

Annexure 3: An Overview of the Lesotho Pilot Project

A pilot project was undertaken in the Quthing District to test the principles of an Ecosystem Approach to IWRM in the Lesotho context, and to inform the development of the Framework.

1. SITE SELECTION

The Framework development was undertaken through consultation with national stakeholders representing a range of Government Ministries and Departments relevant to IWRM and ICM. This national level development process was supported by the testing of the Ecosystem Approach for IWRM at two pilot sites in the Mphaki Community Council, in the Quthing District. These sites were identified through a combination of processes:

- The Quthing District is a critical water resource supply area of national importance, and includes the Lets'eng-la-Letsie Wetland which is an internationally recognised RAMSAR site.
- The project team has extensive working experience in the area and is well known to the local authorities and communities. This facilitated quick and effective mobilisation at the sites that could be achieved within the limited timeframes of the project.
- The local *Morena* (Area Chief) and members of the traditional council recently approached the project team requesting assistance to initiate activities that could lead to improved Integrated Catchment Management (ICM)¹.

In consultation with the local authorities, sites to pilot the Ecosystem Approach to IWRM were selected in the vicinity of the following two villages:

- Site 1 – Ha Kelebone
- Site 2 – Ha Tlhaku

The chosen sites focus on management and use of the surrounding rangelands (incorporating wetlands), livelihood diversification, and building resilience.

The pilot sites comprise predominantly of category C grazing areas (immediately surrounding the villages) and to some extent the slightly more distant category B grazing areas. The activities piloted and demonstrated at the category B and C grazing areas also inform activities that will be implemented by the communities at the distant summer grazing areas (category A grazing areas), which include the Lets'eng-la-Letsie Wetland. Significant wetlands were also included in the category B and C Grazing Areas where the pilot activities were being undertaken. The pilot rangelands and wetlands include areas where degradation is starting (erosion and overgrazing).

While the rangelands and wetlands are still in relatively good ecological condition, early indications of degradation in the area was a strong motivation for the local leaders and communities to change current use and management approaches, in an attempt to avoid the degradation that widely characterises surrounding communities.

¹ This contact resulted from a project (funded through the Millennium Challenge Account) that the SDA and INR project team had undertaken with the communities to develop an Integrated Catchment Management plan for the Lets'eng-la-Letsie Wetland and surrounding catchment.



The District of Quthing is located in the southern part of Lesotho and has an estimated population of 119 636 (BOS, 2006²). Politically and administratively, the District is divided into five constituencies and five Community Councils. The area has a Principal Chief and 14 Area Chiefs who report directly to the Principal Chief of Quthing. At District level, the office of the District Administrator coordinates various district-level government departments and directly links to the office of the Principal Chief.

The population of Mphaki is estimated at 20 288 (BOS, 2006) and as is the case with most communities in Lesotho, the communities within Mphaki Community Council represent a fairly homogenous population with respect to demographic characteristics, economic status and living conditions (Letsie and Stefan, 2015³). Being a rural area, the main source of livelihoods for Mphaki communities is farming, including both crops and livestock production, with limited local alternatives to diversify livelihoods. Mphaki was in the past well known for production of seed potato and breeding of quality beef cattle. However, the local economic pattern has changed and the area is now mainly renowned for production of good quality wool and mohair. Livestock production in Lesotho provides multiple social benefits such as wealth 'banking' as well as customary functions and therefore is a socially and culturally important practice.

For project implementation, the Departments of Environment; Water Affairs; Range Resources Management; Soil Conservation; Marketing; and the District Agricultural Office, formed key stakeholder departments. Likewise the Office of the District Administrator, the Office of the Principal Chief of Quthing, the Community Council of Mphaki G05 as well as the Police were also among key stakeholders at National, District and Community Council levels.

² BoS (2006). Population and Housing Census 2006. Lesotho Bureau of Statistics. Maseru.

³ Letsie, M. M., & Stefan, W. G. (2015). Assessment of Social Vulnerability to Natural Hazards in the Mountain Kingdom of Lesotho: Mountain Research and Development 35(2):115-125. MRD- Journal-D-14-00087.1

2. PROJECT ACTIVITIES

The pilot Ecosystem Approach activities focused on seven major components, built around the emphasis on local priorities for IWRM, namely management of rangeland and wetland ecosystems while addressing poverty and livelihood resilience. The section below summarises the key activities undertaken in each of these components.

