

Participatory Planning for Watershed Management

Participatory planning for Integrated Watershed Management (IWM) can be divided into four parts: 1) understanding who and how is using the watershed and its resources (**stakeholder analysis**), 2) understanding the context, challenges and opportunities (**context analysis**), 3) visioning intended change and 4) defining actions to take (**action plan**).

It is important to note that IWM is a multi-stakeholder process requiring **specific tools**. This concept note provides a **toolkit** containing the most simple and relevant tools for the steps mentioned above. The participatory planning process is normally coordinated by a facilitator (Box 1).

Participatory planning helps to create a sense of **ownership** by the primary stakeholders, so that the local community feels responsible for the management, implementation and maintenance of Sustainable Land Management (SLM) activities. This feature is crucial to the success and long-term sustainability of IWM. To create a sense of ownership, the community has to be involved in every step of the planning process - from context analysis to action planning. Furthermore, experiences show that if stakeholders reach agreement at the beginning, they will perceive the project as their own and stay actively engaged, thus increasing the chances of achieving the defined goals ([Borrini-Feyerabend et al, 2007](#)). Similarly, it is particularly important also to include less powerful individuals and groups (e.g. women, minorities, nomadic population) in the planning process to achieve gender inclusiveness and social equity.

Stakeholder analysis

The first step in IWM is to understand *who* is involved in the use of the natural resources in a given watershed and *how*. IWM depends on the different stakeholders (see Box 1) and on creating partnerships between them ([Bond et al, 2006](#)). **Stakeholder analysis** is a means to this end and is increasingly used in community-based approaches. The facilitator has to involve all the concerned actors in this process, paying particular attention to gender inclusiveness and social equity. If necessary, special actions are taken to increase inclusiveness (e.g. do separate stakeholder analysis with women's group).

Stakeholder analysis fosters collaboration between the different stakeholders and helps to reveal varying interests and objectives as well as existing conflicts and power relations at an early stage. It also unwraps information gaps (key stakeholders still unidentified, unknown cropland in the higher part of the valley, etc.) and lays the groundwork for further steps in the planning process ([Proscovia et al, 2003](#)).

The most popular tools for stakeholder analysis are the **Stakeholder Analysis Matrix** and **Stakeholder Mapping**.

Box 1: Role of the facilitator

The role of the facilitator is (Bolliger and Zellweger, 2007):

- To establish agreement on expected results,
- To propose procedures and choose methods,
- To guide and manage a group,
- To lead discussions,
- To motivate participants,
- To summarize contributions,
- To ensure results,
- To create a friendly atmosphere in the group.

The facilitator should also always remember his or her **neutral position** and aim to achieve compromise through dialogue. Every participatory planning process is different and requires specific actions! (As Elinor Ostrom recalls, panacea don't exist!).

Box 2: Stakeholders

Stakeholders are people, groups or institutions affected directly or indirectly by the natural resource and can therefore influence its management. A distinction can be made between **primary stakeholders** (people directly affected by the resource and its management) and **secondary stakeholders** (interested in the resource but not directly affected by it: government, NGOs, private sector, etc.) ([Bond et al, 2006](#)).

Box 3: Stakeholders Analysis Matrix (adapted from Brouwer et al. 2012)

Stakeholders	Interests - Stakes in the NRM	Contribution to successful outcomes of NRM	Power in decision-making (influential or not?)

Stakeholder Analysis Matrix

The Stakeholder Analysis Matrix makes it possible to classify the different stakeholders according to different criteria such as their interests, their possible contributions or their power in decision-making processes. Box 4 explains the steps to follow in a Stakeholder Analysis Matrix and Box 3 shows an example that can be adapted to local circumstances.

Stakeholder mapping

Drawing a stakeholder map helps to identify relations, conflicts and tensions between the different stakeholders involved in IWM, generating a better understanding of the context and the main actors involved. It also identifies any gaps and needs that require further investigation.

Stakeholder mapping has to be done with the communities involved in IWM to obtain their perception of *who* is using the natural resources in the watershed and *how*. Similarly, as IWM usually involves several communities (in particular if it concerns natural resources such as rangelands) the stakeholder map should be repeated in each community (or group of resource users). A stakeholder map only reflects the opinions of the people involved directly in the drawing, and it is therefore important to take different perspectives and perceptions into account. Box 5 shows the different steps in stakeholder mapping, Figure 1 gives examples of how to visualise relationships, and Figure 2 gives an example of a stakeholder map.

