We All Need The Shire

MINISTRY OF AGRICULTURE,

IRRIGATION AND WATER DEVELOPMENT

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Government of Malawi

MALAWI NATIONAL GUIDELINES: INTEGRATED CATCHMENT MANAGEMENT AND RURAL INFRASTRUCTURE

VOLUME II: Village Level Catchment Management Guideline

Cover Page Pictures (Left to right, top to bottom):

Source of photos: contributing specialists

1. Maria and her permaculture, Kasankha Bay
2. A successful farm along the North Rukuru River west of Karonga, practising forest protection, conservation agriculture principles and general resource protection
3. Sapling protected from goats browsing.
4. Fish from the Lake Chilwa
5. Children along the banks of the Shire River in Kasisi
6. Irrigation scheme in Chingale catchment

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List of acronyms and abbreviations

ADC	:	Area Development Committee
AWU	:	Association of Water Users
BMC	:	Block Management Committees
CA	:	Conservation Agriculture
CAN	:	Calcium Ammonium Nitrate
CCT	:	continuous contour trenches
CBSL	:	Community Based Savings and Loans
CMP	:	Catchment Management Plan
DC	:	District Council
DEC	:	District Executive Committee
DEO	:	District Extension Officer
DSS	:	Decision Support System
EAP	:	Environmental Action Plan
EIA	:	Environmental Impact Assessment
FISP	:	Farm Input Subsidy Programme
FRIM	:	Forestry Research Institute of Malawi
GVH	:	Group Village Head
ICM	:	Integrated Catchment Management
IFR	:	Instream Flow Requirements
IWRM	:	Integrated Water Resources Management
ICRAF	:	International Council for Research in Agroforestry
LFA	:	Logic Framework Assessment
MoU	:	Memorandum of Understanding
NEAP	:	National Environmental Action Plan
NGO	:	Non-Governmental Organisation
NPK	:	Nitrogen, Phosphorus and Potassium (plant macronutrients)
NRM	:	Natural Resources Management
NWRA	:	The National Water Resources Authority
ORS	:	Oral Rehydration Solution
PIC	:	Project Implementation Committee
PRA	:	Participatory Rural Appraisal
RAAKS	:	Rapid (Relaxed) Appraisal of Agriculture Knowledge Systems
SRBMP	:	Shire River Basin Management Program
SWAT	:	Soil and Water Assessment Tool

SWOT	:	Strengths, Weakness, Opportunities, Threats
TA	:	Traditional Authority
VLAP	:	Village Level Action Plan
VDC	:	Village Development Committee
VHSC	:	Village Health and Sanitation Committees
VNRMC	:	Village Natural Resources Management Committees
WAT	:	Water Absorption Trenches
WUE	:	Water use efficiency

Measurements:

cm	:	Centimetres
ft	:	Feet/foot
H	:	Head in metres
in	:	Inches
kg	:	Kilograms
kg/ha	:	Kilograms per hectare
kW	:	Kilo watts
l	:	Litres
l/ha	:	Litres per hectare
l/acre	:	Litres per acre
ha	:	Hectares
m	:	Metres
m^2 *or* m.sq	:	Metres square
mm	:	Millimetres
mm/yr	:	Millimetres per year
P	:	Power in kW
Q	:	Flow rate in cubic meters per second
Wh	:	Energy in watt hours
Wh/m^2	:	Insolation i.e. energy per metre square
Wp	:	Peak power
(x)°	:	Degrees (refers to angles)

Glossary of Terms

A-Frame: a wooden frame in the form of a letter 'A' with a spirit level set in the cross-piece. Used to lay-out a contour across a sloping field

Agroforestry: the deliberate combination of woody and non-woody species – most commonly trees with crops or grass – for multiple benefits

Alternative Energy: renewable energy from wind (windmills) the sun (solar panels) or organic matter/ faeces (biogas). Hydro-electric schemes sometimes included in this definition; energy-saving stoves also

Agrobiodiversity: the range of living organisms within agricultural systems – both farmed and natural species

Aquaculture (Fish Farming**):** farming of fish in ponds, fed artificially, and often protected from birds by nets

Base Scenario (Baseline): the current status of a catchment resulting from 'business-as-usual' activities

Berm: a bank or bund usually constructed from earth

Biodiversity: the range of living organisms within a given area

Biogas: gas (mainly methane) from anaerobic digestion of organic matter (usually cow manure and urine) in a specially designed unit that can be piped and used for cooking or lighting

Blackwater: waste water and sewage from toilets

Brush Packing: laying out cut bush/ scrub along a contour/ across a slope to reduce erosion and protect emerging vegetation

Carrying Capacity: the maximum number of individuals that can be supported, fed or are able to survive in any specific habitat or ecosystem without causing the breakdown of the habitat or ecosystem

Catchment: an area from which any rainfall falling on it will drain into a watercourse through surface flow to a common point: sometimes referred to as a watershed. In the Malawian context around 35,000 ha in size (see also **Micro-Catchment**; **Sub-Catchment**; **River Basin**)

Catchment Hardening: compaction of parts of the catchment through overgrazing, road building, housing etc. causing an increase in runoff

Catchment Management Plan: a plan of action to achieve the **catchment vision**

Catchment Vision: the future that a group want to see in their catchment – their goal

Climate Change Adaptation: measures taken to adapt to the impacts of climate change by lessening their impacts and/or reducing risks of extreme events

Climate Change Mitigation: measures to decrease the reduction of greenhouse gasses in the atmosphere through reduced emissions, or by carbon storage (sequestration)

Climate Resilience: the ability of a living system to restore itself to its original condition after being exposed to shocks or disturbance caused by climate

Check Dam: a structure made of stone, brushwood or other materials that partially block a gully to reduce erosion by slowing flow of runoff

Compost: decomposed organic matter made in a heap or a pit which adds fertility to soil and improves structure

Conservation Agriculture (CA): an approach to managing agro-ecosystems for improved and sustained productivity, increased profits and food security while preserving and enhancing the resource base and the environment. CA is characterized by three linked principles, namely:

1. Minimum mechanical soil disturbance
2. Permanent organic soil cover
3. Diversification of crop species grown in sequences and/ or associations

Contour: a line joining points on the same elevation/ a barrier across a slope (e.g. contour vegetative strip; a contour earth bund; contour ridge)

Crop Rotation: changing crops from season to season (or after a longer period) on the same plot of land – for example a legume following a cereal crop

Culvert: large pipe under road draining water from catchment on the far side

Cut-Off Drain: channel/ trench usually sited on the contour, to hold potentially damaging runoff from catchment above fields/ homesteads etc. Where the catchment is large, it may be graded to lead water away safely

Dambo: seasonally waterlogged low-lying areas which are mainly covered with grass

Decision Support System (DSS): a system that helps guide people to make choices from a 'menu' of activities based on specific needs and situations

Deforestation: the partial or complete loss of trees within a forest and the associated loss of the forest's ecosystem function and services

Dyke: an embankment alongside a watercourse to prevent flooding

Endemic: a plant (or animal) that is originally from, and confined to, a particular location

Eutrophication: the enrichment of aquatic systems with plant nutrients, mostly nitrates and phosphates, which stimulates growth of algae, and depletes oxygen, killing local plants and fish and thus damaging the indigenous aquatic ecosystem

Fauna: animal life

Flora: plant life

Graded Terraces: terrace constructed with a lateral gradient **(**slightly off contour**)** to allow discharge of excess water

Gabion/ Gabion Basket: a wire mesh box of (usually) 1.0 (or 2.0) metres length x 0.5 m height and 0.5 m width, packed with stones and connected to each other by wire to form a semi-permeable weir across a gully, or a wall for bank protection

Green Manure: planting a leguminous crop which is then ploughed into the soil to increase fertility and improve structure

Greywater: used household water sourced from baths, showers, bathroom basins and laundries, but excludes water from the toilet (= black water) Grey water can contain pathogens, high concentrations of nutrients and other contaminants that pose a risk to human health or the environment if used inappropriately

Herbicides: chemicals – or sometimes organic substances - used to kill weeds

Inorganic Fertilizer: industrially produced fertilizers of a known composition; mainly composed of the macronutrients, nitrogen, phosphorus and potassium (NPK), with micronutrients added where necessary

Integrated Catchment Management (ICM): integrated management of all the components that operate within a catchment, as well as the human activities that impact on, and are impacted on, by the different components.

Integrated Water Resources Management (IWRM): a process which promotes the coordinated development and management of water, land and related resources in order to maximise economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems

Intercropping (or Companion Cropping or Mixed Cropping): a combination of different crops in the same field to provide benefits greater than planting separately but also to reduce risk

Invasive Alien Species: plant species that have been introduced from outside the country (or outside a particular zone) that reproduce rapidly and reduce production of desired species

Land Tenure: the rights to use of land – may be temporary or permanent

Levee: embankment (usually of earth) built alongside a river to prevent flooding – similar to berm but generally larger

Line Level: a simple device consisting of a spirit level suspended on a string between two poles that is used to determine contour lines

Micro-Catchment: See also **Catchment**, in the Malawian context around 500 ha in size

Mitigation: the implementation of practical measures to reduce adverse impacts: in the context of climate change see **Climate Change Mitigation** (above)

Mitre Drain: road drain – draining the near-side of the road from the crest (also see **culvert**)

Modelling: use of computerised mathematical formulae based on available data/ estimates to predict a catchment's reaction to (for example) rainfall or conservation treatments such as afforestation

Mulching: the application of (usually) organic material on the soil surface to yield multiple benefits including moisture conservation, reduced runoff, weed control, temperature modification and a build-up of organic matter, fertility and biodiversity in the top soil

Multi-storey planting: planting pattern arranged according to height of plants

Participatory Rural Appraisal: a participatory methodology aimed at articulating problems and potentials involving members of the local community and facilitated by a trained 'outsider'. Combines various tools, such as transect walks, historical profiles, participatory mapping, wealth ranking, and ranking/ scoring of different options

Permaculture: a system of 'natural' farming that makes use of a combination of plants, ensuring maximum integration of resources and seeking symbiotic relationships and continuous production. Permaculture is often characterised by a three dimensional geometric design

Phiri-Lino-frame: see A-frame.

Problem Tree: type of analysis that offers an overview of known causes and effect of an identified problem.

RAAKS: Rapid Appraisal of Agriculture Knowledge Systems combines elements of PRA (see above) and institutional analysis to create a framework for participatory action research to understand and improve agricultural knowledge systems

Reclamation: restoring land from a state of serious erosion, such as a gully, and (at least) stabilising its state

Rehabilitation: the process of bringing natural resources – croplands, rangelands, forests etc – back to their original state after degradation has taken place

Remote Sensing: monitoring from a distance – for example aerial photography or satellite imagery

Resilience: the ability of a living system to restore itself to its original condition after being exposed to an outside disturbance

Resource Map: showing the economic activity or natural resources in an area spatially by means of different symbols or colours.

Rotational Resting (Rotational Grazing): allowing a recovering period for pastures/ rangeland through resting them from grazing

Riparian Buffer Zone: a strip of several metres in width (depending on the size of the river, and its flow regime) alongside a river which is planted to perennial vegetation, including trees, principally to protect the riverbanks from erosion

River Basin: the catchment of a whole river

Runoff: surface flow of non-infiltrated rainfall

Sand Dam: a masonry dam in a watercourse that captures sand behinds its wall in which sub-surface flow of water is stored allowing recharge of the local water table for consumption and/or irrigation

Semi-Structured Interview: a participatory methodology tool that is used to gather information in an informal way by constructing a discussion around a small number of key questions (in contrast to a structured questionnaire)

Soil Erosion: the detachment and transform of soil particles: i.e. the loss of soil form the original site

Strip Cropping: planting broad strips (several metres wide) of different crops along the contour in sequence, usually so that a crop which is prone to erosion is 'protected' by a band of a denser crop

Sub-Catchment: See **Catchment,** in the Malawian context around 4 500 ha in size

Sustainability: the ability of a system to survive for some specified (finite) time

Swale: a channel made from earth with excavated soil placed downslope (forming a bank or bund) either on the contour to hold runoff water for infiltration, or on a slight gradient to divert it for water harvesting or safe disposal

SWAT: the Soil and Water Assessment Tool is a model used to predict the effect of management decisions on water, sediment, nutrient and pesticide yields with on large, ungauged river basins

SWOT Analysis (of Strengths, Weaknesses, Opportunities, Threats Analysis): a structured process to evaluate the strengths, weaknesses, opportunities and threats involved in an initiative

Strengths, Weakness, Opportunities, Threats (SWOT): a participatory exercise used to evaluate a system, activity, project, organisation etc. Usually a SWOT is developed and depicted on a wallchart divided into four sections

Tied Ridges: low earth ridges separated by furrows which are blocked at intervals by soil (= ties) to capture rainfall where it falls. A form of *in-situ* water conservation

Tillage: working the soil by plough or hoe. **Minimum Tillage** implies reducing the amount of tillage as much as possible. **Zero-Tillage or No-till** means no tillage at all

Transect Walk: a tool used in participatory processes where a facilitator walks a transect of village/ community land/ a micro-watershed with a group of local people as a means to open discussion on problems and potentials

Wastewater: water is water that has been negatively affected in quality by human activity, and can originate from domestic, industrial, commercial or agricultural activities or any combination thereof, including surface runoff or stormwater

Water Conservation: the sustainable and efficient management of surface and underground water, drinking water, and water in rivers, streams, reservoirs, wells, dams, canals, channels, lakes or wetlands

Water Harvesting: the collection and concentration of rainfall runoff for productive purposes

Water Use Efficiency: maximising productivity in relation to water in a farming system

Wetlands: lands characterised by permanent, shallow water, through which (typically) reeds, grasses and *papyrus* grow

Windbreak: trees planted usually in lines against the prevailing wind to reduce wind damage to crops, lower rates of evapotranspiration and minimise wind erosion

***Zaï* planting pits:** shallow but wide planting pits spaces spaced at about 90 cm apart, which collect and concentrate rainfall from the bare land between: a form of water harvesting, originating from Burkina Faso

Foreword

The Government of Malawi is working with its development partners to bring about economic growth and to alleviate poverty in the country. One of the recent initiatives is the Shire River Basin Management Program. The program is a flagship World Bank financed activity for Malawi, given the importance of the Shire River Basin in the economy of the country. The overall Development Objective of the Shire River Basin Management Program (SRBMP) is to increase sustainable social, economic and environmental benefits by effectively and collaboratively planning, developing, and managing the Shire River Basin's natural resources. The SRBMP will have an initial duration of 15 years.

The first phase project – the Shire River Basin Management Programme Phase-1 Project (SRBMP-1) commenced in 2013, and will last for five and a half years. The Development Objective and the Global Environmental Objective of the SRBMP-1 are: to develop the Shire River Basin planning framework to improve land and water management for ecosystem and livelihood benefits in target areas. The project will address the interlinked challenges of poverty and a deteriorating natural resource base in the Shire River Basin to reduce the process of environmental degradation and to improve the productive potential of the natural resources. SRBMP-1 comprises three components:

a) Shire Basin Planning

b) Catchment Management, and

c) Water Related Infrastructure

As part of the Catchment Management component, one activity has been to develop national integrated catchment management and rural infrastructure Guidelines. These Guidelines have duly been drawn up, and are presented here. They comprise two separate volumes which complement each other as follows:

Volume I	Theory and Procedural Guidelines *The theory of catchment management and higher level planning*
Volume II	Toolbox *Step-by-step technical guidance and village level planning*

The Guidelines were developed in consultation with many different stakeholders - within the Malawi Government, the Shire River Basin Management Program and other stakeholders within Malawi, and international experts. It represents a substantial collaborative effort. I wish to convey my thanks to all those who participated in the consultation processes, and made contributions to the product that you hold in your hands today.

The next step is the implementation of a training program in which the target groups will be coached in the use of the Guidelines. This process, together with 'road-testing' as the Guidelines are put to use will, no doubt, result in further adjustments and fine-tuning, culminating in a more robust and practically useful product.

It gives me great pleasure therefore to introduce you to these National Guidelines for Integrated Catchment Management and Rural Infrastructure Development.

How to Use the Guidelines

The Guidelines comprise two volumes that complement one another. Volume I is intended for office study, while Volume II is basically a field manual. Each is self-standing, with introductory sections and an explanation of the overall catchment management process.

Volume I Theory and Procedural Guidelines

Volume I introduces catchment management principles: it explores the theory of catchment management in the context of Malawi and lays out the need for integrated catchment management– and why strategic catchment planning is required at all levels. It deals with procedures throughout the process, linking national plans with activities on the ground. It is especially targeted at higher level planners and managers. It is recommended that government and project staff study these guidelines: this will help them understand the overall importance of integrated catchment management in terms of the environment and development. It also shows how higher level planning processes tie in to participatory village planning.

Volume II Toolbox

Volume II comprises practical activities targeted at village level. First, the village level planning process is explained, and how the Village Level Action Plans formed are turned into on-farm and community activities. Step-by-step technical guidance is given for a range of measures, from (for example) conservation agriculture and agroforestry, to gully rehabilitation and forest management. There are line drawings and photographs to illustrate each technology, as well as references and suggestions for further reading. This volume is aimed at ‘hands-on’ practitioners at the village/ community level.

Overleaf each volume is summarised, by section, with a short explanation of the purpose of each section, and its main content.

These Guidelines are also available at:
http://www.catchmentguidelines.org.mw/

Volume I Theory and Procedures

	Section	Content and Objective
1	Introduction	This section introduces the concepts and context of integrated catchment management (ICM), and catchment management plans (CMPs) as appropriate planning instruments.
2	Key issues in Malawi	A dependency on natural resources leads to degradation and depletion under the pressures of high population growth. Deforestation, land degradation, impacts on water resources (quantity and quality), depleted biodiversity and fish resources, all exacerbate levels of poverty. Climate change is an underlying threat.
3	Catchment management: concepts and principles	The catchment is an integrated management unit defined by hydrology. Sustainability requires integrated land and water management objectives, the participation of stakeholders in planning and decision making, and 'reasonable utilisation'.
4	Legislative and institutional framework	Malawi has a comprehensive suite of institutional structures, backed by the Constitution, including Cabinet and Parliamentary oversight committees, a National Environmental Policy, and an Environmental Management Act. The Forestry Act, the National Water Resources Policy, and institutional structures for Water Resource management are outlined, along with local government structures and functions focusing down to village level.
5	Catchment management planning	This section is the heart of Volume I of the guidelines. The planning commences with initiation, assessment, planning, implementation and ultimately monitoring and review of a CMP. *For more on Village Level Planning refer also to Volume II: Section 3.*
6	Participatory approaches	There are many useful techniques that assist planners in working with communities. Participatory and Rapid Rural Appraisals are described, and methodological techniques are presented as practical guidelines.
7	Modelling	A decision support system is required to support the analysis of different development scenarios. There are many models to choose from, with selection dependent both on purpose and on the availability of data for model configuration. Both hydrological and ecosystems models are offered as useful planning tools.
8	Role of a Catchment Management Committee	Catchment Management Committees are mandated in terms of the National Water Resources Act (2013) as custodians of water resources conservation. They may or may not be established but are the most suitable vehicle for implemented ICM planning.
9	Alternative sources of income	Limitations and pressures on natural resources require that additional, alternative, strategies be adopted for both production (agroforestry, and poultry rearing), and demand reduction (energy efficient stoves), with micro-scale enterprises playing a vital role in value addition.

