saturday 6	Flying out BKK-AMS to home base	Home base
6-12 February	Drafting preliminary outputs: **Submission by the 12th: Draft M&E framework, ToR and Survey design**	Home base
13-14 February		
15-19 February		Home base
20-21 February	Travel home base-BKK-Mandalay; arrival the 21st	Home base to Mandalay
22 February	Back in Mandalay Office	Mandalay
23-26	Continuation of design of M&E framework, survey design and ToR	
27-28		
29 February-March 4	Continuation of design of M&E framework, survey design and ToR. Draft RFP and ToR for the Survey sent to team.	Mandalay
5-6		
7-11	Continuation of design of M&E framework, survey design and ToR Meeting with Watershed and Forestry consultant on activities under outputs 1.2 and 1.3 Presentation of findings to team Finalizing Final Draft report Finalizing Survey ToR Flying out to BKK	Mandalay
12-13	Travel BKK-AMS home base	
14-18 March	**Finalization of deliverables; submission of final M&E framework report, survey design and ToR by March 18**	Home base

Deliverable are indicated in bold with expected dates.

Annex 3 Annual targets of the various sectors as break-down of the End-of-Project targets

Livestock sector

Out put	Activity	Unit	Target beneficiaries (person/household)			EoP Target Total
			2016	2017	2018	
1	2.3.1: TOT training for LBVD	Person	35			35
2	2.3.2: community training and individual village livestock need assessment	Person	1400	1400	1400	4200
3	2.3.3. climate change resistant livestock supporting	Household	2000	2000		4000
4	2.3.4: Benefit sharing and Livestock Farmer Group functioning	Household		1000	1500	2500
5	2.3.5: Demonstration and cross breeding activities	Household	60	30		90

	Total Benificiary households	Household				6590

Agricultural sector targets and breakdown

Agriculture						
	Activity	Project Period				
1	**Climate-resilient farming methods**	2016	2017	2018	2019	Total
	Primary target trainee (Farmers: 560, Extension staff: 100) in 5 tsp. in 2016	660				
	Advanced training courses on climate-resilient farming methods (Farmers: 560, Extension staff: 50) in 5 tsp. in 2018			610		
	Knowledge sharing among village communities by project-trained village trainees (10 by 1 trainee) = 560 x 10 in 2016	5.600				
	Knowledge sharing among village communities by project-trained village trainees (10 by 1) = 560 x 10 in 2018			5.600		
	Sharing climate-resilient farming methods to other extension staff through sharing training experiences at respective Township (20 extension workers per Township x 5 project Townships) in 2016	100				
	Sharing climate-resilient farming methods to other extension staff through sharing training experiences at respective Township (25 extension workers per Township x 5 project Townships) in 2018			125		
2	**Water smart practice (AWD: Alternate Wetting and Drying)**					
	Primary target trainee (Farmers: 60, Extension staff: 40) in 4 tsp. in 2016	100				
	Primary target trainee (Farmers: 100, Extension staff: 20) in 4 tsp. in 2017		120			
	Retraining on water smart practice among other extension workers (20 extension workers per Township x 4 project Townships) in 2016	100				
	Review and Reflection on water smart practice among other extension workers (10 extension workers per Township x 4 project Townships) in 2017		40			
	Dissemination of water saving technology through field days (50 farmers from project villages and 10 farmers from non-project villages, 15 extension staff and relevant departments / session x 2 session / Township x 4 Townships) in 2016	400				
	Dissemination of water saving technology through field days (50 farmers from project villages and 10 farmers from non-project villages, 10 extension staff and relevant departments / session x 2 session / Township x 4 Townships) in 2017		500			
3	**Establishment of Thanakha trees intercropped with annual crops**					

	Primary target trainee (Farmers: 60, Extension staff: 30) in 3 tsp. in 2016	90				
	Primary target trainee (Farmers: 150 Extension staff: 20) in 4 tsp. in 2017		170			
	Sharing experience-cum-discussion on intercropping annual with thanakha trees among other extension workers (20 extension workers per Township x 3 project Townships) in 2016	60				
	Lesson learned, needs to improvement, sustainability on intercropping annual with thanakha trees among other extension workers (15 extension workers per Township x 4 project Townships) in 2017		60			
	Dissemination of drought-resistant thanakha trees through field days (60 farmers from project villages and 10 farmers from non-project villages, 10 extension staff and relevant departments / session x 2 session / Township x3 Townships) in 2016	300				
	Dissemination of drought-resistant thanakha trees through field days (200 farmers from project villages and 10 farmers from non-project villages, 10 extension staff and relevant departments / session x 2 session / Township x3 Townships) in 2017		400			
4	**Farmer-managed climate-resilient seed multiplication**					
	Primary target trainee (Farmers: 260, Extension staff: 25) in 5 tsp. in 2016	285				
	Primary target trainee (Farmers: 100, Extension staff: 10) in 5 tsp. in 2017		110			
	Retraining on farmer-managed seed multiplication concept and methods among other extension workers (20 extension workers per Township x 5 project Townships) in 2016	100				
	Review and reflection on farmer-managed seed multiplication in 2016 among other extension workers (10 extension workers per Township x 5 project Townships) in 2017		50			
	Farmer evaluation of drought-resistant varieties and their performance at farm-level through field days (60 farmers from project villages and 10 farmers from non-project villages, 10 extension staff and relevant departments / session x 2 session / Township x5 Townships) in 2016	300				
	Farmer evaluation of drought-resistant varieties and their performance at farm-level through field days (60 farmers from project villages and 10 farmers from non-project villages, 10 extension staff and relevant departments / session x 2 session / Township x5 Townships) in 2017		300			
5	**Establishment of participatory demonstration plots**					
	Primary target trainee (Farmers: 225, Extension staff: 25) in 5 tsp. in 2016	250				

	Primary target trainee (Farmers: 100, Extension staff: 10) in 5 tsp. in 2017		110			
	Retraining on farmer-managed seed multiplication concept and methods among other extension workers (20 extension workers per Township x 5 project Townships)	100				
	Dissemination of climate-resilient cultural practices and field observations on varietal performance through field days (60 farmers from project villages and 10 farmers from non-project villages, 10 extension staff and relevant departments / session x 2 session / Township x3 Townships) in 2016	300				
	Dissemination of climate-resilient cultural practices and field observations on varietal performance through field days (60 farmers from project villages and 10 farmers from non-project villages, 10 extension staff and relevant departments / session x 2 session / Township x3 Townships) in 2017		200			
6	**Farmer Field School on climate change**					
	Primary target trainee (Farmers: 110, Extension staff: 20) in 2 tsp. in 2016	130				
	Primary target trainee (Farmers: 140, Extension staff: 10) in 2 tsp. in 2017		50			
	Retraining on farmer-managed seed multiplication concept and methods among other extension workers (20 extension workers per Township x 5 project Townships) in 2016	100				
	Review on farmer-managed seed multiplication concept and methods among other extension workers (15 extension workers per Township x 5 project Townships) in 2017		75			
	110 dryland farmers and 3 extension staff per Township attend 12 regular sessions facilitated resource persons from DOA and Agricultural Farm and sharing interested farmers in respective villages (70 persons x 2 tsp. x 12 sessions) in 2016	1.700				
	141 dryland farmers and 3 extension staff per Township attend 12 regular sessions facilitated resource persons from DOA and Agricultural Farm and sharing interested farmers in respective villages (80 persons x 5 tsp. x 12 sessions) in 2017		1.900			
7	**Participatory assessment to quantify the effects of existing practices and identify loss patterns in post-harvest practices along the value chain of harvesting, threshing, drying, storage and processing**					
	10 key informants participate in and discussion on participatory assessment on current postharvest practices and losses (10 persons x 280 villages)	2.800				
	3 extension works gained knowledge on postharvest assessment and participate in data collection training (5 extension staff x 5 tsp.)	15				

8	**140 threshers groups are using local-made thresher to reduce climate-induced postharvest losses (140 groups with 20 memberships)**	2.800				
	50 threshers groups are using local-made thresher to reduce climate-induced postharvest losses (50 groups with 20 memberships) in 2017		1.000			
9	**Establishment of adaptable fruit trees with drip irrigation**					
	Primary target trainee (Farmers: 100, Extension staff: 25) in 5 tsp. in 2017					
	Dissemination of adaptable practices and field observation on fruit trees with irrigation methods through field days (50 farmers from project villages and 10 farmers from non-project villages, 10 extension staff and relevant departments / session x 2 session / Township x 5 Townships) in 2017		250			
10	**Organic farming concept and introduction of vermiculture 1n 5 tsp. in 2017**					
	Primary target trainee (Farmers: 200, Extension staff: 25) in 5 tsp. in 2017		225			
	More support in vermiculture			300		
	Brainstorming on organic concept and implementation strategies among extension staff (15 staff per tsp. x 5 Township) in 2017		75			
11	**Exchange visit (project and non-project community members, staff from relevant line departments, Township / district authorities, NGOs / CSOs, etc.**		200	200		
12	**Additional target beneficiaries for climate-resilient farming methods based on series of discussions with communities in 2016**		300	200		
13	**Strengthening of Agricultural Groups, Thresher User Groups**		140	140		
		16.290	6.275	7.175		
					29.740	
	Threshold numbers:				**19.628**	
	Target households by the end of project:				**11.550**	

Soil- and Water Conservation Targets and Breakdown

Soil and Water Conservation							
No.	**Activity**	**Total target**	**Unit**	**2016**	**2017**	**2018**	**2019**
1	**Coordination**						
	meeting	9	Frequency	2	2	2	1
2	**Training**						
	Construction & Maintenance of various SCWH measures	300	Trainees	300			
	Utilization, Operation & Maintenance of Water Infrastructures	300	Trainees		300		
3	**Workshop**						
	Development/ Revision of Village Water Management Schedules and R&Rs	280	participants		140	140	
	Field Day/Workshop for awareness Raising	280	participants		140	140	
4	**Group Forming**						
	Formation of Executive Committee	280	EC	56	112	112	
	Formation of Village Water User Group	280	WUG	56	112	112	
	Formation of Village Labor Group	280	LG	56	112	112	
5	**Construction Activities** (including also for Demonstrations)						
	Shallow Tube Well	40			40		
	Deep Tube Well (Construction/Renovation)	10			10		
	Water Pumping System	70			70		
	Communal Water Tank	56			28	28	
	Diversion Water Canal	45		1	19	25	
	Pond Rehabilitation/Construction	150			75	75	
	Various Soil Conservation Measures	1156	Hectare		578	578	

Annual and End of Project Targets for Outcome 3:

Timeliness and quality of climate risk information disseminated to Dry Zone households enhanced through use of short-term weather forecasts, medium-term seasonal forecasts, and longer-term climate scenario planning							
Output	**Activities**	**Year**					
		2016	**2017**	**2018**	**2019**	**Total**	**EoP Target**
3.1	Number of climate risk communication products such as maps and scenarios in active use by Township authorities, NGOs and CBOs to improve planning decisions and prioritize investment actions	0	5			5	Climate hazard maps and risk scenarios are available in each Township, based on vulnerability assessments.
3.2	Number of local institutions that issue regular warning and forecasting communications to community-based organisations and vulnerable households		10	35	30	75	70 community based disaster risk management (CBDRM) committees are formed to relay climate early warning information from the Township DPC 5 Climate Risk Information sub-committees established within the Township DPC
	The number of climate related information materials produced to assist Dry Zone households to adjust their livelihood behavior		4	4	4	12	At least six agro-meteorological bulletins; two early warning and disaster response bulletins/posters; four guidance notes on resilient agricultural /livestock practices produced

ANNEX 4 Back-to-Office-Report Template (BTOR)

<table>
<tr><td colspan="3">UNITED NATIONS DEVELOPMENT PROGRAMME</td><td>MISSION REPORT SUMMARY</td></tr>
<tr><td>Name</td><td>Group/Unit
UDNP-AF Project</td><td></td><td>Date:</td></tr>
<tr><td colspan="3">Approved Mission Itinerary: Patheingyi—- list sites -Patheingyi</td><td>Telephone Number:</td></tr>
<tr><td colspan="3">Inclusive Travel Dates:</td><td>Key counterpart(s):</td></tr>
<tr><td colspan="4">Purpose/Objective of Mission:</td></tr>
<tr><td colspan="4">Brief Summary of Mission Findings:

• Focus here on key findings and observations made during the field visit.
• Try to make a clear distinction between observations, discussions and findings
• Give key findings and recommendations
• Do not forget to clearly indicate which stakeholders you have met</td></tr>
<tr><td colspan="3">Actions to be Taken :

• List the key actionable points and also indicate clearly WHO is responsible and WHEN action is expected to be completed.</td><td>Distribution:</td></tr>
</table>

ANNEX 5 RISK TABLE

No	Risk	Classification	Impact/ Probability 1: Low 5: High	Mitigation Measure
1	Non-climate drivers undermine adaptation efforts under this project	Institutional	Impact: 4 Probability: 1	The project will promote an integrated view of vulnerability in which the mitigation of climate- related drivers of vulnerability can be coupled with economic benefits. This integrated, ecosystem-based view of resilience, which is based on community-based participatory planning, will be able to hold non-climatic drivers such as over-grazing, deforestation and unsustainable agricultural practices in check.
2	Extreme weather events during the project lifetime undermine confidence of local communities in adaptation measures promoted by the project	Environmental	Impact: 3 Probability: 3	The project will integrate designated Outputs which focus on disaster risk and early warning communication, which will enable basic preparedness planning. As indicated in the Implementation Schedule in section D, activities in Component 3 will be implemented in earlier phase of the project implementation so that the impact of potential extreme weather can be minimized while the effectiveness of activities can be demonstrated
3	Adaptation measures increase inequity in communities	Environmental Social	Impact: 3 Probability: 2	Local level implementation through farmer groups, CBOs and NGOs will ensure that adaptation measures are demonstrated on the basis of participative processes which are gender-sensitive and enable participation of, and expression of views from, vulnerable and marginalized groups. Furthermore, during the inception phase of the project, M&E Officer will formulate a detailed beneficiary selection criteria and have it endorsed by relevant stakeholders to reduce the potential risks of mistargeting.
4	Technical capacity of Township and village stakeholders restricts broad community engagement	Institutional	Impact: 3 Probability: 2	The project is adopting a capacity development approach which is based on participatory assessments. These assessments will build awareness, support ownership and enable the analysis of autonomous adaptation approaches. Based on these assessments, community groups will be supported in piloting local adaptation measures, which enhance capacity in a practical 'learning by doing' manner.
5	Political and social instability and lack of government engagement	Institutional/ Political	Impact:3 Probability:1	While potential political instability is ultimately outside the control of the project, the Dry Zone has been relatively insulated from the past civil unrest. The principle of community empowerment, the economic, social and environmental benefits that the project is likely to deliver, will have a positive impact on removing a seed of potential civil unrest. Project preparation phase had extensive consultations with government officials including Region Chief Ministers in the project target sites as well as high level officials at the capital. These consultations reconfirmed their original commitment for and interest in successful implementation of the project. Lastly, UNDP has been regarded as a trusted government partner even during the times of internal conflicts and their aftermath. UNDP's active role in project execution will contribute greatly to ensure continued commitment from and engagement of government agencies.

ANNEX 6

Self-Assessment Template

A Critical Internal Review of Progress, Challenges and Opportunities in Preparation for the Last 2 Years of Implementation

1. **Introduction**
    a. Objective (SA as input for MTR, stocktaking opportunity, moment of reflection away of daily implementation focus, setting agenda for MTR discussions on progress and challenges
    b. Compilation process
    c. Contents

2. **Review of Progress**
    a. Inception phase
    b. Year 1, key activities
    c. Year 2, key activities
    d. Capacity building
    e. Collaboration?

3. **Monitoring and Evaluation Report**
    a. M&E Framework and process
    b. Monitoring report
        I. Component 1
        II. Component 2
        III. Component 3
    c. Proposal for new indicators and/or new targets (target revision/adjustment)
    d. Budget expenditure (financial monitoring)
        I. Year 1 and 2 (delivery rate)
        II. Looking ahead (adjustment of projected expenditure)

4. **Challenges and Issues**

5. **Proposed changes or additional activities for the last years of project implementation**

6. **Conclusions and Recommendations**
    a. Conclusions
    b. Recommendations

ANNEX 7 UNDP AF Project Emerging Good Practice Template
Date:

Brief summary of the good practice (link to project goal or specific deliverable, background, purpose, etc.)	*Short description why this practice has been developed, for what reasons and why you consider this as an example of a good practice to be replicated/shared.*
Relevant conditions and Context: limitations or advice in terms of applicability and replicability	*Based on your field experiences, describe under what conditions this practice will be applicable/replicable and what are key limitations/constraints for implementation (and how to overcome these…).*
Establish a clear cause-effect relationship	*Describe why this practice is to be considered a success: what are the causal factors it works and has a positive effect.*
Indicate measurable impact and targeted beneficiaries	*Define how one can measure the net positive impact of this good practice and by whom these impacts are felt (beneficiaries): yield, improved income in USD, less time spent on water collection etc.*
Potential for replication and by whom	*Describe the replicability/applicability by others (by whom??) and what is needed for successful replication: training, technical support by Government staff etc.*
Upward links to higher UNDP and/or AF Goals ()	*Alignment with country-level programmes/goals and/or AF global outcomes and goals/objectives.*
Other documents or relevant comments	*Any other documentation: fact sheet, case study, photo story, video, training manual etc.*

ANNEX 8 Lesson Learned Template

UNDP AF Project Myanmar

Brief description of lesson learned (link to specific action or task)	*What is the precise lesson you have learned and to what activity or practice of the project is this linked?*
Context and any related preconditions	*Under what conditions have you learned this lesson and what was needed to learn this lesson?*
Targeted users /Beneficiaries	*What was the targeted group of beneficiaries/users related to the lessson learning process?*
Challenges/Negative lessons: Causal factors	*In case of a negative lesson, name the key factors that caused failure or challenges and, if possible, how you tried to overcome these challenges.*
Success/Positive Issues: Causal factors	*If case of a positive lesson, name the key factors that caused success or had a positive impact..*
UNDP-AF Administrative Issues (staff, resources, design, implementation)	*Self-explanatory.*

ANNEX 9 Screening Procedure: examples and mitigation plan

Do you foresee any negative environmental impact of the planned activity? Examples of possible negative effect could be:

- *Increased land degradation because of more intensive free grazing linked to supply of livestock*
- *Enhanced accessibility of irrigation water leads to salinity issues linked to poor irrigation management*

Do you foresee any negative social impact of the planned activity? Examples:

- *Reduced yields of short-life seed varieties*
- *Group formation with exclusion of some community members*
- *Fencing of communal plantation areas: right of access and limitation of grazing*
- *Afforestation activities only produce impacts on medium- and longer-term and are therefore less attractive to marginal households, relying on direct impact (seeds, inputs etc.), which results in **indirect exclusion** of these households to planned activities.*
- *Communal ponds developed or rehabilitated have led to a higher mosquito population and more vector-borne diseases as malaria and dengue.*
- *Soil- and water conservation practices require a lot of labour, which woman-headed households have difficulty to provide (risk of exclusion/limited access).*

Consider:

- **Indirect effects**: implementation could lead to secondary or indirect effects, often social responses to a project intervention. For instance, resource access limitations, such as a community agreement to limit or forbid grazing in a forest plantation area could lead to encroachment of land of a neighboring village/watershed ("spillover").
- **Social groups and inclusion**: differences between resource-rich and resource-poor may result in different impact of certain interventions, especially access to certain interventions (consider exclusion of landless households or woman-headed households).
- **Gender**: women are often more vulnerable to environmental degradation because of existing inequality to land and resources and one has to ensure inclusion of women in planned activities.

Mitigation Plan

If the initial screening has triggered **any concerns** about possible negative environmental or social impacts of planned activities and the project still intends to continue implementation because of the envisaged benefits of the interventions, it is recommended to consider which actions could be undertaken to avoid or limit the possible negative implications. **A mitigation plan** lists the measures needed to enhance environmental benefits and minimize adverse environmental effects. The mitigation plan, as part of a broader monitoring effort, should track the actual impacts of the project during implementation.

Mitigation Plan Example

Project activity:

- *Rehabilitation of secondary irrigation channel in village X*
  Is there any foreseen negative social or environmental impact?: YES / NO

If YES, what kind of with possible negative environmental or social impact has been identified:

- *Rehabilitation of the irrigation channel might revive a longer existing dispute with the neighboring village about the management of the irrigation channel. They express that in the past too much water was consumed by village X and they fear that this will be the case again after rehabilitation.*

Mitigation Activity	Intended Result	Actual Result
1. Dialogue session with neighboring village on clear rules for water usage	Agreement between villages on irrigation water management	To be recorded during follow-up monitoring
2. Shared maintenance work by the two villages	Building better social linkages and sustain good irrigation water access	To be recorded during follow-up monitoring

Who should lead this screening process?

The lead role lies initially with the technical specialists as the activities to consider are part of their work packages and plans and require their technical supervision and guidance. Another role will be with the implementing partners, the NGOs hired as service providers, to ensure that during planning and implementation of the various project interventions no adverse effects are occurring or identified. Lastly, the beneficiary communities should play a part in this screening through consulting them on any foreseen negative impact during the planning phase and during and after implementation to get their feedback and experiences, especially perceived risks and negative impacts.

ANNEX 10 *Table of project milestones with indication of milestones in red and distinct gender-disaggregated milestones in green* (Adopted from the ProDoc with readjustment of some of the milestones based on the Results Framework revision)

♦♦ **=milestone** ♦♦ = gender disaggregated milestone

		Year I				Year II				Year III				Year IV			
	Output / Activity	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
	Programme Execution																
	Inception Workshop																
1.1	Water capture and storage capacities in 280 villages enhanced to ensure sufficient irrigation and potable water supply during dry periods																
	1.1.1. Establish a coordination platform with public institutions and development organizations (CBOs, NGOs) in each township to design and co-finance a simple network of technically and environmentally appropriate and complementary water harvesting, storage, filtering and retention structures to conserve water for dry periods and hold erosion in check																
	Identify specific locations in target villages for the following adaptation interventions: Canals for water diversion; small-scale pumping systems; communal water tanks; tube wells; pound reservoirs; and soil storage dams.		♦♦														
	1.1.2. In consultation with Village Water User Groups, revise/develop a water management scheme (including a conflict resolution mechanism and collection of user fees)																
	1.1.3. Organize technical trainings targeting Village Water User Groups on the maintenance and management of the water systems as well as periodic monitoring of effectiveness and usage for M&E																
	1.1.4. Organize awareness raising events targeting WUG and community members on climate risks, resilient water use, and participatory management of the water systems																
	Village-level management scheme formulated which includes the roles and responsibilities of VWUG and distribution agreement across (vulnerable) households		♦♦	♦♦													
	At least 50% of women's participation is encouraged to the workshops and participation monitored	♦♦	♦♦				♦♦	♦♦	♦♦						♦♦		
	1.1.5. In collaboration with Village Development Committees and VWUG, identify sources of local materials and local labour for construction of the water systems																
	1.1.6. Construction of the water systems according to the priorities and agreement under																
	Contribution of labour from women and/or landless impoverished households is facilitated			♦♦	♦♦	♦♦	♦♦	♦♦	♦♦								
	Production of a report on the success and challenges of micro-scale water infrastructure														♦♦		
1.2	6,141 hectares of micro-watersheds are protected and rehabilitated through Farmer- Managed Natural Regeneration (FMNR) to increase natural water retention and reduce erosion																
	1.2.1. Verification of target locations (pre-identified during the preparation phase) and selection of relevant tree species for conservation/regeneration/afforestation/reforestation in consultation with CFUG, farmer groups, Village Development Committees, foresters, etc.																

		Year I				Year II				Year III				Year IV			
	Output / Activity	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
	Finalize village-wise intervention type and size based on the level of denudation, on-going surface runoff, and topography.		♦♦														
	1.2.2. Facilitated by CFUG and Village Development Committees, finalize in-kind co-financing agreement with local communities participating in FMNR activities	■	■														
	1.2.3. In alignment with 1.1.4., organize workshops on climate risks and linkages of FMNR, erosion control, and natural water control	■	■				■	■	■						■		
	At least 50% of women's participation is encouraged to the workshops and participation monitored	♦♦	♦♦				♦♦	♦♦	♦♦						♦♦		
	1.2.4. Along with Activity 3.1.3., measure the preconditions of the micro-watersheds and integrate the information in the GIS system			■	■	■											
	1.2.4. Soil storage dams and check dams constructed; enrichment planting, improvement felling, pruning, ditch digging, and root cutting carried out in 116 villages for regeneration of existing vegetation cover and conserve remnant natural forests (engaging the bulk of landless labourers in the target area)			■	■	■	■	■	■	■	■						
	1.2.5. Afforestation and reforestation activities conducted covering 1,458 hectares of land			■	■	■	■	■	■	■	■						
	1.2.6. Tree planting in religious and school compounds, along dam boundaries, road sides and gaps in communal areas covering 770 hectares			■	■	■	■	■	■	■	■						
	1.2.7. Provide hands-on trainings to CFUG, farmer groups, village development committees, foresters, rangers and range officers on forest management (initially in alignment with the implementation schedule for 1.2.5 to 1.2.6.)			■	■	■	■	■	■	■	■			■	■		
	1.2.8. Facilitated by Forest Department and NGOs, and using outputs from Activity 3.1.1., formulate a community forestry management plan in line with CFI guidelines						■	■	■								
	Roles and responsibilities of women are clearly identified in the community management plans						♦♦	♦♦	♦♦								
	1.2.9. Undertake monitoring and training on adherence to the community forestry management plan					■				■				■			
	Production of a report on the success and challenges of community forestry management plan														♦♦		
	Initial 30-year land lease permission sought and granted for successfully managed community forests														♦♦	♦♦	
1.3	Community-based agro-forestry plots are established on 3,983 hectares of private and communal lands to conserve soil and water																
	1.3.1. Establish a small village-based agro-forestry group in each target village	■															
	Initial call for participation will target primarily women; at minimum, 50% of the member should be women	♦♦															
	1.3.2. Formulate a user-friendly template for community-led inventory of ongoing agro-forestry (agro-silviculture; agro-silvipasture; silvopasture) practices	■															

		Year I				Year II				Year III				Year IV			
	Output / Activity	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
	1.3.3. Undertake a community-led inventory of agro-forestry practices, agro-silvopastural systems and non-timber forest utilization and development in 280 villages to be updated along with implementation progress, including economic benefits from the intervention	■	■	■					■				■				■
	Information collected on ongoing practices will be gender-disaggregated		♦♦	♦♦													
	1.3.4. Based on the results of the inventory, community priorities and expert opinions, consult with communities on a locally suitable agro-forestry approach				■												
	1.3.5. Implement locally suitable agro-forestry techniques					■	■	■	■	■	■	■	■				
	1,000 hectare of homestead gardening in 76 villages established												♦♦				
	1,500 hectare of farm boundary planting in 95 villages established												♦♦				
	1.3.6. Provide trainings to agro-forestry groups, Village Development Committees, CFUGs and other CBOs on planning, implementation and management of small-scale, diversified agro-forestry systems and non-timber forest production techniques					■				■				■			
	1.3.7. Undertake exchange visits of community members for information sharing							■				■				■	
	Participants of the monitoring visits encourage women's participation							♦♦				♦♦				♦♦	
	Production of a report on the success and challenges of community forestry management plan														♦♦		
2.1	Drought-resilient farming methods introduced to farmers to enhance the resilience of subsistent agriculture in the Dry Zone																
	2.1.1. Organize training events on a range of climate-resilient farming methods targeting Dry Zone farmers and extension workers including drought-resilient crop varieties, optimization of plant population, weed control and crop husbandry techniques, and surface mulching		■	■	■					■	■	■					
	Organize a technical workshop to consolidate existing domestic and international knowledge on drought resilient crop varieties and seed banks inviting technical agencies such as Myanmar Agriculture Services, Univ. of Agriculture, Dept. of Agricultural Research		♦♦														
	2.1.2. Establish and transfer drought-resilient varieties from township agricultural research farms to village-level research farms in 140 villages			■	■	■	■	■									
	2.1.3. Establish a participatory, demonstration plots in 50 villages and undertake field trials of drought resistant crops and drip irrigation techniques to enable local dissemination and transfer of adaptation know-how			■	■	■	■	■									
	2.1.4. Organize exchange visits and farmer's field school involving project and non-project community members, staff from these institutions, agricultural extension officers, Township and District Administrations and NGOs					■				■				■			

		Year I				Year II				Year III				Year IV			
	Output / Activity	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
	2.1.5. Produce at least one technical report capturing lessons learnt on the effectiveness of drought-resilient farming methods													■	■	■	
2.2	Resilient post-harvest processing and storage systems introduced to reduce climate-induced post-harvest losses (drought and floods)																
	2.2.1. Undertake a participatory assessment to quantify the effects of existing practices and identify loss patterns from current post-harvest practices along the value chain of harvesting, threshing, drying, storing and processing	■	■														
	2.2.2. Based on the findings from Activity 2.2.1, provide 140 locally made, community-managed rice threshers to 140 villages in areas where post-harvest loss are highest to increase communal food security and price stability in flood-prone areas			■													
	Quantitative assessment of current post-harvest process undertaken and reported				♦♦	♦♦											
	Production of an assessment report						♦♦										
	2.2.3. Identify sources of locally-made rice threshers			■													
	Formulate a cost-sharing and maintenance plan in each village for the use of the thresher			♦♦													
	2.2.4. Construct 36 elevated harvest storage facilities which reduce post-harvest losses from erratic rainfall and flooding							■	■	■	■						
	2.2.5. Organize technical trainings targeting Agriculture Services officers, farmer groups/cooperatives, CBOs/NGOs on post-harvest handling techniques based on the results from Activity 2.2.1							■					■				
	Women's participation is encouraged and gender-disaggregated participation record will be produced							♦♦					♦♦				
	Production of an assessment report on the effectiveness of 2.2.4 and 2.2.5														♦♦		
2.3	Diversified livestock production systems introduced in 6,300 households to buffer the effects of drought on rural livelihoods																
	2.3.1. Organize training of trainers events targeting Livestock Department officers in diversified livestock rearing, improved fodder preparation and storage, rangeland management, disease control methods, fodder bank and livestock shelter practices. (To be conducted once at start of implementation).	■	■					■	■								
	2.3.2. Organize at least 4 training events throughout the course of project in each village-tract aiming at a transfer of technical know-hows on climate-resilient livestock practices from Livestock Department officers to community members, CBOs and NGOs			■				■				■				■	
	At least 50% of the participants of the trainings should be women. Gender-disaggregated participant list will be produced.			♦♦				♦♦				♦♦				♦♦	
	2.3.3. Procure high productivity pigs with 62.5% drought tolerant gene; drought tolerant chicken; existing species of goats and sheep; and high-productivity goat/sheep species		■	■													
	2.3.4. Formulate a community agreement on benefit sharing from diversified and climate resilient livestock practice		■														

		Year I				Year II				Year III				Year IV			
	Output / Activity	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
	2.3.5. Organize events that demonstrate participatory animal (cross) breeding to conserve essential buffer stocks during extreme events and maintain genetic diversity				■	■				■	■						
	Production of an assessment report on the effectiveness of diversified livestock production systems														♦♦		
3.1	Climate hazard maps and risk scenarios are developed in each township to support community-based climate risk management and preparedness planning																
	3.1.1. Synthesize available information on future climate in the Dry Zone (in collaboration with the CRI sub-committees)	■	■	■													
	3.1.2. Organize a training of trainers event, inviting a regional expert on participatory vulnerability assessments, targeting local NGOs, CBDRM and CRI members, DZGD and Department of Development Affairs			■	■												
	3.1.3. Carry out vulnerability assessments in township and rapid vulnerability assessments at each village tract			■	■	■											
	Vulnerability assessment will look at gender-differentiated vulnerabilities to climate risks			♦♦	♦♦	♦♦											
	3.1.4. Using the product from Activity 3.1.3., generate climate hazard, risk and vulnerability maps for all townships targeted under the project taking into account locally-specific socio-environmental conditions such as the extent of poverty, FMNR/micro-watershed management, access to small-scale water infrastructure, adoption of agro-forestry, and agro-silvo-pastural practices					■	■										
	3.1.5. Update the map at least twice during the course of the project taking into account the progress in Outcome 1 and 2									■	■				■	■	
	3.1.6. Organize town-hall meetings with township administrator, CRI sub-committees and other government departments, CBOs/NGOs, and community members, to discuss climate risk and hazard information and lessons learned from risk reduction measures into rural development planning and investment processes												■			■	
3.2	Local level climate and disaster risk management framework strengthened for timely and effective communication of climate risk and early warning information																
	3.2.1. Finalize operational procedures for the Climate Risk Information sub-committee in coordination with the Township Administrator's Office, DPC, Drought Monitoring Centre, member NGOs, and village-level CBDRM Committees	■	■														
	3.2.2. Organize a national level training targeting DHM at the national, division, district and township level officers on collection, analysis and communication of climate risk information; organize regional training targeting DHM and NGOs in producing climate risk information tailored for agricultural use			■													
	Seasonal agricultural bulletins produced					♦♦		♦♦		♦♦		♦♦		♦♦		♦♦	

		Year I				Year II				Year III				Year IV			
	Output / Activity	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
	3.2.3. Formulate a TOR and communication protocol for CBDRM Committees in coordination with their respective Disaster Preparedness Committee at the township level and local NGOs, detailing the early warning information flow from DMH/Drought Monitoring Centre to CBDRM Committees through DPC																
	3.2.4. With support from local NGOs, form Community-based Disaster Risk Management Committees (CBDRM) in at least 70 villages																
	CBDRM Committee will have women representatives and they will be assigned specific roles and responsibilities			♦♦	♦♦												
	3.2.5. Organize community level trainings on interpreting publicly available weather forecasts broadcasted through TV and radio; seasonal forecasts, agro-meteorological bulletins and communal hazard maps from CRI sub-committee; early warning information from DPC and CBDRM Committee																
	3.2.6. Establish linkages with national and regional information sources for the Climate Risk Information Sub-committees																
	3.2.7. Carry out early warning mock drills to test information flow from the national DMH and National Disaster Preparedness Central Committee, to division/district/township DPCs, to CBDRM Committees, and finally to villagers and practice evacuation (Output 3.1 will identify community evacuation centres as part of hazard map preparation process).																
	Programme Execution																
	PMU established and operational																
	Project staff recruited																
	Equipment procured, office established																
	PMU operational and managing programme implementation																
	Project Monitoring and Evaluation																
	Establishment of M&E systems including additional baseline data collection (where needed)																
	Inception report																
	Quarterly reports																
	Annual technical monitoring report																
	Meetings of National Project Steering Committee																
	Meetings of Technical Working Group																
	Meeting of National Environment Coordinating Committee																
	Mid-Term Evaluation																

”
”

		Year I				Year II				Year III				Year IV			
	Output / Activity	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**
	Final Project Evaluation																
	Project Terminal Report																
	Audits																

ANNEX 11 Quarterly Report Template

DATE:
Award ID: 00079682
Description: Addressing Climate Change Risks on Water Resources and Food Security in the Dry Zone of Myanmar (AF Project, CCA / Dry Zone)
Implementing Partner: UNDP
Period Covered: X Quarter 2016

1. A Project Risks and Issues logs:

Project Risk log: Please integrate the latest project risk log (from previous quarter or original project risk log if this is the first QPR for the project) and update as relevant. Refer to ANNEX 5, Risk Table.

If any change in the perceived risk for the project implementation is identified, this needs to be reflected in an updated risk log.

#	Description	Date Identified	Type	Impact & Probability	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update and status

1.B Project Issues Log: Please integrate the latest project issues log (from previous quarter) and update as relevant – or if this the first QPR of the project, fill in the below template.

#	Description	Date Identified	Type	Impact & Priority	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status

2. Project Performance.

Description of implementation progress at output level, taking into account all activities. Here a concise narrative (bullet point wise) should present the distinct steps taken in project implementation.

3. Activity Performance.

Narrative at sub-output level with the requirement to fill out the next table, divided over the 3 Components of the AF project.

Quality Criteria	Quality Method	Quality Assessment Due Date	User Perspective	Timelines	Resource Usage	Gender Perspective
			(Date – Rating: Comments)			
Please enter activity result here	*Please indicate how you will establish what really happened, i.e. source of information (e.g. project manager's reports, training surveys, etc.)*	*Please indicate the planned completion date for the result activity (as per AWP)*	*By date, please provide a short narrative of project activities that were undertaken, including some detail as to what exactly was done/happened, as well as feedback on success/impression of the project activity*	*Please indicate whether the activity was completed on time as per AWP*	*Please indicate whether this required any additional funding/resources, or made use of special funds, etc.*	*Please describe how the gender dimension has been addressed in the implementation of the project activity*