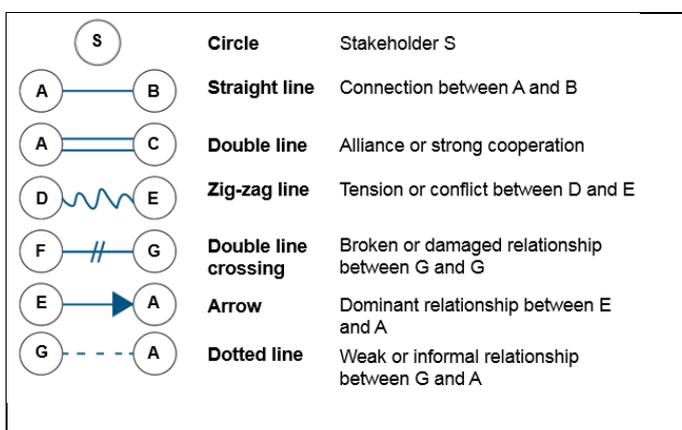


Figure 1: Visual representation of relation typologies (Adapted from ETHZ/Nadel, 2013 and [Marthaler and Gabriel, 2013](#)).

Box 4: Steps to establish a Stakeholder Analysis Matrix

1. List potential actors and try to find categories such as:
 - Resource users,
 - Donors,
 - Partners,
 - Possible opponents to the projects.
 Participatory tools such as focus-group discussion, brainstorming, etc. are useful for identifying actors and categories.
2. Find criteria to analyse these categories (interests, contributions, power and other relevant criteria for the analysis).
3. Discuss and analyse the criteria with the community.

Box 5: How to facilitate stakeholder mapping

Takes about 3 hours (can take longer, depending on the context).

1. Be clear about the scope of mapping and the time and periodicity (what is the issue at stake and for what moment do we draw the map?).
2. Explain the concept of direct and indirect stakeholder.
3. Identify all the people, groups and institutions affected or interested in the concerned resource (it can be easier if you start with a stakeholder analysis matrix).
4. Write the names of the stakeholders on different cards (one stakeholder per card), use different coloured cards for direct and indirect stakeholders. (Don't forget to count your own organisation as a stakeholder!)
5. Try to identify alliances, conflicts, etc. and use the symbols shown in Figure 1 to draw relationships among stakeholders.

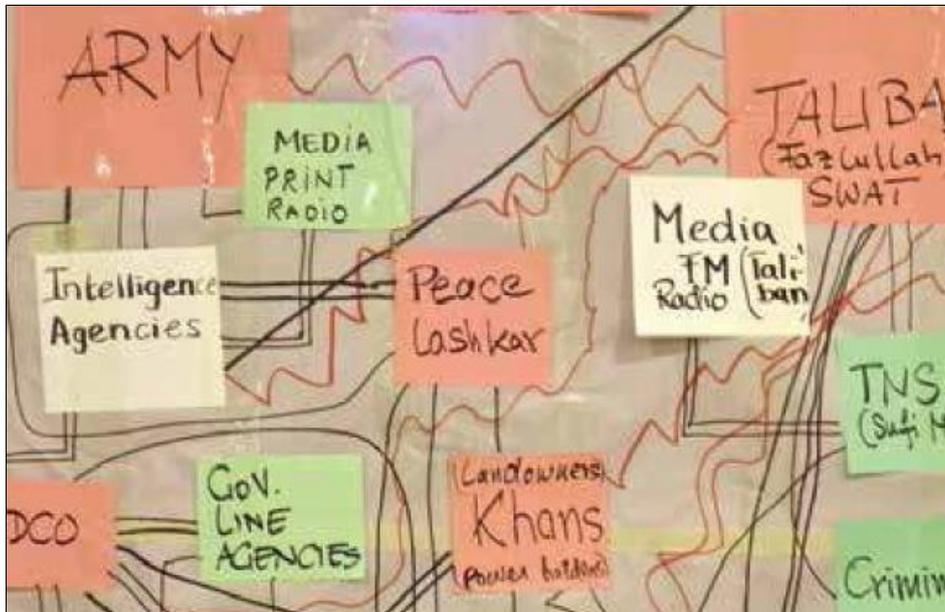


Figure 2: Example of a stakeholder map (↗ Marthaler and Gabriel, 2013)

Context analysis

Accurate context analysis is key in any planning process. As a matter of fact, planning for action has to start with a common understanding of the context and challenges to be addressed through strategic action.

