



The adapted sub-catchment management plan for arid and semi-arid lands of Kenya

Building Drought Resilience Project

April, 2013

INTERNATIONAL UNION FOR CONSERVATION OF NATURE

1. Introduction

The International Union for Conservation of Nature (IUCN) and its partners¹ are implementing a three year (2012-14) project funded by the Austrian Development Agency. The project's overall objective is: *"To improve resilience of drylands communities (within a river catchment) to the impacts of increasingly severe and frequent drought, through strengthened ecosystem management and adaptive capacity"*. The project, entitled *"Building Drought Resilience through Land and Water Management"* is being implemented in a sub-catchment of the lower Tana River in Kenya and in a sub-catchment of the Upper Aswa-Agago River in Uganda. The project has five key results to deliver in order to achieve its aims, two of which are:

1. Improving the integrity and functioning of catchments by developing and implementing ecosystem-based actions that improve livelihood assets; and
2. Improving harmonisation of plans and interventions through greater coordination between multi-sectoral institutions.

It is within this framework that the project supported the development of adapted sub-catchment management plans (ASCMPs) for the Saka and Tula sub-catchments in the Lower Tana River (areas within which the project is operating). These have been developed with a view to them acting as pilots for other sub-catchments in arid and semi-arid lands (ASALs) in Kenya. The process adopted in the development of these ASCMPs was through the harmonisation of two existing, parallel planning approaches for the management of natural resources, which were the sub-catchment management plan (SCMP) and participatory rangeland management plan (PRMP).

This briefing note describes the rationale for harmonising the approaches; key elements of these approaches; the main areas of commonality and difference of the approaches; the process employed in their harmonisation; the steps taken in developing the ASCMP; key elements of the ASCMP; and finally, the way forward in implementing the ASCMP.

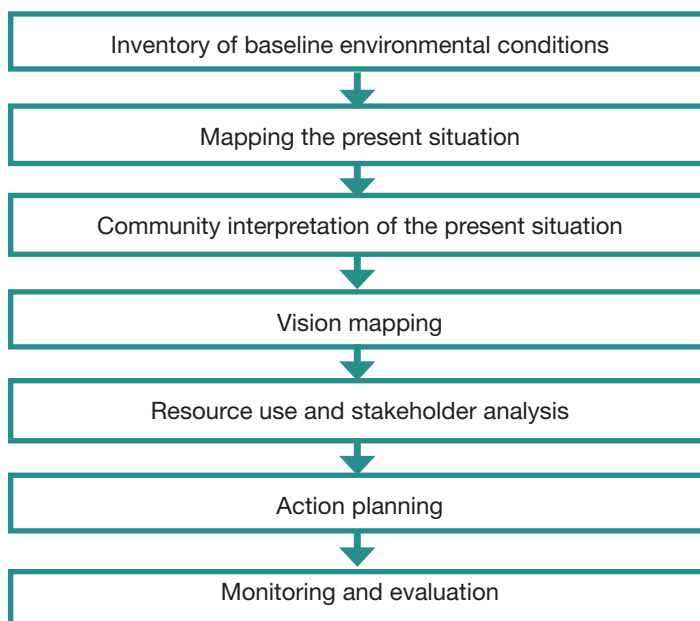
2. Rationale for harmonising the two planning approaches