Component 1: Stakeholder Engagement Processes (Workshops and Meetings)

1.1. Introduction and Organization

- Introduction of the project to District-level stakeholders - April 2015
- Introduction of the project to communities - April 2015
- Establishment of EA committees (1 per village) with representation from various community embedded structures (Chiefs, Headmen, Community Councillors, grazing schemes, women groups, livestock owners, crop farmers) to lead implementation and ensure participation/inclusiveness of all site-level stakeholder groups - April 2015
- Introduction of project to National level stakeholders - November 2015

1.2. Assessment and Planning (May 2015 – January 2016)

- District and Community Council meetings and site visits were undertaken to assess the societal priorities and plan the objectives, actions and interventions. This stakeholder driven assessment and planning was used to:
 - i. identify the kind of interventions/activities required per site based on areas;
 - ii. reach agreement on strategy/plan; and
 - iii. provide an introduction of climate change and the need to adapt to the changing climate.

1.3. Implementation and Capacity Building (October 2015 – May 2016)

- Implementation of the project activities was undertaken by a wide range of stakeholders, individually and collaboratively. An EA Committee was established to coordinate these activities.
- Key stakeholder participating in the pilot activities included local communities and District-level Department of Water Affairs (DWA), Department of Environment, Ministry of Forestry, Rangelands and Soil Conservation (MFRSC).

Component 2: Rangelands Management and Rehabilitation

- Clearing of invasive indigenous shrubs e.g. *Chrysochoma*, *Artemisia*, etc. to improve grazing. Areas cleared:
 - Ha-Tlhaku: 9.7 ha of which 7.5 ha was contribution from National Poverty Reduction Programme - 'Cash for Work'
 - Ha Kelebone: 11.9 ha
- Building of stone lines and brush packs on cleared areas to prevent/avoid erosion – this was implemented in line with the Environment Management and Mitigation

Plan developed at the start of implementation (in compliance with the USAID requirement).

- Awareness raising and capacity building about reseeded of rangelands with indigenous grass seeds to revegetate eroded areas.



Component 3: Water Courses

- Working with households, livestock owners, herders, etc. to raise awareness about the need for rotational grazing (resting process) at wetlands in the catchments.
- Rehabilitation of degraded areas within wetlands and surrounding areas.
- Zonation and management of sensitive areas within wetlands to prevent overgrazing and trampling by livestock.

Component 4: Grazing Management

- Demarcation of grazing management areas based on the importance (e.g. is highly productive or is used for breeding purposes, etc.) and condition of the areas.
- Rangeland inventory survey to inform development of grazing plans - request by pilot site communities and undertaken by MFSRC: Department of Range.

- Development of a grazing management plan for pilot sites (includes resting of grazing areas, monitoring of rangelands for adaptive management, fire management and rehabilitation of degraded areas).



Component 5: Community Based Ecosystems Monitoring and Adaptive Management

- Tools and equipment were introduced and local community members trained to implement a community based monitoring programme (e.g. use of quadrats to measure basal cover; runoff plots to measure erosion; splash boards; erosion pins; livestock condition monitoring to link to trends in rangeland condition).
- EA Committees were trained to champion piloting and implementation of monitoring programme with villagers. Link between monitoring and adaptive management was established.
- The monitoring was integrated with adaptive management activities already being practiced-chiefs, headmen and community councillors (plan, observe & take action or Plan-Do-Study-Act (PDSA) – these activities will now also be informed by results of community based monitoring.



Component 6: Livelihoods diversification and resilience

- *Innovative new livelihood enterprises* were identified and capacity development undertaken to help households to become less dependent on rangelands and wetlands, and to create alternative livelihood opportunities that reduce pressure on rangelands while enhancing livelihood security.
- *Training on fruit drying and food preservation* was provided as a household food security enhancement strategy. The preserved and dry products can either be sold to earn income, or stored by the household to be used at a later stage to provide an important nutritional supplement for households when fruit and vegetables are out of season and in short supply.
- *Opportunity to establish and enhance home-based enterprise* (e.g. preserved foods) was explored in collaboration with the District level Department of Marketing. A plan was developed with the Department of Marketing at District level to hold market day at Mphaki and to market the home-based enterprise products in Quthing, to the hospitality industry and other potential consumers.
- *Low cost greenhouse technologies* were introduced to complement keyhole gardens (provide opportunity to grow vegetables throughout the year). Communities exploring use of locally available materials as alternatives to purchased materials for construction of greenhouses e.g. use trees instead of timber in making frame- further bringing down the cost.
- *Beekeeping* for harvesting of products such as Honey, Propolis and Wax- further enhancement of household food security and opportunity for home-based enterprise.