Volume II Toolbox

Section		Content and Objective
1	Introduction	The principles of catchment management are introduced. The Guidelines are outlined.
2	Stakeholders and Roleplayers	Everyone in the village benefits from sustainable catchment management. However different stakeholders play different roles in the process. The different contributors and participants in village level catchment management are identified and discussed.
3	Village Level Catchment Planning	The purpose of the Village Level Action Plan is explained. The process is laid out in simple stages: villages identify problems and opportunities, and compile a VLAP. Technical measures are selected and guidance is given to communities to manage their own resources. How the VLAP is linked to the overall catchment planning (Volume I, Section 5) is described.
4	Budgets, funding and savings clubs	The financial market is seen as playing a vital role in the rural development process. Guidelines outline the process of compiling a budget, a funding application, and organizing and managing a Community Based Savings and Loans group or “Bank Mkhonde”. It lists steps on how to start a CBSL, describes accountability structures, operational rules and linkages with formal banks.
5	Monitoring and Evaluation	Monitoring and evaluation ensuring the village’s plans are implemented correctly and that they achieve their set objectives. This section outlines the key principles that villagers need to be aware of.
6	Tool Box Introduction	A simple decision support system is described to help villagers choose appropriate measures and guidelines. The icons of the tool box guidelines are explained.
A	Sustainable Land Management	The sub-themes that are covered in this section include: Climate-Smart Agriculture, Rangeland Management, Soil Fertility Management, Erosion and Runoff Control Measures, Gully Management, Stream / River Bank Management, and Sediment Trapping. Tips on compost making and fertilizer selection are included. Guidance is provided on restoring eroded land e.g. by reclaiming gullies. There is information on creating buffer zones for rivers and wetlands.
B	Water Harvesting and Storage	The sub-themes that are covered in this section include: Water Use Efficiency, Water Reuse and Recycling, Water Harvesting, Micro Water Storage, Small Dams, Infiltration, and Small-Scale Irrigation. Improving WUE by installing drip irrigation, making use of household “grey water” is highlighted. Instructions are given on harvesting water from roofs and roads for productive purposes.
C	Household Management	The sub-themes that are covered in this section include: Farm Management, Sanitation, Energy and Waste Management. This section also demonstrates how to establish living fences and windbreaks from trees and how to operate a tree nursery. There are instructions on how to maintain borehole pumps, and guidelines for improved grain storage. Sanitation includes construction of a composting toilet, and an “Arborloo” latrine, as well as instructions on how to close a filled pit latrine. A detailed section explains construction and use of devices that utilise alternative sources of energy, e.g. solar, wind and biogas. Waste management looks at how to improve waste management both at the household level and at the market level, and suggests means for recycling and reuse.
D	Natural Resource Management	The six components of this section are: Forestry (woodlot management and natural forests), Fishing (aquaculture), Wetland management (*Dambos*), and Invasive Alien Vegetation Management.
E	Disaster Management	Fire Management, Health and Emergency Response are the three sub-themes dealt with in this section. Planning and practical action are described.
	Annexes	Annexes to *Volume* II give extra, specific information on the following: 1: Standard requirements for accessing donor funding 2: Co-operative Agreements (Forest Reserves) 3: Community Disaster Risk Reduction Response Plans 4: Fire Hazard Assessment and Mitigation 5: Selecting Beneficial Trees 6: Participatory approaches in catchment management planning

1 Introduction

1.1 What is the water cycle?

Water is the basis of life and is needed for people, animals and plants to survive. It shapes the earth's surface and is part of our climate and how it works. Earth receives water as rain, which runs into rivers or filters into the soil. Water may be stored underground, or in dams or lakes before it flows into the sea. Evaporation occurs when water in soils or rivers, lakes and the sea changes to a gas and moves back into the atmosphere as the surface warms-up. This process allows water to collect in clouds and be returned to the earth again as rain, in what is known as the water cycle (Figure 1-1). A water resource is any water supply that can be used by people in their daily lives.

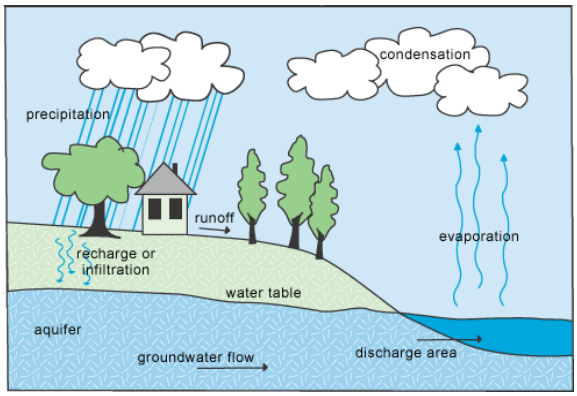


Figure 1-1: The water cycle (Source: Westfield)[1]

1.2 What is a catchment?

A water catchment or watershed is an area of land that catches rain as it falls and directs it to the same destination or "outlet" (for example a river or lake). A typical catchment has a basin shape, formed by hills or mountains on the edges of the catchment. Catchment boundaries are formed by the tops of the ridges, hills or mountains (see the red dotted line in Figure 1-2). Rain runs over the ground and down the slopes on either side of the hill, mountain or ridge as surface runoff, until it joins streams and rivers and eventually flows into the sea. Each side of the hill or mountain will form a different catchment area. Surface runoff can run evenly along the ground surface without a channel, which is called sheet-flow, or it can collect in drainage lines or channels. Rain can also soak into the ground and then move underground to streams or rivers as groundwater. Groundwater flow reaches outlet points in streams and rivers more slowly than surface runoff, and some groundwater can be stored in natural underground basins called aquifers for thousands of years.

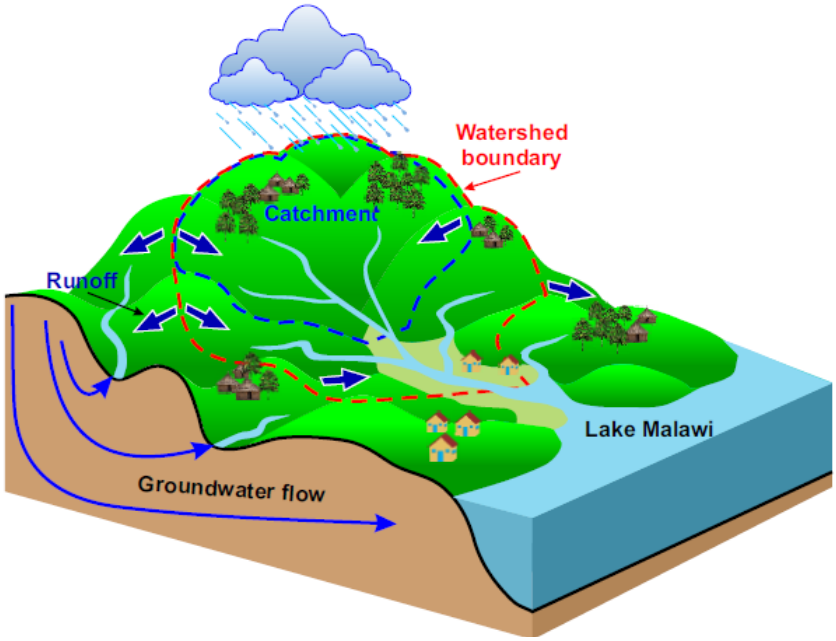


Figure 1-2: Diagram of a catchment area, showing the boundary of the catchment (red line) as well as surface runoff and groundwater flows

[1] **Westfield:** http://www.westfield.ma.edu/personalpages/draker/edcom/final/webprojects/sp07/watercycle/hydro_cycle.gif

A number of rivers draining rainwater into bigger rivers or lakes form a drainage network, which eventually sends water into the sea. Different types of streams and rivers drain a catchment and form part of the system as rainwater flows from the mountains to the sea. Some rivers will only flow for a short time when the rain is very heavy (“ephemeral flow”), others only flow in the rainy season (“seasonal flow”) and some flow most of the year or all of the time (“perennial flow”).

A catchment area is made up of natural resources e.g. forests, mountains, lakes and fish, as well as man-made features such as farms, dams, irrigation schemes, mines, industries and towns. When we consider a catchment area we mean all the land use activities, water resources, natural resources and people living in that area (Figure 1-3). Each catchment is different, depending on climate, slope - that is whether it is flat or hilly, what type of plants and soil occur, and the activities of the people who live there. We need to understand how our own unique catchment works so that we can manage the way we use it to ensure more and cleaner water and natural resources for all.

Therefore it is important to manage the catchment in order to ensure that all the resources are available both now, and in the future, in order to support us.

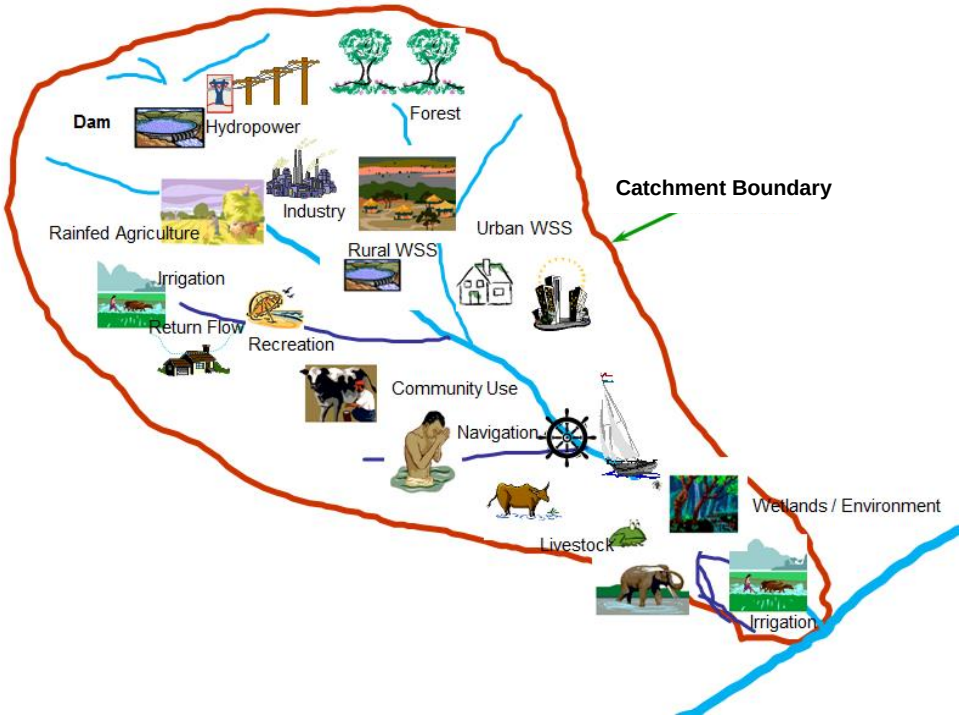


Figure 1-3: **Typical water and land use activities within a catchment**

1.2.1 How does climate affect our catchment?

Climate is the big picture of temperature, rainfall and wind over a large region and long time. Weather is what happens at a particular place at a specific time and refers to wind or rain events. Climate, not weather, determines how much water is received by a catchment. This is based on how much rain and mist (known as precipitation) occurs. Seasonal changes in temperature also affect how much water evaporates in the catchment. Where the climate is hot, dry and windy, there will be high levels of evaporation from bare soil and water surfaces.

1.2.2 How do slopes affect our catchment?

Different slopes in a catchment receive different amounts of sunshine, depending on which way they face. The amount of sun affects local temperature and evaporation rates. Water in the soil is lost more quickly to evaporation on a slope that gets lots of sunshine most of the day. This affects what grows in the area and how we can use the land. The kinds of plants that will grow in a catchment will therefore depend on the direction the slopes are facing (Figure 1-4).

The steepness of the slope also affects the kinds of plants that grow in a catchment. Water runs off steeper slopes faster, and does not get a chance to soak into the soil. Even less water infiltrates into the ground when there are bad farming practices, deforestation or loss of vegetation.

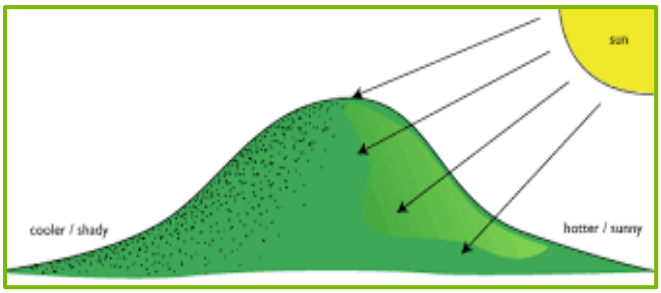


Figure 1-4: Diagram showing how slopes can be hot or dry, depending on the direction the slope faces

When water runs down disturbed slopes soil is washed away too: this is called erosion. The top layer of soil (topsoil) contains nutrients needed by plants for healthy growth and when this is lost through erosion, soil degradation is the result and it becomes difficult for plants to grow. The soil is washed into the rivers and causes sedimentation of rivers and lakes. Dams and lakes become shallower and cannot store as much water as before. Soil in the water also causes pollution making it difficult for fish, other aquatic animals and plant life to live. The soil is eventually deposited in floodplains or washed out to sea.

1.2.3 How does vegetation cover affect our catchment?

The type and quantity of vegetation that grows in the catchment area affect the amount of water that reaches the soil. Good cover with vegetation slows down the force with which rain and wind reach the soil, and in this way stops soil from washing away. Leaves and twigs of plants also fall to the ground, protecting the soil from wind and rain, before they decompose and add nutrients to the soil. The roots of plants open up spaces for water to seep into the soil.

Plants are also important in returning water to the atmosphere to make rain. Plants absorb water from the soil through the roots, and this is transported into the leaves. Small pores on the underside of the leaves release this water into the atmosphere, through transpiration. The amount of water transpired depends of the type of plant, the moisture in the ground, the temperature and the wind movement around the plant. The less vegetation cover there is, the less transpiration will take place.

All plants help to protect the soil from erosion and water resources from pollution, but plants that grow naturally in an area are especially important as they are suited to the climate and soil of the area.

1.2.4 How does soil affect our catchment?

Soil is comprised of various nutrients and minerals. Vegetation and crops need these nutrients and minerals in order to grow. Some plants help to return nutrients to the soil, for example nitrogen-fixing legumes. Mulching and composting also help to return nutrients and minerals to the soil. Where the soil is overused and fertility is not replaced, this results in degradation. Where these nutrients are depleted, the soil requires chemical fertilizers to assist it to support crop growth.

The soil also holds moisture, which helps the vegetation and crops grow. Where vegetation is removed and soil is exposed to the sun, the moisture evaporates causing the soil to dry out. Exposed soil is prone to erosion by water and wind. Currently Malawi loses tonnes of soil each year due through erosion. Without nutrient-rich soils, vegetation won't grow properly, which in turn affects the catchment. There are different soils in different areas of Malawi. Different types of vegetation and crops prefer different soils.

1.2.5 How do people affect our catchment?

Everything we do affects our catchments. This includes the way in which we farm and grow food, the way we collect water for washing our clothes or drinking, and even the way we build our homes, roads, bridges and dams. Our catchments also affects the type of food we grow, the number and types of animals we can support on our land, and the way in which we store water.

It is important to remember that what happens in a catchment area affects the people living within the catchment as well as those living upstream or downstream. The quality of water in a village many

kilometres downstream can be affected by pollution that happens in the upstream catchment: when pollution occurs upstream it can make water downstream undrinkable. Damming rivers downstream can also flood upstream areas and change how natural resources function. We all need to remember that, as part of a system, our behaviour can unknowingly affect others far away - and in turn their behaviour can affect us. As the population size rapidly increases, there is more pressure on resources as there are more people who need food, clothes, energy, income, and building materials. This results in demand for more land, greater levels of deforestation and more unsustainable farming practices.

Over time people's activities negatively affect catchment areas, which in turn affects how people farm and live in the same areas today. Some of these activities are shown in Figure 1-5. An example of good and poor catchment management is shown in Figure 1-6.

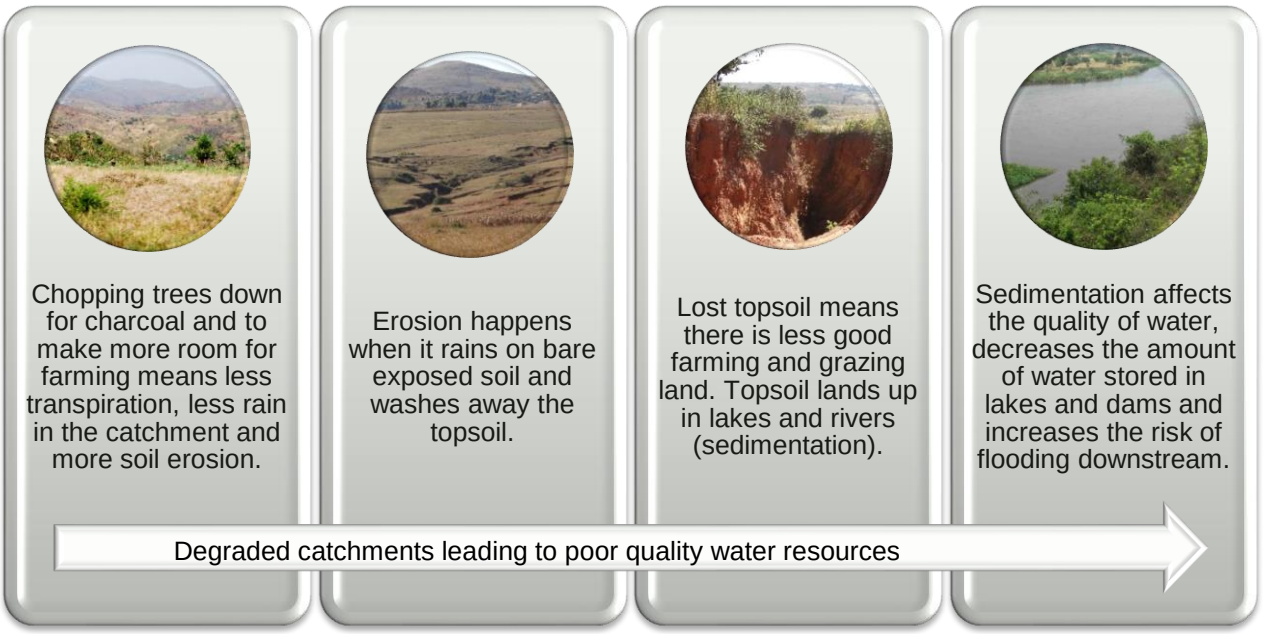


Figure 1-5: Examples of poor land use activities in catchment areas that results in degraded catchments

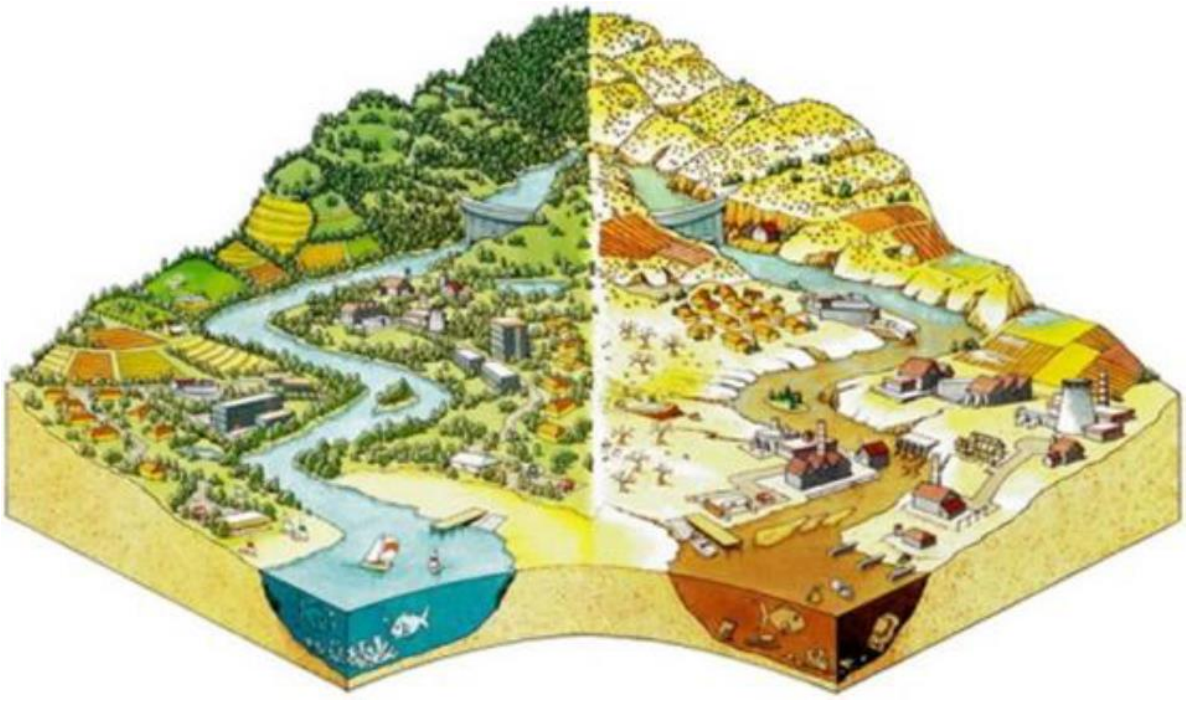


Figure 1-6: Illustration of good and poor state of both land and water resources in a catchment (Source: Waterwatch Queensland)

While different catchments may have different problems, there are some problems that are common to most catchments in Malawi. These are listed in Figure 1-7.

