CoOPLAN multi-scale participatory planning process: Applications in Uganda and elsewhere

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Chapter 17

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This chapter introduces CoOPLAN, a specific approach for participatory planning aiming at enabling a group of participants to co-construct together a collective action plan to change together in their environment. The chapter provides a detailed description of the various steps of the CoOPLAN process and illustrates how it was implemented in a specific case in Uganda. The chapter also includes a comparative discussion of the implementation of the CoOPLAN approach in four cases (Uganda, metropolitan France, New-Caledonia, Tunisia). It highlights the modifications that were made to adapt the approach to the specific context of each case.

Participatory planning, as the design of an action plan by a group, is the essence of strategic decision-making for governments, business or any community. It aims, initially, at anticipating and organising a complex set of actions, responding to stakeholders' needs and coping with an uncertain environment. It also structures stakeholders' commitments, identifies ways to share resources, builds a vision of a common evolution and hence strengthens social links. The planning process should obviously produce a plan; but it is a key social learning process. It has its own transformative value (Smith, 1973) by engaging participants in sharing and aligning their expectations, their options' proposals, and their understanding of the future. It helps discussing on resources, dependencies, commitments, risks, solutions and may thereby set conditions for a more resilient and adaptable society. Planning and adapting become complementary: the future adaptation processes are themselves planned, by including a monitoring and steering apparatus.

In this chapter, we introduce CoOPLAN, a specific approach for participatory planning extended from participatory modelling. CoOPLAN has been developed by researchers from the G-EAU joint research unit "Water Matters" in Montpellier, France, and extended internationally since 2006. The second part of the chapter details how the CoOPLAN approach was implemented in a specific case in Uganda. The third part of the chapter presents a cross-reading of four CoOPLAN processes implemented in different contexts: Uganda, France (mainland), New-Caledonia and Tunisia. The chapter compares the four processes and highlights the adaptations they led to.

⏩ Components and steps of the CoOPLAN process

The implementation of a CoOPLAN process includes various components, steps, actors and tools, which we will present here. As stated in the introduction, the overall aim of a CoOPLAN process is not only to produce a plan, but also to strengthen the social ties between participants and thus create favorable social conditions for implementing the plan. Formally, CoOPLAN is a participatory modelling process, which uses two meta-models[1]:

– one to let participants propose actions, through an "action sheet", pre-instantiated based on a common action meta-model for all CoOPLAN process, and later instantiated by the participants in many "action proposals";

– a second one to let them structure action proposals in plans, through an "integration matrix", which follows itself a meta-model, and is pre-instantiated in a specific matrix for this application case.

Figure 17.1 summarises the components of the CoOPLAN process. The process includes one or more stakeholder groups who will co-design one or more plans. This is specified below. Stakeholders include a "pilot" who is the participatory process initiator and leader, and a "pilot group" which gathers supporters of the pilot.

The pilot, and eventually other stakeholders, start by organising the process (see step 1 in table 17.1). This implies selecting and engaging participants, preparing logistics and materials and communicating about the process (see chapter 9 for more details). The first step in building the plan is for participants to identify common objectives, stakes or goals (step 2). It is also during this step that they define the spatial, temporal, thematic and scale boundaries of their future plan. For this, they can draw on existing diagnostics, if any. The participants then propose various proposals of actions to achieve these objectives (step 3). The resulting list of action proposals is shared with all participants. These action proposals are then sorted into thematic categories (e.g. agriculture, health, education, etc.) (step 4), and discussed and detailed through the filling of "action sheets". An action sheet is a material instance of an action "meta-model", i.e. structured components allowing to build and use a model for a given purpose. The action sheet is one of the central components of the CoOPLAN approach (along with the integration matrix presented below). The same meta-model is kept throughout the whole process. The action sheet allows to specify (1) the resources needed to carry out the various action proposals, with an estimated intensity (e.g from 0 to +3) of this requirement, (2) the expected impacts of these actions, also with an intensity (positive or negative, or both), (3) the scales at which the actions are to be implemented, and (4) where and when the action is to be carried out (figure 17.2). The elements of this action sheet, i.e. the choice of resources, impacts and scales mentioned in it, can be made by the participants themselves or in advance by the pilot, the pilot group and/or experts (step 5). These "action sheets" are then completed individually or in small groups (step 6), followed by a comparative dialogue during which participants compare the various action proposals with each other and improve or modify the content of the related action sheets (step 7). This database of action proposals can then

1. A meta-model, in this chapter, is a set of types of concepts and rules, or grammar, which allow to build a given type of model. In practice, it can be a language or a method. Providing a meta-model to modelers steer them toward a given family of models, for some repeatable purpose.

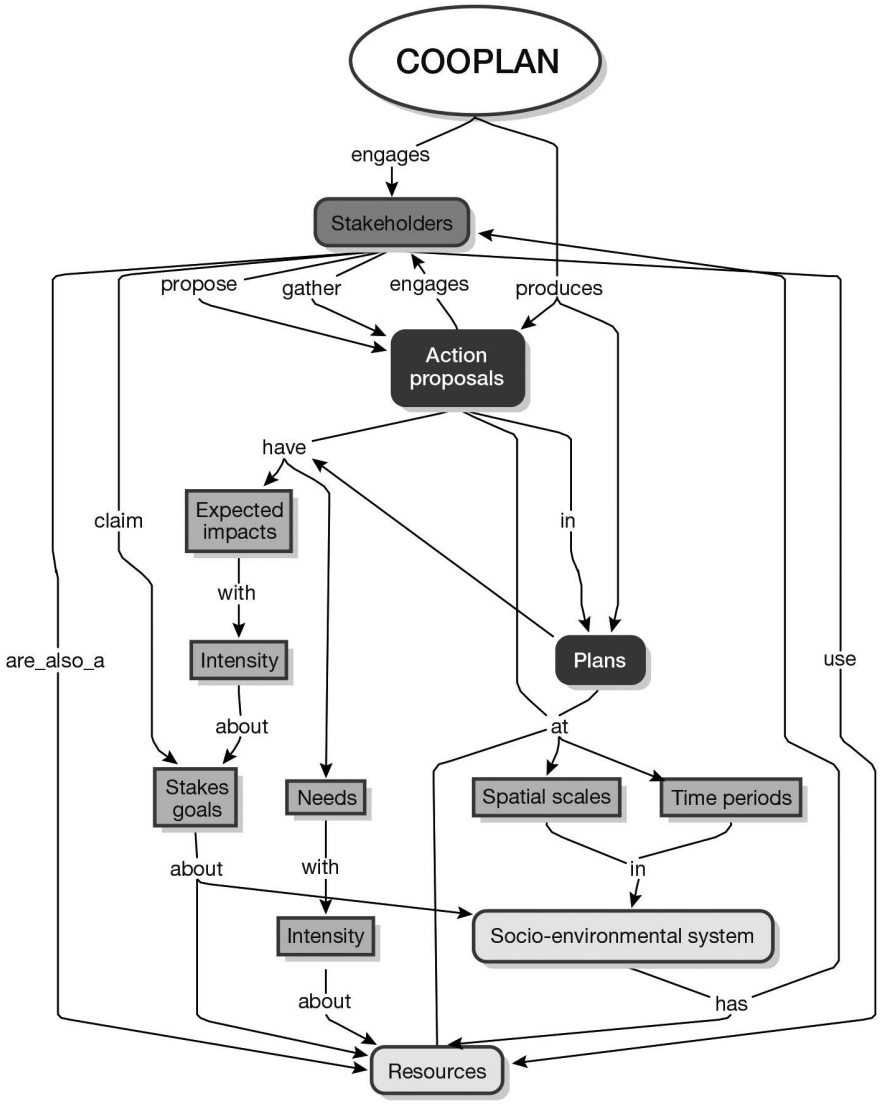


Figure 17.1. Components of the CoOPLAN process

be analysed (by the pilot, experts and/or participants) to check the consistency of the actions between them (step 8). For example, participants will check that action A does not require a larger budget than action B, whereas the participants had evaluated them on an equal budget basis.

The group then moves on to constructing the plan itself. To do this, participants select the action proposals that they feel are most relevant to achieving the desired objectives, and structure them in a logical, temporal and spatial manner in a first version of the plan (step 9). This structuring is based on CoOPLAN's second central component, which is also a meta-model: the integration matrix. The integration matrix is an empty grid that incorporates the various components of the action sheet: resources,

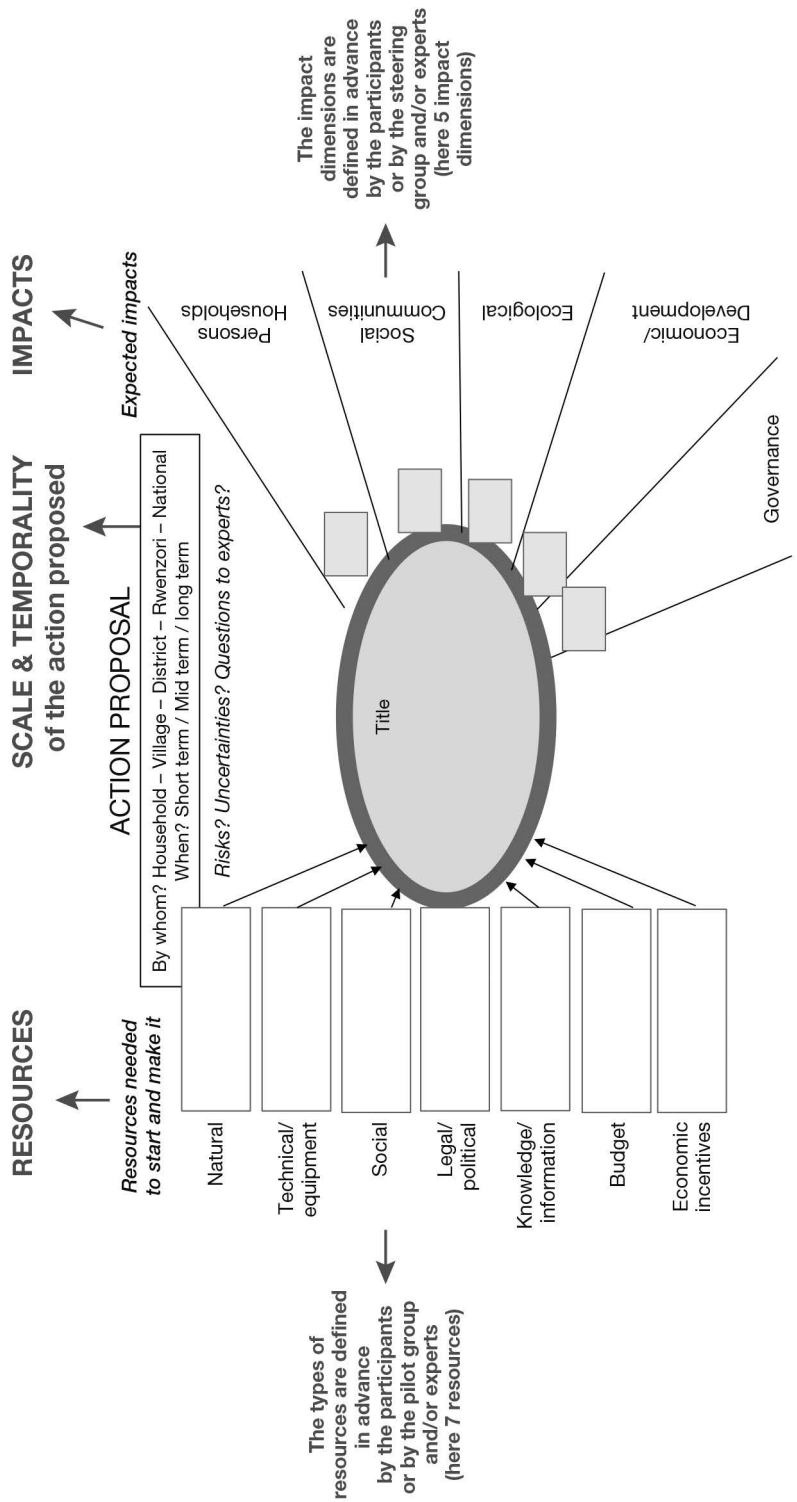


Figure 17.2. Example of action sheet and its components (resources, scale and temporality, impacts)

impacts, scale and temporality of action implementation (short-term, mid-term, long-term, see figure 17.3). The matrix is accompanied by a spatial map enabling the actions to be precisely located when relevant. Stakeholders position the action proposals selected in the matrix according to the timeframe and scale at which they are to be implemented. Then, for each target scale, on the basis of the information entered in the action sheets for the selected proposals, they assess the intensity of the global resources' requirements, column after column. In the same way, they assess the impact of the various actions on the different impact dimensions defined beforehand. The impacts of the actions can be positive or negative, or kept positive and negative if different arguments are combined. For example, the creation of a hillside lake can increase available water resources, but it can also destroy vegetation, create siltation or restrict access to water for users who do not have access to the lake. Looking at the matrix, for each target scale, participants then assess the feasibility (resources requirements) and efficiency (achieving the expected impacts) of their plan (step 10). For instance, if they look at the natural resources column, and see that many actions selected will require a lot of water or land, they must discuss and adapt the actions, withdraw some actions or add additional ones (e.g compensation, provision) to make sure that the plan is feasible and efficient.