Context analysis can be done through a **Participatory Rural Appraisal (PRA)**; for more information please refer to the ↗ [Concept Note on Participatory Rural Appraisal](#). Specifically, a **resource map** combined with a **transect walk** are useful tools for community-based watershed management planning. Additionally, **SWOT analysis** (Strengths, Weaknesses, Opportunities, and Threats) is commonly used in participatory planning, as it makes it possible to understand the strengths and opportunities in a community in order to maximise them. SWOT analysis is also a useful tool in action planning and as a way of designing strategies in line with local strengths, weaknesses, opportunities and threats. Find a detailed description in ↗ [SDC Shareweb on Knowledge and Learning](#).

Experimented facilitators can also choose to do a **participatory system analysis** to refine context analysis. It allows us to analyse and understand the context system and to introduce “systems thinking” in an applied way. However, participatory systems analysis is not as simple as using PRA tools or doing a SWOT analysis. More detailed information can be found in ↗ [Herweg and Steiner \(2002\)](#).

Problem analysis is an important part of context analysis. It seeks to identify problems (rangeland overgrazing) and issues (rangeland management) stakeholders face in their context. Problems are situations that require change, and issues are situations that block this change (↗ [Borrini-Feyerabend et al, 2007](#)). During the planning process, stakeholders need to reach an agreement on both in order to translate them into objectives. Problem analysis is therefore key to a) developing a common understanding of the problem to be solved and b) visualising cause-and-effect relationships between problems and issues (↗ [SDC/ETHZ/Nadel, 2013](#)).

Problem analysis is usually done using a **problem tree**, which is based on simple analysis of linear causality between problems. A **flow chart** is also useful for a more systemic approach, as it allows better understanding of complex and non-linear relations.

Problem Tree

A problem tree makes it possible to analyse a core problem at the time, while identifying and discussing its causes and consequences (see Box 5 for proceedings). It can be sketched in the shape of a tree (Figure 3) or it may represent a more schematic chain of causal relationship between problems (Figure 4). A problem tree is a useful tool for planning being easy and quick to perform. However, it analyses only one problem at a time and is based entirely on linear causal relationship, not allowing one to grasp the complexity of reality.

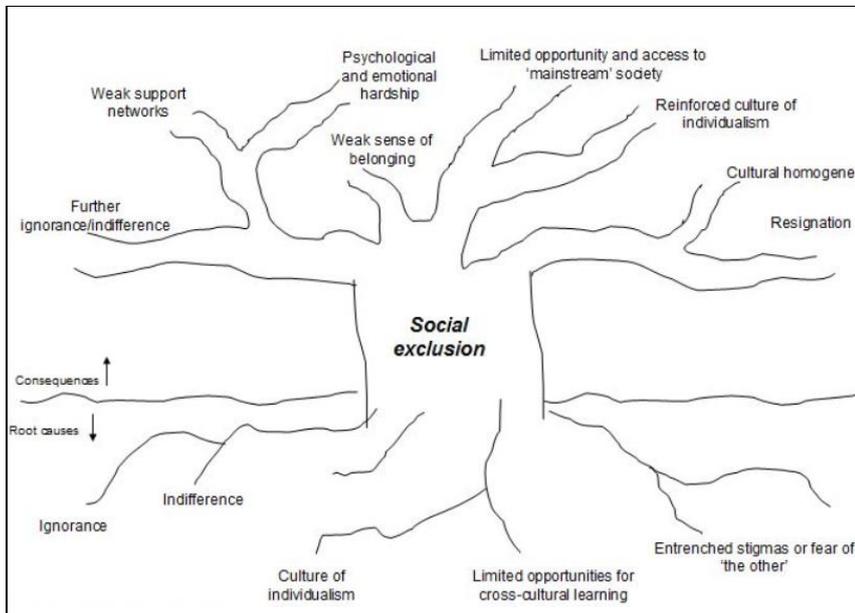


Figure 3: A problem tree (Source: <https://connectualise.files.wordpress.com/2010/05/problem-tree-analysis1.jpg>)

Box 5: How to facilitate a problem tree analysis

Around 30 mins per problem:

1. Explain to the group what a problem tree is by drawing one,
2. Start with an inventory of key elements/problems with community involvement,
3. Identify the core problem,
4. Identify direct causes of the core problem,
5. Identify effects/consequences of the core problems,
6. Draw the problem, causes and consequences in a problem tree as shown in Figure 3 and/or Figure 4.

