

REPORT ON SCENARIO-PLANNING FOR USE BY THE MAJI PROJECT

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EXECUTIVE SUMMARY

The More Action for Just Initiatives for Climate Change Adaptation in Southern Africa (MAJI) project aims to reduce the vulnerability of the rural poor to climate change impacts in Malawi, by helping them to proactively and collaboratively plan for the future. To achieve this, VSO volunteers will work closely with district officials in 3 districts (Dowa, Salima and Karonga) to support both district and village-level planning processes. MAJI has a specific focus on using the concept or approach of 'scenario-planning' to help ensure planning processes and subsequent actions take into account the likely effects of climate change and other future changes.

Scenario-planning is a strategic method or tool that can help groups of people to make flexible long-term plans. It differs from normal planning in that it considers longer-term timeframes (it typically looks at anything from 10 to 50 years ahead) and it focuses on considering how future situations may differ from now. By creating scenarios, it takes into account the effect of multiple drivers of change and so exposes important possibilities, risks and opportunities inherent in current ideas and actions. The outcomes of scenario-planning processes, i.e. the resulting scenarios, are useful for stimulating discussions about how to respond to future challenges. Ideally, the process can help to identify actions to prioritise now that are relatively 'future proof' or 'low regret' (i.e. actions which will be useful and feasible given possibilities of future change) and to de-prioritise activities that are likely to offer only short-term fixes.

The James Hutton Institute is responsible for proposing a scenario-planning framework that the VSO partner and volunteers can subsequently adapt for use in each of the 3 districts. This report provides that scenario-planning framework. This framework was explained and shared during a 2-day capacity-building workshop facilitated by the James Hutton Institute in March 2015. This meeting also provided an opportunity to collect ideas and challenges that should be addressed in MAJI's future work, and these observations by the participants and facilitators are also included in this report. A summary of the workshop is attached as an annex to this report.

The framework is designed to be flexible in its adaptation for use at different levels and contexts, to reflect the differing needs and planning situations of contrasting districts, and the differing challenges of working at village and district levels. It is structured around five main steps: the consideration of the past; the identification of drivers that shape the future; the use of drivers to create multiple plausible futures; the use of these scenarios to help achieve pre-established goals; and the integration of the results of the previous phases into planning. In this report we also provide some suggestions about options or ideas that the VSO volunteers and their partners may wish to consider as they develop scenario-planning to suit specific contexts. The report also provides examples of specific tools and facilitation tips that can be useful in the implementation of scenario-planning, but does not represent an exhaustive inventory of the available techniques. These have been screened and filtered by the authors, selecting some that were considered more appropriate for MAJI. References to these complementary materials and sources are provided at the end of this document.

The penultimate section of the report highlights a number of key challenges that must be addressed by the future work of MAJI in order that the framework be applied effectively. These include careful facilitation to guard against common pitfalls and risks during scenario-planning; identifying exactly who and how to engage with during scenario-planning; understanding and connecting with other projects and initiatives ongoing in Malawi; understanding and connecting with ongoing planning processes within each district; and clarifying the role of all partners in MAJI in doing so.

We conclude that MAJI and the concept of scenario-planning has the potential to provide significant and useful support to Malawi's district and village-level planning processes, but important challenges still remain ahead. This document and its accompanying workshop should be seen as only the first step in a process of finding specific scenario-planning approaches and activities that will efficiently and usefully dovetail with ongoing district planning processes whilst also complementing the activities and concepts employed by other projects, organisations and initiatives. This will require flexibility and close liaison between MAJI and its district partners, but if this can be achieved we believe MAJI has significant potential to strengthen resilience to climate change in its three target districts but also offer lessons for the rest of Malawi and beyond.

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INTRODUCTION

Malawi has a pioneering and extensive policy framework designed to encourage decentralised environmental planning and management. However, implementation of these policies can be complex, constrained by resources, and difficult to coordinate. Development and implementation of these plans is particularly challenged by climate change, since this together with other drivers such as population growth, threatens further degradation of the environment and the well-being of the population. In a country that is already one of the poorest in sub-Saharan Africa, it is vital that Malawi's planning system be able to take into account these issues. This is the challenge tackled by the 'MAJI' project: *More Action for Just Initiatives for Climate Change Adaptation in Southern Africa*.

MAJI is a project led by VSO and funded by the Scottish Government Climate Justice Fund. Its overall objective is to reduce the vulnerability of the rural poor to climate change impacts in Malawi, by helping them to proactively and collaboratively plan for the future. MAJI has a particular focus on integrated water resources management (IWRM) but is relevant to all sectors for decentralised environmental management. MAJI runs from November 2014 until September 2016 to empower and link local government, civil society and communities to plan for the effects of future change, to enable planning for equitable future-adapted environmental management.

Three districts are collaborating in the project; Dowa, Salima, Karonga. In each of these districts VSO places a volunteer to work closely with district officials to support them in their district planning processes, and to help stimulate the involvement of local communities via their Village Natural Resources Management Committees (VNRMCs) and the elaboration of the so called Village Action Plans (VAPs). At the time of writing, VSO has already placed 2 volunteers in the districts of Salima and Karonga, whilst the recruitment of a volunteer for Dowa is pending. MAJI builds on previous work and insights generated by a project called WATERS: *Towards Equitable Resource Management Strategies* (See Box 1 for more details). WATERS focused on introducing a concept called the 'Ecosystem Services Approach' to help support systemic integrated planning in four districts (two of these districts are also participating in MAJI).

Box 1 The WATERS project, which preceded MAJI

MAJI builds on the work of a previous VSO-led project called WATERS (Water Futures: Towards Equitable Resource Management Strategies) that was funded by first round of the Scottish Government's Climate Justice Fund. This project placed VSO volunteers to work with and support district planners in Nsanje, Chikhwawa, Karonga, Salima.

It focused on introducing the concept of the Ecosystem Services Approach as a means to encourage participatory identification and discussion of the multiple services provided to people by the environment, and the multiple connections between different groups of people and places.

Apart from the VSO and the James Hutton Institute, other partners in this project were LEAD-SEA (Leadership for Environment And Development - South-East Africa), and CEPA (Centre for Environmental Policy and Advocacy).

An overview of the WATERS project and its achievements is available from VSO Malawi vsomalawi@vsoint.org. For links to some of WATER outputs with a particular focus on the role of the James Hutton Institute, visit www.hutton.ac.uk/water-futures



Figure 1. Small group discussion at community workshop for WATERS project in Nsanje District on 21st May 2013.

This workshop was one of a series where the concepts of an Ecosystem Services Approach were introduced to members of VNRMCs and district-level officers responsible for planning for environmental management.

To achieve MAJI's aims, the project focuses on scenario-planning as a way to structure consideration of future change. The James Hutton Institute, a supporting partner in MAJI, is tasked with providing technical support and capacity building on this subject. This report represents their main contribution on this subject, in that it provides the framework for scenario-planning in MAJI. It results from desk-based synthesis building on the expertise of the authors and the academic literature, combined with observations and refinements made during a capacity-building workshop run by the authors in March 2015, where this framework was introduced to the MAJI partners and district colleagues. This report also provides link to more resources, examples and further reading on scenario-planning: this, together with the availability of remote support and advice from the authors, is designed to enable further capacity-building by the VSO volunteers and their district colleagues.

Apart from the VSO and the James Hutton Institute, other partners in this project are - LEAD-SEA (Leadership for Environment And Development - South-East Africa), and CEPA (Centre for Environmental Policy and Advocacy), SCCAN (Scottish Communities Climate Action Network) and LUANAR (Lilongwe University of Agriculture and Natural Resources). These partners between them provide complementary insights and expertise on the challenges of engaging different societal groups in planning and adapting to climate change, and in finding specific technical measures relevant to building Malawi's future resilience to climate change.

This report is structured as follows. Firstly, we provide an overview and definition of the concept of scenario-planning, and explain why it can be helpful to employ this concept. Secondly, we provide a specific scenario-planning framework for MAJI. This framework is designed to be flexible in its adaptation for use at different levels and contexts, to reflect the different needs and existing plans of different districts, and the different challenges of working at village and district levels. Throughout this section we provide some suggestions about options or ideas that the VSO volunteers and their partners may wish to develop or consider as the project develops. Thirdly, we provide a summary of the unresolved questions and challenges to be tackled as the project develops. We finish with a brief conclusion about the prospects of scenario-planning in MAJI, and a list of resources which provide examples, ideas and further reading on the subject of scenario-planning. An annex to the document describes the content of the March 2015 training workshop held to build capacity on scenario-planning for MAJI. Examples from this workshop are used as illustrations throughout this document, whilst ideas and queries voiced by the workshop participants inform the questions and challenges presented in the main document.



Figure 2. Widening and securing access to water is an example of a challenge that may be exacerbated by effects of climate change.

BACKGROUND TO SCENARIO-PLANNING

What is scenario-planning? Scenario-planning is a strategic method or tool that can help organisations or groups of people to make flexible long-term plans. It differs from normal planning in that it considers longer-term timeframes (it typically looks at anything from 10 to 50 years ahead) and it focuses on considering how future situations may differ from now.

There are many methods and techniques that can be used for scenario-planning, but all share a focus on identifying ‘drivers of change’ - forces which have strong and multiple influences on current systems and situations. Climate change is an excellent example of a driver, but there are also many other potential societal, economic or environmental drivers, for example population growth or globalisation of markets.

“A scenario is a coherent, internally consistent, and plausible description of a possible future state (including both social and natural aspects). It is not a forecast; rather, each scenario is one alternative image of how the future can unfold.”

Considering how drivers of change may vary, and how this will affect other issues – for example if the population growth will rise or fall and how this would affect Malawi’s society, economy and environment – is a process that results in the creation of contrasting ‘scenarios’. A scenario is a plausible and coherent description of a possible future state, that encompasses and account for the effect of multiple drivers of change. Each individual scenario is not a specific prediction, and it is unlikely that we will arrive in any of the precise situations described, but by considering several contrasting scenarios can help to expose important possibilities, risks and opportunities in the current plans and actions. This may give useful ideas about what actions are planned or prioritised now, and identify any actions likely to offer benefits only in the short-term.

What is the origin of scenario-planning? Scenario-planning has its origins in military planning, a sector quite different to environmental management! Ever since the Second World War (and arguably before), strategic military organisations and intelligence analysts have been constructing and using scenarios (often in the form of war games) to help them anticipate the unexpected. These exercises have helped military planners to think through the detail of their responses to different manoeuvres and military problems before they happen, and to plan resource allocation to give flexibility to respond to multiple potential challenges.