Once they have obtained a plan that seems feasible and efficient, participants can test this plan in a participatory simulation (e.g. role-playing game with WAG) or by simulating the impact of extreme or "stress-test" scenarios and discussing their effect (e.g. what if a flood or a migratory wave occurs in the area?). They can adapt the plan accordingly. If several plans were produced by different groups, participants can then integrate and choose one final unified plan by comparing globally all plan alternatives, hybridising among plans or choosing one (step 12). They then need to re-assess the final plan as in step 10. The final step involves communicating on the final plan and formalising a commitment act from participants to symbolise their future involvement in the implementation of their plan (through a signature or else).

Most of the steps outlined above can be carried out in face-to-face workshops or online. However, given that the process aims to strengthen the social ties between participants, it seems necessary for certain key steps to be carried out face-to-face (notably steps 7, 9, 10, 11 and 12). Similarly, each of these steps can be more or less participatory, i.e. carried out by the pilot alone, by all participants and/or involving other stakeholders (pilot group, experts, etc.). These choices are made when engineering the CoOPLAN process (see chapter 9).

In summary, CoOPLAN is a deliberative, integrative and structured plan design mechanism with contradictory evaluation. CoOPLAN does not replace multiple technical-scientific expertise, it is complementary. It is not a multi-criteria method of group decision-making, but an assisted social protocol for discussing collective action. There is no aggregative or arithmetic process for exhibiting a better solution. Participants have to gather proposals and discuss them with the support of their own products. It is impossible, in principle, if the process is truly participatory, to know or impose in advance the diverse dimensions or sectors of the future actions, as these could have a wide scope linked to the participant's visions. Thus, the method is totally open in regards to the scope of proposals made, which can be technical, social, organisational, etc. Nevertheless, some steps indubitably constrain

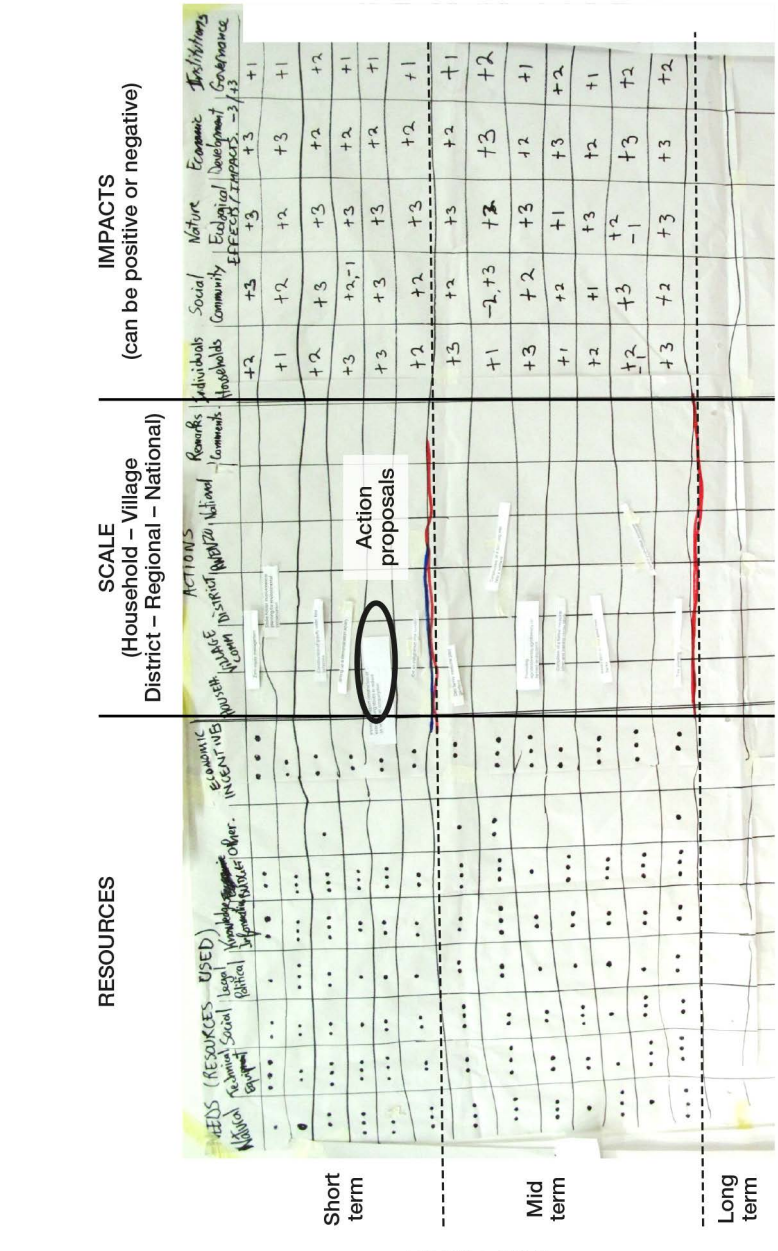


Figure 17.3. Example of integration matrix and its components (resources, impacts, scale, temporality)

the "spectrum of possible" that emerge in the process, notably step 1 (selection of participants and modes of engagement), step 2 (framing spatial, temporal, thematic, and scale boundaries of the future plan), step 4 (clustering of actions) and step 5 (elaboration of the meta model). To reduce the biases induced by these steps, it is possible to carry them out in a participatory way, but this can also increase the duration and cost of the process as a whole.

We have provided here a detailed description of the various steps of the CoOPLAN process (table 17.1), which can give the impression of a long and complex process. Nevertheless, several of these steps can be carried out in the same workshop, as we illustrate in the following section with the example of Uganda. Furthermore, if the process is to strengthen social ties between participants, it needs to be spread over a period of time, but not over several years, otherwise it risks creating participation fatigue. A more detailed description of the CoOPLAN process in Uganda can be found in Hassenforder (2015).

Table 17.1. Detailed steps of the CoOPLAN process

#	Step	Goals	Actors
1	**Organisation**	Organise the conditions of the process	Pilot
2	**Normative framing**	Define boundaries and objectives, what the plan aims at changing	Pilot + Pilot Group or all participant (if inclusive participation)
3	**Action proposals**	Get participants to propose ideas of actions	Pilot + ALL
4	**Actions' synthesis**	Organise action proposals in thematic clusters	Pilot + experts
5	**Common framework for describing action proposals**	Select relevant scales, resources and impacts for describing action proposals (i.e. define the content of the action sheets)	Pilot + pilot group + experts
6	**Detailed actions' description**	Fill the action sheet for each action proposal	Pilot + pilot group or ALL
7	**Comparative dialog**	Share and improve action sheets	Pilot + ALL + experts
8	**Consistency/ Harmonisation**	Global comparison of action proposals to check consistency	Pilot + ALL + experts
9	**Plans' design**	Select and gather actions in a logical, temporal, and spatial manner to build an action plan	Pilot + ALL
10	**Plans' assessment**	Analysis of the plan to assess feasibility and efficiency	Pilot + ALL
11	**Testing plans**	Test plans by simulation or robustness analysis	Pilot + ALL
12	**Plan selection**	Integrate and choose one final unified plan	Pilot + ALL + experts
13	**Finalisation**	Officialise the final plan	ALL

⏩ Case: planning for integrated natural resource management in Uganda

In the European project Afromaison[2] (2011-2014), researchers used CoOPLAN to support integrated natural resource management in five study areas, including in the Rwenzori Mountain range in Uganda. The Rwenzori region is located in western Uganda, at the border with the Democratic Republic of Congo (Figure 17.4). It covers 14,000 km^2 with a population of about 2,4 million. This region of mountain tropical forests has several environmental assets, with fertile soils. Predominantly inhabited by smallholder farmers engaged in subsistence farming, it also hosts some commercial farming, and a significant touristic activity.

Inhabitants' subsistence practices such as bush burning, fuel wood harvesting and unsustainable timber harvesting have led to deforestation, soil and ecosystems degradations (Plumptre, 2002). Combined with climate change and high population growth rates, it led to food shortages and disease outbreaks (Migongo-Bake and Catactutan, 2012). This makes the region economically vulnerable with a majority of people below the poverty threshold (Ubos and ILRI, 2007).

Uganda has a fairly comprehensive list of natural resource management legislation and policies. From 1992, natural resource management was devolved to the local governments (Onyach-Olaa, 2003), shaped by a five-tier structure (district/county/subcounty/parish/village). Environment committees and officers are responsible for community engagement and implementation of natural resource management laws. However, lack of governmental funds, heavy workloads and corruption impede adequate implementation of this legal framework. Other important issues include problems of land tenure due to the reinstatement of the former traditional kingdoms in 1993. Few international donors are still active in the region. Since 2003, regional civil society organisations, later joined by other stakeholders, have gathered under a coalition called the Rwenzori Regional Development Framework (RRDF, 2011).

This CoOPLAN process was initiated, piloted and facilitated by six local researchers (also farmers themselves) from Mountains of the Moon community University (MMU) in Fort Portal, supported by French and Belgium researchers of the Afro-Maison project. Local facilitators originate from the area, belong to the cultural and linguistic groups and are involved in natural resource management through a pre-existing network of community organisations (with farmers field school and other training or sensitisation activities). Five "rapporteurs" were also hired to monitor the process in the communities.

The European researchers proposed a set of initial methodological trainings for the Ugandan partners; which allowed them to implement CoOPLAN at both the regional and the local level, with a joint dialogue. The aim was to support regional and local stakeholders in the co-construction of a multi-scale natural resource management plan. European partners have supported the Ugandan partners with a very restricted direct intervention with participants.

2. AfroMaison website: http://www.afromaison.net (consulted April 10, 2015).

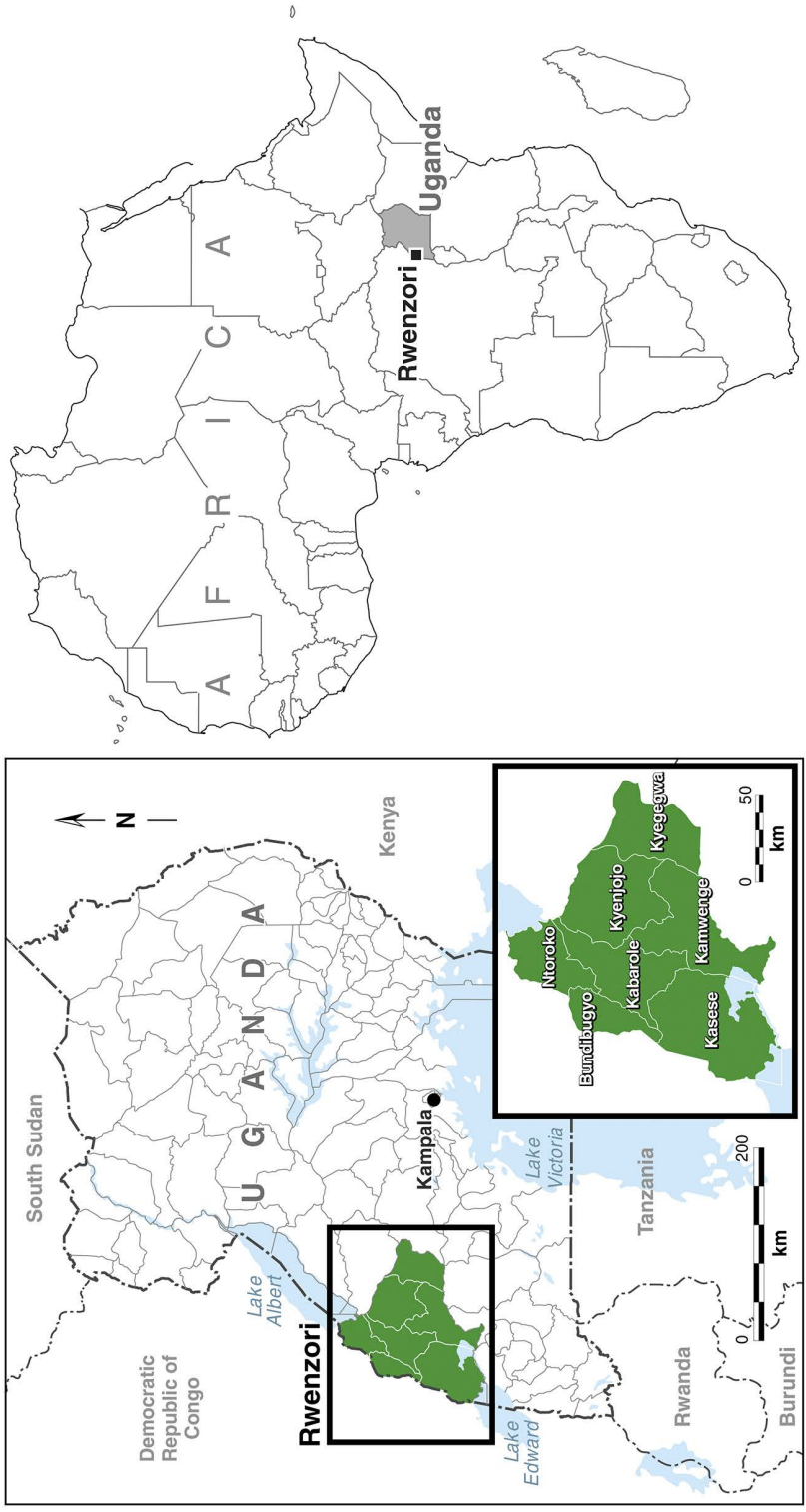


Figure 17.4. Map of the Rwenzori region case study area (Source: Google (2014) adapted by Clive Hilliker)

The regional process

The participatory planning process was implemented with the regional group of participants through a series of four two-to-three days workshops over 16 months, from April 2012 to July 2013. In total, 125 participants were involved, mainly representatives of regional governments, communities, civil society, universities, private companies, media and kingdoms authorities.

The first workshop, in April 2012, focused on steps 2 to 10 of the CoOPLAN process (see table 17.1 and figure 17.5). Step 1, organisation, had been agreed upon prior to the workshop. During Day 1, participants were divided into three mixed-groups. Each group started by identifying a territorial objective through a scenario-building exercise (step 2), leading to the common objective: "sustainable natural resource management for socio-economic development". At day 2, participants reflected on indicators that could be used to assess successful progress in the achievement of the territorial objective. This was followed by a brainstorming to identify action proposals addressing the territorial objective (step 3). Participants shared all their action proposals on the common board. Facilitators grouped proposals by categories (step 4). Here, the formatting of the common action description framework (step 5) had been made by the pilot group prior to the first workshop. After step 4, participants claimed for editing some proposals. They filled one action sheet per proposal, specified needs and impacts (step 6), and published the result on the board. Experts were also invited to discuss the actions. Day 3 started with the market place (step 7) during which participants could revise the action sheets with one or two other participants. This step was set in "speed dating mode", also called "market plaza", i.e. four rounds of ten minutes each. Day 3 continued by building action plan proposals, in three mixed groups, assembling some actions proposals (steps 8 to 10). They organised the selected actions in time, space and organisational scales using the CoOPLAN matrix and a map of the Rwenzori region. They finally compiled on the matrix the required resources and expected impacts of all actions. Reading the columns, they could question the feasibility and efficiency of their plans, and identify related implementation gaps and risks. This first workshop ended with an evaluative feedback on the three plan proposals.

The second workshop, in August 2012, was dedicated to testing and comparing the three plans previously established (step 11). Participants reflected on the three plans as a whole group and in smaller settings. They played two rounds of "Mpan'Game", a role-playing game developed specifically with the pilot group to explore the situation and actions. It exhibits issues like river dynamics, consumption of natural resources, pollution, human health, livelihood, upstream-downstream conflicts, and most traditional activities. The objective was to foster reflection on existing social and environmental issues in the region. On day 2, participants tested the plans using the game. Actions included in the plan proposals had been transformed into action cards testable in the game. Not all proposal being implemented, e.g. social transformation or education, they were kept in the game dynamics as triggers for reflexion. This simulation resulted in several changes in the plan proposals. The workshop ended with a debriefing about the game's and plans' improvement as well as a discussion on and commitments towards the follow up of the process (preparation of steps 12 and 13). It should be noted for later discussion that here CoOPLAN was followed by a game session.