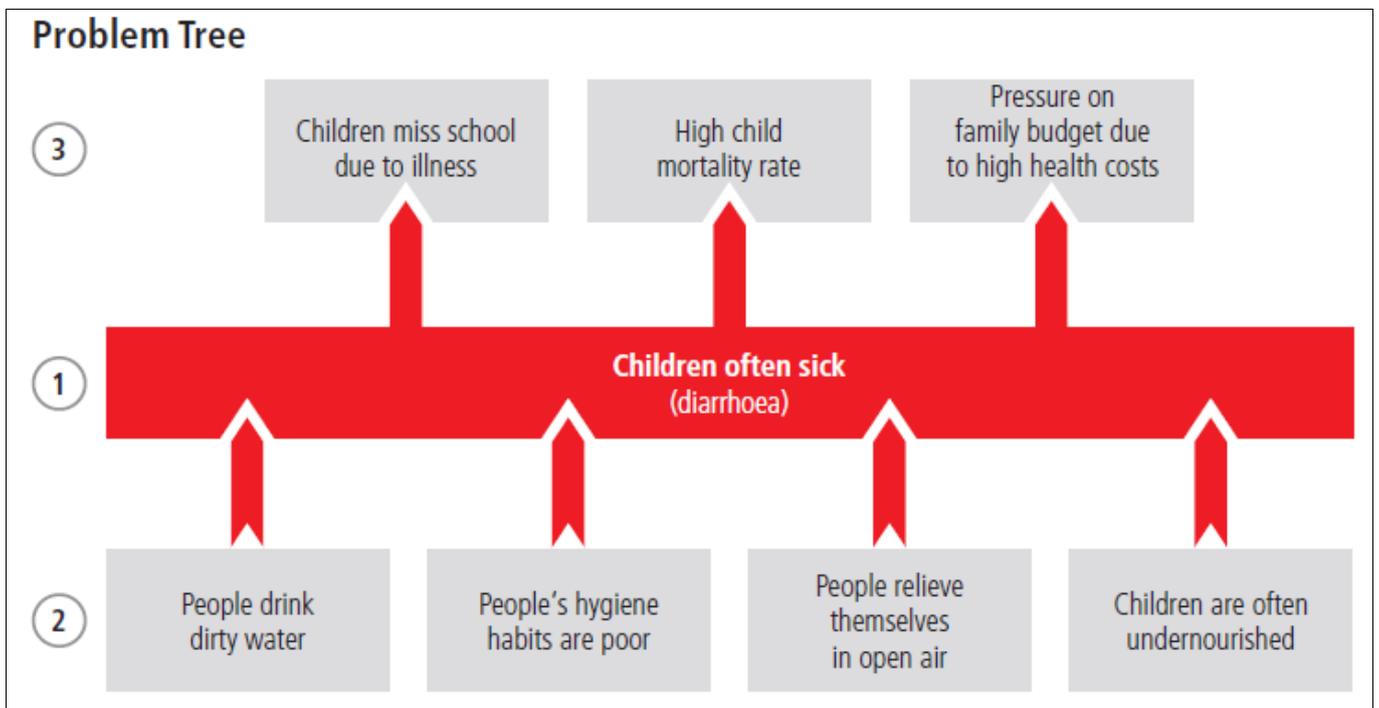


Figure 4: A more schematic problem tree (SDC/ETHZ/Nadel, 2013)

Flow chart

The facilitator can use a flow chart (either before or after the problem tree exercise) for a better understanding of this complexity. It allows for a more cyclical and systemic logic to analyse problems and their relationships and thus helps one to uncover problems that were not identified in the first place. Figure 5 shows an example of how complex relationships and context elements can be. Box 6 gives tips on how to facilitate this analysis.

Action plan

While the precedent steps determine *what* has to be improved, this last step is about defining a strategy for *how* to improve the situation, i.e. **translating the vision into action**. Deciding jointly the actions (activities or measures) that can be undertaken to reach the defined goals is called **action planning**. See Box 7 for a step-to-step action planning.

The following aspects are important in action planning:

- a. **What?** Vision of a desired future (already established in the precedent phase);
- b. **How?** Define which activities and measures to take to reach the desirable goals;
- c. **Who** is responsible for which activity?
- d. **When and where?** Define the timeline and area of implementation for the specific actions and measures;
- e. **Monitoring and evaluation.** Elaborate indicators to analyse and evaluate the effectiveness of specific actions and measures.