Scenario-planning became popular with large businesses from the 1960s onwards. The most famous example comes from the oil industry, where the Royal Dutch Shell organisation used scenario-planning to help reduce the impacts of the ‘Oil Shock’ of the 1970s. Some academics also developed work on scenario-planning. As a result, a variety of sophisticated methods developed, with different versions and techniques being advocated by different individuals. Scenario-planning developed a reputation for underpinning strategic thinking about business planning, but was also often seen as rather complicated and unwieldy.

In recent years there has been increasing interest in the use of scenario-planning for assisting in environmental management challenges. This is partially because climate change has become perceived as a critical issue that has not typically been taken into account by environmental management. It also reflects a growing recognition that tackling environmental management challenges requires a systemic approach (as opposed to a focus on single issues): since scenario-planning tries to consider how multiple drivers will affect multiple issues, it can help to support the development of systems thinking and systems approaches.

Why try scenario-planning? Various examples of scenario-planning from across the world together suggest that scenario-planning has the potential to provide several benefits. Most obviously, the outcomes of scenario-planning processes, i.e. the resulting scenarios, are useful for stimulating discussions about how the communities and other actors (e.g. NGOs, government and environmental planners) may respond to future challenges. Ideally, the process can help to identify actions to prioritise now that are relatively ‘future proof’ or ‘low regret’ (i.e. actions which will be useful and feasible given possibilities of future change) and to downplay activities that are likely to offer only short-term fixes.

The process itself – depending on the method chosen – normally involves extensive discussions and this also supports the aims of fostering participation in planning and management. The individuals thus involved in scenario-planning will share different forms of knowledge, to inform and enrich planning. This process also tends to elicit

different individuals' ideas and expectations, and so can help to identify and discuss aspirations for management. Discussions about a distant future offer a relatively 'safe space' for people to discuss their goals and interests, and can even help to openly identify and negotiate conflicts in a way that would not be possible if discussions focused only on the immediate future.

Why try scenario-planning in Malawi? Climate change is predicted to have profound implications for Malawi – for example, one prediction¹ is that by 2075 average temperatures will rise by 2.7°C and average rainfall will decrease by 4.8%. Extreme events (e.g. droughts and flooding) will become more frequent, and changing patterns and predictability of the rainy season are already perceived and ascribed to climate change. This will have profound implications for the viability and resilience of typical livelihoods strategies in Malawi, and many other aspects of its society, economy, and environment. Recognising the seriousness of the challenge, Malawi's National Climate Change Programme (NCCP) links to many initiatives. Since 2001, the need for adaptation has been recognised by the Malawian government in a National Adaptation Programme of Action (NAPA) under the UN Framework Convention on Climate Change (UNFCCC). However, it is also vital to recognise that climate change will not be the only force shaping the future of Malawi. Malawi's future will also be shaped by drivers such as the rate of population growth, rate of incidence of diseases such as HIV and malaria, changes in global markets, international aid inputs, and the nature of Malawi's governance and politics. The direction of change of many of these drivers, and thus their effect on the future, is much less certain than climate change. Therefore it is important the scenario-planning help consider the effect of some of these key drivers, in addition to the effects of climate change.

The other reason that scenario-planning can be useful is because it can support participation. Some versions of the method can be accessible and use-able even by illiterate people. Thus, the techniques of scenario-planning should support Malawi's ambitious and decentralised planning system (Box 2). Therefore, if scenario-planning is used to foster the participation of multiple groups in deliberation over the effects of future change, this should help to foster Malawi's resilience to future changes.

Box 2 Statutory planning processes for environmental management in Malawi

In 1998, Malawi embarked on a pioneering National Decentralization Programme, following adoption of a Decentralization Policy (1998) and the enactment of the Local Government Act (1998). This decentralization process aims to enhance community participation in governance and development, and focuses on devolving political and administrative authority to the district and community levels.

The District Development Planning System (DDPS) is an integral part of this decentralization process. For each district, a Socio-Economic Profile (SEP) describes the environmental and social situation within the district and identifies priority issues. Five-year District Development Plans (DDPs) then outline objectives, strategies and subsidiary programmes /projects to address these issues, and inform the basis of activities contained in Annual Implementation Plans (AIPs). Village level planning – creating Village Development Plans (VDPs) feed into Area Development Plans (ADPs) and thence into the DDPS.

Similar relationships mirror the processes specific to environmental and natural resources management. A District State of the Environment and Outlook Report (DSEOR) informs the creation of the SEP. A District Environment Action Plan (DEAP) is part of the DDP and specific district officers have responsibility for specific environmental issues e.g. water, forestry. At the village level, Village Natural Resources Management Committees (VNRMCs) are primarily responsible for planning natural resource management but other units such as Water associations, Beach Village Committees (BVC) are also relevant. For some management issues (e.g. flooding) the content of Disaster Risk Management Plans (also known as Contingency Plans), that feed into the DDP, is also relevant.

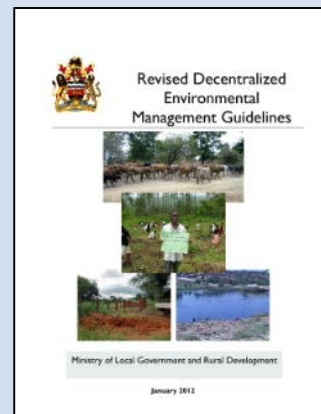


Figure 3. Ministry of Local Government and Rural Development of Malawi (2012). Revised Decentralized Environmental Guidelines.

This document provides an overview of Malawi's planning processes as they relate to environmental management. In each district the planning process may be at a different stage. For example, at the time of writing Karonga has a recently published District Development Plan (DDP) whilst the district of Dowa has no up-to-date plan. Any cross-district initiative must take these differences into account.

¹ These estimates derive from the IALUO study which is described in the resources section of this document. In this report we do not provide references for individual statements, but the ideas are consistent with the sources in that section.

SCENARIO-PLANNING FRAMEWORK FOR MAJI

This section presents the scenario-planning framework that The James Hutton Institute proposes for use in MAJI. It results from desk-based synthesis building on the expertise of the authors and the academic literature, combined with observations and refinements made during a capacity-building workshop run by the authors in March 2015, where this framework was introduced to the MAJI partners and district colleagues. This framework is designed to be flexible in its adaptation for use at different levels and contexts, to reflect the different needs and existing plans of different districts, and the different challenges of working at village and district levels. Throughout this section we provide some suggestions about options or ideas that the VSO volunteers and their partners may wish to develop or consider as the project develops. In the section following this, we provide a summary of challenges to be tackled as the project develops, in order to successfully apply this framework.

This document provides examples of specific tools that can be useful in the implementation of scenario-planning, but does not represent an exhaustive inventory of the available techniques. These have been screened and filtered by the authors, selecting those that were considered more appropriate for MAJI. References to complementary materials and sources are provided at the end of this document.

The document contains some suggestions for facilitation but we do not provide detailed instructions or prescriptions for facilitation, as we recognise that each partner will have a different needs, differing approaches to working with stakeholders, the order in which they wish to ask questions, etc. We mark these notes and suggestions using this cloud symbol:



It is usually convenient to develop scenario-planning in a series of workshops that involve all the relevant stakeholders. The number, duration and format of workshops is to be chosen by the facilitator. However, it is worth remembering that where the workshops involve sessions of small-group work, it is important that the participants come together in plenary in such a way that the entire group shares understanding and ownership of the eventual scenarios.

Figure 4 presents an overview of the scenario-planning framework proposed for MAJI. It involves five key stages: the consideration of the past; the identification of drivers that shape the future; the use of drivers to create multiple plausible futures; the use of these scenarios to help achieve pre-established goals; and the integration of the results of the previous phases into planning. It is important that significant amount of effort is devoted to each of the steps in this process. This does not necessarily mean that the same amount of time is dedicated to each of these phases of the process, but that each of them is given attention and thought about carefully.

It is essential that copies of any tangible outputs are made available to communities, as a record and reminder of this process. However, it is important to recognise that the benefits of scenario-planning probably arise from the process as much as the outputs. Scenario-planning should help bring people together to think about their goals, understand different points of view, to refine ideas that will aid future adaptive management. The new ways of thinking held by participants, as well as written outputs, are both of value to making Malawi more resilient to future change.

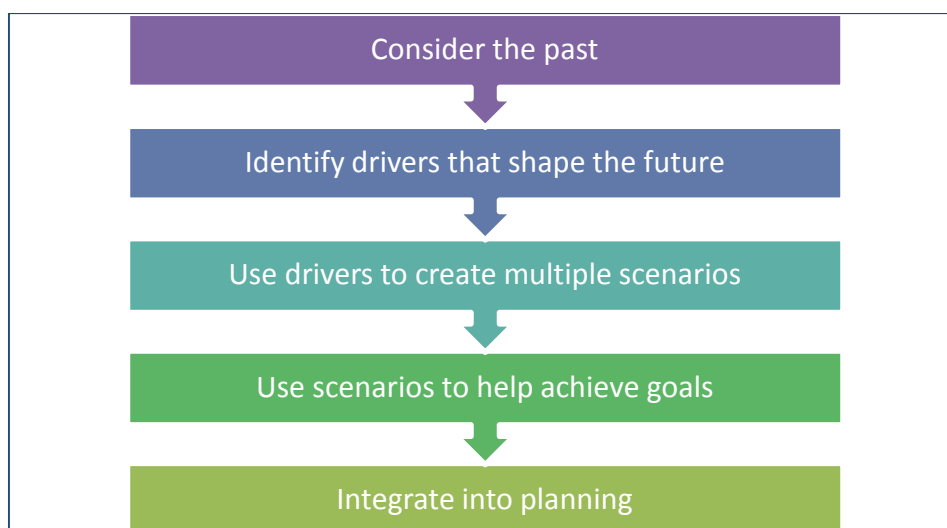


Figure 4 Overview of the MAJI scenario-planning framework

Start By Considering The Past

Firstly, the need to think about the future needs to be established in the minds of the participants. Normally all of us focus strongly on day to day life and the immediate future, in order to cope with the problems that we have now. This is especially true for poor people facing many immediate challenges in safeguarding their livelihoods, as in Malawi, and this means it is sometimes hard to start thinking about the future. Moreover, studies have shown most of us have a tendency to assume that the future will be quite similar to the present. Therefore, before trying to think about the future, it is important to ensure participants are persuaded of the need to think about the future and the changes it may bring. One way to facilitate this is to think about change in the past and the big changes that have occurred even in our recent history.

