Water Harvesting and Natural Resource Management in South Sudan

TECHNICAL GUIDELINES
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Executive summary

The struggle over natural resources, particularly pasture and water during the dry season, is a critical issue in many pastoral production areas of South Sudan and is one of the major causes of conflict between pastoral and farming communities in the country. In order to address such conflicts associated with use of and access to pasture and water, the Government of South Sudan and the international community has been financing the construction of *hafirs* in order to provide water for livestock during the dry season.

However, in addressing the problem of water scarcity through the construction of water harvesting structures, the Government of South Sudan has focused on the physical designs and technical aspects of the *hafirs* with less emphasis on natural resource issues around these structures.

In order to understand water harvesting interventions in the context of sustainable natural resource use and management, conflict resolution and policy framework in South Sudan, The Food and Agriculture Organization of the United Nations (FAO) and the United Nations Environment Programme (UNEP) have embarked on a joint project entitled “Assessment of water harvesting structures for sustainable livelihoods and peacebuilding in South Sudan”. The project has been financed by the Peacebuilding Fund (PBF) for South Sudan.

A natural resource assessment and analysis was conducted to inform the Government’s and development partners’ understanding of sustainable natural resources use and management. The assessment also looked at the institutional arrangements required for management of the *hafirs* and conflict associated with access to and use of natural resources around the *hafirs*. The findings of the natural resource assessment and analysis will be used as a reference for future construction and operation of water harvesting structures.

It is imperative to note the importance of increasing the community’s understanding of natural resource issues right from the design stage. Establishing inclusive Natural Resource Management Committees (NRMCs) from the village up to the county levels with by-laws detailing the scope of work at different levels will greatly help in promoting sustainable use and management of natural resources.

The NRMCs should also be provided with trainings on how to manage natural resources and establish a clear channel of communication for operation and use of *hafirs* with local governments for better management of natural resources.

These guidelines constitute a reference document for the mainstreaming of sustainable natural resource management strategies in water harvesting structures in South Sudan for organizations investing in and implementing water harvesting projects for livestock and human consumption.
Acknowledgements

These guidelines are the product of the work of many individuals, and so there are many to thank. I am very grateful to South Sudan Peacebuilding Fund for providing financial support to conduct this first-ever "Assessment of water harvesting structures for sustainable livelihoods and peace building in South Sudan" which has resulted into the development of these guidelines.

I would like to recognize the guidance and assistance provided by FAO colleagues: Said Ali-Chief Technical Advisor, Abigail Wathorne, Gender Officer - FAO Juba, Michael Odhiambo, Land Tenure Consultant and Andreas Thulstrup, Natural Resources Management Officer (Energy) Climate, Energy and Tenure in Rome.

Special thanks are due to central, state and local-level government civil servants and the administrative staffs in Lakes and Eastern Equatoria States for their cooperation and support during field data collection. The Ministry of Electricity, Dams, Irrigation and Water Resources and FAO–South Sudan provided key administrative and technical support during the planning and implementation stages.

I would like to acknowledge the enthusiasm and wonderful participation of all the local government officials in all the selected states for their timely responses and active participation in the meetings/discussions that led to the compilation of these guidelines which constitute a reference document for the mainstreaming of sustainable natural resource management strategies in water harvesting structures in South Sudan.

Thanks are also due to all the field assistants involved in the assessment who assisted in conducting community meetings and for their contributions to the field preparations, community mobilization, field data collection and the drafting of the technical report. Lastly, my gratitude to Mr. AbdalMonium Osman-FAO South Sudan for his input and support in reviewing the draft the guidelines.
Abbreviations and acronyms

FAO . . . . . . . . . . . . Food and Agriculture Organization of the United Nations

UNEP . . . . . . . . . . . United Nations Environment Programme

NRMC . . . . . . . . . . . Natural Resource Management Committee

PBF . . . . . . . . . . . . Peacebuilding Fund

UN . . . . . . . . . . . . United Nations

PRA . . . . . . . . . . . . Participatory rural appraisal
1 Background

Conflicts over natural resources, particularly competition over access to traditional grazing lands and water rights, remain fundamental challenges to peace and stability in South Sudan. Various approaches and strategies are required to manage and resolve conflicts depending on the sources of the problem. The Government of South Sudan and the international community have been investing in livestock water provision (e.g. hafirs) for several years as a means to mitigate the conflicts arising from dry season water demand.

In order to better understand the effectiveness of water harvesting interventions in livelihoods improvement and conflict reduction and to contribute to policy discourse on water harvesting in South Sudan, the Food and Agriculture Organization of the United Nations (FAO), in collaboration with the United Nations Environment Programme (UNEP), has embarked on a joint project entitled “Assessment of water harvesting structures for sustainable livelihoods and peacebuilding in South Sudan”. The project has been financed by the Peacebuilding Fund (PBF) for South Sudan.\(^1\)

A natural resource assessment and analysis was conducted to inform the Government’s and development partners’ understanding of sustainable natural resource use and management so as to propose strategies and guidelines for sustainable resource management. The assessment also looked at the institutional arrangements required for management of the hafirs and conflict associated with access to and use of natural resources around the hafirs. The findings of the natural resources assessment and analysis will be used as a reference for future construction of hafirs and sustainable management of natural resources around them.

1.1 Implementation of the Assessment

For three weeks during April and May 2014, a joint six-person team from the United Nations (UN) and the Government of South Sudan conducted a multi-disciplinary assessment of selected water harvesting structures in Lakes, Western Equatoria, and Eastern Equatoria States. The team included experts specialized in technical/engineering, environmental, socio-economic, gender and natural resource management aspects of water harvesting.

1.2 Key Findings of the Natural Resources Assessment

- There is high level of overgrazing around the hafirs, resulting in degraded land and shrinking of grazing areas.

- The cycle of slash-and-burn agricultural practices has accelerated with the high density of livestock around the hafirs. This is done to encourage re-sprouting of pasture and in most cases has left the soils susceptible to erosion around the hafirs.

- In Lakes State, insecurity has made some parts of the grazing areas inaccessible, thus limiting the communities’ ability to cope with droughts and other climate-related disasters by limiting mobility.

- There was a high level of unmanaged extraction of woodland resources for charcoal, firewood and building/fencing materials in the areas visited.

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\(^1\) Peacebuilding Fund Project document - Assessment of water harvesting structures for sustainable livelihoods and peace building in South Sudan
• The hafirs visited have management committees but with no clearly defined terms of reference. Members of the existing committees have not received any training in natural resource management.

• It is very important to increase the communities’ understanding of natural resource issues from the initial design stage rather than limiting their participation to the selection of suitable sites for construction of the hafirs.

• Pastoralist communities in the areas surveyed live in isolated and underdeveloped pockets. These areas are often conflict prone, food insecure, and associated with high levels of vulnerability.

In general, the assessment has shown that hafirs provide water for both human and livestock consumption, particularly in Eastern Equatoria where the lack of surface water is a serious problem. It was observed that there was a big technical and administrative capacity gap in tackling issues of natural resource management. The overcrowding of livestock around hafirs has resulted in the shrinking of grazing areas and, subsequently, in massive soil erosions.

1.3 Guideline Development

This set of guidelines is intended to offer direction on how to consider natural resource issues leading up to and following hafir construction. The guidelines are expected to address some of the natural resource issues identified during the assessment and avoid future natural resource degradation.

These guidelines were produced based on discussions with key stakeholders involved in hafir design and use as well as policy makers. Additional information for the development of these guidelines came from literature review and secondary data associated with water harvesting structures. The materials collected were from the three states of Eastern Equatoria, Western Equatoria and Lakes where field missions were held for a period of three weeks.
2 Natural resource management issues

This section covers the procedures that need to be followed in order to ensure that natural resource issues are considered during the planning, construction and use of water harvesting structures. These include community sensitization, formation of Natural Resource Management Committees (NRMCs), natural resource analysis and development of a natural resource plan.

2.1 Pre-construction phase

2.1.1 Consider sensitization and mobilization of stakeholders

In this context, community sensitization refers to the creation of awareness in the community of hafirs and natural resource management issues such as: access to and sustainable management of grazing areas; maintenance of the structure; and the roles of the different stakeholders in the management of these resources.

Determining the potential stakeholders should be the first step before site selection. Different stakeholders have critical roles in the future management of hafirs and the surrounding natural resource.

Roles and responsibilities can be assigned during the mobilization of the different stakeholders. They can be assigned using participatory techniques like the participatory rural appraisal (PRA). It is crucial to involve the community (including women) in decision making at all stages of the hafir construction such as site selection, spacing of hafir sites, determining the community contribution for the construction as well as operation and maintenance of the hafir. The community should also be involved in the technical aspects of the water service provision such as technology choice, design preference and drainage apron.

2.1.2 Formation of Natural Resource Management Committees

An NRMC is a group of people elected by the community to represent their views and interests in hafir use and management. The formation of an NRMC should only be undertaken if there is no representative institution in the management area that can effectively play this role. The decision to form an NRMC must be taken by the community with the full knowledge and approval of local civic and traditional leadership. It is also very important to assess the composition and representativeness of the NRMC and define roles of committee members. The NRMC will play a greater role in the future management of hafirs and the surrounding natural resources.

2.1.3 Natural resource analysis

Prior to selection of the hafir site, it is vital that a natural resource analysis is conducted with the NRMC. The analysis should look at the natural resource capital of the area, resource users, accessibility and control over these resources. The analysis should also strive to identify key issues and constraints affecting the areas around the hafirs - mainly water and pasture in the area. The analysis is not only important for selecting the location of the hafir sites but also forms the basis for developing a sustainable resource use and management plan. The field activities for the analysis are outlined on Table 1 on the following page.
Table 1. Natural resource analysis of the area

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Methodology</th>
<th>Anticipated Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Identify key natural resources of the area and user groups.</td>
<td>• Group discussions.</td>
<td>• Summary of discussions of access and control over land and resources.</td>
</tr>
<tr>
<td>• Identify key issues, constraints and opportunities related to resource use and access.</td>
<td>• Semi-structured interviews with community members.</td>
<td>• Matrix used to compile perceptions.</td>
</tr>
<tr>
<td>• Understand which individuals or groups have control over the land and resources in the area.</td>
<td></td>
<td>• Consolidated “best practices” document for the area.</td>
</tr>
<tr>
<td>• Create a “best practices for natural resource dispute resolution” document.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Create a “best practices for accommodating returnees or internally displaced person” document.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Box 1. Assessing the natural capital of the hafir site

- Convene the community and explain the objectives of the activity.
- Provide the community with the sketch map showing the natural resources of the area.
- Lead a discussion on who uses which resources in area. Discuss and record all the natural resources in the area. Identify who uses the resources and to what degree. If it helps the communities understand the subject better, use the matrix below.

Table 2. Matrix for tabulating results from the analysis

<table>
<thead>
<tr>
<th>Users</th>
<th>Resources</th>
<th>Safe water</th>
<th>River and river banks</th>
<th>Lakes</th>
<th>Swamp permanently flooded</th>
<th>Marshy area Seasonally flooded</th>
<th>Upland</th>
<th>Grassland or open area</th>
<th>Forest</th>
<th>Shrubs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers</td>
<td>+++</td>
<td>++++</td>
<td>+</td>
<td>++</td>
<td>+++</td>
<td>++++++</td>
<td>+</td>
<td>++</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pastoralists</td>
<td>++</td>
<td>+</td>
<td>++++</td>
<td>+</td>
<td>++</td>
<td>+++++</td>
<td>+</td>
<td></td>
<td></td>
<td>++</td>
</tr>
<tr>
<td>Women</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>IDPs</td>
<td>+++</td>
<td>+</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Fishermen</td>
<td>+</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td></td>
</tr>
<tr>
<td>Herbalist</td>
<td>+</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td></td>
</tr>
<tr>
<td>Carpenter</td>
<td>+</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td></td>
</tr>
<tr>
<td>......others</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+</td>
<td>+++</td>
<td></td>
</tr>
</tbody>
</table>

+ stands for minimal use; ++ for moderate use; +++ for high use; ++++ for extensive use
In order to understand access to water and other natural resources in the area, it is important to lead a discussion as described in Box 2.

**Box 2. Access to water and natural resources**

1. Once you have gathered and understood who uses the resources in the area, move the discussions to the idea of secure access.

2. Lead a discussion about how people in the area access natural resources.

3. Key questions that should guide the discussions are: Who uses each type of resource? Who feels like they have secure access to resources and land? Who decides who can access certain areas and certain resources? Which groups/individuals in the community lack access to land and resources?

4. Keep a record of the discussions in the NRMC. If it helps members to understand, you can use a matrix like the one above. Use symbols to mark how secure people feel their access is.

**Box 3. Discussing natural resources**

If you used the matrix during the discussions, display the matrix and invite the group to discuss the following questions.

1. Are all the resources that are used by the community found within the boundaries of the area? What resources are found outside the area? Who has control over these resources and how is access negotiated?

2. Which group of resource users makes the most use of the available resources?

3. Do all members of the community have equal access to resources? If not, who are the privileged and underprivileged groups?

4. Which resources(s) are most heavily utilized? Who uses these resources most?

5. Who has the greatest stake in ensuring their conservation?

6. Which resources are crucial for achieving existing livelihood requirements?

7. Which resources will play an important part in the achievement of future livelihood needs?

8. How is resource use regulated? Are there any resources that have poorly regulated usage?

9. Which resources are poorly utilized and present opportunities for future development?

Note: Keep a record of the discussions in the NRMCs. Attempt to present a clear understanding of who controls land and how they control it.

### 2.1.4 Assessing the sustainability of natural resource use

Once you have gathered and understood what resources are available and who has secure access to these resources, move the discussions to sustainability and management of these resources. Explain to the participants that the assessment is aimed at finding out whether the natural resources around the hatir sites will meet the pasture and water needs of the community. Furthermore, it seeks to determine which resources are in danger of depletion or degradation and need attention. Field procedures for assessing sustainability are outlined in Table 3.
Table 3. Assessing the sustainability of natural resources of the area

<table>
<thead>
<tr>
<th>Objective</th>
<th>Methodology</th>
<th>Expected output</th>
</tr>
</thead>
<tbody>
<tr>
<td>· Determine the sustainability of natural resource use in the area.</td>
<td>· Focus group discussion.</td>
<td>· A sustainable use matrix.</td>
</tr>
<tr>
<td>· Identify resources that are in danger of depletion or degradation or that can be developed to improve productivity.</td>
<td>· Semi-structured interview with key informants.</td>
<td>· Rating of resources in terms of management priorities.</td>
</tr>
<tr>
<td>· Analyse the causes of degradation/ depletion/ underutilization of resources.</td>
<td>· Community mapping</td>
<td>· Analysis of problems associated with prioritized resources.</td>
</tr>
</tbody>
</table>

Box 4. Assessing sustainability of natural resources around hafirs

1. Invite members of the area for a community meeting and explain to them the objective of the session.
2. Ask the participants to list down all the resources they have in the area and ask them to locate these resources in an area map.
3. The facilitator then leads a discussion on whether the listed resources are meeting the needs of the community.
4. Participants are then asked to list down all those resources currently satisfying their needs and those that may or may not satisfy their needs in the foreseeable future.

Table 4. Present and future needs assessment matrix

<table>
<thead>
<tr>
<th>Resource</th>
<th>Is it satisfying your needs today?</th>
<th>Will it satisfy your needs in the foreseeable future?</th>
<th>Rating Y=1 N=0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>No</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>Pasture</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Valley bottom land</td>
<td>Yes</td>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>Hill slope land</td>
<td>Yes</td>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>Fallow land</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Soil</td>
<td>No</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>Forest /woodlands</td>
<td>Yes</td>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>Shrubs</td>
<td>No</td>
<td>No</td>
<td>0</td>
</tr>
<tr>
<td>Grasses</td>
<td>Yes</td>
<td>No</td>
<td>1</td>
</tr>
<tr>
<td>Wild fruits</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Fish</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Wild animals</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
<tr>
<td>Medicinal plants</td>
<td>Yes</td>
<td>Yes</td>
<td>2</td>
</tr>
</tbody>
</table>
2.1.5 Prioritizing resources for immediate management action

1. Split the NRMC into village groups and distribute 100 or beans to each group.
2. Request them to allocate beans to the resources that they feel deserve immediate attention.
3. The most deserving resource should be allocated the highest number of beans.
4. At the end of the exercise, the number of beans allocated to each resource is counted, recorded on a large sheet of paper and ranked as shown below.
5. Engage the NRMC to discuss and reach a consensus on the ranking in order to identify resources that deserve immediate attention. Results of the ranking should be presented in a format as shown in Table 5 below.

<table>
<thead>
<tr>
<th>Resource</th>
<th>Score</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasture</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fallow land</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forest /woodlands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shrubs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grasses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild fruits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wild animals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicinal plants</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
2.1.6 Development of Management Plan

After identifying all the resources and causes for degradation and depletion in the area, it is time to develop a management plan. A management plan is needed to assist communities in addressing priority natural resource issues through realistic interventions. It allows communities to progress from discussing common concerns and issues to defining carefully considered actions that will improve some aspect of natural resource management in their area.

Once formulated, the plan must be communicated to the wider community for input and approval. Actions that involve individuals and groups must be discussed with them and agreed upon. Required resources must be identified and sourced. Government and non-government agencies that could contribute financial and technical resources for the implementation of the plan must be consulted and agreements negotiated. The field procedures required for the activity is presented in table 6 below.

Table 6. Activity outline for the development of a natural resource management plan

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Methodology</th>
<th>Anticipated Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop a plan to address priority issues related to land and resource management</td>
<td>• Group discussion • Logical framework</td>
<td>A consolidated management plan incorporating results from Field Activities 9, 10 and 12.</td>
</tr>
</tbody>
</table>

Box 7. Interpreting results of analysis

In this example, water emerges as the resource that the group considers most deserving of conservation/management, followed by soil, forest and woodlands and shrub land.

Box 8. Procedures for identification of endangered resources

1. Record all the natural resources that are meeting present needs and appear sufficiently abundant and healthy to meet the needs of the area in the foreseeable future.
2. List the resources that are not fulfilling these requirements.
3. Document all resources that are underutilized and can be exploited in a sustainable manner.
4. List all resources that have been prioritized for immediate attention.
5. Document all causes of degradation and depletion of natural resources in the area.
Once the key issues have been developed, a management plan is to be developed and presented on a simple table like on Table 7 below.

Table 7. A natural resource management plan

<table>
<thead>
<tr>
<th>Objective</th>
<th>Activities</th>
<th>By whom</th>
<th>By when</th>
<th>Resources needed and sources</th>
<th>Indicators of success</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Resources needed to implement the activities and the sources must be identified and recorded at this point.

2.2. Post-construction phase

2.2.1 Natural Resource Management, capacity building and operation, maintenance of hafirs

Both traditional and formal structures of governance exist at hafirs sites but it is important that their management becomes the sole responsibility of the community. However, maintenance and sustainability of the hafirs requires the involvement of skilled labour, which can be sourced from the county authorities. It is recommended that a joint working group involving the NRMC and the technical units of the county work together for both maintenance and management of the hafirs and the surrounding natural resources. To ensure a strong and capable community management system, capacity needs of the community members should be identified and strengthened in a regular manner through trainings.

Environmental and related social implications of project actions should be considered as early as possible in order to design mitigating measures at the early stages of project implementation.  

Extensive training of communities and local authorities, together with awareness campaigns on the danger of Guinea worm is necessary to ensure that hafir water is consumed by humans only when it is treated.

Traditionally, the control of a grazing area rests with the Cattle Camp chief who, in consultation with community leaders, decides on the timing, location and extent of the use of the pastures by the community members and sanctions access to pastures and water in the territory under their control for an agreed upon period of time. Building on the existing traditional institutions/structures and improving their effectiveness will be more realistic than suggesting new NRMCs. A community-based management system that is enforced by a viable tariff and strong legislation is recommended. A substantial part of the revenue should be allocated to maintain and improve the facilities.

In moments of conflicts over use of and access to the hafir and surrounding natural resources, chiefs, with support from the elders, should be engaged in peaceful resolution of natural resource based conflicts. When mediation efforts fail to resolve conflicts, the matter should be referred to the civil authority to continue mediation efforts. Court should be the last resort when the traditional and administrative channels fail to resolve the disputes.

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3  Technical Guidelines for the Construction and Management of Improved Hafirs MWRI - GOSS 2004
4  Technical Guidelines for the Construction and Management of Improved Hafirs MWRI - GOSS 2004
Although conflicts between cultivators and herders do occur, there are rules and guidelines for herding during the cultivation season so as to minimize the destruction of crops by animals and ensure the amicable settlement of complaints over crop destruction. It is, therefore, suggested that farming and livestock activities co-exist around the hafir areas and that any conflict be addressed through the existing mechanisms. The reason for the co-existence is that cultivators and herders are of the same community. The only difference is that farming is done mainly by women and the elderly, who are not involved in transhumance activities.

2.2.2 Allocate funds for natural resource issues

Priority issues related to land and resource management will require sufficient funds in order to address them. The NRMC at this point should be the custodian of such funds and use them to address issues identified.
Glossary of terms used to describe land and resource access

- **Use rights**: the right to use a plot of land to gain benefit from the resources on the land or to cultivate food. Having a use right does not mean that you can make decisions regarding the land (examples: grazing, harvesting wild fruits, and planting crops for a defined period).

- **Control rights**: the right to make decisions about who can use a plot of land and for what purpose. It is also the right to financially benefit from the use of the land (example: lease land for money).

- **Secure access to land and resources**: freedom from fear that the person's or group's ability to access land or resources will be taken away.

- **Land tenure**: the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land.

- **Land tenure system**: the rules and regulations determining by whom, how, when and where the land can be used.

- **Communal land**: situation in which the community has the right to decide how, when, where and by whom the land can be used.

- **Individual land**: situation in which the individual has the right to decide how, when, where and by whom the land can be used.

- **State land**: situation in which the government has the right to decide how, when, where and by whom the land can be used.

- **Open-access land**: situation in which there are no rules regulating the use of a plot of land.

- **Land dispute**: a disagreement over land rights, boundaries or uses.

References