The need for an ASCMP for ASALs was necessitated by the fact that, currently, there are two parallel planning approaches for the management of water and rangeland resources in ASALs being used by various stakeholders, including IUCN Eastern and Southern Africa Regional Office (ESARO). These two approaches (sub-catchment management plan and participatory rangeland management plan) have similarities and differences (described in Section 4) and it was, therefore, felt necessary and useful for them to be harmonised in order to promote a more coordinated planning and management approach to both resources, i.e. water and rangeland, in ASALs. Harmonising the two approaches is useful because ASALs are unique areas that require tailored and appropriate planning and management approaches. Key aspects of their uniqueness include: scarcity of water resources, fragile heterogeneous landscapes that are prone to degradation; communally ownership of land and its use for nomadic pastoralism where mobility is integral to survival; high levels of poverty; strong reliance by communities on natural resources for livelihood options; increasing constraints to mobility as dry season grazing reserves and pastures areas are converted into farm lands and haphazard settlements; the spread of invasive weeds such as *Prosopis juliflora* adversely affecting natural pastures; adverse impacts of climate change in recent decades contributing to higher rainfall variability and lower reliability than in the past; weak governance due to dysfunctional traditional and modern management and governance of natural resources resulting in unsustainable use; and poor understanding of the dynamics and key elements of dryland systems leading to inappropriate approaches to development, e.g. ad hoc provision of water resources. The latter, water, is the most important natural resource in the ASALs and it is around water that many of the local rules of planning and management of natural resources are organised. The manner, in which water is managed, therefore, has serious knock-on implications, for example such as access to vegetation, pastures, crops and other pastoral resources.

¹ In Kenya, the partners are: Fafi Integrated Development Agency (FaIDA), Water Resources Management Authority (WRMA) Tana River Basin, National Drought Management Authority (NDMA), Kenya Forest Service (KFS), Kenya Wildlife Service (KWS), National Environment Management Authority (NEMA), Ministries of Water, Livestock and Agriculture. In Uganda, the partners are: Directorate of Water Resources Management, District Local Governments of Lira, Alebtong and Otuke.

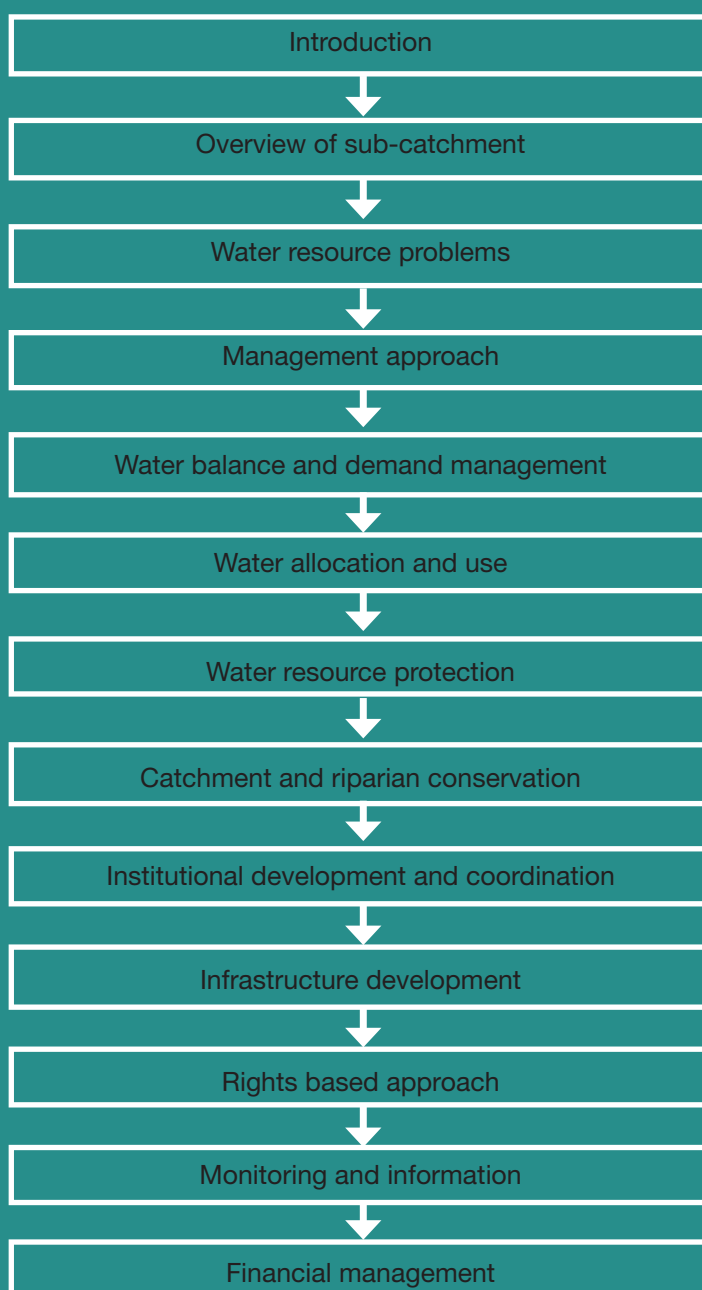
3. Key elements of participatory rangeland and sub-catchment management plans

PRMP is a specific planning framework for the management of natural resources (water and land/pastures) in rangelands and is mainly used in the ASALs. It is developed and implemented through a series of sequential steps including inventory of baseline environmental conditions; mapping of the present situation; community interpretation of present situation map; visioning mapping; resource use and stakeholder analysis; developing action plans that arrest and reverse declining rangeland productivity and undertaking monitoring and evaluation (*see the illustration*). The legally recognised community based organisation that implements PRMP in a defined rangeland area, is a Rangeland Management Committee (RMC).



Key Steps in Participatory Rangeland Planning

The SCMP is an approach that enables the involvement of stakeholders in planning and sustainable management of their water, land and related resources for improved livelihoods. The approach entails identification and analysis of issues related to water and the environment; issue prioritisation; identification of the immediate and strategic interventions, as well as activities and sub activities, required to address the issues and; development of an associated budget. In addition, the approach entails agreeing on the timeframe for implementation of activities/sub activities, in addition to identifying and agreeing upon appropriate indicators by which to assess progress and/or success (*see the illustration*). The approach recognises that water is a finite and vulnerable resource that has to be logically managed within a framework of a sub-catchment (hydrological drainage) boundary. It also recognises water as an economic, as well as a social good, hence it has to be efficiently and equitably managed and/or utilised. Water Resources User Associations (WRUAs) are the legally recognised community based organisation that implements SCMPs. The process of developing and implementing SCMPs, as well as WRUA establishment, is facilitated by the Water Resources Management Authority (WRMA) in the Ministry of Water and Irrigation, through a process called the WRUA Development Cycle (WDC).



Chapters in the SCMP

4. Main areas of commonalities and difference

Both approaches have commonalities and differences – these are summarised in Table 1. The ASCMP builds on the synergies of these commonalities and address the differences through harmonisation.

Table 1. Summary of major areas of commonalities and differences between PRMP and SCMP

Areas of commonalities

- Participatory resource mapping
- Issue identification and analysis
- Production of a plan
- Identification of, and agreement upon, an organisational set-up for the purposes of implementing the plan, for SCMP process the emphasis is on WRUAs and its Development Cycle and for PRMP the emphasis is on Rangeland Users Association (RUA)

Areas of difference

- SCMP is a planning approach that uses mainly hydrological perspectives, such as river basins or sub-catchments, as planning and management units. PRMP, on the other hand, focuses on pastoralism and/or rangeland related issues and uses a landscape perspective as a planning and management unit.
- Almost all the information required for developing a PRMP is provided by the local communities while information required for developing SCMPs is also generated by experts. The kind of information that needs to be derived from experts includes aspects such as derivation of water balances, information on water use and efficiency; analysis of the issues around water resources conflict; identification of potential storage options and technologies and; resource monitoring approached such as the establishment of hydro-meteorological and river gauging stations.

5. The process of harmonising the two approaches

The process of harmonising the two approaches included preparation of training modules on the two approaches (PRMP and SCMP) and an outline of the ASCMP approach. Relevant stakeholders were then identified to participate in the process and undertaking Training of Trainers (ToT) using the modules developed. This was followed by participatory preparation of ASCMPs, led by the trained trainers, for the two pilot sub-catchments and then by sharing of the ASCMPs with communities and partners for comment, agreement and subsequent implementation.

6. Key steps in developing the ASCMP

- Step 1:** Participatory mapping of natural resources i.e. pasture, forest etc, and physical, i.e. sand, rocks etc., resources, as well as land use mapping, all focused at the sub-catchment level. This exercise promotes the understanding by communities of their environment. Participants are facilitated to create the required maps on the ground using local materials and later transfer the drawings to flipcharts and other media as and where possible/necessary;
- Step 2:** Issue identification and livelihoods implication. This allows participants to identify various issues related to water, rangeland and/or environmental issues. Problems are not just identified but where possible also located on the map;
- Step 3:** Issue analysis. This allows participants to identify the causes of the issues they face and then to analyse (cause and effect) and rank/prioritise them, for example using pairwise ranking or a simple secret ballot;

Step 4: Visioning maps. This is where participants draw physical representations of what they would like to see in future. This includes representing desired landscapes, environments and strategic interventions and is aimed at addressing the identified issues;

Step 5: Stakeholder analysis to understand the issues and interrelationships created by the existence of multiple users and uses of natural resources, especially water and land resources. This analysis is based on rights, responsibilities (for management of resources), relationships (reciprocal, conflict over use/access, supportive) and accruing revenue/benefits (quantity and duration of use). Understanding of who the relevant stakeholders are is important for ensuring their effective involvement and participation in the development of the plan, its implementation and monitoring. For example, a stakeholder might be a permanent resource user, an occasional resource user or an outsider group.

Step 6: Breaking down strategic interventions (see Step 5) above into manageable milestones/actions, i.e. derivation of activities and/or sub-activities to address the problems and/or facilitate the realisation of the community vision;

Step 7: Agree on how, where and who will generate the technical information required for the plan and its use, as well as on how this will be assessed and incorporated into the plan;

Step 8: Development of the ASCMP using a work plan matrix². The main objectives of an ASCMP are to: Improve management of water and land resources for enhanced livelihoods; improve the ability of the sub-catchment to provide ecosystem services; improve the governance of land and water resources by promoting stakeholders participation; improve compliance to water, land and environmental regulations; and promote the use of a community based organisation, such as WRUAs and others, as a framework for (developing and) implementing the adapted ASCMP.

7. The main elements of ASCMP

The main elements of the ASCMP are organised in the following 13 chapters:

Chapter 1: Introduction. This provides an overview of the ASCMP and should include the following: Its objectives; who developed it and why - highlighting the role of ASALs in sustaining the pastoralist lifestyle that supports the livelihoods of the people living there.

Chapter 2: Overview of the sub-catchment. This describes the sub-catchment in terms of its physical characteristics, such as hydrology and land use, as well as presents its demographics (populations) and socio-economic aspects.

Chapter 3: Baseline on current status and management of water and land resources. This provides description of the baseline conditions such as the current status of resources, the problems facing water resources and rangelands, their causes and impacts.

Chapter 4: Management approach including financial, institutional development and coordination aspects. This describes the community based organisations' capacities to implement the developed plan. Such organisations must genuinely represent the interests of local resource users, e.g. be an entity such as a WRUA or a RUA, in order to effectively implement the adapted ASCMP.

Chapter 5: Natural resource availability and demand. This provides an assessment of the resource potential, as well as the demand among resource users and any balance or deficit. The assessment should also cover the status of the land resources as well as livestock and wildlife holding capacities since the latter two are major water users.

Chapter 6: Natural resource allocation for sustainable, equitable and efficient use by communities. This chapter describes current resource use, access, any current sharing plans, and sets out proposed sharing arrangements to ensure equity. Any incidences of conflict over access to and use of resources between different groups, such as local communities and outsider groups, as well as suggestion for how these may be resolved, should also be covered.