When talking about past change, we suggest facilitators come prepared to discuss and illustrate a couple of examples of radical change that have occurred within living memory. We suggest a good example, is the changes to daily life that have been caused by mobile phones. After providing one or two examples, the facilitators can ask the group for suggestions of other things that have changed (for example, ask them about what things their parents used to do that they don't do anymore).

A specific technique to stimulate a discussion about the past is to do a Historical TimeLine Exercise. This is an interactive exercise involving building a historic timeline of Malawi's history with the aim of sensitising participants to identifying trends, patterns, deep change and stability, amongst other. The rule of thumb is to go back twice as long as you plan to go forward. For MAJI, we propose looking 30 years ahead, and hence we suggest this exercise look back over the past 60 years. In small groups, participants can also be asked to identify significant events in general and those specific to the environment and water sector (as in Box 3). It is useful to prompt the participants to discuss both events but also trends.

Box 3 . An example of a timeline of events shaping Malawi since 1955

Participants of the MAJI's scenario planning workshop carried out in March 2015 were asked to create a historical timeline of the main events having taken place in Malawi in the last 60 years, i.e. since 1955. Participants were first asked to consider economic, political, technological changes. Some examples of these changes included the Federation in 1956, the proclamation of the independence of the Republic in 1964, the first HIV outbreak in 1980 and the introduction of the first Malawian TV station in the 80s. Secondly, participants were asked to think about environmentally and water related changes. These included massive flooding in 1991 and 2015 and massive deforestation processes in 2012.

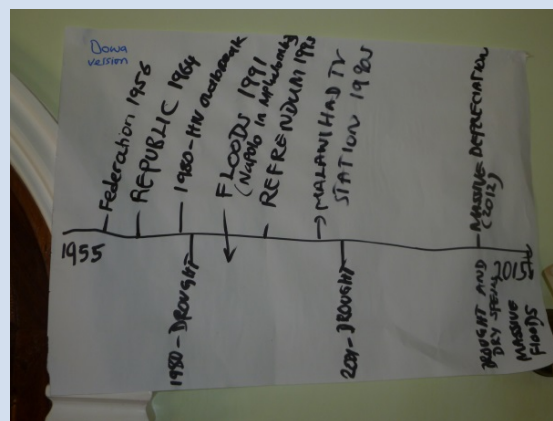


Figure 5. Historical timeline produced by the Dowa District representatives in MAJI's March 2015 scenario-planning workshop.


This exercise is useful, not only for justifying the need to think about change, but also to see what types of forces (or 'drivers') have driven changes. When discussing past changes, it is important to highlight to the participants the wide range of types of drivers that have caused change. This will be useful in later discussion, because it shows that climate is not the only driver of change that will affect Malawi's future.


It is very important that discussion does not focus narrowly only on certain changes (e.g. only climate change, or only on political changes). To assist in ensuring this, it may help the facilitator to stimulate the discussion using a standard categorization for identifying drivers of change that called 'STEEP'. STEEP is an acronym for Social, Technological, Economics, Environmental and Political drivers of change. See Table 1 (next page) for examples of each of these drivers.

Table 1. Examples of changes according to the 5 STEEP categories

STEER categories	Examples
Social changes	Appearance of HIV/AIDS
Technological changes	Internet
Economic changes	Adoption of the Kwacha
Environmental changes	Massive deforestation
Political changes	Introduction of democracy

After using the historical timeline exercise to demonstrate the need to think about the change, and the diverse causes of change, the timeline exercise can also be used to lead into a discussion of the current situation and current challenges facing Malawi. It is essential to extract and confirm factors that summarise the current situation, as this will help to ensure the later steps of the process will build on a comprehensive and shared understanding of the current situation in Malawi. When doing this, it will be useful to refer back to previous work and reports that may exist (at the end of this document, we provide some useful resources for this).

 A useful framework to encourage and structure the description about the current situation, and to discuss and identify the multiple connections and interactions between people and their environment, is to use the Ecosystem Services Approach, which was used in WATERS, the project preceding MAJI (see Box 4 below).

 In order to facilitate discussion about the present situation, an interesting and stimulating option is to carry out a photographic exercise. If working with villagers, a cheap or disposable camera can be provided to small groups of villagers who are asked to go around the territory taking pictures of aspects that they think represent best the current situation (for example, a photo of fishermen, a photo of a degraded river bank, etc.). The photos are brought together to a plenary discussion, where they are clustered so 3 to 5 key characteristics are selected (e.g. eroded river banks). Photos are then collectively discussed. Experience has shown that this is a very useful method to engage with people who might find it difficult to spend a whole day in a workshop, but it might not be applicable if there are not enough funds to make available a number of cameras.

Box 4 . Using the Ecosystem Services Approach to describe the current situation

An Ecosystem Services Approach is one way of understanding the complex relationships between nature and humans, for use into decision-making and resource planning. Adopting an Ecosystem Services Approach relates to a recognition that the status of ecosystems critically affects human well-being. That is: if ecosystems are in good condition, this has positive effects on peoples' lives (wealth, health, happiness), and similarly, if ecosystems are in bad condition this generally has negative effects for lives and livelihoods. Using an Ecosystem Services Approach to describe the current characteristics of a system implies reflecting on the natural processes in terms of the benefits that they provide for people. This includes three types of services: 'provisioning', 'regulating' and 'cultural'. This set together includes quite obvious and tangible provisioning services (i.e. the products that humans obtain from nature, such as food and energy) together with the less obvious and less tangible regulating services (i.e. the benefits that humans obtain from ecosystems' role in sustaining a safe environment, such as climate and flood regulation), as well as the cultural services (non-tangible benefits such as recreation, spiritual values, musical inspiration, etc.). Adopting an ecosystem services perspective leads to questions such as: "exactly how do natural processes provide benefits to humans?"; "What is the importance of those benefits, and to whom?"; "Where are benefits produced and where are they consumed/enjoyed?"



Figure 6. Image of the Shire river.

The Shire provides both ecosystem services and dis-services that affect the lives and livelihoods of many in southern Malawi.

Identifying drivers that shape the future

The discussions of the previous step – about the changes that have shaped Malawi in the past and its current challenges – should have helped to identify the main drivers of change in Malawi. A ‘driver’ is key external force which acts with a significant influence on systems and management outcomes. Examples include climate change, population growth or global financial markets. Each driver is expected to have important influences on systems, but exactly how the driver will change (i.e. what state they will take) is unknown. For example, human population could decline and/or it could stay the same and/or it could increase. A discussion about drivers is the basis of the creation of scenarios in the next step.

The first step in this process is to share with participants some information about some prior studies. There have been many previous studies in Malawi that have identified a number of important drivers. It is useful to be aware of and discuss these drivers with participants, to help ensure that the scenarios that they will generate can build on available knowledge and studies. We compile them here as an illustration, but this is not to be considered a comprehensive list; other drivers can be considered – in particular participants may wish to use any that have emerged from their earlier discussions about past changes during the historical timeline exercise.

Table 2. Examples of potential drivers of change that are relevant to Malawi’s future

Driver	Description
Climate change	Raising levels of greenhouses are changing the climate globally. In Malawi this means that there will be: more and more frequent extreme events such as floods and droughts; greater variability in rainfall and uncertainty of seasons (4.8% less precipitation and rainy season will be more unpredictable); greater variability and uncertainty in temperature (2.7C hotter expected); and changes in tidal waves and water levels in Lake Malawi
Population growth	Current population growth rates are 2.7% per year. Probably this high growth rate will decline in the future, but it is unlikely to drop below 1% per year in the next 30 years. Most predictions place future population growth between 1.5% and 2.5%
International aid and investments	Many factors affect incoming international aid and investments. The global economic climate will affect the capacity of foreign countries and international organizations and business to provide aid or invest in Malawi. International government aid has been suspended in the past (last time in 2013 from the UK, Norway and the European Union) for various reasons. International private investments in Malawi have fluctuated a lot in the past, but are presently increasing (e.g. from China). Aid and investment can increase or decrease in the future
HIV/AIDS	In 2012, approximately 1,100,000 people in Malawi (11% of the population) were HIV-positive. Since 2003, the access to therapy has increased a lot and has Malawi has achieved more than 70% coverage of HIV treatment. In the last decade there has been more than a 70% incidence decline. HIV infection and retroviral treatment rates could rise, keep steady or increase in the next 30 years.
Global prices of exported agricultural products	Global supply and demand of agricultural products will affect prices for crops Malawi produces. For example, it has been projected that in the coming decade, global prices could rise 20% for cereals, and 30% for meat. Price for Malawi’s exports (like tobacco) could rise or fall
Extent of electrification	Malawi presently derives most of its energy from fuelwood (>85%). Electricity supplies only ~2.3% of the energy needs of Malawi, and demand already exceeds supply. In 30 years reliability and accessibility of electricity supply could improve or plateau.
International oil prices	Oil and gas are used as fuel and for energy, and must be imported to Malawi. Global costs of oil and gas have risen on average by 11.5% per year since 2000, though have recently dropped. Global oil prices could rise, fall or stay static over the next 30 years.
Agricultural productivity and diversification	Improved knowledge and updated practices may allow increase productivity. For example, technological advances could enable average annual crop productivity to increase by 2.6%
The nature of politics	Politics has changed a lot in Malawian history. The nature of politics has great impact on all aspects of society. The nature of politics can remain as currently, go back to previous regimes or change to completely new ways (good or bad).

After presenting information about previous studies, it is important to give space for discussion with participants to review these. The participants may have additional drivers or ideas that they wish to add to this list.

Next, after having identified some potentially significant drivers, it is useful to discuss uncertainty of these drivers. Some drivers are more certain than others: for those that can be reasonably predicted one can, with a certain level of ease, point out how they might play out in the future. Climate change is perhaps the best example of a driver in which we have some confidence in how it will change – e.g. we can be fairly certain that average temperatures will rise and extreme events will become more frequent – whilst by contrast the direction and extent of changes in drivers such as governance or global markets is rather more uncertain.

By the end of this stage, the participants should have identified a list of drivers that they think may shape the future of Malawi, and discussed key uncertainties that affect the possible future states of those drivers.