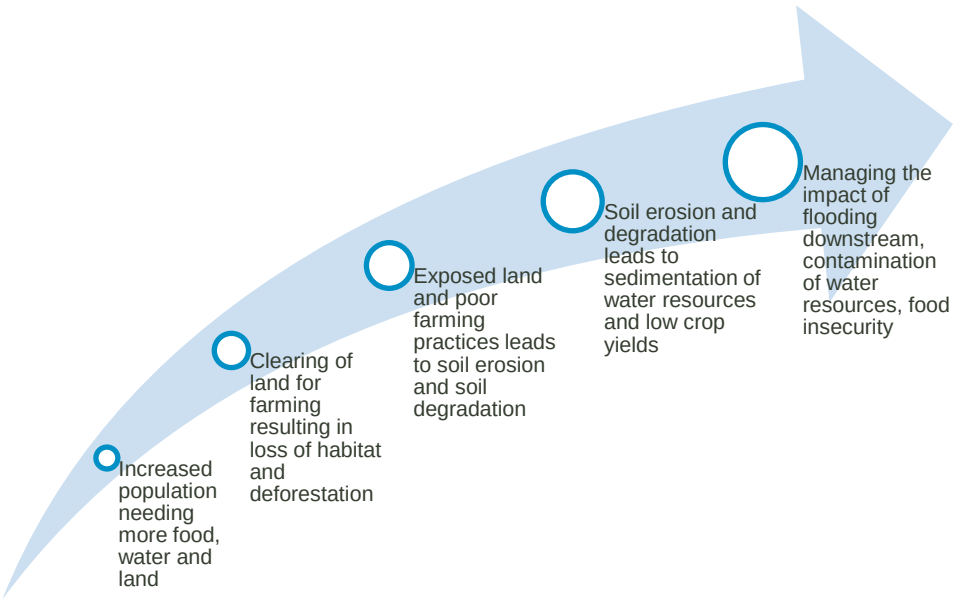


Figure 1-7: Common environmental and social problems in Malawi

It is therefore important to think about the whole catchment area and everything happening in that catchment when trying to improve the quality and availability of livelihoods and natural resources. When there is good management in a catchment, we get better land, water and natural resources over the long term.

1.2.6 Why is it important to manage our catchments?

All the plants, animals and people in an area make up an ecosystem in which all the parts depend on each other to survive. When one part of the ecosystem is damaged it impacts on the other parts of the ecosystem. A healthy ecosystem means that all parts are in balance and can function. People living in an area benefit from a healthy ecosystem through "ecosystem function" and the services it provides (see Table 1-1).These are the benefits that nature produces. These include all our food, our water, safe places for living, materials such as wood and many of our medicines. Table 1-1 explains more about these ecosystem functions.

Table 1-1: The four main ecosystem functions (adapted from Soman *et al*., 2007[2])

Provision Function - what we get from healthy ecosystems		
▪ Food		▪ The sun's energy is converted into plants and animals which we can eat.
▪ Water supply		▪ Wetland plants filter, retain and store fresh water that we can drink. Plants also clean water sources, making water safe to drink. ▪ Plants help surface water to filter into the ground which provides us with another source of water which we can pump at boreholes.
▪ Raw materials		▪ Wood from trees and reeds and other plants can be used for construction and fuel. ▪ Saving a range of different plants and animals (biodiversity) that may be important in the future.

[2] Soman, S, Beyeler, S, Kraft, SE, Thomas, D and Winstanely, D. 2007**. Ecosystem services from riparian areas: A brief summary of the literature.** Prepared for the Scientific Advisory Committee on the Illinois River Coordinator Council, Office of the Lt. Governor. United States of America.

Provision Function - what we get from healthy ecosystems		
■ Medicinal resources		■ Plants are used in traditional medicines and the pharmaceutical industry.

Regulation Function – how ecosystems make our environment better to live in		
■ Disturbance prevention		■ Plants help to control the effects of flooding and stabilise river banks and steep slopes. A healthy ecosystem can also stop the outbreak of pests.
■ Water Regulation		■ Plants on river banks (riparian cover) help control floods, encourage steady infiltration of surface runoff and keep a steady stream flow.
■ Filtration / Water filtration		■ Plants on the shores of lakes and rivers filter sediments, nutrients, pathogens, pesticides, and toxins in runoff. ■ Plants also help surface water infiltrate the soil by stopping fast runoff which increases the water storage potential underground.
■ Soil retention		■ The roots of plants root bind the soil so that it is not easily washed away, which reduces soil erosion and helps to control sedimentation of water resources.
■ Soil formation		■ Weathering of rock to form soil as well as decomposition of organic matter to add nutrients of the soil, which helps form topsoil and increase soil fertility.
■ Nutrient regulation		■ Plants help to store and recycle nutrients such as nitrogen, potassium and organic matter by taking them up from the soil through the roots and passing these through the food chain when animals eat plants.
■ Gas regulation		■ Plants filter air to provide clean breathable air.
■ Climate regulation		■ Good land cover (like trees) help to regulate temperatures and increase the amount of water returned to the atmosphere, helping to keep climates more regular.
■ Waste treatment		■ Plants and animals help to breakdown nutrients and organic compounds and play a role in recycling human waste.

Habitat Provision Function – how ecosystems provide homes for nature that we rely on		
■ Pollination		■ Insects and birds and small mammals pollinate plants to ensure that plants reproduce.
■ Refuge function		■ Vegetation provides living areas for wild animals and plants as well as travel corridors for animals to migrate and seeds to disperse. ■ Woody debris in streams provides habitat and shelter for aquatic organisms.
■ Nursery functions		■ Some water bodies provide habitat for aquatic organisms and amphibians to breed in and allow fish stock to grow.

Information / Cultural Function – how ecosystems make our lives better		
▪ Aesthetic information		▪ A beautiful environment makes people feel happy.
▪ Recreation		▪ People use water for boating and swimming.
▪ Science and education		▪ Nature has specific scientific and educational value.

It is important to manage catchments properly to protect the ecosystem services that a healthy catchment can provide. There is a point (known as the "tipping point") where a degraded ecosystem will stop functioning and no longer provide the benefits we rely on. It can be very expensive, and sometimes impossible to fix ecosystems that have been damaged by man's activities.

It is better that the local farmers, other land users and the community who depend on the land are involved from the very beginning in planning how to manage catchments as they will need to implement the activities in order to ensure continuous provision of ecosystem benefits.

1.3 How do we manage catchments?

1.3.1 Adopt the concept of sustainability

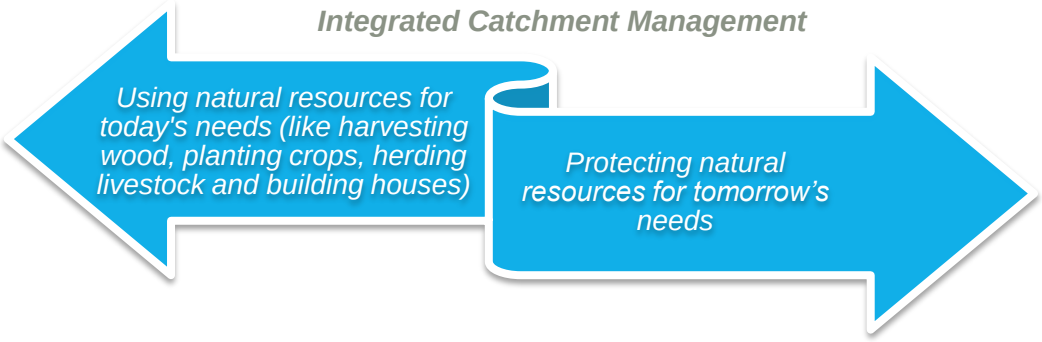
People talk a lot about sustainability today. Sustainability is all about using natural resources that provide environmental, social and economic services for communities without threatening the natural system itself. This thinking needs to guide all planning for, and management of, activities in a catchment.

Therefore sustainability is about keeping the system in balance; using the resources in order to live but enabling the environment to replenish and recover in order to keep producing goods and benefits. In an unbalanced system, the human demand for resources exceeds what the environment is capable of providing, and those resources run out: an example is deforestation of the Southern Region.

Sustainability is the use of a natural resource, where use does not reduce the resource's ability to either maintain or naturally replace itself.

1.3.2 Apply an Integrated Catchment Management Approach

Integrated Catchment Management (ICM) is a specific process to manage the natural resources, people's actions and their livelihoods in a catchment in a sustainable way.



ICM links the management of land, water and related natural resources. The aim is balanced use for current and future needs. All resources in our catchment and the way we use them are linked and all environmental, economic and social problems must be managed together in a catchment area. ICM is

based on five key principles and looks at encouraging good practices as well as improving what is degraded (Figure 1-8):

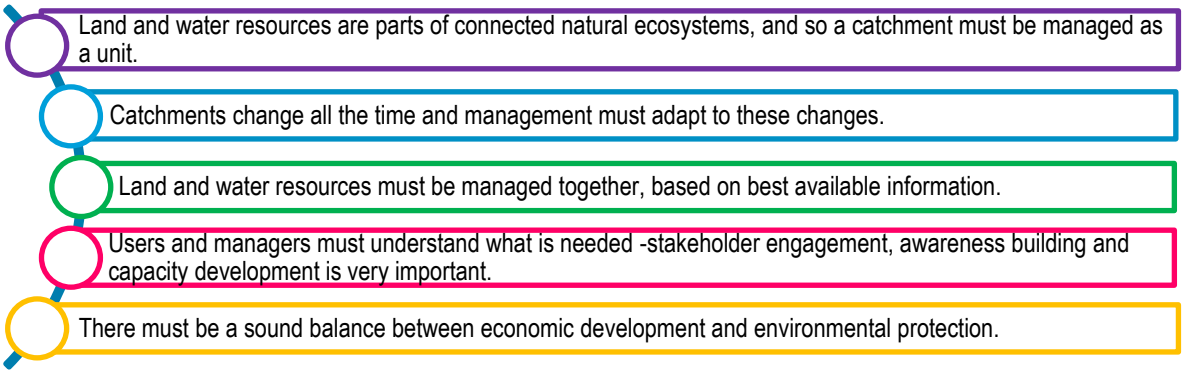


Figure 1-8: Key Principles of ICM

ICM looks at growing community awareness and cooperation to make sure there are common aims and priority actions for a catchment. It is very important that both government and non-governmental organisations are part of the planning and implementation. Existing community groups must be involved as this ensures community support: examples are Village Development Committees (VDC), Village Natural Resource Management Committee (VNRMC), Block Committees, and Irrigation Committees.

Where the problems in the catchment are more serious and require combined action from different individuals and villages, Catchment Management Committees (CMC) may be needed (refer Volume I section 8 on the role of CMCs).

Catchment Management Plans (CMP) must be drawn up to guide the use and management of natural resources. These plans are aimed at balancing the growing demand with the finite nature of resources within the catchment while still promoting socio-economic wellbeing. These plans are compiled at different scales, e.g. the Village Level Action Plan (VLAP) is compiled at the village level, whereas the Catchment Management Plan (CMP) is compiled at a broader scale of several districts.

1.3.3 Levels of Catchment Management

Management of catchments is complicated as catchments cross political and traditional boundaries, as well as economic, cultural and even national frontiers. Catchment management planning must be done at various levels from regional and district level to village level. This must be a combined approach so that everyone is working towards achieving the same goals. The six key characteristics needed for effective and efficient ICM are shown in Figure 1-9.

Figure 1-9: Six important characteristics necessary for ICM to be effective and efficient

There must be a focus on the overall catchment to manage it properly. However actions need to be implemented in smaller units for specific purposes to match administrative boundaries. In Malawi, the smallest form of a water catchment is called a micro-catchment. Micro-catchments make up a sub-catchment and sub-catchments make up the whole catchment. These catchment scales are shown in Figure 1-10

Each catchment is different, depending on topography, rainfall, and many other factors. There are also different stakeholders involved at different levels. For example a farmer may not be interested in what is happening in the area outside his/ her village, but he/ she can be very involved at village and sub-catchment level. For good management, the full range of stakeholders from national government institutions, districts, villages to individual landowners must be involved.

Day-to-day management of the micro-catchment and village level catchment is a community responsibility, as the daily activities of villagers have a direct impact on the state and health of their catchment.

The detail in catchment plans depends on the scale of the catchment. There are three levels of planning - a Catchment Management Strategy, a Catchment Management Plan (catchment or sub-catchment scale) and a Village Level Action Plan (VLAP). This is explained in Figure 1-11.

It is important to understand the links between broader catchment and village level planning. These guidelines look at how to plan and implement VLAPs – that is at the village level. It is an exciting opportunity for village members to take control of their own natural resources.

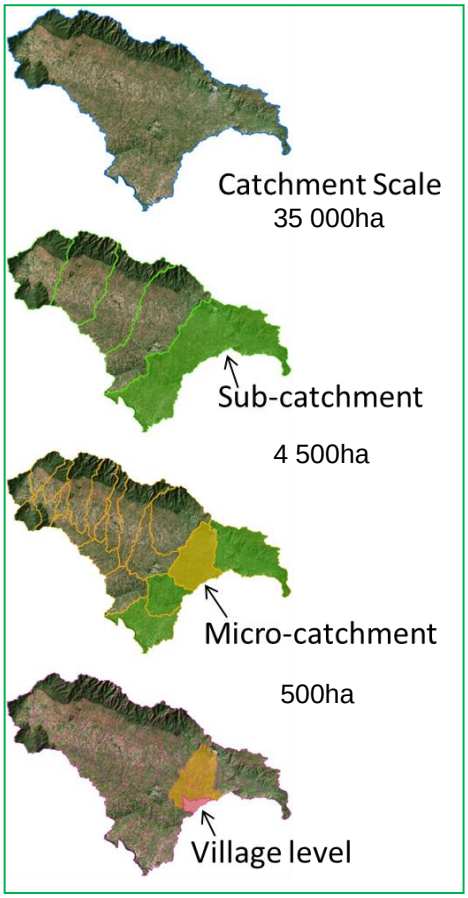


Figure 1-10: Various catchment scales

Figure 1-11: Relationship between different levels of plans

The methods described in these guidelines will inform district extension officers, consultants, non-governmental organisations (NGOs) and villagers themselves to develop a VLAP both for the benefit of the village itself and as part of the broader catchment management plan. The aim is for the villagers to take responsibility for their own resources so that they are sustainable into the future.

The VLAP should be developed BY the people of the village, FOR the people of the village.

2 Roleplayers and stakeholders

2.1 Who is involved in village level catchment planning?

Everyone stands to gain from sustainable catchment management and everyone participates - but the level of participation varies.

All those who farm, live, work, attend school and play in the village can benefit from a Village Level Action Plan (VLAP); neighbouring villages also benefit. More specifically:

- The plan will allocate, utilise, develop and conserve resources in a more efficient and sustainable manner that will benefit the villagers.
- The planning helps the District Council, civic society and NGOs better understand the priorities of the village so that they can assist the village efficient and effectively.

The participants typically fall into one of two categories, either roleplayer or stakeholder, but may often fall into both. These categories are defined as follows:

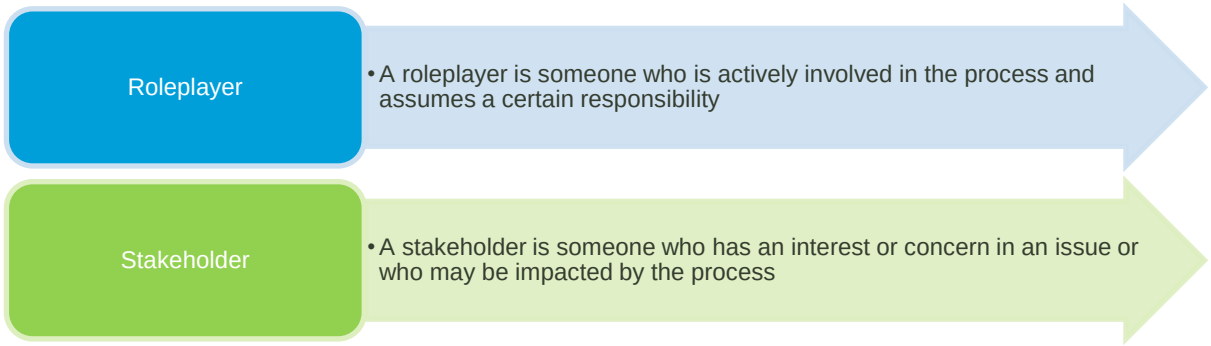


Figure 2-1: Roleplayer and stakeholder definition

2.2 Roleplayers in village level catchment planning

There are a number of roleplayers who will assume specific responsibility for planning and implementation of the VLAP. The main roleplayers are assisted by the District Extension Officer, and are the Village Development Committee (VDC), the Project Implementation Committee (PIC) and the Village Natural Resources Management Committees (VNRMCs). They all originate from within the villages involved. The roles are described in the subsequent sections below.

2.2.1 District Extension Officer

District Extension Officers are mandated in terms of various statutes of legislation. They provide support to the villages under the District Council. For example, Forestry extension officers are mandated in terms of the Forestry Act 1997 to implement forestry management with a development focus.

Extension officers help to drive the VLAP process and provide support to the VDC in developing the VLAP, as they are locally based and educated in natural resource management. The VLAP is compiled by the VDC and village members. It is envisaged that extension officers will communicate the overall principles and strategies contained in this Volume to the relevant VDCs and facilitators in order to guide the catchment management activities at a village level.

2.2.2 The Village Development Committee

A Village Development Committee (VDC) is mandated by the Local Government Act, 2009 (Amended) to lead and manage natural resources management (NRM) and community based natural resources management (CBNRM) activities and projects at the village level. Members are elected by the village to form a grass roots committee.

In terms of the VLAP process, the VDC is the most suitable vehicle to champion the development of a VLAP because it is an existing structure at the village level and has experience in NRM and CBNRM projects. Catchment management planning is essentially underpinned by NRM and CBNRM principles. The Village Natural Resources Management Committee (where it exists and is active) will play a role in advising the VDC (see 2.2.4)

The role of the VDC is to initiate and facilitate the VLAP process, with support from the extension officers as described above. The VDC is also responsible for organising itself – this step may need to be facilitated by the extension officers and the traditional authority body, the Area Development Committee (ADC). Often VDCs in reality only meet when a new initiative arises so this is a good opportunity for them to reconvene. When convening for the VLAP the VDC must decide the following:

- Where and how often the VDC will meet;
- Who will act as the chairperson to keep order, call meetings and assign work
- Who will record minutes, so that everyone is clear about what has been decided at meetings; and
- How the VDC will schedule activities required to develop the plan.

Some things for the VDC to think about with respect to each activity include:

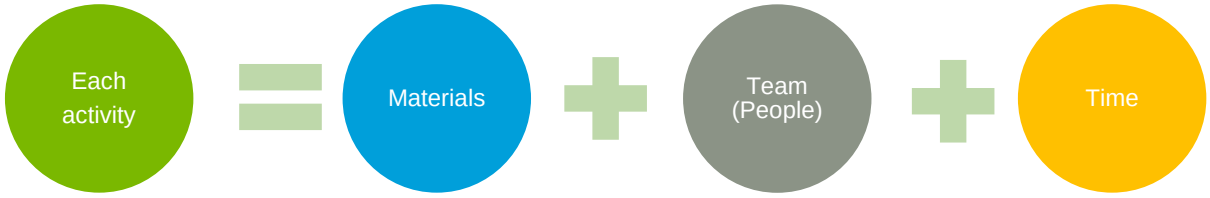


Figure 2-2: Elements of each activity of the VLAP to be considered by the VDC

2.2.3 Project Implementation Committee

The Project Implementation Committee (PIC) is a temporary body selected by the village which is established to implement a particular set of activities and projects as set out in the VLAP. It should include representatives from the VNRMC (see Section 2.2.4) and will report to the VDC. Specifically the PIC should be set up as Step 6 of developing a VLAP (see Section 3.5.6). A selection process that is fair, open and inclusive will ensure community support. With reference to the VLAP, the PIC is tasked with the following (see Section 3 for more details):

- Compiling the implementation plan and schedule;
- Preparing a budget;
- Applying for funding from a donor;
- Setting up a village savings group;
- Implementation of projects:

– Procurement and storage of project materials;
– Procurement of services;

- Project fund management;
- Submission of progress reports; and
- Monitoring and evaluation of project progress.

The composition of a PIC is set out in Table 2-1.

Table 2-1: Composition of the Project Implementation Committee

PIC Composition
Member 1 (Chairperson)
Member 2 (Treasurer)
Member 3 (Secretary)
Member 4 (PIC member)
Member 5 (PIC member)
Member 6 (Chairperson Procurement Sub-Committee)
Member 7 (Secretary Procurement Sub-Committee)
Member 8 (Procurement Sub-Committee member)
Member 9 (Procurement Sub- Committee member)

This initial community selection process is time consuming but important for the success of the plan.

Some suggested selection methods are:

- Election by representation (i.e. decide the number of members from each sector of the community and establish a democratic process to elect members);
- Election by geographical boundaries (i.e. if the village is large, break it down into manageable parts and host meetings to elect representatives from the smaller areas); and/or
- Interim appointments followed by a meeting to present PIC members and seek endorsement from the village for the PIC (this could be an election).

Guidelines for the villagers when selecting a PIC:

- Consider the skills the PIC needs;
- Invite people who are prepared to give their time and talents to participate in this process;
- Membership should reflect the diversity of the village;
- There will be many village representatives throughout the overall process, however keep the core decision making team (the PIC) to a few people;
- Consider the size of the team, as too large a group will not be effective;
- Two of the members should be from the village leadership (male and female);
- Remember it is essential that the team is representative of the village.

2.2.4 Village Natural Resources Management Committee

The Village Natural Resources Management Committee (VNMRC) is another existing committee which is prescribed by the Forestry Act 1997 for the benefit of communities and mandated to take responsibility for the protection of water catchments and fragile areas, rehabilitation of degraded areas and any other activity which will be conducive to good land husbandry. VNRMCs are not established in all villages, but where they are operational they should be included in the VDC and VLAP process.

The Forestry Act 1997 also empowers the VNRMCs to obtain financial and technical assistance from the private sector, non-governmental organisations and other organisations in achieving the objectives of protecting and managing forests.

Since protection of water catchments and rehabilitation of degraded areas are essentially principles of catchment management, the VNMRC is an important roleplayer which can be approached to contribute to

the VLAP process. They do not necessarily serve as a driver or champion of the VLAP process but will have an important advisory role.

There are thus a number of traditional and formal structures and groups that can be involved in the VLAP process, as set out in Table 2-2 below. Their functions and potential responsibilities or involvement in the VLAP process is also described. Volume I of the Guidelines details the governing legislation in further detail and the role of such stakeholders in catchment management.

Table 2-2: Organisations and Responsibilities in Catchment Management – Key roleplayers

Roleplayer	Level	Appointed / Elected	Official Mandate	Reports to	Function / Responsibility	Role in VLAP Process
Village Development Committee (VDC)	Village	Elected by village	Local Government Act, 2010 (Amended) Decentralisation Policy 1998 Mandated by the village to formulate VLAP	ADC	• Lead the process of developing and budgeting VLAPs • Lead and manage NRM and CBNRM activities and projects in the village • Lead the process of developing Environmental Action Plans (EAPs)	• Roleplayer • Develops the VLAP together with a trained Facilitator responsible to the VDC
Project Implementation Committee (PIC)	Village	Elected by the village (specifically for implementation of the VLAP	Mandated by the village to coordinate implementation of VLAP	VDC / NGOs and Donors	• Body set up specifically to implement, secure funding, and monitor the implementation of the VLAP	• Roleplayer • Coordinate implementation of VLAP • Procurement under the VLAP
Village Natural Resources Management Committees (VNRMC)	Village	Elected by village	Forestry Act 1997	VDC	• A sub-committee of the VDC • Committee responsible for sustainable forest management including the protection of water catchments and fragile areas as well as rehabilitation of degraded areas • Empowered to seek technical and financial assistance from external sectors	• Roleplayer • Advises VDC as necessary • Can be approached for contribution to the VLAP process
District Extension Officer	District	Appointed	Forestry Act 1997	District Forest Office	• Extension officers responsible for forest management • Development orientated	• Roleplayers • Trained to facilitate the VLAP processes in selected villages

Table 2-3: Organisations and Responsibilities in Catchment Management – Other roleplayers

Roleplayer	Level	Appointed / Elected	Mandate	Reports to	Function / Responsibility	Role in VLAP Process
District Council (DC)	District	Elected and appointed	Local Government Act 2010 (Amended) Decentralisation Policy 1998	Ministry of Local Government and Rural Development and relevant line Ministries	• Decentralised government responsible for administering overall development of their area	• Stakeholder • Should be consulted during VLAP process for support
District Executive	District	Portfolio from DEC	Local Government Act, 2010	DC	• Technical and advisory arm of the DC	• Stakeholder • Should be consulted during

Roleplayer	Level	Appointed / Elected	Mandate	Reports to	Function / Responsibility	Role in VLAP Process
Committee (DEC)			(Amended) Decentralisation Policy 1998		• Provide technical advice on socio-economic and community development in the District and facilitate projects • Responsible for the District Development Plan (DDP)	VLAP process for support • Catchment Management activities should be included in the DDP
District Environmental Sub-Committee (DESC)	District	Multi-disciplinary forum	Local Government Act, 2010 (Amended) Decentralisation Policy 1998	DEC	• Provides technical advice to the DC on issues of the environment and natural resources • Facilitates micro-projects, awareness campaigns and capacity development on environmental projects • Develops District Environmental Action Plan (DEAP)	• Stakeholder • Should be consulted during VLAP process for support • Catchment Management activities should be included in the District Development Plan
Area Development Committee (ADC)	Traditional land management area	Elected	Local Government Act, 2010 (Amended) Decentralisation Policy 1998 (not formally prescribed by legislation or policy)	TA DEC	• Representative in all VDCs working within a TA area • Assist in the identification, prioritisation and preparation of community needs, which encompasses more than one VDC • Responsible for environmental issues, projects and the Environmental Action Plans (EAPs)	• Stakeholder • Should be consulted during VLAP process for support
Area Executive Committee (AEC)	Traditional land management area	Assigned	Local Government Act, 2010 (Amended) Decentralisation Policy 1998 (not formally prescribed by legislation or policy)	ADC DEC	• A representative body of all extension workers of government ministries, NGOs and Statutory Corporations working within a Traditional Authority area • Responsible for advising the ADC on all aspects of needs assessment, project identification and project proposal preparation	• Stakeholder • Should be consulted during VLAP process for support
Catchment Management Committee (CMC)	Two or more sub-catchments	Appointed	Water Resources Act 2013	National Water Resources Authority	• Broad scale institutional arrangement • Water resources conservation, use and allocation • Water resources conservation activities and works	• Stakeholder • Should be consulted during VLAP process for support
Association of Water Users (AWU)	Water resource point e.g. River, Village,	Voluntary: those with a stake in the use of	Water Resources Act, 2013	CMC	• Manage, distribute and conserve water from a source used jointly by the members	• Stakeholder • Should be consulted during VLAP process for

Roleplayer	Level	Appointed / Elected	Mandate	Reports to	Function / Responsibility	Role in VLAP Process
	Sub-catchment; Irrigation project	the water source			• of the association • Acquire and operate an abstraction license or a discharge permit under the Act • Collect water user charges and fees on behalf of the Authority • Several irrigation schemes around Malawi are registered as an AWU	support
Village Headman (VH)	Village	Appointed by Traditional Authority	Chiefs Act 1967	GVH TA	• Existing traditional leader of the village	• Stakeholder • Must be consulted during VLAP process for support
Group Village Headman (GVH)	Five or more villages	Elected by village headmen / Appointed by TA	Chiefs Act 1967	TA	• Existing traditional leader of a group of villages	• Stakeholder • Must be consulted during VLAP process for support
Traditional Authorities (TA)	Traditional land management area	Hereditary	N/A	N/A	• Traditional or cultural head of an area • Community leader responsible for supervising a cluster or number of GHV	• Stakeholder • Must be consulted during VLAP process for support
Non-Governmental Organisations (NGO)	Local or external	Mixed	N/A	N/A	• Existing NGOs with natural resource management / development focus	• Stakeholders • Approached by the village, or may approach the village, to assist in facilitating and supporting the VLAP process
Donors	External	N/A	N/A	Shareholders / Members	• Existing donors willing to fund projects with a natural resource management / development focus	• Approached to fund actions in the VLAP

2.3 Stakeholders in village level catchment management planning

Everybody in the village and community is a stakeholder and should be involved in the VLAP process. Abroad categorisation of stakeholders is indicated below (but note there are overlaps between the categories):

Figure 2-3: Broad categories of stakeholders

Representation from a broad range of local stakeholders will help strengthen support for the VLAP and make implementation easier.

While represented by the VDC and PIC, stakeholders are directly engaged throughout the VLAP process during village meetings and other participatory rural appraisal techniques (PRA) such as interviews, resource planning, and transect walks.

Stakeholders are equally important in the VLAP process, implementation of the projects and activities and success of the plan. Their role and contributions to the process should not be downplayed or ignored.

3 Village level catchment management planning

3.1 Introduction

The aim of village level catchment planning is to plan the activities of the village in an efficient and sustainable manner to achieve optimum benefits for all in the village, through making use of available resources in a sustainable and efficient manner. The process and purpose of the Village Level Action Plan (VLAP) is to empower the people of the village to make decisions and take responsibility for and promote the collective action for the sustainable management and utilisation of their natural resources. The VLAP is developed by the community of the village, **for** the community of the village. The plan accommodates the resources available to the village community and their needs.

Ultimately the village level plans contribute to the higher level overall Catchment Management Plan, and similarly where national strategic objectives are filtered down through this plan, these activities can be integrated into the VLAPs. The catchment plans at all scales need to be integrated, regularly monitored, revised and updated.

The VLAP sets out a **vision** towards which the community works; specifically a vision statement describes where the village wants to be in the next five (or ten) years (see Section 3.5.3, entitled “Step 3: Developing a vision” for an example). The vision is broken down into several **goals**; these address different sectors or aspects of catchment management and village life. Under each of these goals various **activities** are identified that need to be implemented in order to achieve the goals (e.g. water for drinking, erosion rehabilitation and prevention, improved soil fertility – all catchment management activities spanning different but related issues). Achieving the goals then realises the vision. Some of the activities will be carried out in the short term with rapid pay-back, other activities will be longer term with slower turn-around of benefits. It is good to have a good mix of activities to build trust in the plan. Seeing and reaping quick rewards strengthens confidence in the process and breeds positive attitudes. The longer term benefits are an investment in the catchment. Some activities will require the entire community to be involved in implementing; others may be limited to particular farms. The success of the plans lies in the whole community being involved and taking ownership of the plan and its implementation. Village level action planning incorporates the following principles:

Figure 3-1: Village level action planning principles

3.2 What is a Village Level Action Plan?

A Village Level Action Plan (VLAP) is a written document, which includes drawings depicting the village, its infrastructure and natural resources. It identifies issues of concern to the village: particularly in terms of land and water resources. The plan identifies opportunities, strengths, threats and weaknesses within the village catchment. It also provides practical actions that will result in improved catchment management at the village level. It identifies opportunities for resource mobilisation.

A VLAP does three essential things. It provides a **vision** of what the local stakeholders would like their village to look like; sets out clear **goals** to achieve that vision; and provides an **action plan** comprising **activities** to reach those goals.

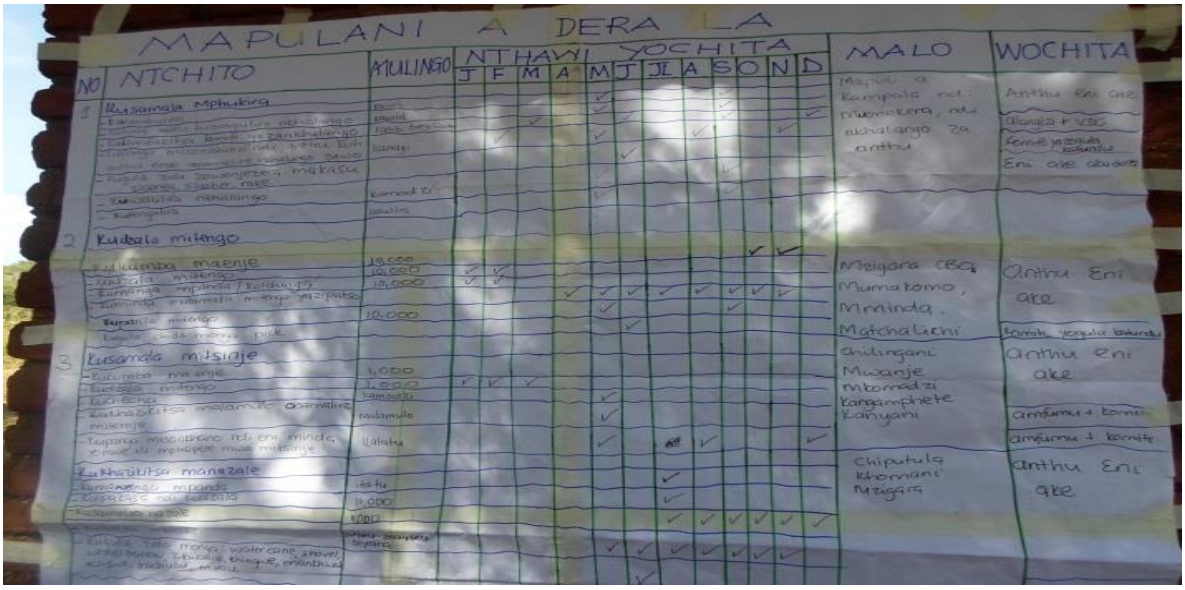


Figure 3-2: Part of the Kapichira 2A4 area 'Actions Table' showing interventions on forest regeneration, afforestation, multipurpose tree nurseries and riverbank protection (Source: Mott MacDonald)

3.3 Who do you involve?

Section 2 sets out all of the different roleplayers involved in developing a VLAP and their responsibilities. However, since collaboration and inclusion are key principles, everybody in the village and community is a stakeholder who could be involved. Representation from a broad range of local stakeholders will help strengthen support for the VLAP and make implementation easier. The broad types of stakeholders are shown in Figure 3-1above.

3.4 What are the benefits of a village level action plan process?

- It brings residents, business communities, traditional authorities and civil society organizations together to **share ideas and work together** on issues that are important to everyone.

- It **improves information** collection, sharing, communication, focuses ideas and builds consensus.
- It helps a village or community **identify its strengths** and evaluate its own resources;
- It **increases the level of concern** in the village about the problems that affect the community.
- It helps to **translate community concerns into action.**
- It **encourages creativity and builds partnerships** both within and outside the village.

- It **enables others to become more informed** and responsive about what is needed.
- It can **influence the policy and financial decisions** of local government, development partners and the business community.
- It helps the communities to **build their capacities** in implementation of, and monitoring their activities in a sustainable manner.
- It helps communities in **identifying and mobilizing local and external resources**.
- It creates a **sense of commitment, ownership and belonging** in the community and at village level.

3.5 Steps of the village catchment management planning process

These are the typical steps that a village should follow in developing a Village Catchment Management Plan. Once a VDC is established, it takes stock of what is in the community and the strengths and weaknesses of the area. Through open communication with local residents and business owners, the team develops a vision of what the community would like the village to be within a given time frame (perhaps five or ten years). To achieve that vision, the plan will include actions to reach those goals. To monitor progress, these actions and accomplishments need to be reviewed from time to time (e.g. every year), to measure and celebrate the successes of the plan; or where necessary, changes can be made to better suit the current situation. The steps of compiling the VLAP are:

Figure 3-3: Steps of compiling the VLAP

3.5.1 Step 1: Initiating the process

The facilitator (person/s driving the process, can be the extension officer or member of the community) must remember that the plan has to come from the people of the village. It depends on local leadership and participation to be successful. The important first steps are as follows:

3.5.1.1 Organise the VDC for action

Refer to Section 2 which sets out key issues the VDC should think about before developing the plan.

3.5.1.2 Raise awareness in the village

Following this step, the VDC, assisted by the facilitator, should find the core group of opinion leaders, local leaders, and village/ community committees who are prepared to help develop a VLAP. It is important to ensure that involvement is not influenced by vested interests. The following groups can be approached:

- The Group Village Headman (GVH) or Village Headman for permission and support.
- The Village Natural Resources Management Committee (VNRMC) and/or other community or village-based resource management committees. They will ultimately need to take ownership of the implementation of the VLAP.
- Other village elders or key village community or village members to be involved in the planning process.
- Neighbouring villages so there is integration.

For example, it doesn't help to plan activities along a river bank, if the other bank falls under a different village and they don't know what is being done, or why it is being done.

A village community meeting or workshop can be held to assist in the identification of the champions.

Tip: Support is very important!! People need to buy-into the idea, so emphasise the benefits of the plan to them and demonstrate other successful examples.

3.5.1.3 Characterising the planning area

One of the first decisions to be made before starting to plan is how to define the village. A map of the area and discussion with the planning team is a good place to start. This is known as participatory mapping and should be guided by the facilitator. The following questions should be asked:

- What are the physical boundaries that describe the village?
- What are traditional and/or cultural boundaries of the village?
- What social, economic and other characteristics best describe the make-up of the village?
- What are the main activities of the village?

Tip: A map of the village is a good place to start, either printed or hand drawn. You will need a pencil and paper to write down the other information.

3.5.1.4 Communicate with the village

It is important that the VDC communicates with the village for their input. This can be undertaken in two stages: Stakeholder Analysis and Community Dialogue.

Stakeholder analysis

The VDC, guided by the facilitator, needs to identify who the stakeholders of the village's natural resources are, both from within the village and surrounding areas. These can be either individuals or groups of people who are impacted by or benefit from the village's resources in different ways (user groups), or may only be interest groups. The Figure 3-4 below illustrates an example of a stakeholder analysis diagram.

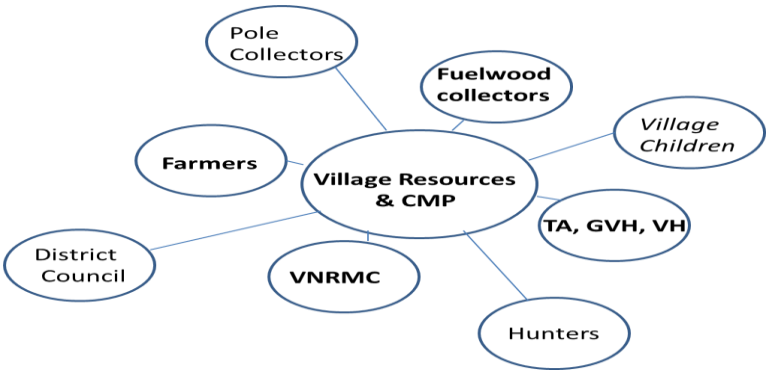


Figure 3-4: Stakeholder analysis: User groups and Interest Groups

Community dialogue

"Getting the word out" to people in the village as the plan develops is important for a number of reasons:

- It keeps everyone informed as the process unfolds;
- It invites members of the community to participate through meetings, focus groups, round table discussions and information events; and
- It helps the VDC determine the village's response to its ideas and proposals.

It is important to develop a communication strategy at the outset and stick with it. People are more likely to participate if they are kept informed about the process as well as the benefits of the process. The plan is only limited by the VDC's imagination and creativity! The communication strategy identifies what communication activities need to be conducted by whom, how and when. There are several ways that the VDC can get messages out to the village. Here are a few ideas:

Figure 3-5: Communication means to get messages out to the village

3.5.2 Step 2: Understanding the village catchment

The VLAP vision will define what the village wants to achieve for the village today, and in the future. It should be realistic, clear and inclusive.

To determine the vision, the team should undertake participatory planning which will involve asking the following questions:

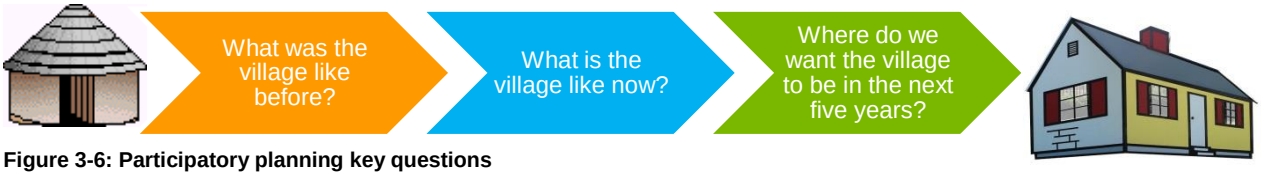


Figure 3-6: Participatory planning key questions

To answer these questions a clear picture of the village's key characteristics, past and present, is needed. This is called a community profile. The community profile can include:

- Land use mapping – established through Participatory Rural Appraisal (PRA) described below, defines location and types of residential, commercial, institutional uses, etc. (separate to village catchment boundary map);
- Population characteristics – statistics about the people who live in the village;
- Community assets and resources – an inventory of village natural resources, natural forests, water sources, boreholes, dambos, services and facilities and local agencies, organisations and groups;

Researching village organisations, community associations, cultural, religious, social and other community groups (with roots in the village) will provide information on the resident involvement in the village, and cultural and traditional roles that influence resource management within the village.

- Community perceptions – what people are saying about the natural resources and catchment management in the village; and
- Other information, such as how the village is currently laid out, its physical assets (e.g. borehole, church, mill, woodlot, etc.) provide a snapshot of the village.

The community profile is created by various participatory tools that are used during PRA (further described below):

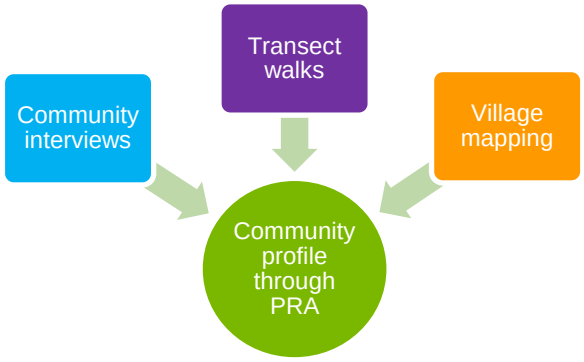


Figure 3-7: Participatory technique used to create the community profile

In addition, basic statistical data on the village, including population, household size, family composition, income, length of residency, etc., provide a profile of the people who make up the village. This information should also be available through socio-economic studies, household surveys and government census.

Researching village organizations, community associations, cultural, religious, social and other community groups (with roots in the village) will provide insight into the level of resident involvement in the village, and cultural and traditional roles that influence resource management within the village. The VDC can use the following approaches to gather information about the village:

3.5.2.1 Participatory Rural Appraisal (PRA)

What is PRA?
This method involves local people carrying out their own appraisal, analysis and actions. It uses focus group exercises and interactive visual tools to facilitate information sharing and analysis – guided by a facilitator

The VLAP encourages village participation and therefore PRA is the best method for collecting information about the community. PRA encourages shared learning and gives people the freedom to try - and succeed, or fail. It views mistakes as learning opportunities and chances for constructive criticism. In this way the people own the decisions and are committed to the work.

The practise of PRA is described in more detail in Volume I, but requires the following:

- Reverse the conventional direction learning
- Understand the power of the practitioner's role
- Work as a team:
- Share knowledge
- Use non-authoritarian approaches
- Make trade-offs
- Triangulate
- Seek diversity

There are a number of tools that can be used to collect information via PRA. These can be in the form of focus group interviews, transect walks, village resource mapping and assessing the village strengths and weaknesses via a SWOT analysis and problem tree analysis. It is recommended that all of these methods are applied in an interrelated manner during the VLAP process to gather information from community members.

3.5.2.2 Focus Group Interviews

Focus group interviews can be conducted as a form of semi-structured interviews. A semi-structured (conversational) interview is one with a loose structure that responds to the person or group being interviewed. Many participatory techniques, such as mapping, transect walks, etc. use this tool to gain more insight into relevant issues or topics. For example, after a group of stakeholders has drawn a visual map, the facilitator can use a semi-structured interview to enable them to share their knowledge, experiences, perceptions and understanding of the map.

A semi-structured interview allows a free flow of conversation so that participating stakeholders can introduce whatever topics they feel are important. One-on-one interviews are better when the issues being discussed are specific or sensitive, but a semi-structures group interview also works when a topic is applicable to many people.

Tip: In a group interview, be aware of one or two strong participants' hi-jacking the conversation and be sure to enable everyone to participate and contribute their own views in the discussion.

Semi-structured interviews can be carried out at all scales of catchment planning. With larger groups of stakeholders, break into smaller groups (focus group) to facilitate more discussion and inputs from the participants. A small group (±10 people or less) is more personalised than a large group (30 people and more). The facilitator should consider the type of information they want to gain from the conservation, and divide the larger group into smaller focus groups accordingly. For example, if it is intended to raise women's roles in water management, then it is more useful to have a group of only women rather than a focus group comprising both women and men.

3.5.2.3 Transect walk

Transect is a cross-cutting or straight cut through the village in order to capture the greatest diversity or ecosystems, land use and location of resources: see Figure 3-8 for an example. Transects can seek to uncover geographical and historical information, as well as address other themes too:

- A geographical transect is a diagram of the main land use zones across the village. It compares the main features, resources, uses and problem of different zones.
- A historical transects is a time line that cuts across time (these can be useful for indicating historical flood heights and flooded areas, original village size and expansion over time, even

original forest size and shrinkage by encroachment and deforestation) and may be used if relevant.

- It is also possible to combine geographical and historical transects when looking (for example) a particular resource and its use

Tip: Mapping and transects are complementary. Often a map can be used to identify a suitable transect line. See Section 3.5.2.4 below.

A transect walk should involve careful observation and semi-structured interviewing. See Section 3.5.2.2 on above.

The following steps can be taken when walking transects:

- The facilitator should find community members who are knowledgeable and willing to participate in a walk through the village and surrounding area;
- Discuss with them the different factors to be drawn in the transect (crop types, land use, trees, slopes, soils, springs / water points, erosion gullies, pathways) and agree to the route;
- Seek a transect that shows the greatest diversity in a short distance;
- Observe, ask, listen while walking, and take notes along the way. Note each different zone observed, note its description e.g. slope, character, land use, vegetation type. Also take note of problems or issues occurring within or affecting each zone, as well the opportunities or available resources located in each zone;
- Discuss problems and opportunities; identify the main agricultural zones and sketch the distinguishing features. For each zone describe: soils, crops, livestock, problems, solutions, opportunities. Draw the transect and cross-check the findings with the informants; and
- When completed, draw the transect, making notes against the different sections of the transect map: the completed draft is then shared, discussed and agreed.

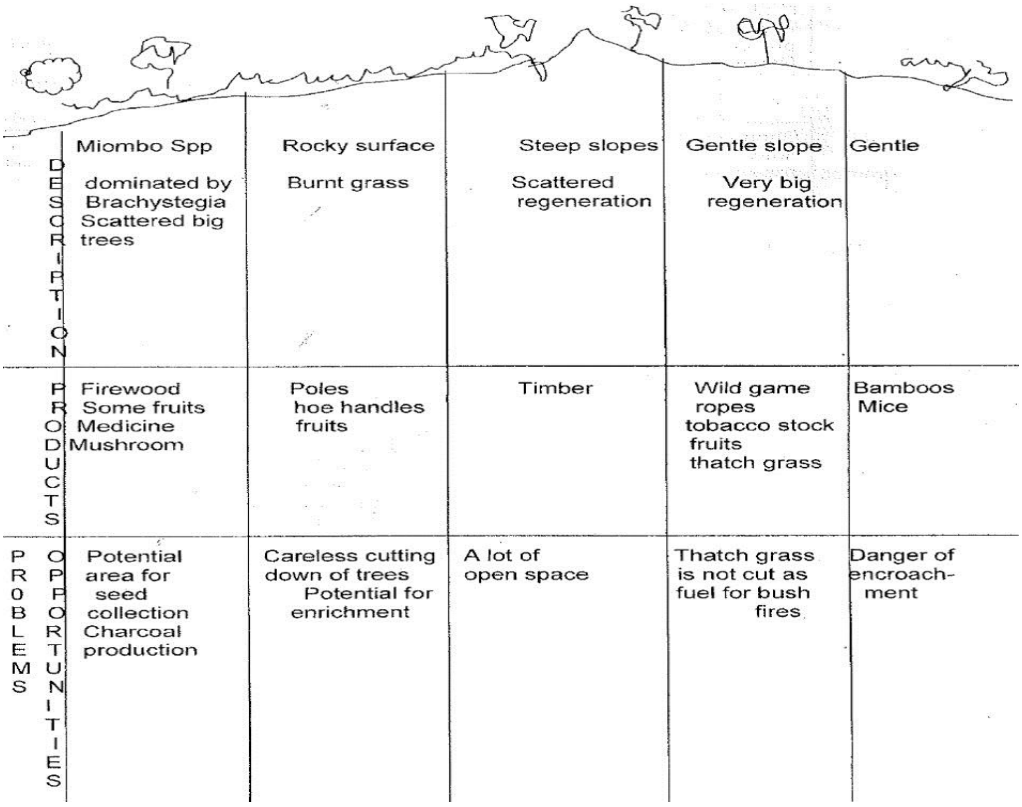


Figure 3-8: Example of a transect (Source: Moyo-Mauni Village Forest Area*)*

3.5.2.4 Village resource map

Using maps makes it easy to visually indicate resource availability, land-use activities, infrastructure and access points, and to identify relationships within and between the villagers and resource bases. Maps help to plan as they enable the village to visualise the outcomes of activities before the activities have occurred. Maps can therefore be used as a tool to record the intended vision for the village.

Tip: Several different maps, indicating different types of information can be drawn during this process, such as drainage map, resource based map, land use map, etc.

Steps for participatory mapping:

- Decide on what type of map should be drawn (village layout, linkages, resource locations, drainage etc.);
- Involve villagers that have knowledge about the village and surrounding lands, and who are willing to share their knowledge;
- Choose a suitable medium (ground, floor, wall, paper) and marking/counting instruments (sticks, stones, seeds, pens, paint, pencils, chalks) for drawing the maps; different mediums can be used to represent different things;
- The participating members then draw a map using the information gathered and shared. The facilitator will ensure that all members participate and the process is not dominated by individuals. The facilitator should not dominate the process either but provide guidance. The group can be broken into smaller groups to develop the maps;
- If the area of the village is a large area, then several maps should be compiled of the different parts of the village catchment area;
- Once the map is compiled, it is the property of those who prepared it – the focus group representing the village usually – through painting it on the side of the wall of a common building but the facilitator should keep a permanent record, typically a digital photograph; and
- Where other resources such as topographic maps are available these can be used as foundation or base-layer maps in the mapping and transect exercises, but not as the lead or primary map. The aim of the exercise is for the community to draw the maps as they experience their environment. It is useful to note in this exercise the scale of drawings i.e. if some activities are drawn larger than others or in focus of attention more than others, or if all activities are drawn to the same scale.

Tip: This mapping exercise is not limited to the planning team, all interested stakeholders can be involved, and it can be carried out in groups of people to obtain different interpretations of the village.

Ask the focus group to also sketch major watershed units (dividers of land use, e.g. a ridge, a road, line of trees). These major watershed units should report the main features related to land use and their value in terms of productivity and basic community assets. This is based on their perception. For example: the best land for corn or other crops, best land for vegetables, grazing, poor cultivated land, poor grazing land, good forest, bush land, water logged areas, woodlots, homesteads, schools, churches, stores, health post, road, foot path, market, steep slopes, drainage, and others.

The process of mapping should lead to the identification of the following:

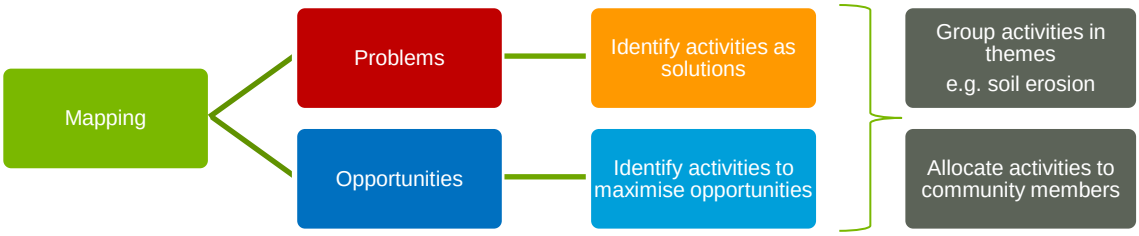


Figure 3-9: Mapping process

The outcome of these discussions informs the management actions and detailed activities of the VLAP

The information gathered from the transect walk must also be used to inform the map. The key problem areas, opportunities, land use activities, resource locations, homesteads, farms, pathways, linkages, etc. are indicated on the map can also be used to inform the SWOT and problem analysis.

Example of a drainage map:

A drainage map is used to illustrate one type of village resource map that can be easily generated via participatory methods. It can be used together with the other maps to identify problems and opportunities as well as activities and solutions. A drainage map is important for runoff management, both to identify areas requiring rehabilitation activities, as well as areas for implementation of preventative measures and opportunities for water harvesting. Through a focus group exercise, draw the boundary of the community or village and the sub-village areas within which the community is located. Carryout the same task for boundaries shared with adjacent and upper/lower sites which are relevant to the community. Identify where the rain falls, and when it flows across the land, where it flows and in which direction, across the village area. Mark on the drawing where water collects and pools, and where erosion occurs or areas where the water runs fast across the land. As mentioned in the procedures, the watershed boundaries may not coincide with the community ones, particularly if for geographical (drainage) and technical factors (treatment requirements) a larger area is to be considered. In that case, more than one community plan should be involved and specific joint interventions designed, planned and shared to be developed following watershed logic.

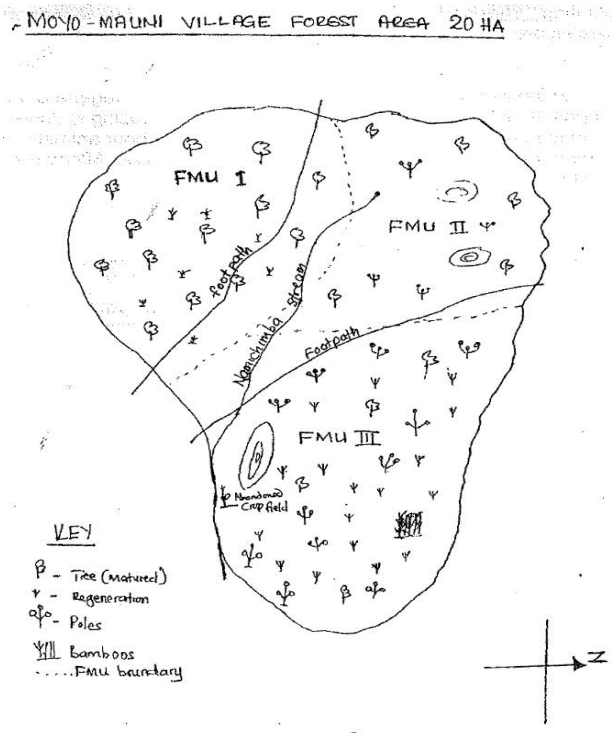


Figure 3-10: Example of a resource map (Source: Moyo-Mauni Village Forest Area)

3.5.2.5 SWOT analysis

What is SWOT Analysis?
SWOT Analysis is a tool to help identify the **strengths** and **weaknesses**, and to examine the **opportunities** and **threats** that face the village resources.

In catchment management, as there are so many different activities that impact on the water resources both to the village and by the village, it is important to identify what the these **strengths, weaknesses, opportunities and threats** are, especially in light of the recent floods, and the ongoing deforestation in Malawi. This exercise is focused on establishing the baseline and the context for the VLAP.

To carry out a SWOT analysis, the facilitator asks the focus group to provide answers to the following questions, and writes these down. Additional questions and variations of the question can be asked. The questions can be applied to different themes or sectors, for example, current and improved water management, soil erosion, current and improved crop management, soil health and fertility, and other natural resources. Questions to ask when undertaking a SWOT analysis are set out in Table 3-1 and an example of a SWOT matrix is illustrated in Table 3-2.

Table 3-1: Examples of questions to ask when undertaking a SWOT analysis

Strengths:	Weaknesses:
■ What does the village do well? ■ What advantages do you have? ■ What resources (people, places, programs and services) does the village have?	■ What in the village / household / farm / forest level can be improved or changed? ■ What do you struggle with? ■ What should you avoid?
Opportunities:	**Threats:**
■ Where do good opportunities exist? ■ What are the favourable trends in the village? ■ What do you need to make the village a better place to live?	■ What barriers are preventing change? ■ What threats face the village / the land? ■ Could any of your weaknesses seriously threaten the homestead / farm / village / forest?

Tip: To help focus the discussion, consider asking the following questions… How can our village:

- Improve water management?
- Reduce erosion?
- Improve livelihoods?
- Reduce pressures on land resources?

Table 3-2: Example of a SWOT Analysis

Strengths:	Weaknesses:
■ Village tree nursery ■ Reliable borehole ■ No conflicts over boundaries or water use	■ Lots of exposed soil ■ Encroachment into forest reserve ■ Disconnected contour rows on hills
Opportunities:	**Threats:**
■ Water storage to facilitate irrigation and second crop ■ Ties in contour furrows for water conservation	■ Increasingly unreliable rainfall ■ Deforestation ■ Pit latrines close to boreholes

Use the activities of the strengths, weaknesses, threats and opportunities to identify the types of actions that the VLAP plan needs to include. For example:

- **Strengths:** what actions need to be implemented to maintain or preserve these strengths; what types of actions are required to extend or replicate these strengths; what types of actions can be carried out to grow or develop these strengths?
- **Weaknesses:** what activities can be implemented to reduce or minimise the weaknesses; what activities can be implemented to improve the weaknesses?
- **Opportunities:** what activities can be implemented to develop these opportunities?
- **Threats:** What activities can be implemented to mitigate or reduce these threats?

The particular issue identified in the SWOT analysis can be the management action (worded in a positive way e.g. to improve poor farming practices). The various actions identified and the activities needed to implement those actions then help form the details of the VLAP.

3.5.2.6 Problem tree analysis

A Problem Tree Analysis (PTA) or Logical Framework Approach (LFA), follows on from a SWOT analysis and helps to identify the cause and effect of activities. In order to sustainably manage resources, the cause of degrading activities needs to be identified and remediated to prevent further negative effect. Similarly, the cause of positive impacts also needs to be identified in order to be able to replicate them.

To conduct a PTA, the following steps should apply and the facilitator should assist the focus groups in these tasks:

Key themes to start with:

- Water management – runoff, storage, supply
- Soil erosion – occurring, prevention
- Crop management – yield
- Soil health – fertility
- Forest status
- Other natural resource management

- Identify a key issue, e.g. deforestation, and write this on a card. Place it in the centre of the board.
- Then identify all the aspects, issues, effects, etc. and also write these on cards. Place them on the central card.
- Reorder these issue cards to indicate which activities are causing the problems - these cards are placed below the central theme card, like the roots of a tree. The activities that are a result of the central theme are placed above the central card, like the branches of a tree.
- Identify what types of management activities are needed to prevent, remediate or resolve the cause and effect impacts.

Note: Using the cards is useful for a focus group exercise.

The cause and effects of a problem, using deforestation as an example, are depicted in Figure 3-11below.

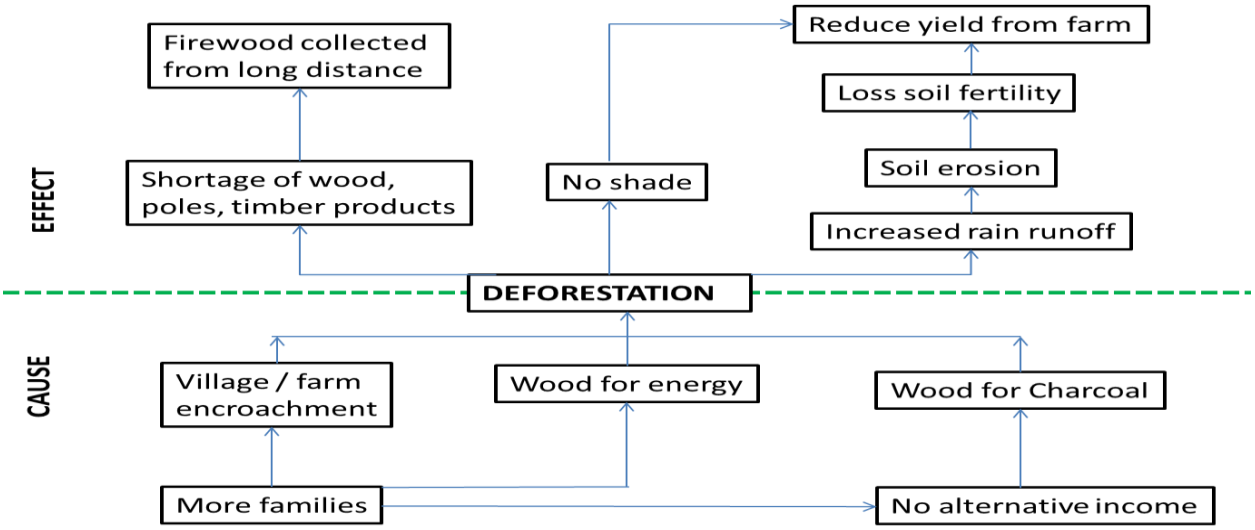


Figure 3-11: Example of a Problem Tree Analysis

The next step is to identify what types of management activities are needed to prevent, remediate or resolve the cause and effect impacts. This is illustrated in Figure 3-12 below.

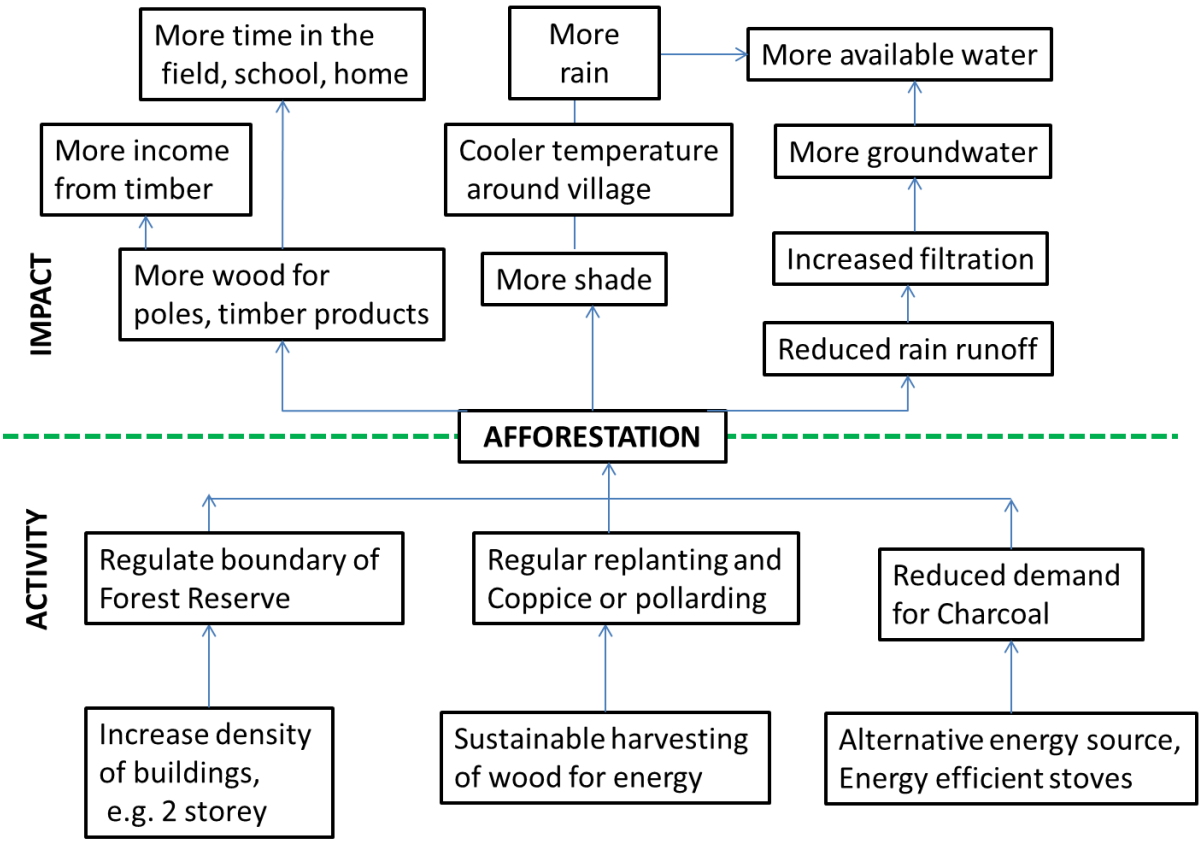


Figure 3-12: PTA used to identify management activities

Tip: The strengths and weaknesses, opportunities and threats identified during the SWOT analysis as well as the problems and objectives identified in the LFA Problem Tree analysis will be helpful when you get to developing the VLAP in Step 4!

3.5.3 Step 3: Developing a vision

What is a Vision Statement?

A vision statement describes where the village wants to be in the next five or ten years.

3.5.3.1 Developing a vision statement

The information obtained from the village assessments and the community consultations will allow for a vision statement to be developed. There may be a number of statements, or a single statement describing the desired future for the village.

A vision is a simple statement of the desired outcome over a specific period of time, usually five or ten years. There is no right or wrong way of doing this, whatever process is followed in preparing the vision statement, the VDC should:

- Encourage full participation in discussion by all VDC members.
- Focus on a realistic and achievable future based upon the village assessment.
- Be conscious of the village's people and their values.
- Be conscious of the need for sustainable development that respects the environment (physical assets) as well as strengthening the village economy.
- Some of the topics that may be included in preparing the vision statement include:

- The desired physical condition of the village;
- The nature and quality of future services (e.g. water, sanitation, food security, etc.) and/or, the desired social and economic outlook for the village.

The SMART tool can be used to help ensure that the vision is realistic (see Figure 3-13):

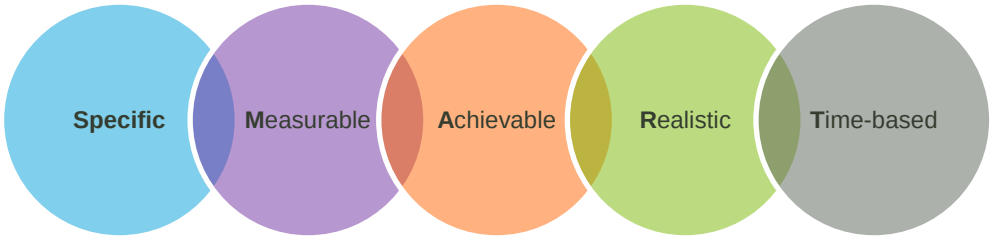


Figure 3-13: SMART tool

For example, the following vision statement was developed by Niras at the 3rd Annual Shire River Basin Conference through a consultation process:

> By **2030**, we will see **prosperous families**, **green catchments** and **healthy waterways** across the Shire River Basin.

Each of the six words has been chosen carefully and has its own significance:

- "**Prosperous**" implies that increased wealth has come from one's own labour or other efforts. Giving lots of free money to poor families will not lead to sustainable prosperity. For many people, "prosperous" also has the connotation of happiness, contentment and health.
- "**Families**" is used instead of "people" because it embodies Malawian values of the family and implies social cohesion. When the social cohesion of a country is torn by tensions caused by poor economic conditions, or racial or religious disputes, then family life is a casualty.
- "**Green**" is the universal term for good environmental conditions, whether for vegetation or other aspects. It stands for more than just forests, but also for sustainable good water and natural resource management, and sound, to sustain the forests and farming practices leading to food security and clean water supplies. It should also be interpreted as meaning sustainable and environmental agriculture that supports the prosperous families.
- "**Catchments**" is used instead of "land" because it is a reminder that everyone lives in a catchment, and that all activities there will have some effect on the rest of the catchment. Catchment condition is a major determinant of the quantity and quality of runoff and water resources.
- "**Healthy**" as applied to waterways embodies both environmental well-being and productivity. Virtually all human activity in the Shire River Basin is dependent on having these characteristics.
- "**Waterways**" encompasses the streams, rivers, marshes, dambos and lakes of the Shire River Basin.

Figure 3-14: A vision map for the village (Source: Mott MacDonald)

Figure 3-15: Vision of the village based on photographs

3.5.3.2 Getting village support for the vision

Village support of the vision statement is essential to the success of the VLAP. This step builds on initial community dialogue held at the beginning of the VLAP process.

There are many effective ways to seek village input and support as has been noted previously

3.5.4 Step 4: Developing a VLAP

3.5.4.1 Contents of a VLAP

A VLAP sets out the vision for the village, as well as the associated goals and objectives; and identifies actions to achieve them.

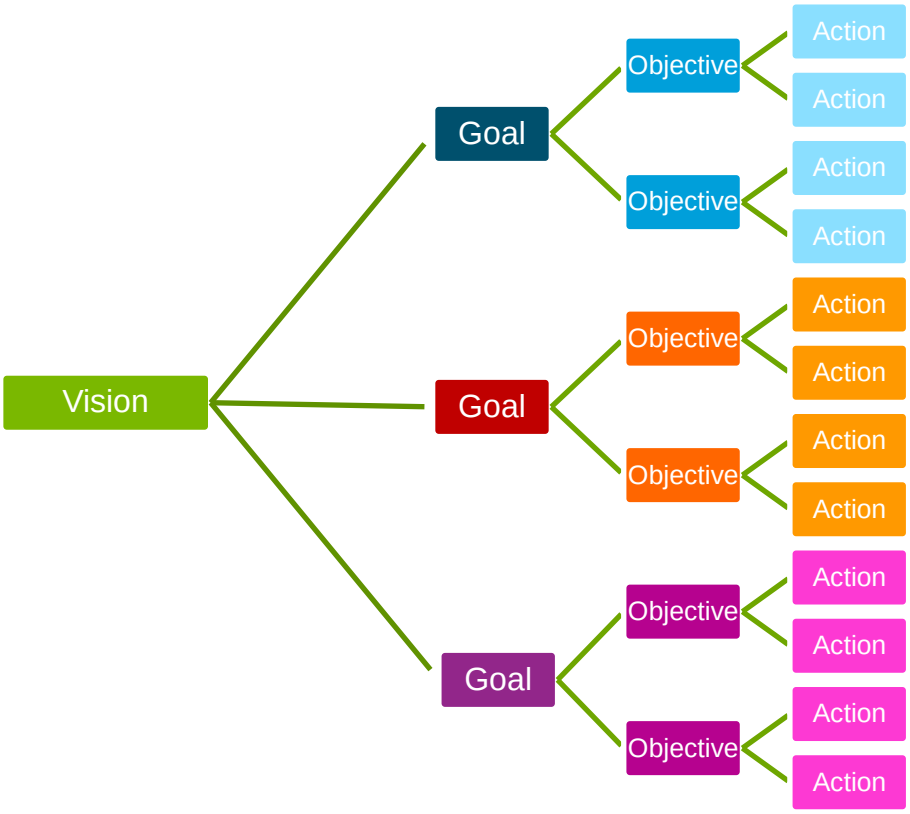


Figure 3-16: Schematic representation of contents of a VLAP

A **goal** describes an achievement that helps realise the vision. The village may have a long list of goals they want to accomplish. Grouping the village goals by themes or categories may help to focus the discussion and plan development. Some questions that may help to set priorities:

- What goals are most important to the village?
- What goals are the most practical and achievable?

An **objective** is also something the village wants to achieve but it is more tangible and specific: in turn it helps reach one of the village goals. Objectives should be clear and have a measurable outcome in a given time frame. The benefits of each objective should be stated, as a reminder of why the activities are being carried out.

An **action plan** describes:

- **What** needs to be done;
- **When** it needs to be done;
- **Who** will do the activity;
- **Where** the village can get help; and
- **How much** it will cost.

When detailing the plan, try and be specific as possible about the activity, see Table 3-3.

Table 3-3: Example of one of the goals in a VLAP

Goal	To improve catchment's ecosystem health				
Objective	To prevent and control soil erosion				
Benefit	Keep water in the soil for longer to support crop growth Keep top soil in the field for farming, and not allowing it to be transported to the river				
Management Action	Improved farming activities				
Action	**Activity / What**	**Who**	**Where**	**When**	**Resources & Cost**
1. Implement contour bunding	1.1. Measure and peg ridges.	Farmers	All farm land	Before wet season. Before planting	Line level or A-frame Labour
	1.2. Align bunds across fields.	Farmers	All farm land	Before wet season. Before planting	Labour
	1.3. Dig trenches and make ridges	Farmers	All farm land	Before wet season. Before planting	Hoe or spade Labour
	1.4. Plant vetiver or other grass	Farmers	All farm land	Before wet season. Before planting	Vetiver grass Labour
2. Mulching	2.1. Collect vegetative material	Farmers	All farm land	Before wet season. After planting	Vegetation materials Labour
	2.2. Place mulching materials on garden and fields	Farmers	Vegetable gardens first	Before wet season. After planting	Labour

i) Developing indicators to measure progress

Developing village indicators to measure progress helps to assess the success of the plan and guide adjustments to the village plan, based upon what has been learnt. Such measurements are called **indicators**. Once it has been decided what activity will be measured and how, the PIC (see Section 3.5.6 and Step 6 Establishing a PIC team) monitors progress, stimulates discussion and feedback from the village and adjusts the action plan to reflect what has been learnt. Refer to Section 3.5.8 (Step 8 below) for more information on Monitoring and Evaluation (M&E).

Using the example above, the alignment of contour bunds across adjacent plots can be measured visually by observing if the contour bunds link up across farm plots or not. Refer to Figure 3-17. This can be reported by noting if (a) all of the contour bunds align, (b) the majority of the contour bunds align, (c) some align, or (d) none of the contour bunds align across adjacent farm plots.

Figure 3-17: Example of aligned contour bunds across adjacent plots (Source: S. Braid)

Figure 3-18: Example of little contour bunding and no alignment across adjacent plots (Source: S. Braid)

3.5.5 Step 5: Approval of the VLAP

The vision, goals, and proposed actions must be widely known and generally agreed upon by the village. The more closely the VDC keeps the villager's involved in, and informed about the proposed plan, the greater the acceptance of the plan is likely to be. It is also critical that the Traditional Authority and District Council both approve and are in support of the plan.

Some examples of consulting the village on the plan include:

- A series of "meetings at homes" at different times and at accessible location to encourage all members of the community to attend;
- Parish or religious group meetings to engage debate and discussion on the plan; and
- Segment on community radio.

Tip: Whatever method is chosen, keep the communication open and the VDC must be prepared to modify the village plan in response to concerns raised by the community.

3.5.6 Step 6: Establishing a Project Implementation Committee (PIC) team

The Project Implementation Committee (PIC) is a group of people selected by the village who are be responsible for the implementation of the VLAP. The potential composition of the PIC is detailed in Section 2.

3.5.7 Step 7: Implementing the VLAP

Once there is community consensus on the village plan and it is supported by the main stakeholders, then the first steps towards implementation are to prioritise the activities and develop budgets for the proposed projects.

3.5.7.1 Compiling the implementation plan

Compiling the implementation plan is the responsibility of the PIC. Using the details from the action plan, the different activities need to be prioritised and ordered based on their timing. Prioritisation can be done using various criteria, for example:

- ***Rapid benefits:*** activities can be implemented with the least resources and costs and provide the quickest benefits. Longer term activities may require more time to source resources or funding.
- ***Sequence:*** activities that need to occur progressively, or that rely on other activities to occur first: for example, a diversion weir should only be built after the furrows in the fields are constructed.
- ***Timing:*** some activities can only be implemented in the dry months and some activities need to be implemented in the wet period; similarly, some activities need to occur prior to planting and some afterwards. Some actions may have long periods between activities; for example compost making, so this should be initiated early so the different stages can progress over time.
- ***Location:*** some activities are site-specific and may influence other activities because of their location. For example, if carrying out several activities on a slope to reduce runoff, start with the interventions at the top of the slop and work your way down.

Once the different actions and activities are prioritised and ordered, these can be summarised into an implementation plan. The implementation plan lists the action and activities, when it should occur and what resources are needed and who is responsible for each activity. An example is provided in

Table 3-4. Compiling the implementation plan is done by the PIC.

Tip: It is a good idea to start implementing the actions that can be accomplished in a short time frame. The success of these initial efforts will demonstrate to the villagers and community that changes are happening, and will help sustain and build interest and involvement as implementation of the plan progresses.

Table 3-4: Example of an implementation plan template

Action	Activity	Months of the year												Resources	Who
		J	F	M	A	M	J	J	A	S	O	N	D		
Nursery	Plant vetiver		X	X	X									Parent grass; Nursery area	VNRMC
Build contour ridges	Measure and peg ridges					X								A-frame measure; Pegs or markers; Labour	Farmers
	Align contour ridges					X								Pegs or markers; Labour	Farmers
	Dig ridges						X	X						Labour; Hoes; Shovel	Farmers
	Plant vetiver grass on ridges						X	X						Labour; Watering can; Vetiver plants	Farmers

The **action plan** provides all the details of the various activities, including the vision, goals, objectives, benefits. The **implementation plan** on the other hand indicates the order in which the activities should be carried out, what resources are needed and who is responsible for each activity.

Both these plans should available to the village; for example, paint them on the side of the school wall, so everyone is reminded of what they are working towards.

3.5.7.2 Preparing a budget

Once the activities have been prioritised and ordered, a budget needs to be compiled. The implementation plan will indicate what resources and costs are needed and by when. As we have seen in Step 4: Developing a VLAP, it is important to consider the cost and resources that go into each activity planned to reach an overlying goal. While much village work will be voluntary, resources such as skilled artisans, materials, services and transport usually mean that money needs to be spent. Budgets should be calculated for each year of the plan. The basic steps to compiling a budget include:

Figure 3-19: Basic steps to compiling a budget

Keeping track of the amount of money needed for a project is an important part of the planning process. To start with a budget, there needs to be a calculation of what inputs/resources are required for each activity. It is also important to consider the running costs over the future years. Sometimes implementation costs are high: thus prioritisation of activities will dictate which comes first.

It is essential to keep close track of the income and expenses during the implementation of the project for good management. Some items in the budget items may cost more or less than budgeted. Record

keeping helps to indicate if there are additional funds available or needed, as well as to properly guide the next year's budget. Budgeting is also useful in comparing estimates with actual costs: this is a valuable planning tool for the future.

Refer to Section 4 for an example of compiling a budget for construction contour ridges in a 3 year plan.

3.5.7.3 Ongoing considerations

The village community should be encouraged to take time out to celebrate. Village members need to feel that they are valued for their contributions. A function to celebrate successes will go a long way in helping the community members see that their efforts are needed and that there are visible results of their work in their catchment.

3.5.8 Step 8: Monitoring and evaluation

It is the responsibility of the PIC to monitor and evaluate the process during and after implementation; that is known as monitoring and evaluation (M&E). Village stakeholders, government, donors and other communities can all benefit from the information that is obtained from monitoring and evaluation. Refer to Section 5 for more information on M&E.

3.5.9 Next steps

The VDC and PIC should review the plan on a regular basis to revise goals or set new ones. This may be based upon lessons learned from the monitoring and evaluation process or caused by on changes that are occurring in the village. Some questions they could ask:

- Do some activities need more attention than others?
- What new issues have arisen?
- What new opportunities do we have?
- What new resources have we created or found?
- Were our targets realistic?
- What new strategies could be employed?
- What assistance or resources do we need?

- The VDC and PIC have worked long and hard to get to this point. It is important they stay involved in future action plans in the quest to meet the village goals.

These groups have played a valuable role in guiding and assisting local initiatives, and should continue to do so in the future – though there may need to be changes in personnel: not all members will want to continue indefinitely. But it is important to keep the momentum going.

4 Budgets, funding and financial management

4.1 How to compile a budget

What is a budget?
A budget describes the amount of money that an organisation, for example the VDC, requires to spend for set purposes over a given period of time, in this case a VLAP.

A budget has several different functions and is important at various stages of a project (Figure 4-1 and Table 4-1), including:

- ***Planning:*** project managers e.g. the VDC can use it to establish an accurate idea of the VLAP cost. This allows them to work out if they have enough money to complete the project and if they are making the best use of the money they have available. The budget indicates when certain amounts of money will be needed to carry out specific activities.
- ***Fundraising:*** the budget is an important tool for convincing donors the VLAP and its constituent sub-projects are viable. It sets out in detail what the money will be spent on, and what results will be achieved. Donors use the budget as a basis for deciding whether the funds being requested are reasonable and well-planned.
- ***Project implementation:*** an accurate budget is needed to control the VLAP, once it has been started. It is an important tool to compare the actual costs against the budgeted costs for on-going monitoring. It will be necessary to review the budget after a project has started because plans sometimes change.
- ***Monitoring and evaluation:*** the budget is used to monitor the income and expenditure as the projects progress to identify any problems and determine if adjustments need to be made to any specific activities or goals. It is also used as a tool for evaluating the success of the VLAP when it is finished. It helps to determine if the VLAP succeeded in achieved what it set out to achieve. The budget promotes financial accountability and transparency which results in good project governance.

Budgets are based on objectives, action plans, and resources.

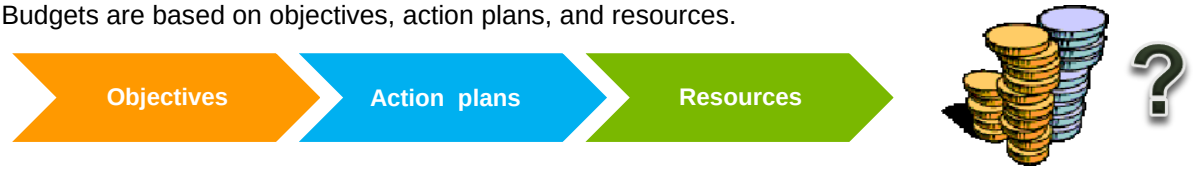


Figure 4-1: Elements to considerer when compiling a budget

While the VDC is responsible for preparing the preliminary budget, the PIC may later review and suggest refinements. This input gives the PIC an opportunity to modify the budget and helps identify if any budget items or expenses have been omitted, based on experience gained from other similar projects – and during implementation. This collaboration helps to develop a budget that reflects realities.

When preparing a budget consideration is given to what the VLAP expects to cost (i.e. expenses) against the funds available (i.e. income) during a specific time period. Usually, there are two major types of costs to consider: direct costs and indirect costs Figure 4-2.

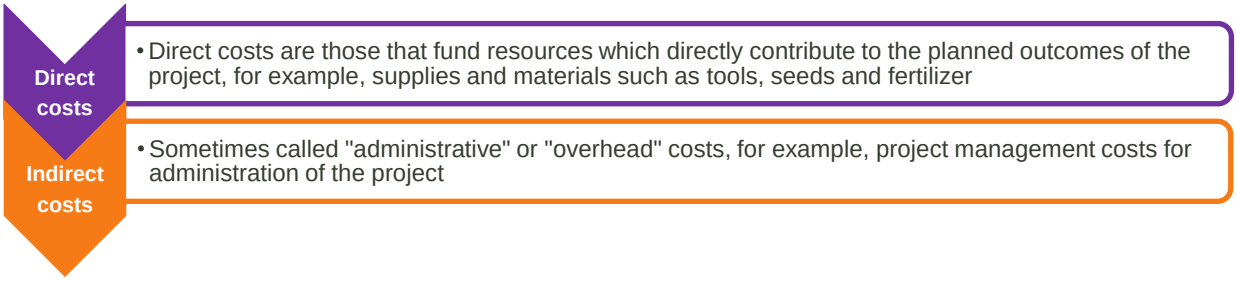


Figure 4-2: Types of costs to be considered

The administrative costs should not exceed more than half the budget. In addition, funders always require reporting on monies spent on overheads and directly on the project (Figure 4-3).

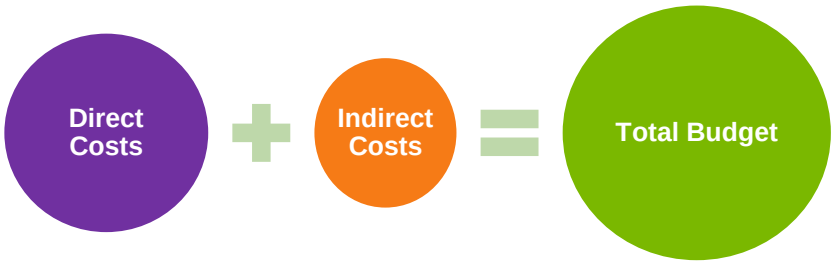


Figure 4-3: Components of costs to be considered in budget

4.2 Budgeting technique

The easiest technique for budgeting is known as **incremental budgeting,** in which the figures are based on those of the actual expenditure for the previous year, with a percentage added for inflation for a new year. This is an easy method that saves time but it is the "lazy" way and is often inaccurate and can only be used on projects with similar activities that run for a number of years. This may not be the case with the VLAP.

Other techniques, such as **zero based budgeting**, may provide a more detailed and accurate budget, but take more time and energy to prepare. In this approach each activity that is required to be undertaken to reach the projects aim must be broken down to establish its component costs. This comes closer to the VLAP characteristics.

4.3 Budgeting process

Preparing a meaningful and useful budget is best undertaken as an organised and structured group exercise by the VDC with input from the PIC (and others as required). The budgeting process can be assisted by asking a number of key questions such as:

- What are the objectives of the project? *Refer to the VLAP*
- What activities will need to be undertaken to meet these objectives? *Refer to the VLAP*
- What resources will you need to successfully complete these activities? *Refer to the VLAP*
- What will the identified resources cost?
- What will additional resources will be required to manage the project?
- Where will the funds come from?
- Is the VLAP realistic?

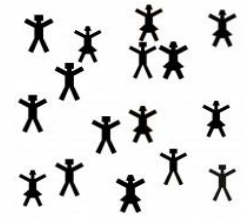
A stepwise approach to budgeting will include the following steps:

1. **Identify** exactly what is planned and how it will be implemented. List each of the activities and then plan how much each will cost and whether the result will generate income.
2. **Determine what each of the expenses will be**. Assume an increase for inflation when comparing expenses from a previous year, e.g. 10%. Aspects to consider in budgeting include those listed in Table 4-1.
3. **Analyse the difference between the available funds, additional income required and expected expenses.** Make adjustments to balance your budget. Determine if and what expenses need to be reduced and how these may affect the implementation of the project.
4. **Develop a plan for the unexpected**, such as a crisis (e.g. flooding), or if there are price fluctuations.
5. **Make any changes and finalise income and expenses budgets**, as well as the timing of expenditures and income. Review this with the implementation plan, the timing of some project

activities may be limited by available funds, or basic interventions can be implemented and when funds are available these can be upgraded.

6. **Monitor the budget** as the VLAP progresses, i.e. monitor what is actually being spent compared to what was planned and budgeted for.

Table 4-1: Framework for estimating costs

Operational costs: Each activity will have a number of resources that will cost money.			
Resources	**Unit cost**	**Quantity**	**Total cost of item**
Materials Equipment Services Transport 	*The unit cost is the cost of a single item, or one unit. E.g. Cost per day, per kilometre, per person.*	*This is the number of units (how many) are needed for the activity. e.g. 200 training packs, 130 days of trainers' time.*	*Multiply the total number of units by the unit cost.*
Organisational costs: The management of all the required activities will need to include money for some or all of the following aspects, depending on the size and complexity of the project.			
Management (time):	**Administration:**	**Governance & Organisational development:**	**Overheads:**
Expenses (travel; out of pocket expenses etc.) Public relations Fundraising 	Secretarial help Equipment Software Stationery 	Organisational processes (committee meetings) Resource materials (books, pamphlets) 	Rental of space for meetings Electricity, water (if required) Refreshments for meetings Maintenance Telephone costs 

FOR EXAMPLE:

This is an example of compiling a budget for constructing earth contour bunds on one hectare during a 3 year plan.

Step 1 • **Identify what resources are needed, e.g. for a 3 year plan**

Table 4-2 Resources needed for a 3 year plan

Resource items	Year 1 (quantity)	Year 2	Year 3
Pegs	20	0	0
Hammer / stone	1	0	0
Spade	3	1	1
Line level / A-frame or Phiri-Lino-frame	1	0	1
Supervision (person-days) voluntary/unpaid	9 (3 people x 3 days)	(1 person x 1 day)	(1 person x 1 day)
Labour (person-days) voluntary/ unpaid	150 (family of 5 x 30 days)	10	10

In the first year of constructing the contour ridges there is a requirement for equipment and labour to dig the ridges. However in year 2 and year 3, there is little equipment required but there is still some labour to maintain the ridges.

Step 2 • **Price each of the resources**

The general cost price is obtained for each of the items of equipment / resources that are required to construct the contour ridges. This needs to be fairly accurate as this will form the foundation of your budget.

Table 4-3: Price of each resource

Resources	Unit price
Pegs	KW 50
Hammer / stone	KW 150
Spade	KW 1000
Line level / A-frame or Phiri-Lino-frame	KW 500
Supervision	KW 1000 per person per day
Labour	None

Don't forget to consider inflation if prices go up each year as well as taxes such as VAT. (Budget = resource unit price x quantity)

Step 3 • **Calculate each budget**

Calculate how many of each resource / equipment item is needed for the initial construction in year 1, as well as for the maintenance in year 2 and year 3.

Table 4-4: Budget calculation

Resources	Year 1 Budget	Year 2 Budget	Year 3 Budget
Pegs	KW 1000 (20 x kw50)	KW0 (0 x kw50)	KW0 (0 x kw50)
Hammer / stone	KW 150 (1 x kw 150)	KW0 (0 x kw 150)	KW0 (0 x kw 150)
Spade	KW3000 (3 x kw 1000)	KW1000 (1 x kw 1000)	KW1000 (1 x kw 1000)
Line level / A-frame or Phiri-Lino-frame	KW500 (1 x kw500)	KW0 (0 x kw500)	KW500 (1 x kw500)
Labour (people / days)	3 people 3 days KW9000 (3x3xkw 1000)	1 person 1 day KW1000 (1x1xkw 1000)	2 person 1 day KW2000 (2x1xkw 1000)
TOTAL	**KW 13650**	**KW 2000**	**KW 3500**

Step 4 • **Review budget each year and adjust accordingly**

Table 4-5: Budget review and adjustment

Year 1	Budget			Actual Cost		
	Unit price	Quantity	Budget KW	Unit price	Quantity	Spent KW
Pegs	KW 50	20	1000	KW 30	50	1500
Hammer / stone	KW 150	1	150	KW 200	2	400
Spade	KW 1000	3	3000	KW 1800	2	3600
Line level / A-frame or Phiri-Lino-frame	KW 500	1	500	KW 1000	1	1000
Supervision: person-days (kw1000 per day)	KW 1000	3 x 3	9000	KW 1000	2 x 3	6000
TOTAL			**KW13650**			**KW13500**
Difference (=Actual – Budget)				**-KW150 (saving)**		

Keep records of how much you actually spent each year. Note that although the unit price of specific items may have changed, these changes are balanced out and a general saving was made.

4.4 Timeframes

Organisational budgets (for example for a VDC) are usually calculated for a year at a time to establish an annual budget, but it is best to break it down into months for management purposes. A monthly breakdown facilitates monitoring (refer to Chapter 5 for more information on monitoring and evaluation). Budgets for specific, timebound projects[1] may be calculated for the whole life of the project. For monitoring purposes it is probably best to break this overall VLAP budget into months (where the project runs over several months). For smaller seasonal projects it may be decided to break it up into weeks to accurately manage cash flow.

[1]What is a time-bound project?

Timebound projects run for a specific length of time and have a set start and end date.

Once the budget has been agreed by the VDC and the activity implemented, the process is completed by comparing the plan (budget) with the eventual outcome ('actual'), to see if there is anything that can be learnt or could be done differently next time.

The following important points should also be considered when preparing a budget:

- **Income**: Funders like to see a diverse source of revenue which shows that project sustainability does not rely on one sole source of funding. Projects that can start to generate their own income over time are preferred: in the case of a VLAP, tree nurseries may be income generating for example
- **Expenses**: Expenses should be itemized and include unit costs, for example, daily fees or travel for number of participants.
- **Budget Headings**: Make sure that budget headings or categories are consistent throughout the period the VDC and PIC are actively engaged, for both income and expense items. This will simplify the book-keeping and help with reporting.
- **Notes**: Keep notes to record the budgeting process. Notes explain how and why budget calculations are made, and can be used later to clarify how and why certain decisions were taken. This makes it easier to make later changes to the budget should circumstances change. It also helps when the activity is audited.
- **Contingency funds**: Include a line item that will incorporate fluctuation of costs or unexpected expenses.
- **Non-monetary contributions**: It is helpful to show the funds or resources contributed by donations from other organisations or by voluntary work (much of the work under a VLAP will be voluntary labour: 'in-kind' contributions). Funders see in-kind contributions as evidence of the community's commitment to the sustainability of the project.
- **Maintenance**: where materials e.g. tools, can be used for multiple activities, include budget for maintenance if applicable, e.g. new wheel for a wheelbarrow, new shovel handle, etc.
- **Streamlining expenditure**: where several of the same tools are required for different activities, try and streamline, if possible, the activities, rather than relying on purchasing new equipment for each activity. Where additional tools are required, then these additional items should be budgeted for.

4.5 How to finance the plan

Finance is most often the main constraint to community initiatives being implemented or to those that are started and not being successfully completed. Projects can be financed through a community's own resources facilitated through Village Savings and Loans clubs (discussed in the next section) or through donations, of both time (volunteering) and money, or through financial institutions or funders (e.g. Government, Donor agencies, NGOs) who have an interest in seeing communities attain specific goals such as social well-being, food security or sustainability. Implementation of VLAPs and sustainable catchment management activities should not be limited by lack of funding as an excuse.

Funders consider a budget as an essential tool that provides an understanding of the work that is planned and demonstrates the level of thought and planning that has gone into the VLAP. When analysing budget proposals, potential funders consider the following points closely:

Table 4-6: Funder considerations

Considerations of funders:
How you are planning to use the grant funds?
What other sources of funds have been investigated to support the project?
Does the budget reflect realistic local costs?
Do the expenditures correspond to the magnitude and complexity of the activities?
Does the budget fall within funder's specific guidelines for the projects they support?
What percentage of overhead expenses (such as salaries, expenses and utilities) versus operational costs (such as materials, tools) is included in the budget?

Fundraising exercises must be carefully planned and implemented to be successful. Consider which funders are most suited to the type of projects and activities that are being planned; different funders will tend to fund different types of projects and some will only fund specific aspects of projects, such as operational costs only for example. Funders will also want to be sure that the plans comply with local laws and regulations.

In order to approach a suitable funder it will be necessary to draw up a proposal that clearly sets out what is intended and what budget will be required to achieve those aims. Some funders require the use their own specific application forms but the type of information they require regarding each aspect of the project remains similar. Remember that there are many projects out there looking for funding so the challenge is to make sure that the particular VLAP proposal includes all the key points that make it stand out for the identified donor.

As a first step the VDC should list the top five reasons why this particular funder should finance the VLAP (or sub-project within the VLAP). Keep this list in mind and come back to review it once your proposal is complete, to check how strongly these points stand out in your final version. A full list of standard requirements for accessing donor funding is included in Annexure 1. A proposal should address the main aspects outlined in (Table 4-7).

Table 4-7: Main components of proposal for funding for VLAP

Summary
Even short proposals should have a paragraph summarizing what the project (in this case the VLAP) is about to catch the reader's attention and makes them take an interest in the project. Longer proposals may have a summary up to a page long (no longer) comprising a short paragraph covering each of the main sections.
Background
The background section will provide some information on the VDC and the context within which it operates. It should persuade the funder that the VDC is a credible organization that will manage funds and resources responsibly. The background will explain who you are, what you do, how and where you work, and how your experience and/or qualifications will allow you to succeed in the project you are proposing. Relevant information that establishes the trustworthiness and professionalism of the VDC should be included, such as the previous donors worked with or other projects that have been successfully completed. Sometimes additional supporting information can be provided in appendices, such as organizational history and CVs. However, keep the background to the point and brief.
Project need
This section explains the social issues that the VLAP is designed to tackle. You should aim to provide detailed information about the specific region and area you will be working in, and the socio-economic status of the people that will benefit from the project to demonstrate that the need is genuine & substantial, and that you have a thorough understanding of what the need is. Explain how the VLAP came into being – highlighting the participatory processes employed. Some insight into the funder's specific interests should influence how you describe the problem to match their interests, without changing the nature of your project. For example if they support food security initiatives you

should describe the challenges your communities face in accessing food rather than employment issues.

The project

Describe what are you planning to do in such a way that even a donor who is not familiar with your area will understand. Describe your aims, the methods you will you use, how long the project will run and how activities will be managed. Explain the level of support you have from the community – again stressing the participatory nature of the VLAP - and local government structures and whether the VDC will collaborate with any other organizations. Describe the features of the VLAP and explain what will take place, and why. If, for example, the plan includes a nursery you must also explain its purpose in terms of the benefits it will bring, i.e. if it is for nutrition, income generation, agroforestry, afforestation, education, or all of these.

Outcomes

It is vital for funders to understand what the VLAP involves and what the outcomes of it will be: that is, what results do you expect to achieve? The outcomes should ideally reflect a decrease in the need which the community previously identified as being important. These outcomes must be specific and not just general statements such as 'the community will learn many useful skills'. Good outcomes can be described as being 'SMART' if they are Specific, Measurable, Achievable, Realistic, & Time bound. It is important to give timeframes to how budgets will be used, and results achieved, in order to be able to measure the success of the VLAP. This section should also contain details of how you intend to monitor progress & evaluate success to provide evidence that the outcomes of your project are being achieved.

Resources and financing

In order to successfully implement the VLAP, the PIC will need sufficient financial and non-financial resources. Every proposal must include a clear budget covering the project's projected income and expenditure. The level of detail will depend on who the proposal is intended for and the funder's specific requirements. Short proposals might just contain a summary budget broken down into main headings while longer proposals will need to specify more precisely what is included under each of the headings. If the VLAP – or components of it - has income projections these must be made clear and be justified in terms of identifying the potential markets for any products that may be produced. If you have approached other funders who have committed to funding certain aspects of the project, you must make sure this is clearly in this section. Mention also any in-kind support from the local community or donations from other sources and specify what form this support will take and its estimated value. This will give funders a clear picture of where your resources are coming from and demonstrate that your project has local commitment.

Motivate the funder's interest

Throughout the proposal you should include information on any areas you know will be of interest to the funder in question. Add a few paragraphs to the end of your proposal that clearly state how your project matches their priorities. Most funders have a real interest in sustainability - it ensures their money continues to have an effect even after the initial funding period is over. You need to demonstrate how the project will continue to operate after they are no longer funding it, or how it will bring benefit to the community even after completion of the project.

Appendices

The amount of information needed in the appendices will normally be specified by the funder. This will normally include evidence of previous successful projects such as audited accounts and an annual report of the VDC. Organizational and program budgets for previous and current years, and more detailed income & expenditure breakdowns for the project can also be included

4.6 Financial management

When savings and loans are an important part of the VLAP, financial control can be exercised through Community Based Savings and Loans Clubs (CBSL or ""Bank Mkhonde"), which can manage a pooled investment in which everyone in the community has an interest.

In many respects, CBSL Groups resemble any other businesses but have distinctive features. They have similar physical facilities, perform similar functions, and must follow sound business practices. They are usually incorporated under Microfinance Policy and may require bylaws and other necessary documentation. Even though CBSL Groups are similar to many other businesses, they have distinct differences. Some differences are found in the CBSL's purpose, ownership, control, and distribution of benefits. CBSL Groups follow three principles that define or identify their distinctive characteristics Figure 4-4.

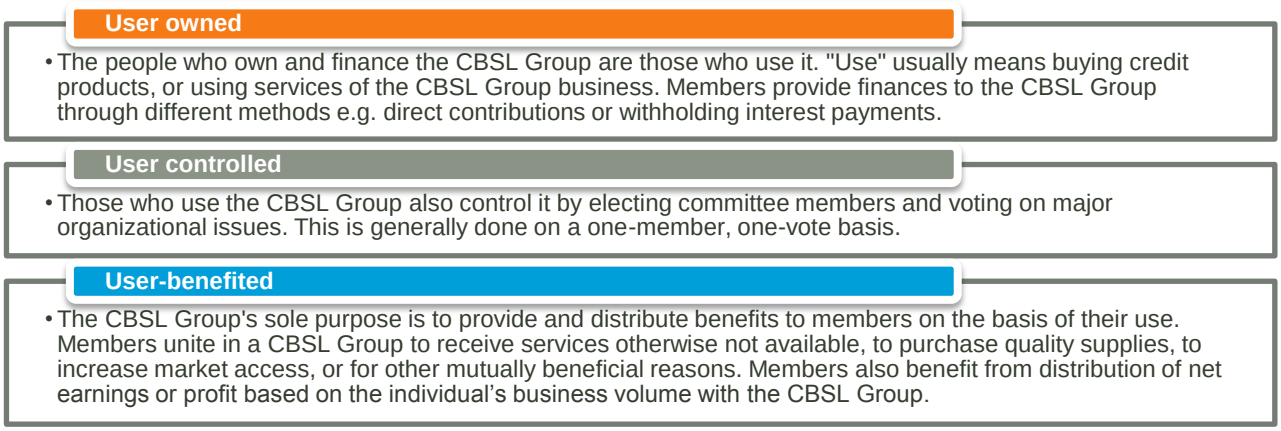


Figure 4-4: Principles of a CBSL

4.6.1 Steps in setting up a CBSL

The village or community is supported by the Community Development Extension Officers from the District Councils. The steps to set up a CBSL are discussed in Table 4-8.

Table 4-8 Steps to set up a CBSL (LUPP, undated)[3]:

Steps to set up a CBSL:
Identify the participants: there should already be a group that have a shared interest in wanting to invest in certain income generating activities under the VLAP, but there may be other community members that may wish to be involved. Between 5 and 25 members is ideal. Form a committee: members of the committee are democratically elected by the general meeting. The committee should comprise a chair, treasurer and secretary and two money counters. They should be people of good credit history and of good standing in the community. It must be ensured that there is representation of women and youth. The committee can be rotated every few years. Write a set of rules: These rules can form a 'constitution' and should set out how the savings will be regulated and how disputes will be settled. It can also be decided how often the group must meet and where the money can be kept for safety if there is no access to a bank account. Decide on the operational cycle: Before any savings begins, the following must be decided: • The amount of savings to be contributed. • How long the group will operate for before a loan can be taken out. • How long before members receive shares from the saved money. When deciding on this cycle, the group should consider when there will be a need for it the majority of members to have access to large sums of money (for example: Christmas or at the commencement of the rainy season). In such cases, members have a right to withdraw from the group without penalty, taking their share with them and thereby ending the cycle. At times like this, new members can be admitted to the group. • The maximum loan (this could be based on how much the individual has contributed, e.g. three times their savings) • The repayment period and interest rates - interest rates vary but the average is 10%. • Start saving! When the operational cycle comes to an end the group may receive back its share or conduct a collective investment such as implementation of the VLAP

[3] LUPP (Editor) (undated): C**ommunity-based Microfinance: Community Savings and Loan Groups. Good practice in the musseques of Luanda**. Luanda Urban Poverty Programme (LUPP). URL http://www.sswm.info/sites/default/files/reference_attachments/LUPP%20ny%20Community%20Based%20Microfinance.pdf [Accessed: 06.04.015].

4.6.2 Accountability issues

- **Capacity Building**: To operate under these distinctive principles, an important practice, particularly for new CBSL Groups, is to conduct continuing member education. This is especially important for attracting and recruiting new members. It is also necessary because the CBSL Group's membership continually changes. Older members retire and new ones join or other may just resign.
- **Communication:** Keeping owners (members) informed is an important practice for any business, but vital in a CBSL Group for at least:

  - The democratic control principle, exercised through majority rule, requires that the entire ownership (members) be informed and involved to assure that enlightened decisions are made; and
  - Members must indicate their needs and accept the accompanying financial responsibilities before the CBSL Group can fulfill those needs.

Therefore there needs to be accurate records kept of monies paid into the CBSL and monies paid out of the CBSL (Figure 4-5).

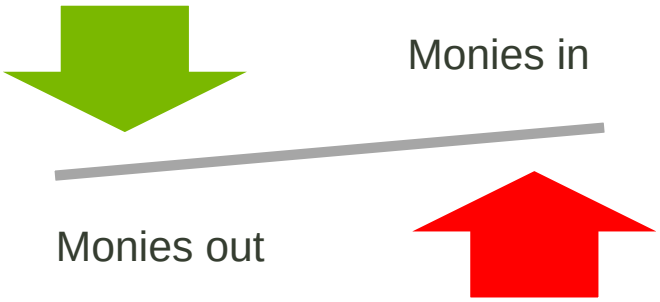


Figure 4-5: Balance between money spent and received to be recorded

5 Monitoring and evaluation

It is the responsibility of the PIC to monitor and evaluate (M&E) the processes during and after implementation (Figure 5-1). Village stakeholders, government, donors and other communities can all benefit from the information that is obtained from monitoring and evaluation.

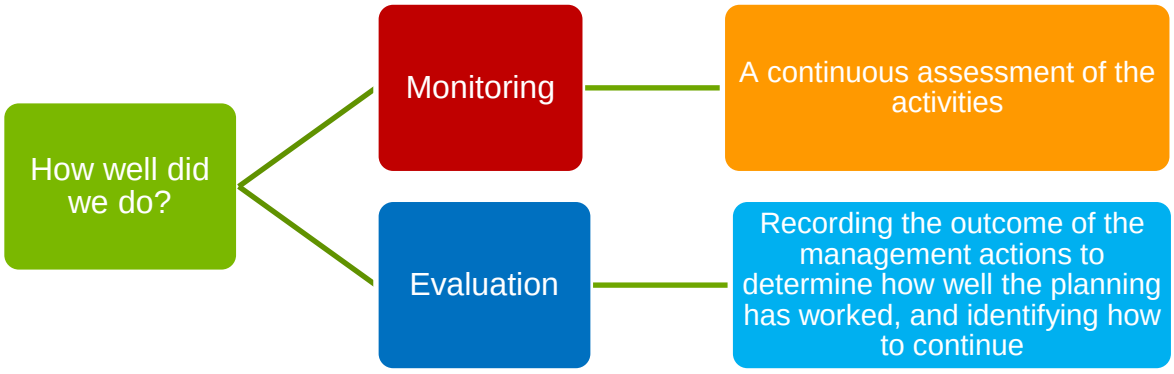


Figure 5-1: The process of assessing performance

It is important to recognise that for the lifetime of a VLAP, planning never stops. As projects develop, they continually change and the members of the organisations driving them change, and in response to this their plans will need to be constantly revisited. How these changes affect the VLAP and its budget and how the PIC and VDC should respond to these changes is informed by monitoring the action plan and the budget against the implementation of the project activities.

At the end of the project the VLAP and budget are evaluated to compare what was planned with what actually took place, and how successful the project outcomes are. From this important lessons can be learned for implementation in future projects.

5.1 Monitoring

Regularly monitoring the VLAP's performance can provide early indications of possible activity-coordination problems, resource conflicts, and possible cost overruns. The project plan and budget are important tools for monitoring the performance of the VLAP, project or activity (Table 5-1).

Table 5-1. Mechanisms for monitoring

You use the project plan and budget to:
Monitor your income and expenditure to see whether or not you are on target
Report on project progress and how you are doing financially to your staff, VDC and donors and other stakeholders
Carry out cash flow projections
Make financial decisions
Identify possible activity-coordination problems, resource conflicts, and cost overruns

Once a budget is secured for a specific project, it is important to make sure to monitor the expenses and progress in relation to the amount of money needed to implement each activity. Keeping track of the monitoring process will optimize future funding. The project plan can be used to monitor performance on each activity, either by noting the dates it began and ended or by describing how much of it has been completed and what the success or challenges have been.

Managing a VLAP is a learning process and the VDC and PIC will become stronger if they systematically review what has been done. Mistakes are important sources of information. Always be objective about what has been carried out and find ways to manage funding better, in order to develop stronger strategies in the future.

It is important to set up the VLAP and its budget with monitoring and the linked biophysical indicators in mind, and to include monitoring as one of the management actions. This will provide a measure of how closely a PIC or VDC is meeting its objectives in terms of its finances and the action plan. Comparisons of available funds and expenditure against the budgeted funds and expenditure, and the progress made on each activity, must be done regularly. This will demonstrate, month by month, where you are over-spending, under-spending or on target. By breaking the overall budget up into a monthly budget you will be able to use the budget to create cash flow projections. The monthly breakdown of budget and activities is what provides the management tool.

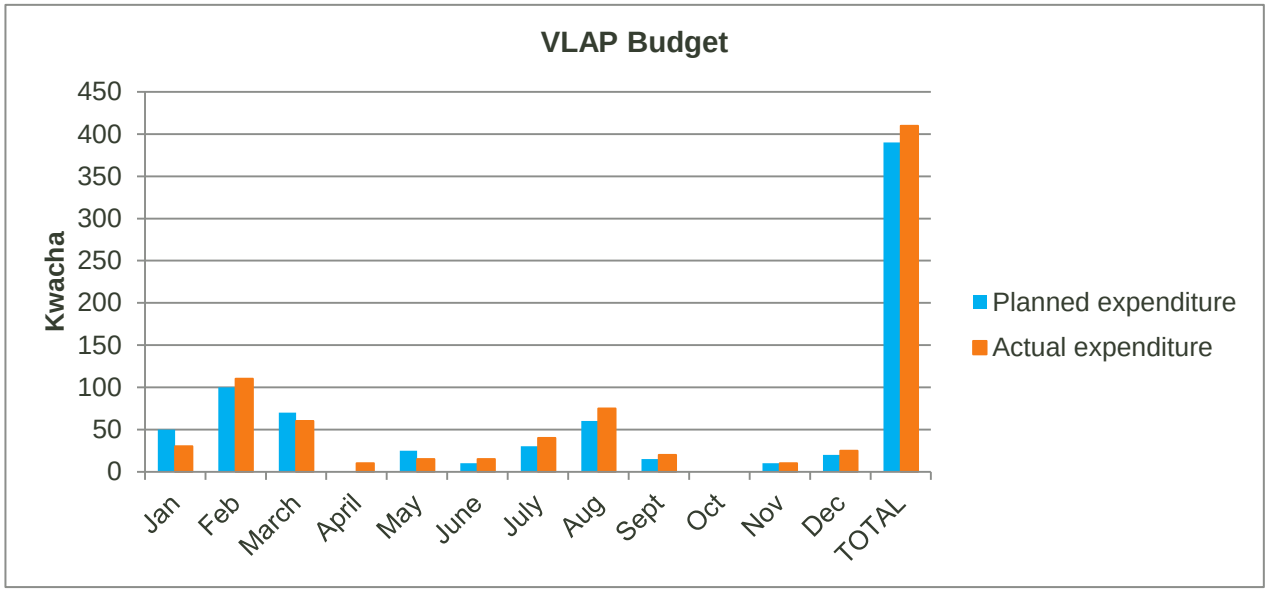


Figure 5-2: Example of monitoring monthly budgets of the VLAP

5.2 Reporting

The purpose of reporting against the budget and action plan is to demonstrate whether or not you are doing the work stipulated and whether or not you are going to have the resources needed to complete the work (Figure 5-3).

When you report against your budget you are reporting on how close your financial planning has been to your actual financial performance

When you are reporting against your action plan you are reporting on the progress of implementation and achievement of the goals and objectives

Figure 5-3: Goals of reporting

The importance of this is that it is possible to identify problematic areas early on and start corrective actions, rather than wait until the problem gets worse and thus more difficult to correct. Monitoring should be done on each activity of each of the projects included within the VLAP. If a problem is identified early on, then the PIC can either:

- Reduce spending on that activity or alternatively allocate funds by reducing spending on other, less critical activities or projects.
- Try to generate more money or request additional funding to cover the anticipated shortfall.
- There may also be a need to adjust the methodology or type of activity being implemented.

Note: Spending too much is not the only problem – sometimes spending too little can also be a problem. Spending too little can be an indication that not enough is being done on a specific activity to meet a deadline.

Over or under spending by more than 10% for a specific time period is an indication that remedial action

5.3 Evaluation

On a regular basis, at least annually, the PIC together with the VDC should take stock and examine what has gone well - and what has not: then analyse why it succeeded and try to repeat similar successes - or prevent problems in the future (Table 5-2). The VLAP should describe how and when the PIC or VDC will evaluate the process, outputs and outcomes of each project and how these should be measured (such as indicators). When developing the VLAP measures of success or indicators should be identified for the different activities or objectives, as well as the method for gathering feedback/results, including regular records, interviews and field surveys. Those involved in the **internal evaluation** should have been involved in the planning process as they will be familiar with the indicators that have been developed. There will also be an **external evaluation** when a donor is involved: the internal exercise will provide valuable information for that review.

Table 5-2: Example of questions to ask in a basic internal VLAP evaluation

A basic internal VLAP evaluation should examine all activities:
Were they completed successfully?
Were they achieved on time?
Were they within budget?
Were the objectives achieved?
Is it possible to identify lessons learnt? I.e. if changes should be implemented for future projects to do it better or if there are successful approaches that should be replicated.

The evaluation should identify how much of what was planned to be done was accomplished. These are the outputs which are usually quantifiable and are (by definition) completed within each project's implementation timeframe. They result from activities in the project plan and work programs (e.g., jobs created, seeds planted, seedlings sold, trees established, income generated).

Overall the evaluation of the end results of implementing a VLAP should show how successful the village has been in tackling its long-term problems, or in achieving its long-term goals, Outcomes are usually long term (e.g. fewer people living in poverty) and linked to problems and goals. They are hard to evaluate because many factors that influence a community's well-being are out of the village's immediate control (e.g. weather; world trade).