Component 7: Training and Capacity Building

- Training for the all households in pilot villages was provided on clearing of invasive bushes, stone lines and brush packs for erosion control. Important support and input was provided by MFRSC.
- Training for community groups:
 - Herders (rangelands management; fire control - MFRSC and Police)

- EA Committees (organizational matters; rangeland management; cross visit to Sehlabathebe; community based monitoring to track changes in rangeland condition - MFRSC and Project Team)
- Livestock owners (animal health and nutrition - MAFS - National level Department of Livestock Services)
- Crop farmers (keyhole gardens; mini greenhouses - Project Team)
- Training on livelihoods diversification:
 - Beekeeping – MFSRC - National and District levels
 - Food preservation
 - Village savings schemes
- Training of the 14 Area Chiefs under the Principal Chief of Quthing and Quthing District Council (Environmental management including ecosystem functioning; Rangelands management including catchment management; Water Resources Management District-level DWA, MFRSC - provided by Departments of Range and Soil Conservation and Project Team)



3. ECOSYSTEM APPROACH PRINCIPLES ADDRESSED IN PILOT ACTIVITIES

All 12 Principles of an Ecosystem Approach were addressed through the combination of pilot activities. While the target set for each of the Basin State Pilot projects was to cover at least 50% of the Principles, the Lesotho Pilot project strived to pilot all 12 principles because the overall goal was to inform the development of EA Framework for IWRM in Lesotho.

Table 1 to follow summarises linkages between the pilot activities and the 12 Ecosystem Approach Principles.

Table 1: Summary of activities conducted at the case study and stakeholder involvement

STAKEHOLDER SECTOR EA COMPONENT	National Government		Local Government	Traditional Leaders		Village/Households	EA Principle Number
	National Ministries	District Level (National Ministries)	District and Community Councils	Principal Chief	Area Chiefs and Headmen		
Rangelands		- MFRSC, through the 'Cash for Work' programme, for rangelands rehabilitation	- Councilors participate in decision making and planning about demarcation of priority areas and activities - Councilors motivate community members to participate in activities		- Chiefs and headmen participate in decision making and planning about demarcation of priority areas and activities - Chiefs and headmen motivate community members to participate in activities	- Clearing of invasive plants to improve grazing - Stone and brush packs on cleared areas to prevent/avoid erosion in line with the EMMP developed for the project - Awareness raising and capacity building about reseeding rangelands	1; 2; 3; 4; 5; 6; 7; 8; 9; 10; 11; 12
Wetlands		- Supported identification and condition assessment of important wetlands to inform management - Incorporate wetland information into District (and National) Water Affairs database			- Working with the Chief, Councilor and EA Committees to raise awareness about the need for rotational resting process at wetlands (and their buffers) in the catchment - Rehabilitation of degraded areas within wetlands and surrounding areas - Zonation of sensitive areas within wetlands and management accordingly	- Working with households, livestock owners, herders, etc. to raise awareness to raise awareness about the need for rotational resting process at wetlands (and their buffers) in the catchment - Rehabilitation of degraded areas within wetlands and surrounding areas - Zonation of sensitive areas within wetlands and management accordingly	

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	National Ministries	District Level (National Ministries)	District and Community Councils	Principal Chief	Area Chiefs and Headmen		
Grazing Management		- Communities in collaboration with District officials (Department of Range) undertaking a rangeland inventory survey to inform grazing management plan			- Chiefs and headmen participate in decision making and planning about demarcation of priority areas and activities - Chiefs and headmen motivate community members to participate in activities	- Demarcated grazing management areas based on the importance and condition of the areas (highly productive, close to communities, breeding purposes, importance productive areas) - Communities in collaboration with District officials undertaking a rangeland inventory survey to inform grazing management plan - Developing a grazing management plan (includes resting of demarcated areas, monitoring of rangelands for comparison purposes, fire management and rehabilitation of degraded areas)	
Community Based Ecosystems Monitoring and Adaptive Management						- EA Committees to champion piloting and implementation - In the C Grazing Areas in particular, the village Chief and headmen, and grazing schemes are already practicing adaptive management (observation, plan)	2; 3; 5; 6; 8; 9; 10
Livelihood Diversification - Drying and Preservation			- Councilors participate in decision making and planning about livelihood diversification opportunities within local economic context - Councilors		- Chiefs and headmen participate in decision making and planning about livelihood diversification opportunities within local economic context - Chiefs and	- Village participants implementing fruit drying and preserving as a household food security enhancement strategy - Opportunities to develop drying and preservation homebased enterprises as commercial opportunities to be explored further (e.g. lobbying Mountainside Hotel for support)	1; 4; 8; 9; 10; 11; 12

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Livelihood Diversification - Mini Greenhouses and Keyhole Gardens			motivate community members to participate in activities		headmen motivate community members to participate in activities	- Village participants are implementing the low-tech greenhouse technologies and keyhole gardens, and exploring locally available materials as alternative to purchased materials for construction of greenhouses.	
Livelihood Diversification - Bee Keeping and Honey Production						- Village participants implementing bee keeping and honey production as a household food security enhancement strategy - Opportunities to develop bee keeping and honey production as homebased enterprises as commercial opportunities to be explored further (e.g. lobbying Mountainside Hotel for support)	

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Training and Capacity Building	<ul style="list-style-type: none"> - MAFS Trainers trained community on animal health and nutrition - MFRSC Trainers trained communities on bee keeping 	<ul style="list-style-type: none"> - MFRSC Trainers trained the community on Rangeland and Soil Conservation 	<ul style="list-style-type: none"> - Training workshops on Environmental Management for District Level Authorities (Council and Chiefs) - Nov 2015 - Training provided by District level ministries on soil conservation, water management, rangeland management, etc. 	<ul style="list-style-type: none"> - Training workshops on Environmental Management for District Level Authorities (Council and Chiefs) - Nov 2015 - Training provided by District level ministries on soil conservation, water management, rangeland management, etc. 	<ul style="list-style-type: none"> - Training workshops on Environmental Management for District Level Authorities (Council and Chiefs) - Nov 2015 - Training provided by District level ministries on soil conservation, water management, rangeland management, etc. 	<ul style="list-style-type: none"> - Training for entire village (clearing invasive alien bushes, stone and bush packs for erosion control - provided by District MFRSC) - Training for community groups <ul style="list-style-type: none"> i). Herders (Rangeland management; fire control - provided by district MFRSC and District Police); ii). EA Committees (organisational matters, rangeland management, water issues, environmental management; cross-visit - provided by District MFRSC, project team) - Community based rangeland monitoring to track in changes rangeland condition - provided by project team iii). Livestock Owners (animal health and nutrition - provided by National MAFS) iv). Crop Farmers (Keyhole Gardens, Mini Greenhouses - provided by project team) - Training on livelihood activities <ul style="list-style-type: none"> i). Beekeeping - provided by National and District MFRSC ii). Drying and Preserving - provided by project team iii). Saving schemes - provided by project team 	2; 12; 11; 7; 10;

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	National Ministries	District Level (National Ministries)	District and Community Councils	Principal Chief	Area Chiefs and Headmen		
Workshops and Meetings	- Stakeholder Engagement Workshop to present the objectives of the project - Nov 2015	- Engagement with District level stakeholders (government departments) to present the projects and verify/formalise site selection - Apr 2015 -	- Engaged during District Council meeting '- Handover over of EA Framework to Community Council (Still to happen) - Sit on EA Committee		- Engaged during the initial project meeting (introduction) at District level - On-going engagement with Chiefs at site level	- Introducing project to communities (2 villages); establishment of EA Committees (1 per village) with representation from various groups (Chiefs, Community Councils, Grazing Scheme, Women Groups, Livestock owners, Crop farmers) - Site visits to establish what interventions/activities were required per site based on areas selected by communities; introduced Adapt-Able Game; agreement on strategy/plan - Meeting to discuss implementation to discuss implementation and training	1; 2; 4; 7; 8; 9; 10; 11; 12