An example of how to identify the most uncertain drivers is provided in the *Report of the EPIC Workshop, Salima, Malawi, 27-30 October 2013*, where it explains how drivers can be plotted on an 'Impact/Uncertainty chart', in order to identify those for which participants have the least knowledge about (those are the least predictable) and that will have the greatest impact on how the future of Malawi might evolve.

This report is available from <http://www.fao.org/3/a-i3566e.pdf>

Using drivers to create multiple contrasting scenarios

Multiple drivers will affect the future of Malawi but it is difficult to consider all of these simultaneously. Therefore, to begin the process of creating scenarios, it can be useful to focus on a couple of those drivers (other drivers will be considered later, they are not forgotten).

Therefore, this step begins by selecting 2 drivers which both seem likely to have a significant effect on Malawi's future, but about whom the direction of change is uncertain. This discussion and selection may be relatively quick, once the activities in the previous step have been completed. In MAJI, it is proposed that climate change is not part of this discussion: it is a fairly certain driver, so can be taken as a given that forms the 'rules of the game' and it will be used in addition to these 2 drivers, to create a future narrative.



This framework takes climate change as 'a given', as there is consensus about the future trends in climate. You may also wish to use Malawi's population growth as 'a given' because most sources agree that it will continue to grow over the next 30 years, although nobody knows by how much.

Once the 2 drivers have been selected, it is necessary to identify what states they may take in future. Each driver can adopt many states in the future (e.g. population could grow by 1%, 2%, 3%, 4%....): however, to be able to create scenarios we need to agree and fix a couple of plausible states that the drivers will take. It is useful to look for contrasting states, i.e. states of the driver that are plausible but opposite. For example, if our driver is "the nature of politics"; we could focus on a state in which the politicians are committed to the greater good versus a state in which they are working selfishly for themselves. Table 3 shows examples of possible contrasting states for some of the drivers shaping Malawi's future.

Table 3. Examples of possible contrasting states of drivers for Malawi by 2045

Driver	State A	State B
International aid	Increases by 10%	Decreases by 50%
HIV/AIDS	Is practically eradicated	Current infection rates increase by 20%
Extent of electrification	Remains the same as current	Covers 70% of the country

The two drivers (and their two states) together with climate change, are then used to create scenarios, using a technique called "the 2-axes method". This method involves drawing 1 vertical and 1 horizontal axis, and then labelling each axis with one driver. The 2 contrasting states of each driver form labels for the 2 halves of each axis. Once this is drawn, the quadrants between the 2 axes provide the space to create a narrative.

These four quadrants are designed to serve as a spur for discussion about 4 possible scenarios. Begin by asking participants to focus on one quadrant and discussing how the state of the drivers shown in that quadrant will likely affect the situation in their district /village. As points are agreed by the group they can be captured on post-its (either by written descriptions, or if participants are illiterate, pictures) and stuck into the quadrant space.

Box 5 . An example of the 2-axis method to create four visions of Malawi in 2045

One of the small groups of MAJI's March 2015 scenario-planning workshop worked with two the drivers Population Growth and Agricultural Productivity and Diversification. The two contrasting states were: a stabilization of current population growth and an increase of the rate of population growth; an increase of agricultural productivity and diversification of crops and stagnation at a low agricultural productivity and a production system based predominantly on maize. On the top left corner of the figure it can be observed how climate change is taken as a given in this exercise (represented by the two letters CC). Post-it notes include the effects emerged from the discussion on the combination of population growth or stabilization and increased on agricultural productivity and diversification or stagnation.

Workshop participants envisioned that an increase on the population growth combined with low agricultural productivity (right bottom quadrant on the figure) would result in corruption, the poor getting poorer and food rationing, among other. Lower population growth combined with high productivity in agriculture could lead to an increase on the school dropouts and an over-exploitation of natural resources.



Figure 7. The 2-axes method applied to the drivers Population Growth and Agricultural productivity and diversification.


The advantage of the 2-axis method is that it is simple and can be easily understood by participants of the scenario planning. However a potential risk is forgetting about the other drivers, and a full consideration of the effects of the drivers of the future situation. Therefore careful facilitation is essential, to ensure participants consider the full range of relevant issues identified in previous phases of the process.


If you prefer to consider the effect of all drivers simultaneously, another method called 'morphological analysis' is an alternative to the 2-axis method. It involves putting all drivers into a matrix in order to systematically consider how each driver might affect each aspect of the current system. This requires aspects of the current system to be captured as rows in the table, whilst the drivers go into columns of the table (see Figure 8). The narratives are then created by combining the different cells on the matrix (as per the red loops shown in the diagram below). The advantage of this methodology is that it ensures that every combination of current variables and key drivers will definitely be considered. However, because of that it can be very time-consuming. If you do decide to use this method, it will help to have a matrix grid 'ready to use' for use with the participants. It is possible that in the villages a matrix with text is not the most suitable, in that case, you can create icons or drawings to represent the drivers and the characteristics of the current systems.

Driver →	Driver 1: International Aid		Driver 2: HIV/AIDS		Driver 3: Extent of electrification	
↓ Aspects of current system	State A: Increases by 10%	State B: Decreases by 50%	State A: Is practically eradicated	State B: Current infection rates increase by 20%	State A: Remains the same as current	State B: Covers 70% of the country
Erosion rates	Remains the same	Increases greatly	Increases slightly	Remains the same	....	....
Education coverage	Increases moderately	Becomes seriously compromised	Decreases slightly	Decreases dramatically	....	....
Sanitation services	Increases slightly	Becomes compromised	Remains the same	Increases moderately	....	....
Child mortality rates	Remains the same	Decreases moderately	Decreases significantly	Increases dramatically	....	....

Figure 8 Example of using 'morphological analysis' to create narratives

Whether using the 2-axis or the morphological analysis, the combination of the post-it notes or the bubbles in the morphological analysis matrix should result in the ability to create several contrasting narratives (scenarios) that each describe a plausible coherent future, and how this came about.

 When creating scenarios, participants may need to be reminded that plausible means logically possible, but it does not necessarily mean probable. If necessary go back to thinking about the past and how some radical changes have actually happened, even though they would have been judged unlikely beforehand. If the scenarios produced by this process are to be useful, they should be contrasting, and should not be mirrors of the present.

 It is useful not to create only narratives representing 'everything is good' (heaven) or 'everything is bad' (hell) futures, but it is important to have nuanced storylines. It is unlikely that in the future everything will be good or everything will be bad. To help you avoid only good or only bad scenarios, it is important to build on and discuss a detailed and comprehensive understanding of the present situation, and how the drivers acted on that to produce a scenario.



 If you need further ideas for avoiding 'everything is good' and 'everything is bad' scenarios, you can get inspiration from existing scenario 'archetypes' (see Table 4). These archetypes are supposed to be helpful for guiding the creating of more specific scenarios.

Table 4. Archetypes or pre-established and contrasting scenario variants. Each variant corresponds to a plausible state of the world.


World views→	Conventional worlds		Great Transitions		Barbarization	
Archetype name: Brief description	Market forces	Policy reform	New sustainability paradigm	Eco-communalism	Fortress-world	Breakdown
	Market optimism remains dominant and proves well-founded. Market driven globalization, trade liberalization, institutional modernization. Deregulation drives growth	Unprecedented political will to meet social and environmental sustainability goals. Emergence of massive government lead effort to achieve sustainability	New human globalization (rather than localism) changes the character of urban industrial society. Values-led change (versus government-led in the policy reform variant) change catalysed by crisis.	Patch-work of semi-isolated and self-reliant communities. Quite sustainable with high equity, low economic growth and populations. Highly localist vision and face-to-face democracy. Strong decentralization	Authoritarian rule, elites in fortress and poverty outside. Strategic resources are under military control. Conventional governance systems are eroded and alliances of privileged are formed	Vicious circle of chaos, conflict and desperation. Security apparatus cannot contain the violence. Collapse of civil order becomes widespread

Source: Hunt et al. (2012).

After discussing and creating four scenarios, it is essential that the details of these scenarios are captured into coherent narratives. It is important that the narratives of each of the scenarios provide a full description of the future drivers, their effects and the results for Malawi, particularly as relate to key challenges and current priorities for the country. To achieve this, any combination of written text can be used, or a drawing, a collage of photos or an oral form of story-telling (like for example, ask participants to write a speech describing the scenario).

 If it is not possible for the participants themselves to create the written narrative, the facilitators should take notes on the scenario and create this at later date, so that the details (and in particular the interconnections) are not forgotten. Written narratives can range from 2 paragraphs – 4 pages long – however as is sufficient to describe all aspects of the future situation.

Next each of the scenarios should have a name or title that people can easily identify. Once the narratives have been created and validated, collectively with participants give a name to each of the scenarios. There are no rules to give a name to the scenarios, just use something that reminds all participants of the essence of the story behind.

 In general, it is better that the labels are given once that the narratives have been created, and not from the outset.

Box 6 shows an example of summarized scenario narratives and their labels, created using the 2-axis method (the full narratives can be found in Annex II).

Completing this step will result in four scenarios: one or more of these will likely be fairly amenable and acceptable and may seem to easily allow current goals to be achieved, whilst one or more scenarios will be quite unchallenging and uncomfortable. It is important that both the amenable and more uncomfortable scenarios are kept in mind during the next step.

Box 6. Example labels and narratives for 4 scenarios.

These result from combining drivers Economic Growth (horizontal axis) and Diversification and Nature of Politics (vertical axis). The two contrasting states of the economic driver are: stagnant and one-dimensional economy (left) and growing and diversified economy (right). The two contrasting states of the political driver are: politics for the greater good (top) and politics for the selfish few (bottom).

<p>WOKANKHA (struggling)</p> <p>Despite best intentions, and even better deeds by those in power, Malawians are still struggling after all these years. The structure of the economy never really changed even after the political ‘transition – the sea-change that is so admired now. How long can these good intentions and decisions last if there is no food on the table?</p>	<p>MKAKA NDI UCHI (milk and honey)</p> <p>Like the agricultural abundance of the biblical Land of Israel, Malawi is flourishing. And it is not just the economy. The whole cabinet recently shared the Africa Good Governance prize. All Malawians are celebrating the success of its socio political system and just love being <i>the</i> role model</p>
<p>WOTSALIRA (un-progressive)</p> <p>To think that Malawi in the mind 2010’s was a great place to be compared to now. Despite donor dependence and corruption, there was at least a functioning system. Now there is nothing! Land- grabs and daylight robbery by those in power are the only functioning issues, whilst the people are suffering with no hope.</p>	<p>MBOMBO (greedy)</p> <p>Nothing much has changed over the years – especially not ‘snouts in the trough’ behaviour...Other than that the economy is sizzling HOT. The Chinese and Indians are competing to invest, and Shell has just completed the gas pipeline to Gauteng. Young people dream and scheme of becoming a politician. It is the most lucrative career by far.</p>

Source: Socio-Economic Scenarios: Report of the EPIC Workshop, Salima, Malawi, 27-30 October 2013.