The most crucial element of action planning is indeed to decide on actions and measures to take (b. How?) and to understand the **assets, opportunities and resources** that might be available to do so. Different options and approaches should be analysed (also based on the opportunities and strengths of the communities, resulting from the SWOT analysis). Developing an action plan will be easier if the previous steps are carried out carefully. You can find typical SLM measures to include in IWM (e.g. structural, vegetative and management measures) in the [☞ Training Package on Low Cost Soil and Water Conservation](#). When deciding and planning actions, it is of the utmost importance to analyse the **feasibility** of any option based on criteria such as:

- **Technical and biophysical criteria** (e.g. available expertise, level of technology, soil and climate conditions);
- **Cost-benefit analysis:** How much does it cost? What are the available means?
- **Institutional and legal criteria:** Does the land tenure law allow one to build small check dams in this part of the watershed, for example? Should the local authority (Community Development Council) be involved? Are there any major conflicts that impede the success of a specific measure?
- **Social equity and environmental sustainability** [☞ Concept Note on Sustainable Land Management](#)
- Many other criteria can be formulated, depending on the context (find more on [☞ SDC/ETHZ/Nadel, 2013](#)).

Moreover, the action plan also has to define **indicators** for monitoring and evaluation (M&E) so as to measure progress and effectiveness of actions and measures. For more information refer to the [☞ Concept Note on Monitoring and Evaluation](#).

Box 7: How to facilitate action planning

Takes a half a day or more.

1. **Formulate objectives and goals** for each problem emerged in the context analysis.
2. Start to discuss each objective on by one.
 - a. *What* exactly has to be done?
 - b. *Who* could do this?
 - c. *How*?
 - d. *When and where*?
 - e. How to do *Monitoring and Evaluation*?
3. To select options, establish a list of **feasibility criteria** (effectiveness, costs benefits, resources, etc.). Score the various options and discuss them.
4. Are there any negative impacts? Examine lessons learned from similar projects in other watersheds. If necessary, call an **external expert** to support the community on technical decisions.
5. Select **indicators** that can monitor the outputs of each action.

Further reading and references

- Bolliger, E. and Zellweger T., 2007: Facilitation – The Art of Making your Meetings and Workshops Purposeful and Time-efficient. AGRIDEA, Lindau, Switzerland.
- Bond, I., Davis, A., Nott, C., Nott K., Stuart-Hill and G., 2006: Community-based Natural Resource Management Manual, Wildlife Management series. NORAD and WWF-SARPO Regional CBNRM Project. Available at: http://assets.wwf.no/downloads/cbnrm_manual.pdf
- Borrini-Feyerabend G., Farvar, T., Nguingiri, J. C., Ndongang, V. A., 2007: Co-management of Natural Resources: Organising, Negotiating and Learning-by-Doing. GTZ and IUCN, Kasperek Verlag, Heidelberg (Germany). Retrieved from: http://www.conservation-development.net/rsFiles/Datei/CoManagement_English_Auflage2.pdf
- Brouwer, H., Groot Kormelinck, A., van Vugt, S. 2012: Tools for Analysing Power in Multi-stakeholder Processes – A menu, Thematic learning programme on power in MSPs, supported by PSO. Retrieved from: http://www.wageningenportals.nl/sites/default/files/resource/menu_of_tools_for_tlp_power_in_msps_v3.pdf
- ETHZ / Nadel, 2013: Alternative Tools for Stakeholder Analysis. Link to the e-learning course Results Based Project Cycle Management, A Vade Mecum for People in Development Cooperation, Module 2. Available at: <http://elearningpcm.ch>
- Herweg, K. and Steiner, K., 2002: Impact Monitoring & Assessment, Instrument for Use in Rural Development Projects with a Focus on Sustainable Land Management. Volume 2: Toolbox. CDE & GTZ. Available at: <http://portals.wi.wur.nl/files/docs/ppme/impactmonitoringandassessment.pdf>
- Marthaler, E., Gabriel, S., 2013: Field Guide: 3 steps for Working in Fragile and Conflict-affected Situations (WFCS), HELVETAS Swiss Intercooperation and KOFF. Available at: http://assets.helvetas.org/downloads/field_guide_working_in_fragile_and_conflict_affected_situations.pdf
- Proscovia Mutekanga, F., Kessler, A., Leber, K., Visser, S., 2013: The Use of Stakeholder Analysis in Integrated Watershed Management: Experiences From the Ngenge Watershed, Uganda. Mountain Research and Development, 33(2), 122–131. Retrieved from: <http://www.jstor.org/stable/mounresedeve.33.2.122>
- SDC / ETHZ / Nadel, 2013: Planning for Results. Result Results-Based Project Cycle Management, A vade mecum for people in development cooperation, Module 2. Available at: <http://elearningpcm.ch>



2015. This document is made available under a [Creative Commons Attribution-Non-Commercial-ShareAlike 4.0 International license](https://creativecommons.org/licenses/by-nc-sa/4.0/)

This publication has been made possible through financial support from the Swiss Agency for Development and Cooperation SDC. The content, however, is the sole responsibility of HELVETAS Swiss Intercooperation.

 Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC