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Tracking Adaptation and Measuring Development (TAMD) in Kenya, Mozambique, Nepal and Pakistan

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Q3 Report - Meta-analysis findings from feasibility testing phase

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Contents

SYNTHESIS OF FINDINGS

This paper summarises findings from the third quarter of feasibility testing of TAMD across four countries- Kenya, Mozambique, Nepal, and Pakistan. Participating countries are at different stages of integrating TAMD within their M&E systems; this briefing explains a range of ways in which countries are applying TAMD within their context. The paper provides an overview of (a) how has the evaluation context within the country evolved? (b) Which actors are involved and how and have there been changes in stakeholder roles in decision making? (c) How has the theory of change been defined? (d) How are the indicators selected? (e) What are the methods used? (f) Experiences with data collection (g) and finally what were the challenges encountered?

Evaluation Context- How has the evaluation context evolved?

Research partners across participating countries are piloting TAMD at different levels and scales. In Kenya and Mozambique, the evaluation context has evolved from a national to a subnational focus. In most participating countries the scale of resilience assessment is at the sub national level- wards, villages and provincial levels.

A) Kenya:

Scale of adaptation interventions: National, County and Ward level

The evaluation context of TAMD in Kenya has evolved from a national focus to a subnational level. During the development of Kenya's Climate Change Action Plan, TAMD framework was integrated as a basis for adaptation M&E into the national climate change MRV system under the sub component 6 of the Kenya Climate Change Action Plan (KCCAP) that addressed performance and benefit measurement. Sub-component 6 also recommended follow up actions for establishing the MRV system, one of which was the use of TAMD at 'county' level to assess climate adaptation investments.

In Kenya therefore TAMD is now being applied to evaluate the impact of a **chain of national, county and ward level** common interventions in five wards of a Kenyan county. This is being done through the Adaptation Consortium in collaboration with the National Drought Management Authority (NDMA). At **national level** the TAMD approach has chosen to focus on specific activities planned in the National Drought Management Authority (NDMA) Strategic Plan such as strengthening information systems, disaster risk reduction, strengthening coordination and planning amongst others. At **county level** the approach is focusing on activities planned in the County Integrated Development Plan (CIDP) that are in line with the national priorities mentioned above. At the **ward level** adaptation interventions planned by 5 ward committees under the County Adaptation Fund (CAF) have been chosen: CAF NRM, livestock and water interventions. These interventions were shortlisted based on a prioritisation exercise carried out in a workshop (12^{th}-13^{th} September) organised with national, county and ward level government representatives in Kenya. The collaborative prioritisation exercise helped to arrive at four common themes, drawing from common interventions across national level, county level and ward level-

- Climate Info Systems;
- DRR
- County coordination & planning;

- Finance and budgeting.

Resilience assessment: Ward level

Kenya is assessing the impact of a chain of national, county and wards level common interventions in five wards of one of the Kenyan county- Isiolo. Increased resilience in the five wards will be measured in terms of reduction in impacts of disaster events, improved standard of living and increased community resilience to droughts. The resilience measures were prioritised based on a workshop with ward committee members organised in quarter 1 (Refer Kenya Quarter 1 report).

The five wards in the Isiolo County were selected collaboratively by the ASAL Secretariat and National Drought Management Authority (NDMA). Isiolo County was purposively selected. The county is the first county to access the County Adaptation Fund (CAF).

B) Mozambique

Scale of adaptation interventions: Local Adaptation Plans at sub national level

Initially CONDES (National Council for Sustainable Development Secretariat) offered the TAMD framework to guide the first steps toward the construction of the national M&E system for CCA by defining a set of indicators through consultations with GIIMC representatives (Inter-Institutional Group on Climate Change) and district planning technical body (as described in the National Climate Change Mitigation and Adaptation Strategy (NCCMAS).

However, over time, the focus has evolved or rather modified due to delays from TAMD support. Since then TAMD has although supported MICOA and S-CONDES in identifying relevant indicators for vulnerability to the and adaptive capacity TAMD will now primarily support ACCRA consortium work1 related to the development of **Local Adaptation Plans (LAP) at district level** based on the climate vulnerability and capacity analysis (CVCA) approach and the LAC framework. The analysis of this exercise will inform the development of district Local Adaptation Plans based on the assessment of relationship between initiatives related to climate change vulnerability risk reduction and factors enabling community adaptive capacity. The theory of change workshop held between 2nd and 3rd December 2013 in one Mozambique districts (Gujja district) focussed on 3 district level adaptation actions, impacts of which will be assessed at the district level. These are-

- Strengthening the flood control infrastructures (dykes and river banks).
- Strengthening the livelihood and coping strategies.
- Strengthening the early warning system.

The new approach will provide strong evidence to feed sub national or local level M&E experiences into the national systems and reengage with the national climate change M&E processes.

Resilience assessment: District level

TAMD will test how climate change adaptation actions (outputs) and results (outcomes) lead to a sustainable reduction in vulnerabilities of people and their assets in a given climate change and socio-economic scenario of Gujja district. Based on the theory of change workshop organised between 2nd and 3rd December 2013 in Gujja district, the stakeholders agreed on measurement of impacts at three levels to understand community level resilience development in Gujja district (a) increased community development in all sectors; (b) increased socio-economic stability (c) increased life expectancy.

[1] ACCRA is a consortium made up of five international organizations namely: Oxfam, Save the Children International, Care International, World Vision International and ODI. In Mozambique SCIMOZ is the lead of the intervention towards developing local adaptive capacity and at the same time IIED partners for TAMD framework implementation.

C) Nepal

Scale of adaptation interventions: Multiple national development interventions

TAMD is evaluating impact of multiple national interventions in selected districts of Nepal. The purpose of the Nepal TAMD feasibility test is to examine changes in community and household resilience and how they might be measured and aggregated across different interventions to enable the government to track progress and measure effectiveness at the national level. It uses three interventions that are addressing specific hazards through community led planning. These include the

- Livelihood Forestry Programme (LFP),
- CADP-N/LAPA, and
- Local Government and Community Development Programme (LGCDP).

The three interventions and 2 districts where TAMD is being applied are selected as per the TAMD Coordination Committee's (TCC)[2] advice/guidance and the TAMD study team (a group of technical/expert consultants) technical recommendation.

Resilience assessment: District and village level (by hazard zones)

The impacts of three interventions are being measured at the district and community resilience level. In quarter 2 the TAMD team has shortlisted two pilot districts- *Nawalprasi and Rukum*- where the impacts of three selected interventions will be assessed.

These districts were selected based on the hazard zone they fall within. For example Nawalparasi district is vulnerable to hazards of flood risk and Rukum district is vulnerable to landslides. The villages within the selected district were shortlisted based on TAMD attribution logic and matched selection criteria between VDCs that will allow a with or without analysis. Selection criteria are - (1) similar contextual elements such as socio-economic status (b) climate vulnerability (c) presence of selected project intervention and demographics so that linkages between the selected project interventions can be ascertained. In quarter 3, two villages have been selected in the landslide affected Rukum district- one that receives support from 2 interventions (LFP, LGDCP) and second VDC which receives support from only one intervention (LGDCP). This is to allow a with or without analysis in a quasi-experimental space. A similar exercise will be adopted in the other flood affected district Nawalprasi.

D) Pakistan

Scale of adaptation interventions: National 'climate related' project

TAMD is being applied in Pakistan to evaluate the impacts of an adaptation related project in selected districts of the country. TAMD will be tested on the **Rain Water Harvesting (RWH) project** managed by the Earthquake Recovery and Rehabilitation Authority (ERRA). Selection of this specific project was based on the climate compatibility of PRWH in terms of livelihood improvement and clear adaptation benefits across the different sectors. In the third quarter the partners engaged in final consultations with relevant agencies, established the theory of change, selected indicators and tested them, and collected data and information for these indicators.

Resilience assessment: District and village level

The impact of the PRWH is being assessed in two provinces- Azaj Jammu and Kashmir (AJK) and Khyber Pakhtunkhwa (KP) - where the project is being implemented. The project will be assessed for its ability to reduce climate change vulnerability of village level communities by augmenting water supply and storage at the household level. Climate vulnerability will be measured in terms of socio economic impacts.

A scoping visit was conducted in both regions (AJK & KP) of the PRWH project to identify the study sites. Two sites were selected - *Chitra Topi Bagh (AJK) and Narian, Nathiagali Abbotabad (KP)* - based on following criteria: (a) Time since the intervention was made operational (b) Availability of comparable populations with and without the intervention (with parameters such as equal distance from existing water source and similar socio-economic status) (c) Catchment area for public services such as health and education were easily discernable for both populations.

[2] The TCC is led by the MoSTE (Ministry of Environment in Nepal).

Interventions	Kenya	Mozambique	Nepal	Pakistan
Scale of adaptation interventions	Adaptation interventions at – National, County and Ward level	Local Adaptation Plans at sub national level	Multiple National Interventions. - NCCSP, LAPA - LFP - LGDCP	National project- Rainwater harvesting
Scale of impact/resilience assessment	Ward Level.	District level	Impact assessment at the District level and village level	Province and village level

Stakeholder engagement- How is TAMD getting institutionalised?

Stakeholder involvement is evolving in each stages of TAMD application. In Kenya and Nepal TAMD is gradually being institutionalised while stakeholders at different levels play key roles in decision-making with regards to choice of evaluation context, indicator selection, data collection, etc. In Pakistan the stakeholders are engaged through consultations for gaining buy in and approvals, but their concrete role in TAMD process is yet to realise. In Mozambique a re-engagement process has been initiated at the sub-national level.

- In **Kenya,** stakeholders at national and subnational particularly, **departmental representatives** at the county level and **ward committees**, play a key role in finalising the theory of change, validation of data through monitoring visits and supporting baseline data collection. Departmental representatives at the county level from NDMA (Ministry of Devolution and Planning), Department of Water (Ministry of Environment, Water and Natural Resources), Department of Livestock (Ministry of Agriculture), Department of Veterinary Services, Department of Meteorology and the Department of Crop Production (Ministry of Agriculture) all inputted into the final theory of change and participated in the monitoring visits. The **County Planning Unit** will be involved in collecting county baseline information and terms of reference for the same were shared with the unit.
- Stakeholder involvement in **Mozambique** has shifted from national to a sub-national level. In the previous quarters TAMD focussed on supporting the national climate change M&E systems. However, due to delays in delivery, interactions between TAMD Mozambique with Government of Mozambique and key stakeholders became limited. As a result a new approach of re-engagement will be considered. TAMD will build on existing ACCRA work on Local Adaptation Plans which was carried out in close coordination with MICOA (the environment ministry in Mozambique) and group of TAs from DANIDA, UNDP and INDIGO. This analysis will provide evidence to GoM from M&E experiences at the subnational level.

  In the third quarter partnerships evolved with **stakeholders at sub national level**- Gujja district. This includes various departmental directors and technical staff from Gujja district government; Gujja district civil society representatives, and Gujja district Permanent Secretary who attended the ToC development workshop and inputted into the process of developing ToC. The Permanent Secretary of the district will be the key decision maker in finalising the ToC in subsequent stages.
- In **Nepal**, the national actors (TAMD Coordination Committee) have played a key guidance and advisory role in the past especially in selecting interventions as well as shortlisting of two districts Nawalparasi and Rukum.

  After the selection of interventions and districts, field visits were conducted in the selected districts to identify stakeholders and further collect relevant data at district, village and community level. In the third quarter, district level workshop was organised in Rukum district to share the TAMD approach and also generate ideas for VDC selection. Key informant surveys were conducted with district based organisations and stakeholders that participated in the district workshop. A similar exercise will be replicated with the Nawalprasi district officials in the next quarter.
- In **Pakistan** stakeholder relationships with TAMD have evolved but limited to correspondences and consultation. Some actors have inputted into the indicator development process. A number of consultation meetings were conducted in the third quarter to develop and use a set of socio-economic indicators. Local level stakeholders were also consulted for applying the TAMD framework. These include local foundations

who are the implementers of the RWH projects in the respective districts. These included the implementers of the PRWH on both sites. In previous stages scoping consultations were conducted with national and sub-national level stakeholders such as the Climate Change Division (CCD) and the Earthquake Reconstruction and Rehabilitation Authority (ERRA).

Country	Stakeholders	Current Role	Expected
Kenya	NDMA and various **county** Departments of Water, Livestock, Veterinary Services, Meteorology & Crop Production	- Inputted into finalisation of ToC - Participated in the monitoring visits	
	The **County** Planning Unit	Inputted into finalisation of ToC and Provide personnel to conduct monitoring visit.	Involved in collecting county
	Ward committees	-Inputted into final ToC. -Provide logistical support during the monitoring visit.	
Mozambique	**National-**MICOA, CONDES	Limited engagement	No direct
	Sub national stakeholders- Gujja district - departmental directors and technical staff from Guijá district government; Guijá district civil society representatives, and Gujja district permanent secretary (PS)	Active participation in the ToC workshop. PS- Champion and very supportive to conduct activities related to planning around CCA/DDR issues	Provide inputs into the finalisation of ToC
Nepal	National- TAMD coordination committee (TCC) - MOSTE, MoFALD, MoFSC.	Guidance and advisory role- in selection of interventions and districts	
	Subnational- District & VDC representatives	Input into VDC selection. Generate ideas for finalising research tools and methods.	
Pakistan	National- CCD, ERRA Sub-national- SERRA, PERRA Local Implementers: Maqsood & Sukhi Welfare Foundation	Scoping and consultations on indicators Consultations with local implementers for applying TAMD	

Theory of Change

Theory of change predicted in the second quarter were finalised in most countries after further consultations in the third quarter. In Nepal ToC established by respective government programmes formed the basis for TAMDs theory of change. In others, such as Kenya and Mozambique local ToCs were informed by adaptation actions at national and sub-national scales using participatory methods.

Kenya: Transition in theory of change from 'predictive' to 'established' using a participatory approach

The ToC in Kenya has been informed by adaptation actions planned at the national, county and ward levels. In the previous quarters, ward adaptation committees in Kenya developed a theory of change for County Adaptation Fund. In the second quarter a joint workshop with national, county and ward level representatives was organised to identify outputs, outcomes and impact indicators for each of the selected interventions.

Following up from the county indicator development workshop in quarter 2, a meeting was held on the 26th of September in Isiolo to gather inputs from the county adaptation planning committee to finalise the theory of change. The county adaptation planning committee interrogated and validated the theory of change by ensuring that all activities were captured, language used was appropriate and assumptions were developed at each stage of the theory of change. The TAMD ToC in Kenya was finalised stating that better adaptation and DRR actions at the country level will result in reduced impacts of disaster events, improved standard of living and finally communities in Isiolo are resilient to droughts and other effects of climate change.

Mozambique: Initiated a discussion on ToC at the district level

TAMD approach in Mozambique has undergone several changes in terms of partnerships and focus. The process of establishing a theory of change began in the third quarter, with a workshop in Gujja district held between 2nd -3rd December 2013. The workshop participants developed the ToC by working in three guided groups to map outputs, outcomes and impacts of adaptation activities under three broad categories (a) strengthening flood control infrastructure (b) strengthening flood control and coping strategies (c) strengthening early warning systems. Analysing the 4 clusters of inputs the Gujja ToC was then constructed with inter-linkages between inputs, outputs, outcome and impacts. This predictive ToC states that – strengthened early warning systems, flood control infrastructure, livelihood and coping strategies to drought and construction of water supply and storage infrastructure will result in reduced effects of floods and droughts, increased life expectancy and increased socio economic stability.

Nepal: TAMD ToC drawn from existing ToC of selected interventions

TAMD team in Nepal has developed theory of change drawing from existing ToC of selected interventions. The project documents and reports of the three selected interventions were reviewed and a draft theory of change for each intervention was predicted and outputs, outcomes and impacts were mapped out. The ToC states that – better development projects either climate change focussed or development focussed will have impacts on people's livelihoods that will increase their climate resilience at the community and household level.

TAMD will analyse linkages between tracks 1 and track 2 indicators by assessing how each intervention are contributing to or targeting at VDC level. Local theories of change on hazard and intervention are established to assess impact of community CRM in reducing community vulnerability in specific hazard and intervention areas.

Pakistan:

In last two quarters, the Theory of Change (ToC) was in predictive stage. The anticipated outcomes and impacts in terms of socio economic resilience of PRWH were mapped. The ToC assumes that better adoption of PRWH is expected to reduce the climate change vulnerability communities in many ways by augmenting water supply and storage at the household level. Through a process of stakeholder consultation, major outcomes were identified and mapped onto the ToC framework.

To further establish the ToC, a survey was designed to assess the socio economic and environmental impacts of PRWH. The draft questionnaire was designed and shared with stakeholders and after their comments it was launched to collect data from project sites. In quarter three data has been collected against the developed indicators to use and establish the ToC.

ToC	Kenya	Mozambique	Nepal	Pakistan
ToC	The ToC and the assumptions underlying it were finalised and refined in this Quarter.	Initial district level ToC was developed through a workshop organised with district officials	Developed a ToC drawing from existing ToC of selected interventions	In quarter three data has been collected against the developed indicators to use and establish the ToC predicted in the last 2 quarters.

Indicator Development

Countries have developed indicators either using participatory workshops or drawing from documents and information collected in relation to specific interventions. In the third quarter, countries have concretised their indicators and begun data collection at different levels. Use of scorecards is a common approach to assess track 1 indicators. Community and local level resilience is assessed using a combination of existing scarce government data and households surveys to populate missing resilience data.

Kenya: Participatory design of track 1 and track 2 indicators; local ToC and hazard based track 2 indicators

TAMD partners in Kenya have now finalised the track 1 and track 2 indicators. The indicators were developed through a participatory process with national county and ward level stakeholders. In quarter 2 a workshop organised with national and county level stakeholders in disaster management, planning, water, livestock and

agriculture departments was organised to identify and shortlist track 1 indicators. Bottom up track 2 indicators were developed in quarter 1 with 5 ward adaptation committees.

During the development process, the stakeholders were asked to develop indicators that were specific and related to the outputs, outcomes and impacts they had identified in the theory of change to show causal linkages. As such the final indicators are both quantitative and qualitative and the main criterion used for identification of the indicators was measurability and availability of data on the ground.

Track 1 indicators: An overview of the track 1 indicators (Refer Kenya Q3 report) show that proposed CRM action at the national and county level are meant to achieve development action/adaptation action at the community level where the vulnerabilities to climate change are being felt the most. The adaptation actions being implemented at ward level are similar to development actions with the only difference being that they were formulated with the use of climate risk information and resilience assessments conducted before the TAMD initiative begun. Track 1 indicators were developed to measure CRM processes e.g. strengthening EWS systems, developing and operationalizing DRR policies and mainstreaming climate change in finance and planning at county level. Score cards for Track 1 were also sent to the County NDMA and Planning unit for scoring during the third quarter. Learnings from Nepal's TAMD process were used for developing scorecards in Kenya.

Track 2 indicators: Track 2 indictors will be used to assess vulnerability and development status of ward level communities. As CAF projects were in the initial stages, it was important to start developing indicators to develop baseline prior to the start of adaptation interventions. The ward committees were trained on M&E uses and methods during the scoping mission specifically in relation to development of theories of change and identifying their outputs, outcomes, and impacts of the proposed projects. Thereafter local theories of change and indicators were established. Ward level stakeholders were asked to anticipate hazard (droughts) impacts on communities, vulnerable groups, livelihoods, livestock and environment. The guiding questions in the workshop were sequentially able to guide the development of the theories of change and also visually represent the outputs, outcomes/short term changes and the impacts of the proposed interventions.

Indicators developed were screened to ensure that they were easily measurable and would provide data to measure against each ward committee's outcome statement. The indicators developed are meant to measure socio-economic outcomes which according to the communities will enhance their resilience to climate risks.

Mozambique: Initial support to facilitate national indicator development; track 2 indicators identified at the district level.

Previously, TAMD was engaged in Mozambique to support and develop a national system to monitor and evaluate policies and actions to respond to the impacts of climate change. During the initial 2 quarters TAMD worked with MICOA and CONDES to identify relevant vulnerability indicators and indicators on adaptive capacity. A draft set of indicators was developed under the TAMD Mozambique project according to the structure of the NCCAMS, which includes strategic objectives, strategic areas and strategic actions for adaptation interventions (Pillar 1) and cross cutting issues (Pillar 3).

Following this process, TAMD has now adopted a new approach of re-engaging with the government. TAMD approach will be used to facilitate the development of local action plans. In the third quarter district level track 2 provisional indicators were developed in collaboration with district representatives

Track 2 indicators at the Gujja district level: The process of establishing the ToC during the December workshop was followed by identification of relevant indicators and assumptions related to various changes in each input category by workshop participants. These comprise of socio economic indicators such as yield increase, unemployment rate, literacy rate, disease occurrence, water supply coverage and increase in improved housing. Group exercise during the ToC workshop helped in deriving impact indicators of four input categories: strengthened early warning systems, livelihood and coping strategies to drought; flood control infrastructure; and construction of water supply and storage infrastructures.

Nepal: Track 1 indicators developed and tested at the sub-national level; Multi layered Track 2 indicators.

In the previous quarters provisional track 1 indicator were developed at the village level and track 2 indicators were developed at the community level. Relevant Track 1 and Track 2 indicators were derived by reviewing the project documents of the selected interventions in detail. These indicators were tested and refined in the third quarter. Indicators were concretised for the selected interventions and specific hazard related vulnerabilities

such as landslides in one of the district: Rukum. The indicators were refined based on discussion, meetings and interactions with DDC and VDC level stakeholders and household surveys in Rukum. A similar testing will be done in Nawalprasi district considering flood vulnerability.

Track 1 indicators: Track 1 indicators in Nepal mainly focus at the VDC level (village) which is the lowest level of decentralised planning. These comprise of institutional indicators such as: mainstreaming of climate change into VDC and DDC planning (district), institutional coordination and budgeting, learning and capacity, institutional knowledge and capacity, etc. The VDC level indicators can be modified and adapted for DDC level and aggregated to assess national level progress in Nepal. Intervention specific CRM indicators were also developed to assess the functioning of community level institutions such as Ward Citizens Forum (WCF) in LGCDP, the Community Forest Users Group (CFUGs) in the LFP and VEECCCC Community in the NCCSP. Causal indicators were also established to assess linkages between outputs, targeting and outcome indicators specific to each of the selected interventions. The T1 indicators were discussed and tested at the DDC and VDC level in Rukum district.

Some TAMD indicator categories were considered too complex by the VDC (for example, the indicator on 'planning under uncertainty'). As a result the team decided to focus on indicators on business as usual functioning, learning and flexibility prior to understanding the ability of the institution to deal with uncertainty.

Track 2 indicators were also derived by reviewing project documents in detail and further refined with respect to specific contexts. There are several layers of track 2 indicators: national level; community level; hazard vulnerability specific indicators. At the national or the district (DDC) level, pre-existing national level indicators will be engaged through a process of feeding back aggregated VDC level information into these national indicators/priorities. No separate national indicators will be developed.

At the community or the local level, two sets of indicators are developed. One which provide a simplified picture for monitoring at the VDC/DDC level and some which will require a full evaluation of contribution/attribution aspects. The assessment will also prioritise a set of intervention specific core indicators which will track development related to the gateway systems (the system used in the LAPA to assess vulnerability) at community and VDC level.

Proxy indicators are developed related to vulnerability (hazard and intervention specific) to assess resilience at community/VDC level. These have been identified and developed based on relevant expert literatures and government M&E systems. Community perceptions on vulnerability were also discussed in Rukum to develop these indicators

Contextual indicators: Development indicators are standardised within the wider context. This is by creating a climate data point or set of contextual information on rainfall, crop yields, loss and damage pay-outs, etc. Due to inadequate data availability, the TAMD is scoping out ways in which sources can be used jointly. TAMD seeks to create an easily assessable data point at the DDC/VDC level (i.e. through converting to a qualitative scale) as well as using a wider set of data for an evaluation context.

Pakistan: Track 2 indicators were used to define the data collection process

In quarter three track 2 indicators finalised in previous quarters were used in developing questionnaires to collect data against those indicators. The indicators were finalised with the main stakeholders at the national and sub-national level. Mainly two types of indicators were developed and used; numeric and categorical. Main categories of indicators are- education, water and sanitation, water fetching, kitchen gardening, livestock, women wellbeing- that assesses the socio economic implications of rainwater harvesting programmes in specific districts.

A comparative overview of track 1 and track 2 indicators is provided in the annex 1.

Methodological Approaches

Kenya: Before after analysis- There have been no changes to the methodological approach which is a mix of before and after analysis, construction of baselines, secondary data assessments, random household surveys. Secondary data assessments are being used to construct the track 1 baseline and were also used in the construction of some track 2 baseline information. Random household surveys were conducted for the collection of track 2 baseline information in Q1.

Mozambique is still in its ToC development stage. Once ToC is established, it anticipates engaging a mix of qualitative and quantitative approaches and before and after analysis. This will be based on the planning and implementation of the local adaptation plans in various districts. The collection of both primary and secondary baseline information will be undertaken after the validation of the ToCs.

Nepal will use a before after analysis at the community level to assess impacts from selected interventions. TAMD team has engaged a series of steps to examine changes in community and household resilience as a result of multiple development interventions. These include--

- Contextual measurements of resilience through quintiles and unit less scores
- Local theories of change at the hazard and intervention level
- Contribution of local/VDC level institutions to community resilience
- Use of hazard specific outcome measures and a climate contextual point
- Use of the scorecards at the local level
- Use of household surveys to assess community level resilience.

The outcomes of TAMD feasibility testing phase will then be tied back to the national systems in different identified ways.

Pakistan: The methodological design for evaluation is based on using 'difference in difference' approach in a quasi-experimental design. Appropriate non-parametric testing will be used to produce statistically significant results from smaller sample sizes. Socio-economic indicators will be tested for both 'with and without' treatment in current state, and 'before and after' analysis using recall data. The quasi experimental approach will allow attribution of the impacts of the intervention by controlling various endogenous and exogenous factors at play that have supported socio-economic development in the project area.

As illustrated in the previous reports, a combination of qualitative and quantitative approaches is being employed to test the impacts of PRWH projects. PRA tools such as Shared Learning Dialogues, Focused Group Discussions, Key Informant Surveys, are used to identify impacts and issues to be explored in the survey. Household surveys and primary data are collected from public social service providers such as schools and health centres. Participatory qualitative analysis will also be used to help in establishing causal relationships, explaining apparent anomalies and to verify the empirical findings.

Empirical data collection

- **Kenya:** The appraisal of Track 2 indicators that commenced in quarter was concluded through a monitoring visit in quarter 3. The track 2 baseline information was verified during the monitoring visits by different government representatives. The two teams visited 5 wards to verify the baseline information on the ground through interviews with ward committees and government officials.
  Baseline data collection to populate track 1 evidence base commenced in early quarter 3. Scorecards were developed to assess track 1 information. The data collection is being facilitated by the County Planning Department. The planning department was chosen to undertake this task as they have all the data within their offices in Isiolo.

- **TAMD Mozambique** team has initiated re-engagement of TAMD in a new way. Data collection on the Track 1 and Track 2 indicators is yet to begin as the indicators both at national and district level are yet to be validated by the stakeholders. The validation is anticipated to take place in Q4 following which the data collection will begin.

- **Nepal partners** have completed the field testing and data collection in one of the selected districts-Rukum- by the end of quarter 3. The data was collected at the District/VDC/Community/HHs level, using various research tools and methods such as field observations, district level stakeholders interaction workshops, DDC/VDC Scorecards, Key Informants Survey (KIS), Focus Group Discussions (FGDs), Households Survey Questionnaire (HHS) etc. The collected data is being processed and will be reported in the next quarter.

Baselines were also developed from diverse range of sources. Community level datasets are inadequate to establish baselines on vulnerability, resilience, adaptive capacity at different interventions and scales. Therefore primary and secondary data related to development indicators, gateway systems, climate data, socio economic and food crop data, vulnerability and associated loss and damage data have been explored and being collected from different sources. Past 20 years climate data is being gathered from the Department of Hydrology and Meteorology (DHM). Disaster and its associated Loss and Damage data at specific district level is provided by the Disaster Management Section/National Emergency Operation Centre. The Crop Situation Update is issued by the Ministry of Agricultural Development (MoAD), World Food Programme (WFP), and Food and Agriculture Organisation (FAO), which is published twice a year.

- **In Pakistan,** the existing data is found inadequate requiring further data collection through primary sources. Various data sources such as data bank of ERRA were appraised to populate track 2 level indicators. These data sources were inadequate in terms of difference of scale (province and district level), lack of appropriate socioeconomic and environmental indicators, and lack of data on specific outcomes and impacts of PRWH intervention. A primary survey was therefore conducted in two selected sites using pilot tested questionnaires. The site selection was done based on pre-defined criteria discussed in the sections above. A household sample size of 70 control group households and 70 treatment group households was randomly selected for data collection in two wards of two selected districts (AJK and KP).

Potential challenges and Limitations

Partners have encountered some challenges while applying TAMD in different contexts. These hindrances point us to some key lessons that can help in improving the application of TAMD in future engagements

- **Kenyan** partners experience challenges in identification and data collection of the counterfactual information in Isiolo. This is due to the growing expectations of the community (not being catered by adaptation actions), that the data collection will potentially lead to financing of projects in future. This can cause difficulty in continuously collecting counterfactual information from the same community. Partners also experience challenges in establishing linkages between track 1 and track 2. Track 1 participants are struggling to understand attribution of development outcomes to specific CRM or adaptation actions.

- TAMD **Mozambique** has experienced several challenges due to its disparate engagement at the national level. This has led to review and design of a new plan for the entire TAMD implementation approach and relationships need to be nurtured, including a fresh agreement on developing the field work and the ToC exercise.

- TAMD partners in **Nepal** face challenges in establishing local ToC for new programmes such as NCCSP. No sufficient activities, outputs, outcomes and impact level indicators could be found from assessment at Community/HH level for NCCSP. Inadequate data availability or access to data sets of the selected interventions and government database systems is one of the concerns. Even though data is available at the national level, intervention data at the VDC/DDC level are not available.

- Some key challenges experienced in applying TAMD in **Pakistan** were in relation to data inadequacies and limited conceptual understanding of TAMD framework amongst government stakeholders. Inadequate secondary data gaps have been bridged through primary data collection. However, some stakeholders find it challenging to engage with TAMD due to limited understanding of the TAMD framework.

Emerging lessons

Kenyan partners have gained full participation of the county government and the community level adaptation committees. This has been the main success factor for feasibility testing. The stakeholders are willing to engage in future data collection and evaluation of adaptation actions.

Verification and validation of baseline data is crucial during the process to avoid erroneous conclusions.

Attributing impacts to actions can be challenging, TAMD in Kenya has tried to assess attribution by evaluating the extent to which adaptation actions have been able deliver their objectives.

The new approach in Mozambique will provide evidence to influence the national M&E systems from bottom up.

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Annex 1 Comparative table of Track 1 and Track 2 indicators:

TRACK 1 Indicator

Kenya	Mozambique	Pakistan	Nepal
Isiolo county level • Climate Change mainstreaming/Integration into County Planning • Institutional co-ordination • Budgeting and finance • Institutional knowledge/capacity • Use of climate information • Planning under uncertainty • Participation • Awareness among stakeholders			**VDC/DDC level** • Climate Change mainstreaming/Integration into VDC/DDC Planning • Institutional co-ordination • Budgeting and finance • Institutional knowledge/capacity (VDC/District staff and ilaka representatives) • Use of climate information • Participation • Awareness among stakeholders (District Council and Representatives of WCF and other civil society) • Learning and flexibility Business as usual (BAU) Functions: Functioning of local systems.

TRACK 2 Indicators

Kenya	Mozambique	Pakistan	Nepal
Output level • Number of constructed/rehabilitated water sources for livestock and humans • Number of trainings held for natural	**Impact Indicators:** • % crop yield increase; • % unemployment rate; • % literacy rate; • % disease occurrence; • % water supply coverage;	**Output level** • Installed no. of RRWH units • Improved water supply/ per HH increased availability (gallons/pitchers) • Increased access to water	• Education level • Access to solar/Electricity/improved stoves • Access to safe drinking water

Kenya	Mozambique	Pakistan	Nepal
resource management committees (dedhas) • Number of livestock laboratories rehabilitated **Outcome level** • Number of livestock and households with access to water during dry season • Number of months that water is available in the constructed/rehabilitated water points • Time spent fetching water for domestic use • Time spent trekking livestock to water points • Prevalence of livestock and human disease outbreaks per year • Number of hours spent fetching water at water point for domestic use • Number of hours spent fetching water at water point for livestock use • Quantities of milk and meat produced per household per year **Impact level (Resilience enhanced)**	• % increase in improved houses. **Outcome Indicators:** • Number of disease cases per year; • Quantity and availability of crops produced locally in the market (according to SIMA for crops); • Number of investors in the district; • Number of households affected by floods and drought per event; • Hours taken to fetch water. **Output Indicators:** • Amount of water available per person per household; • Number of households adopting climate change coping strategies due to drought risk; • Number of households affected by flood risk.	• Reduced vulnerability/insecurity • Reduced water shortage • Increased water storage • Reduced water fetching • Additional livestock • Kitchen gardening • Reduced women exposure to water fetching related insecurities **Outcome level indicators** • Reduced water fetching time • Improved sanitation &hygiene • Improved health/reduced illness • Reduced maternal health issue e.g. miscarriages • Time saving/no. of hours being saved • Increased yield of home grown vegetables • Less reliance on market • Increased domestic saving • Increased children/girls school attendance • Increased satisfaction level • Reduced the cost of giving company to women • Increased male off-farm employment	• Access to own land • Access to irrigated land • House type • Food self-sufficiency from own production • Annual income per HH • Number of sources of income • Livelihood diversification • Means of communication • Agricultural/livestock Services • Access to governmental services • Health services • Access to support groups (Savings group/credit services/others) • Social networks • Livestock holding • Access to roads / markets • Past exposure to local hazard last 5 years • Benefit from seasonal migration income or remittances • Majority agricultural land on

Kenya	Mozambique	Pakistan	Nepal
• Household expenditure patterns • Quantities of food surplus sold at the markets • Frequency of marriage and other cultural ceremonies held per year • Number of conflict incidences • Number of families migrating due to climate hazards • Number of children born • Number of schools, dispensaries, mosques, permanent settlements constructed • Number of children enrolled and retained in schools • Presence of cheese ([3]ititu) • Number of families on food relief • Numbers of livestock • Number new businesses or small scale traders **Assumptions** • NRM committee members are able to enforce water and pasture management by • Community members from within the county and neighbouring counties are receptive and			steep slopes • Reliance on fruit trees and vegetables • Knowledge of climate change and risks • Experienced change in agricultural productivity last five years • Exposed to socio-economic shock in last five years • Ownership of an Ox • % citizens that say that the services of VDCs are more accessible than they were TWO years ago • % citizens who say that the infrastructure (roads, drinking water, electricity) offered by the local governments better meet their needs than last year • % of citizens that think that they are now more involved in the decision-making process of VDCs than two year ago • % of citizens that think they get increased benefit from forest group and its resources

[3] Traditional Borana cheese

Kenya	Mozambique	Pakistan	Nepal
cooperate with the NRM by-laws, rules and regulations • Community members have the financial capacity to pay for water levies to sustain the water resource • The County government will second well trained laboratory staff who are fully qualified to diagnose and treat livestock diseases to the rehabilitated laboratories			compared to two years ago • Increased assets for forest users groups • Increased livelihoods choices for forest users groups

Project materials

Climate Change

Keywords:
Monitoring and Evaluation (M&E), TAMD

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