Using scenarios to help achieve goals

Scenarios illustrate future possibilities but these are not necessarily the same as future goals or aspirations. To go beyond ‘creating a story’ it is essential first to explicitly consider what our current goals and aspirations are. Existing documents and reports in Malawi provide us with statements about national, district and village level goals. It is therefore useful to extract and use priorities from existing reports and programmes, but to also complement this with a brief discussion to check everyone is ‘on the same page’ with regard to the issues that need to be tackled.

At the national level, in 1998 the Malawi Government released its Vision 2020, which establishes the ambition for Malawi to be ‘*secure, democratically mature, environmentally sustainable, self-reliant with equal opportunities for and active participation by all*’ and to have ‘*social services, vibrant cultural and religious values and a technologically driven middle-income economy*’. These objectives are dependent on sustainable environmental management. This global goal for Malawi is complemented by detail in the District Development Plans, which provide a systematic collection of Issues to be tackled (e.g. increased occurrence of natural disasters and hazards), their Causes (e.g. siltation of rivers and deforestation), Development Objectives (e.g. reduce the number of people affected by disasters) and Immediate Objectives (e.g. increase area under forest, rehabilitate river banks of major rivers; increase area under irrigation farming) and supporting programmes and projects to achieve each objective. Village-level plans may also provide pre-existing objectives and aspirations specific to each community.

Therefore, it is probably necessary for the facilitator and/or participants to begin this stage by extracting the goals that are in existing plans, and if necessary to confirm these by discussions with participants. If there is only one vague over-arching aspiration (e.g. “to achieve a happy healthy Malawi”) this will need to be broken down into specific goals. In the case of district planning, the priority issues may be useful for providing specific goals.

The second step is to consider what current actions could help to achieve these goals. Where a group of participants already has a set of actions in up-to-date plans, it may be sensible to start by collecting and collating these. However, it is usually also useful to allow space for ‘blue sky’ or ‘out of the box’ thinking to identify new and innovative actions. This is where the scenarios generated in the previous stage are used. Participants should contribute to a brainstorming exercise to identify actions that would be both useful and feasible to achieve each goal, given each scenario. The aim of this stage is to focus on action: to identify actions that can assist in addressing problems /achieving their goals in each future scenario. This helps to avoid ‘short-term only solutions’ and helps to identify ‘low-regret’ or ‘no-regret’ strategies. If necessary, use an example such as that in Box 7 as in to remind people of the need to review actions to ensure they are climate-proof.

Box 7 Example showing the need to think about the future when identifying and selecting actions now

If a goal is to secure and improve farmers’ livelihoods, it is important to think about future climate and other changes to identify the best ways to help farmers now. By considering what actions will be feasible and useful in the future, we can identify actions or strategies that may be viable only in the short-term. For example, for some farmers in Malawi, focusing on maize-based farming may not be a viable and secure livelihood given future climate change, so current strategies that focus on refining and reinforcing maize cultivation are not sensible (and indeed may waste resources). Reinforcing maize-focused cultivation could be an example of a “short-term only solution” whilst encouraging farmers to diversify into other crops such as cassava would be a “low-regret” strategy that is more likely to foster their future resilience to change.



We suggest that brainstorming of actions should be structured by use of a simple matrix. In this matrix, one column should represent each of the previously-generated scenarios (as represented by the label). Participants should discuss what actions would be feasible *and* useful for one scenario, before moving to discuss the next. Each action identified can be written or visually represented onto a post-it note and stuck into the corresponding column (Figure 9). Quite often the same action may be useful and feasible in more than one scenario (column) – if this is the case duplicate the post-it and stick it into the column for each scenario for which it is relevant. The example in Table 5 demonstrates how this can be done.

Table 5 Example of a matrix used to structure a brainstorming exercise to identify ideas for action

	WOKANKHA (struggling)	MKAKA NDI UCHI (milk and honey)	WOTSALIRA (un-progressive)	MBOMBO (greedy)
Goal 1: Increase sanitation	<ul style="list-style-type: none"> • Increase awareness raising campaigns • Implement low-tech wastewater treatment devices • Promote repairing rather than constructing new infrastructure 	<ul style="list-style-type: none"> • Increase awareness raising campaigns • Develop centralized publically owned wastewater treatment company • Construct new infrastructure 	<ul style="list-style-type: none"> • Increase awareness raising campaigns • Implement low-tech wastewater treatment devices • Promote collective action amongst villages for community-managed sanitation 	<ul style="list-style-type: none"> • Increase awareness raising campaigns • Promote collective action amongst villages for community-managed sanitation • Lobby to decentralise sanitation process to the districts • Access to cheap loans by private investors to build new infrastructure
Goal 2: .....	....	....	....	....

When working through the matrix, participants should discuss the actions that will be needed to achieve one goal, in all four scenarios, before moving on to repeat the process for other goals. The result of these discussions should be a set of goals accompanied by 4 lists of potential actions to achieve each of these goals in each scenario.

In general, it is useful to go as much as possible into the details of the actions. For example, instead of adding an action to 'plant new crops' it would be helpful to explain exactly which crops. This is particularly relevant when there is disagreement about whether or not an action will be feasible and useful in a given scenario of future change. It will be useful to keep notes on this level of detail, which is not always captured on summary post-it notes or presentations.

It is important that participants do not think only about one certain type of actions or interventions, e.g. do not focus only on technological solutions. Facilitators may find it useful to prepare examples of different diverse actions and/or to bear in mind each of the '7Ps': Policies (e.g. rules and regulations); Programmes (e.g. to build infrastructure); Plans (e.g. resource management plans); Procedures (e.g. instructions for best practice in resource harvesting or use) and Processes (e.g. monitoring systems); Products (e.g. information, or technology); People (e.g. training to build skills, capacities, or to influence attitudes and motivation).

Integrate into planning

Planning in Malawi does not start from scratch: at national district and village levels there already exist a variety of plans and planning processes. Scenario-planning is meant to support and complement, and not replace, existing planning processes. It is very important to build upon them. For example, within the District Development Plans each Objective is accompanied by Immediate Objectives, Strategies, Programmes and Projects (e.g. afforestation, river bank rehabilitation, and construction of dykes). Therefore the scenarios previously constructed can be used to:

- look for new actions or combinations of projects and programmes that will be useful despite future change (this was described in the previous step, above);
- check if existing actions (e.g. projects, programmes) are likely to be suitable given future possibilities of change; and identify how to adapt or specify existing actions so as to make them more resilient to future change.

Taking both approaches is useful because it can help to identify if and how current plans and actions may be useful in the face of future change. Some actions or interventions may be relatively useful regardless of what the future holds. These types of responses are called ‘robust’. Therefore, to check if the pre-existing projects and programmes contained with plans are likely to be ‘future proof’, we can analyse their ‘robustness’ in the face of the different scenarios that have previously created.

It is a simple exercise to check for the robustness of new ideas for action, if they were identified and captured in the previous step (i.e. the brainstorming exercise that filled in in the matrix of goal versus scenarios). It is simply necessary to look along one row in the table, to find if any action is repeated across all the columns (scenarios). If the same action occurs in all columns, then this is a robust action that it is useful to prioritise now. For example, in table 6, awareness-raising seemed to be robust, as it was found in all columns.

A slightly modified matrix is useful for checking the robustness of pre-existing actions (i.e. those already in existing plans). To systematically consider the utility of each action, given each scenario, create a matrix with scenarios across the top, and the actions down the side. Then, simple scoring can be used to indicate if an action is thought to be useful in each scenario. Table 6 presents an easy way of doing this using ‘smiley faces’. In this example ☺ represents a judgement that a project or a programme will be useful (two smiley faces represent more utility). Alternatively, it may be judged more useful or appropriate to populate the matrix using scores (e.g. usefulness could be measured from 0 to 5). As a result of this exercise, robust programmes or projects can be identified by looking

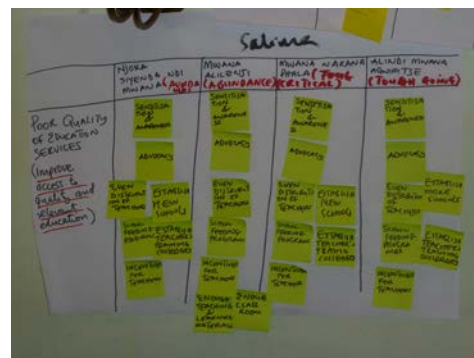


Figure 9. Example of the brainstorming of possible actions per scenario for achieving the goal of improving access and quality of education. Example generated by the Salima District during MAJI'S March 2015 scenario-planning workshop.

across each row to see which actions contain a smiley face in all of the columns. (In the example below, project 3 would be 'robust'). If there are no or few actions that are 'robust' (i.e. useful and feasible in all scenarios), we should look for combinations of actions that are robust. In the example of Table 6, implementing projects 4 and 5 together could make a robust combination.

Table 6. Example illustrating how to identify robustness of existing actions in a matrix of smiley faces.

	WOKANKHA (struggling)	MKAKA NDI UCHI (milk and honey)	WOTSALIRA (un-progressive)	MBOMBO (greedy)
Project 1 e.g. Build a Dam	😊😊	?		😊
Project 2 e.g. educate about safe harvest levels		😊😊	😊	
Project 3 e.g. Improve school	😊	😊	😊	😊
Project 4 e.g. Invest in alternative livelihoods		😊		😊
Project 5	😊		😊😊	

If you wish, the discussion on robustness can be extended by introducing the idea of 'shocks'. Shocks are very unlikely but very influential events that can radically disrupt systems. Examples of shocks include major earthquakes, a serious pandemic, a nuclear accident or a cyber-attack leading to the collapse of stock-markets. Once robust strategies have been identified, facilitators could initiate a discussion on whether they would still be useful in the event of a selected shock and what additional measures can be taken to make them resistant to the shock. This exercise can be difficult for certain projects or programmes, and must be handled carefully to avoid causing panic or unnecessary worry, but it can be useful for promoting 'outside of the box' thinking.

Scenario-planning can also support current development planning by enlarging the list of pre-existing and established ideas for useful actions. For example, if an initial brainstorming exercise as suggested in the previous section of this framework is carried out, it can be cross-checked against the list of projects and programmes currently included in the District Development Plans, seeing whether there is any new intervention that could be added. Also, scenario planning can help making projects and programmes more concrete or establishing specifications that can make them more resilient to change.

Quite often it is the discussions about detail that reveal new ideas about how adapt, re-prioritise or add to existing actions. To ensure all detail is considered you can be useful to ask questions about how an action will be carried out, and by whom, and ask if all in the group agree this will be useful and feasible.

Some ideas for questions to ask, to ensure that all the detail of potential actions is fully considered:

- What more precisely needs to be done to implement this project?
- How will this to be done? e.g. What needs to happen? What needs to change for this project or programme to be implemented?
- Who (individuals, organizations) has to do what?
- What are the social implications: Who will else this affect? Will this action promote equity? Which groups will gain and lose as a result of this (in particular, women and young people)?

Finally, it could be useful to keep notes and reflect on what others not in the group (e.g. the national government, the international organizations and donors, the civil society organizations) could do to contribute to make each of the projects and programmes more resilient face to each of the scenarios. These ideas might have use for MAJI to carry out advocacy at the local, national and international level.

CHALLENGES FOR USING AND DEVELOPING THIS FRAMEWORK WITHIN THE MAJI PROJECT

The framework provided above is designed to inform and enable scenario-planning in each of MAJI's districts. By itself it does not provide a prescriptive 'recipe' for scenario-planning, as it is expected that as the project unfolds adaptation and refinement will be required in order to tailor its use in every situation. To achieve this, we describe below a number of challenges and questions that need attention. These challenges are derived from three sources; the academic literature on scenario-planning, observations of the authors when facilitating the March 2015 training workshop, and ideas and queries voiced by participants during that meeting and in their feedback. We have grouped them below by sub-headings, although some of the points relate to each other.

Guarding against common pitfalls and risks during scenario-planning

When creating multiple scenarios, there is sometimes a tendency for participants to create one extremely positive ('heaven') and one extremely negative scenario ('hell'). This is a particular risk if participants do not really consider the details of a scenario, so do not attempt to realistically explain how that future situation arose. Such drastic extremes are problematic as they are rather implausible. The heaven scenario is particularly unrealistic if we consider that climate change is a part of all the future scenarios. Using such extreme scenarios tends to be unhelpful, as the 'heaven' scenario may invoke complacency and the feeling that anything is possible, whilst by contrast the 'hell' scenario may invoke feelings of fatalism and the feeling that nothing is possible or useful.

- Therefore, when the facilitators guide the participants to create scenarios, they must strike a balance between stimulating consideration of a wide range of possibilities, whilst guarding against some of the scenarios being implausibly positive ('heaven') or awful ('hell'). It is useful to aim for scenarios that feel a bit 'uncomfortable' and provoke discussion.
- This may be assisted by giving plenty of time to develop, discuss and record the detail of all scenarios, including a plausible explanation (or 'storyline') of how the future state arose from the current situation. Indeed, if there is not already a good understanding of the current situation and the interconnections between its challenges, it may be useful to first invest time in developing this, to understand all connections between the environment, people and places are understood, so that later scenarios are realistic, and that implications of planned actions will be fully understood.
- It is useful to think about future changes other than just climate change. Indeed, this is a key advantage that MAJI offers, versus some other projects and initiatives. However, the caveat is that it may be necessary for facilitators to remind participants not to overlook the existence and effects of climate change when creating the scenarios.

Identifying who and how to engage during scenario-planning

The MAJI project has a core obligation to engage with planners at the district-level, and with village-level committees. However, since MAJI cannot engage with every single district official, or villager, let alone every single CSO working at the district or village levels, this raises some important challenges.

- It is not always clear who should be involved in scenario-planning, particularly but not exclusively in relation to which Civil Society Organisations (CSOs). The more groups that are involved in scenario-planning, the more that will have buy-in to the process and its outcomes, but the more complex and resource-demanding the project will become. It may be appropriate to involve some CSOs fully in planning, whilst other CSOs are involved only to the extent of awareness-raising about MAJI and the benefits of scenario-planning.
- It is important to remember that even within any one group (e.g. a VNRM) the individuals within that group will vary in their interests, expertise and capabilities, and these may not always correspond with official positions or training previously received. For example, individuals may differ in how well they understand the concept of climate change and its likely impacts. Facilitators must take account of this diversity in order to ensure no participants are left behind, and to ensure that no-one's interests or knowledge is excluded.
- Two of the three districts in MAJI (Karonga, Salima) were part of the predecessor WATERS project: for these places there is thus a legacy of VSO engagement on planning, and on the Ecosystem Services Approach. To compensate, the Dowa district and villages that were not in MAJI may require extra input and attention.

Understanding other projects and initiatives ongoing in Malawi

The authors of this report are aware of a number of prior and ongoing initiatives relevant to MAJI, in particular much work related to climate change adaptation. Some were uncovered during the creation of the framework and the planning for the March 2015 workshop (and are in the resources section of this document), whilst some others were highlighted by participants during that workshop. However, there has been no detailed or exhaustive search for all relevant initiatives, so this is an essential next step.

- It is essential that a search for related organisations, projects and studies is carried out at the district-level, so that the subsequent work of MAJI will not risk duplication and confusion (especially where other initiatives use related terminology or names). Once these are identified, it will be helpful to proactively spell out exactly how MAJI complements, differs and relates to any other initiatives. In particular, at the workshop in March 2015, it was mentioned that the Environment Affairs Department (EAD) has provided training on scenario-planning in Karonga district, and in future will provide training to the other districts. MAJI should look to reinforce and complement this training – i.e. by providing more opportunities to practice or identify alternative techniques within the scenario-planning framework.
- Where necessary some changes in terminology may be useful to avoid confusion. For example, during the March workshop, an initiative called ‘participatory scenario-planning’ was noted to already exist in some places: it was described as an initiative for long-range weather forecasting to help inform farmers’ planting plans, which is different to how scenario-planning is usually understood (and as it is used by MAJI), however, for MAJI to attempt to use the same terminology without explanation would be confusing for these people.
- If other projects and initiatives are identified early on, this may offer valuable opportunities to build on, by providing complementary ideas, and possibly already-engaged groups and events whereby MAJI may be introduced.
- Previous works have studied the details of the impacts of climate change, and/or developed scenarios of change relevant to Malawi. It will be useful for the facilitators to be aware and build on this information, to inform the drivers of change that participants use, adapt and select from.

Understanding and connecting with planning processes within each district

For MAJI to realise its potential, the concepts of scenario-planning must be connected to the practical realities of planning processes that are already occurring. Otherwise, there is a risk of doing little more than creating nice stories that do not fully realising the potential of the process to help inform and improve planning and action.

- At the time of writing, the districts engaged in MAJI are each at different places within the planning cycle, so it is likely MAJI will need to take different forms in each district, in order to find the best way to adapt and fit with their needs. For example, where districts or villages have recent and up-to-date plans, it would be inappropriate and confusing to ignore these plans, but it may be useful to focus on using scenario-planning as a check for the priorities and actions already within these plans.
- The best way to understand district planners’ needs, is to proactively involve them in planning how best to use and adapt scenario-planning in their districts. This may mean that the application of the latter aspects of the framework may evolve differently in different places, but if this occurs this should be welcomed as the diversity will offer useful points of comparison and learning within and beyond MAJI.
- The title of the project MAJI (which means water in Bantu) and its predecessor project WATERS both obviously have a focus on water. However, district planning processes, and climate adaptation challenges, encompass much more than water. Some discussion may be required to determine how far MAJI will focus on integrated water resource management, or more widely engage with the challenges of integrated environmental management.

Clarifying the role of all partners within MAJI

Within MAJI, the VSO volunteers obviously have a central role in developing and using the framework and in addressing the challenges above. The authors of this report can assist in addressing the first set of challenges identified in this section. However, at the time of writing it there is some ambiguity over the precise role of the other MAJI partners. This may need clarification, to ensure the volunteers receive support in tackling all the challenges, and to identify and implement specific adaptation activities.

CONCLUSIONS

We conclude that MAJI and the concept of scenario-planning has the potential to provide significant and useful support to Malawi's district and village-level planning processes, though important challenges still remain ahead. This document and its accompanying workshop should be seen as only the first step in a process of finding specific scenario-planning approaches and activities that will efficiently and usefully dovetail with ongoing district planning processes, whilst also complementing the activities and concepts employed by other projects, organisations and initiatives. Finding the best ways to interpret and apply this framework will therefore require flexibility and discussion between MAJI and its district partners. However, if this can be achieved we believe MAJI has significant potential to contribute to proactive and collaborative planning in its three partner districts, whilst also offering lessons to the rest of Malawi and beyond. We hope that the future work of MAJI, to which this framework contributes, will therefore help to strengthen the resilience of Malawi to climate change and other future challenges.

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GLOSSARY OF SCENARIO-PLANNING TERMS

Archetypes	In the context of scenario building, archetypes are pre-established and contrasting scenario variants. Each variant corresponds to a plausible state of the world.
Drivers of change	A key external force acting with a significant influence on systems and management outcomes. Examples include climate change or globalisation.
Morphological analysis	Morphological analysis means systematically considering what will happen to each aspect of a system or situation, if each driver takes a particular state. This is carried out by filling in a matrix of each driver state versus each variable.
Narratives	A written description of a scenario, highlighting the main scenario characteristics and dynamics, including the effects of key drivers on the system.
Robustness	A robust action is one that performs well over a very wide range of alternative futures. In addition, if different actions are useful in different scenarios, these could be combined to form a 'robust strategy'.
Scenarios	A coherent, internally consistent, and plausible description of a possible future state (including both social and natural aspects). A scenario is not a forecast; rather, each scenario is one alternative image of how the future can unfold.
Shocks	Very low probability, but very high impact events that, were they occur would severely impact the human condition.
State (of driver)	We do not know what state each driver of change will take in future. For example, we may think changes in human population size will have important effects, but we do not know if the population will decline or will grow. Therefore two or more states must be pre-defined for each driver that is used in scenario-planning.
Storyline	A storyline is very similar to a narrative: it focuses on explaining how a scenario came to be.

REFERENCES AND KEY READING

Please note that the resources provided below are not exhaustive, but we have selected examples that we feel should help to build familiarity and expertise with scenario-planning methods and content relevant to district and village-level planning in Malawi.

Some information about the background, principles and benefits of scenario-planning

- James Hutton Institute Youtube video on scenario-planning. Available from <http://www.youtube.com/watch?v=lxHfA4P0kIQ>
This is a simple video developed by the authors, which tries to describe the potential and principles of scenario-planning in 2.5 minutes. The authors can make available to like to the VSO volunteers so it can be downloaded and played in locations without internet access.
- O'Brien, F. A. 2004. Scenario planning—lessons for practice from teaching and learning. European Journal of Operational Research 152: 709-722. Available from <http://www.hawaii.edu/serials/files/obrien.pdf>
This document is useful for offering ideas about how to facilitate scenario-planning processes. This document is particularly useful for highlighting some of the potential pitfalls and tensions that are likely to arise during these processes, and how to avoid or handle these.
- Climate change and agriculture scenarios for Malawi. Socio-Economic Scenarios: Report of the EPIC Workshop, Salima, Malawi, 27-30 October 2013 Available from www.fao.org/3/a-i3566e.pdf
This project gives really useful ideas about feasible scenario-planning methods similar to that outlined in this document. More information about the project is available from <http://www.fao.org/fsnforum/forum/discussions/epic-malawi>
- Rowland, E.L., Cross, M.S., Hartmann, H., 2014. Considering Multiple Futures: Scenario Planning To Address Uncertainty in Natural Resource Conservation. Report for U.S. Fish and Wildlife Service. Available from <http://www.flca.net/images/ScenarioPlanning.pdf>
This document is quite long but it provides a lot of detail and ideas about scenario-planning and introduces some concepts that are more detailed than our framework. The back of the document shows some real-life examples of using scenario-planning to inform natural resource management.
- Hunt, D.V.L et al. (2012). Scenarios Archetypes: converging rather than diverging themes. Sustainability, 4, 740-772. Available from: www.mdpi.com/2071-1050/4/4/740/pdf
This academic paper reviews 25 years of experience in the implementation of scenario-planning and concludes that the vast majority of scenarios produced so far can be categorized in one of six archetypes. This open access publication is a good reading for those interested in knowing more about the types of scenarios discussed in the scientific literature.

Information about the Ecosystem Services Approach and its predecessor WATERS project

- Waylen, K.A., Martin-Ortega, J., 2013. Report on Knowledge Exchange Workshops on an Ecosystem Services Approach. Report for the WATERS project (WATERS: Towards Equitable Resource Management Strategies). Available from: <http://www.hutton.ac.uk/sites/default/files/files/waters/WATERS-workshop-report-June13.pdf>
In May 2013, Kerry Waylen and Julia Martin Ortega from the James Hutton Institute spent one month in Malawi to lead and participate in a series of knowledge exchange workshops. All the workshops had a focus on an Ecosystem Services Approach, with a particular focus on using this to promote systems thinking. This report describes the Ecosystem Services Approach as used in the WATERS project that preceded MAJI, and the opportunities and challenges for using the concept to support planning for natural resource management.

Information about Malawi's national policies and reports relevant to the planning system or climate change

- Malawi National Adaptation Plan (NAP) Process. Available from <http://www.nccpmw.org/index.php/nap-process>
The Government of Malawi launched the National Adaptation Programmes of Action (NAPA) in February 2008, to address immediate and urgent adaptation needs by enhancing the resilience of vulnerable communities and ecosystems to the adverse effects of climate change. Some of the other projects and reports listed below link to this initiative and its website.
- Malawi National Climate Change Programme <http://www.nccpmw.org/index.php/national-climate-change-programme>
This Programme aims to enable the Government of Malawi to climate-proof policies, strategies and plans of the sectors of the economy most directly affected by climate change. It includes the Climate Action Intelligence (CAI) Report, which aims to monitor, collect and coordinate all action related to tackling climate change in Malawi, supported by UNDP.
- Malawi National Climate Change Investment Plan 2013-2018. Available from <http://www.nccpmw.org/index.php/documentation/category/3-strategies-and-action-plans?download=30:national-climate-change-investment-plan>
This report indicates Malawi's current priorities for climate change adaptation at a national-level.
- Ministry of Local Government and Rural Development of Malawi (2012). Revised Decentralized Environmental Guidelines. Available from: <http://www.mw.undp.org/content/dam/malawi/docs/environment/Decentralized%20Environmental%20Managment%20Guidelines.pdf>
This official document provides a useful overview of the requirements of Malawi's decentralised planning system, especially as it pertains to environmental management, and some of the tools or concepts (including DPSIR and ecosystem services) that have been advocated to support this process.
- Malawi State of the Environment Report (SOER), 2010. Available from <http://www.eadmw.org/docs/soer.pdf>[http://www.unpei.org/sites/default/files/e_library_documents/Decentralized Environmental Managment Guidelines.pdf](http://www.unpei.org/sites/default/files/e_library_documents/Decentralized%20Environmental%20Managment%20Guidelines.pdf)
This is the official document describing the state of Malawi's environment, and identifying potential future changes.
- Malawi's Vision 2020, March 1998. Available from <http://www.sdnw.org.mw/malawi/vision-2020/>
This weblink provides access to the National Long-Term Development Perspective for Malawi.

Examples of projects and reports discussing impacts of climate change and potential adaptation activities in Malawi

- Climate Adaptation for Rural Livelihoods and Agriculture (CARLA) Project <http://www.nccpmw.org/index.php/climate-adaptation-for-rural-livelihood-and-agriculture>
The CARLA project is being implemented in Malawi in the three vulnerable districts of Karonga, Dedza Chikhwawa, which have been identified as vulnerable by the NAPA. The goal of the CARLA project is to improve resilience to current climate variability and future climate change by developing and implementing adaptation strategies and measures that will improve agricultural production and rural livelihoods. The project aimed to produce: (i) integrated climate change adaptation strategies and interventions that improve agricultural production and rural livelihoods; and (ii) enhanced national and district agencies capacities to support community-based adaptation to climate change.
- Stringer, L. Mkwambisi, D., Dougill, A.J., Dyer, Jen C., 2010. Adaptation to climate change and desertification: Perspectives from national policy and autonomous practice in Malawi. *Climate and Development*, 2: 145—160. http://homepages.see.leeds.ac.uk/~lecajd/papers/Stringeretal2010_C+D.pdf
This is a good summary of information about projected climate changes in Malawi, likely impacts and also adaptation activities. It compares the adaptation actions contained with the NAP (National Action Plan to

tackle desertification), NAPA (National Action Plan for Adaptation to climate change) and also those autonomous adaptation actions already being carried out by farmers.

- Integrated Assessment of Land Use Options (IALUO) for Climate Change Mitigation and Adaptation in Malawi. Available from <http://www.itsi.co.uk/malawi-land-use/Main.html>
These webpages present catchment-level data from the integrated assessment. As well as interactive webpages that allow different districts to be explored, a summary and more detailed reports are available. "Climate Smart Landscapes: An Assessment of Integrated Land Use Options in Malawi." <http://www.itsi.co.uk/malawi-land-use/dl/IALUO%20Task%205d%20Summary.pdf>. This document is a summary report of IALUO's findings from the scenario analysis and investment plan. It is intended to provide a succinct overview of the current and future scenarios of land use dynamics in a changing climate in Malawi to inform planning decisions. The more detailed technical reports are available on the NCCP website: www.nccpmw.org *This project was commissioned by the Government of Malawi and is funded through the World Bank, and forms part of the formulation phase of Malawi's National Climate Change Programme.*

Examples of reports or projects that have generated scenarios or discuss drivers of change relevant to Malawi

- Booth, D., Cammack, D., Harrigan, J., Kanyongolo, E., Mataure, M., Ngwira, N., 2006. Drivers of Change and Development in Malawi, Working Paper 261, Overseas Development Institute, London. Available from <http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/1957.pdf>
This document is now rather dated but contains an interesting and provocative discussion about past and potential changes in international aid, national governance structure, and implications for Malawi.
- Climate change and agriculture scenarios for Malawi. Socio-Economic Scenarios: Report of the EPIC Workshop, Salima, Malawi, 27-30 October 2013. Available from <http://www.fao.org/3/a-i3566e.pdf>
This project and its report provide useful ideas about relevant drivers, scenarios, and also provides really useful ideas about scenario-planning methods similar to that outlined in this document. More information about the project is available from <http://www.fao.org/fsnforum/forum/discussions/epic-malawi>
- The Millennium Project <http://millennium-project.org>
This major initiative has published some global-scale scenarios that can give some ideas about global risks and opportunities arising from current trends. Although there is a Southern Africa 'node' whose scope includes Malawi (<http://www.sampnode.org.za>): unfortunately, although this has group has been horizon-scanning it has not yet published any scenarios or reports for this region.
- Foresight for Development-Bibliozone – Climate action. Available from <http://www.foresightfordevelopment.org/bibliozone/climate-action>
A collection of publications related to Climate action, strategies, policies and adaptation in Southern Africa.

Ideas about facilitation (not specific to scenario-planning)

- Facilitation Tools for Meetings and Workshops, Seeds For Change. Available from <http://seedsforchange.org.uk/tools.pdf>
This is a great guide to specific activities and techniques for encouraging people to participate and share their ideas in meetings.
- Tips for facilitating groups – webpage by KSL Limited. Available from <http://www.ksl-training.co.uk/free-resources/facilitation-techniques/tips-for-facilitating-groups/>
This webpage provides some useful basic principles when preparing for a meeting or workshop. It has links to other pages which provide more specific activities.
- Facilitation tools & techniques – webpage by LearningForSustainability.Net. Available from <http://learningforsustainability.net/tools/facilitation.php>
If you are looking for more ideas, this webpage provides links to lots more resources on facilitating, with a particular focus on participation for sustainability.

ANNEX I SUMMARY OF WORKSHOP ON SCENARIO-PLANNING, MARCH 2015

The MAJI project, led by VSO, convened a 2-day capacity-building workshop on 23-24th March 2015, in Lilongwe designed and facilitated by the authors of this report, from The James Hutton Institute.

The aim of this workshop was to build understanding and capacity to carry out scenario-planning with MAJI project partners and selected officials from the three district councils (Dowa, Salima and Karonga) within for the MAJI project. In addition to the 2 facilitators from the James Hutton Institute, 16 individuals attended the meeting, representing 3 individuals each from the District Planning offices in Dowa, Karonga and Salima, and individuals from the project partners VSO, LUANAR and CEPA.

The workshop agenda is copied here. The agenda was designed to balance information-delivery and interactive elements in order to help learning and sharing of ideas on scenario-planning. The workshop was also designed to elicit information about current planning processes and priorities in each of the target districts, in order that subsequent work by MAJI would be able to connect and adapt scenario-planning to fit with and support their pre-existing processes.

During the workshop, the facilitators showed a video and gave talks about the principles of scenario-planning, and demonstrated some aspects of the process. Participants were asked to carry out steps from the scenario-planning framework outlined in this document. This was intended to familiarise participants with scenario-planning, give ideas of options as to how scenario-planning can be facilitated, and also to expose questions or issues with scenario-planning for discussion and resolution in later work by MAJI.

Tangible outputs generated by the participants include timelines, 2-axes diagrams and scenarios with labels, some scenarios of which were captured in speeches. Examples from their work have been used to illustrate the scenario-planning framework provided in the main body of this report (page 8). In general, the method that trialled was found feasible and generated insights as the facilitators expected, which suggests that the framework contained in this report will be a suitable basis for future work. Questions and challenges exposed by this process mostly related to exploring exactly how the framework could connect with district and village level planning, and complement other existing related process. These queries have been used to inform the observations and recommendations contained in the final section of the report (page 19).

The final sessions included an opportunity for participants to provide feedback and queries using post-its on the subjects: (1) Ideas for connecting scenario-planning with current plans; (2) Ideas about related or previous initiatives that it may be important to know about or connect to; (3) Queries, worries or doubts about scenario-planning.

"MAJI Project": Training workshop on scenario-planning 23rd-24th March 2015

Day 1 Timing	Activity
09:30 - 11:20	Meeting start and refreshments Welcome, personal introductions Introduction to MAJI Purpose of this workshop Introduction to scenario planning
11:20 - 11:40	Break
11:40 - 12:15	More detail on steps for scenario planning Introducing the "historical timeline exercise"
12:15 - 13:15	Lunch
13:15 - 14:20	Small group work on historical timelines Plenary discussion
14:20 - 14:40	Break
14:40 - 15:20	Presentation on future changes facing Malawi Plenary discussion
15:20 - 17:00	Presentation and small group work on "2 axes" method for scenario-planning
17:00 - 17:30	Report back and plenary discussion Wrap up and notes about next day.

Day 2 Timing	Activity
09:00 - 10:00	Recap and preview of day 2 Presentation of outputs from small group work with "2 axes" method
10:00 - 10:45	Sharing information about current planning
10:45 - 11:15	Break
11:40 - 12:15	Presentation and discussion on connecting scenarios with planning
12:15 - 13:15	Lunch
13:15 - 14:20	Small group work with scenarios and sample of plan Refreshments available at end
14:15 - 14:30	Break
14:30 - 15:15	Discussion on potential of scenario-planning
15:15 - 16:00	Looking forward for MAJI Presentation of baseline study for MAJI Meeting close

The final session suggested positive feedback on the concept of scenario-planning, provided some practical ideas for using it in the districts, and also confirmed some challenges that the MAJI project must address in its future work. In particular it is important to make efforts to engage widely with different groups, including both national-level government but also villagers, whilst building on and complement other initiatives related to climate change and/or scenario-planning.



Figure 10 Participants from Dowa district and VSO interacting to trial a step in the scenario-planning process.

At the end of the workshop, an evaluation form was distributed to all participants. The information captured in these forms indicates that the workshop resulted in extremely positive views of scenario-planning and its potential for use in Malawi's planning. The ideas and questions asked in these forms, as with those generated during the workshop, have been used to inform the recommendations section in the main body of this report (page 19).



Figure 11. Group photo of workshop participants. Scenario-Planning workshop, Lilongwe, 23-24th March 2015.

ANNEX II EXAMPLE OF SCENARIOS FOR MALAWI PRODUCED BY THE 2013 EPIC WORKSHOP

The text below is copied from the scenarios created by a previous scenario-planning process in Malawi, for the EPIC project, as provided within the document available from <http://www.fao.org/3/a-i3566e.pdf>. We recommend MAJI partners read these scenarios as they provide useful guidance as to the content and minimum level of detail that is required for the narrative that describes a scenario. For more information about how the scenarios were created, please refer to the pdf document. The scenarios are shown below in the form of a presidential speech, addressed to Malawi in 2040.

The Mkaka Ndi Uchi scenario (Land of Milk and Honey)

Address to the United Nations by the Malawian Ambassador about the success story of Malawi for the past 20 years

All protocol observed, Good morning! Malawi's economic growth has continued to be resilient and one of the fastest in Africa. The per capita income has increased ten-fold in the past 20 years. Total fertility has decreased from 6 children to 3.1. The key factors to this success story are:

- Malawi planned for and invested in massive infrastructure and services projects particularly in the energy, transport and irrigation. As a result the country was able to attract foreign direct investments. Our strategic partnerships with multilateral and bilateral organizations played a very catalytic role.
- Governance is now heavily decentralised. The education system has been reformed. It is now able to produce the required skills for development.
- Public finance management has made the systems more transparent and efficient. The economy has largely been opened up, is market oriented and the state is just a regulatory institution.
- With regards to social support systems, safety nets have replaced the non-productive consumption subsidy that had historically eroded the good fiscal space.
- Efforts have been made towards enhancing inclusiveness. Democratic tendencies are now a norm. People are free to voice their grievances.
- Women have become key sources of growth as their participation in the labour market has increased. The youth are more meaningfully engaged in development initiatives

The journey has not been devoid of challenges. The population growth momentum still exerts pressure on land and land based resources leading to degradation of the environment. The urbanization is high creating urban poverty. Despite all these challenges, there is still hope that the country with its people will work together to find solution to its challenges. Thank you!

The Mbombo scenario (Greedy)

The Malawian President's address to the nation

Citizens of this nation!

Today marks a new beginning for the nation of Malawi. I would like to start by thanking you for electing me and for the good work you are doing towards building the nation. The nation is faced with numerous challenges and these calls for a change in the running of the affairs of this country. It will no longer be business as usual. After deliberations and wide consultation, the leadership and I have come developed a plan for the prosperity of the nation hence this address today. My government will have a lean executive.

There shall be guided democracy unlike what is practiced in the west. The nation shall be a one party state. As of today, all other political parties have been dissolved. The economy will be centralized. The country shall adopt guided capitalism. My cabinet shall be in charge of all policy making. Any official communication shall be done through the government's spokesman. All media houses are advised to work with his office. The media is hereby encouraged to practice responsible journalism. Any information contrary to official communication shall be treated as an act of treason. In efforts to tame our population growth, all families have been restricted to having two children. Any disobedience will not be tolerated. The government shall put in place robust social welfare and economic systems to address unemployment challenges and its effects.

Measures have been put in place to improve agriculture and improve the country's efforts towards food security. The government shall invest heavily in agricultural subsidies and intervene in the markets using a twin track approach combining aspects of the state interventions and the free market. The government shall establish strong regulatory framework (top down approach) to guide the

sector. We believe that all these efforts will lead to diversified agriculture, an increase in the yields that will allow us to competitively compete in the export market. Increased income from these efforts will help move our people out of poverty.

The government is keen on the involvement of the youth in and they are the key to moving agriculture from small holder farming to medium- large scale agriculture. The government will focus on strengthening the vocational training institutions especially those focusing on agriculture and sustainable land management. My government shall also increase its investment in climate change adaptation, smart agriculture and in agriculture technology with more focus on irrigation and interventions on tree planting and renewable energy.

There shall be challenges and limitations. The government expects a few dissenting voices. Any uprisings or violence shall be met with the full force of the government. Externally driven social media propaganda and abuse of civil society organization shall not be tolerated. My government welcomes partnerships from the international community. However, any interference and destructive criticism from them shall not be tolerated.

The Wotsalira scenario (Un-progressive)

By 2040, communities are struggling with poverty and have poor access to quality water and health services. Most of the youth who make up the largest proportion of the population will be used by politicians during campaigns and to further their political agenda throughout their terms. Land holding size and quality will have gone down and the farmers in the communities will produce low yield that only lasts them for a month. This is due to land degradation and huge focus and dependence on maize farming. The country will have acute levels of food insecurity.

The high population growth will put a strain on public service delivery. Corruption has resulted in scandals whose results are shortage in products and services like of drugs in hospitals and lack of farming inputs. NGO's/ government support to various community programmes will not equal the demand from the booming population.

There will be loss of biodiversity as a result of climate change and human encroachment. High unemployment levels, poverty and lack of income has led to destruction or overexploitation of natural resources through activities like selling charcoal/ fuel wood. People will be walking long distances to fetch water and collect firewood. Traditional medicines will be scarce. Culture practices and traditions will be a thing of the past. The actors in this scenario will be politicians, communities, government and NGOs

The Wokankha scenario (Struggling)

The Malawian President's speech to development partners, investors, trade unions, farmer representatives and technical experts

My Government has put in place land reform policies to address land fragmentation and invested in infrastructure (good roads, silos, etc.). Climate change policies have also been put in place and implemented in the context of the National Agricultural Strategy. However, the government lacks sufficient resources to invest in irrigation facilities. The donors had promised us grants but have not honoured their word to date.

Our strategic grain reserves have been mismanaged leading to waste of grain and this has contributed to the high levels of food insecurity. Measures have been put in place to overcome such short falls. However, climate change policies without the necessary investment in irrigation infrastructure are ineffective. It has become increasingly difficult to predict exactly how climate change would manifest itself. Climate change has worsened as evidenced by extended droughts and increase in floods.

To the private sector I ask: where is the investment you had promised if my government put in place land reform policy, and the necessary infrastructure?

To Development Partners I ask: what should we do now that climate change is worse than we thought? I had told you years ago about Malawi's need for irrigation infrastructure, but your priorities at the time were all about basic education. Now we have high numbers of educated youth in an undeveloped economy. The high unemployment levels have made them miserable and the country is experiencing high levels of brain drain.

To technical experts I ask: where are the technologies you promised for high yielding varieties not only in maize but also other crops?

To overcome these challenges we must move forward together with a new agenda which includes:

- A review of cooperation priorities, including honouring pledges;
- Improve governance to overcome barriers to doing business, accompanied by assurances by the private sector interest in diversifying economic activities;
- Incentives to retain skilled labour;
- Increase public research in agriculture diversification.

We hope that we can now move forward together with renewed vision to achieve sustainable development for Malawi. I thank you for your attention.