² The matrix presents the information in 8 columns, i.e. the problem to be addressed, activity (task to be undertaken to address the problem), responsibility (who is carrying out the activity), output (the products produced after implementing the activity), indicators (monitoring the activity implementation progress), when will the activity be implemented, where will the activity be implemented, and budget (resources required for the activity implementation)

Chapter 7: Resource protection activities. This should describe any measures required to ensure sustainable use and management of resources (water, land), as well as for any required catchment protection to reduce/prevent degradation. Such measures might include identification of sediment sources and degraded areas; formulation of by-laws; use of agroforestry and reforestation; protection of water sources; soil and water conservation practices etc. Institutions (both traditional and formal) involved in resource protection should also be identified.

Chapter 8: Catchment protection activities. This chapter should –give an account of the activities that need to be implemented in order to conserve the sub-catchment as a whole landscape. Focus should be directed to the protection and conservation of the sources of rivers and other water bodies as well as of important ecosystems.

Chapter 9: Capacity building of communities and partners. This should cover any training necessary for communities in order for them to be able to manage their resources sustainably. Such training should be focused at allowing communities to derive multiple benefits, as well as to overcome drought challenges and other environmental hazards. Some of the typical capacity building and training needs that have been identified as needed by communities include training on rangeland rehabilitation, livestock production, formulation of by-laws, facilitation of WRUAs in terms of material support and government recognition.

Chapter 10: Infrastructure development to boost resource conservation and mitigate disasters and conflicts. This should describe the actions needed to develop infrastructure necessary for improved resource supply as well as that needed to mitigate against disasters (flood and drought) and conflicts. Such infrastructure might include rainwater and hay harvesting, storage tanks, sand dams etc at household, farm and sub-catchment levels.

Chapter 11: Stakeholder analysis. This chapter should identify the full range of resource users, as well as their roles, rights and relationships. It should also set out the structures and steps required to enhance participatory engagements of different stakeholders for sustainable management and efficient use of resources. The chapter should also analyse and describe actions needed to address cross-cutting issues. For example understanding the relationship between resources and conflicts, poverty, gender, HIV/AIDS, livelihood etc.

Chapter 12: Participatory monitoring and evaluation. This describes the actions needed to improve monitoring and evaluation of the use and management of water and land resources overtime (for example, through meteorological and regular gauging stations and other measurements and tests). This will aid in understanding whether or not progress has been made in the course of implementation of the ASCMP. In addition, identification of the actions needed to enhance communication and information sharing between the WRUA members, all resource users and other stakeholders utilising the natural resources is also vital.

Chapter 13: Capacity building on financial management and implementation of project activities. This chapter should describe the mechanisms, structures, actions etc required to identify potential sources of funds for the implementation of the activities. Presently, the main income of WRUAs is monthly contributions from members, but these are paltry and always insufficient. This chapter needs, therefore, to determine and present information and strategies to build the financial capacity of community institutions. This might include provision of training to key staff on proposal development and report writing, financial and procurement skills, negotiation skills and resource mobilisation as well as record keeping, information sharing, networking and partnership, sustainability, ownership, operation and maintenance and training on leadership and governance. Sound mechanisms for financial sourcing and management will help in initiation and implementation of the proposed activities.



8. Way forward in implementing the adapted SCMP

At the county level, ASCMPs will be shared with partners and communities for adoption and implementation. The plan and methodology used in their preparation will be shared with the respective sub-county and county steering groups for endorsement. Upon endorsement, the plans will subsequently be adopted by the county governments for implementation, monitoring and scaling-up. It is believed that the proposed approach of implementing the ASCMPs will help to exploit existing opportunities for strengthening community level planning and management of natural resources arising from policy and institutional changes being implemented in Kenya, for example as part of the on-going governance and natural resource management reforms. Changes arising from the implementation of the Kenyan Constitution (2010), as well as the Sessional Paper No. 3 of 2009 on National Land Policy, has in turn, triggered reforms of laws, policies and institutions for the governance and management of specific natural resources. These new frameworks enlarge the space within which communities are able to participate directly in the management of their resources and hence strengthen their ability to meaningfully engage in planning and management of natural resources.