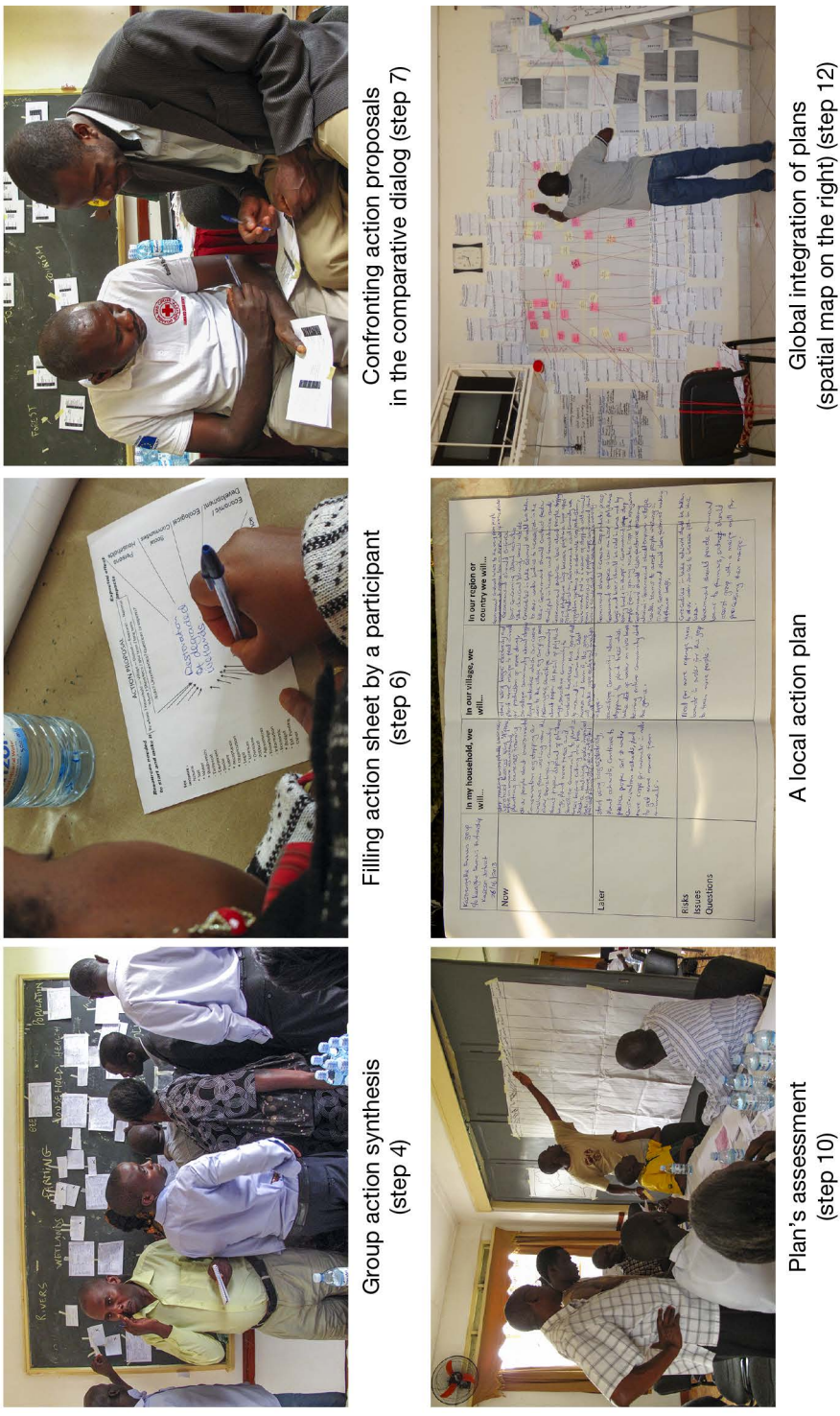


Figure 17.5. Overview of several steps in the Uganda process

The third workshop, in January 2013, involved regional decision makers in the process. The chairman, speaker, ministry in charge of rural production, and environment officer of each of the seven districts of the Rwenzori were invited. Their attendance was expected to foster the further implementation of the plan. In this one-day workshop, the participants were briefed on the previous outcomes, played the game and discussed about their future involvement in the process.

The local scale process

In January 2013, the process started also at the local scale. Some 32 "Community Process Facilitators", members of the local agricultural extension network "SATNET", were trained on the CoOPLAN process, Mpan'Game facilitation and monitoring and evaluation (nov. 2012 to april 2013). Contrarily to the regional process, the game was used first, to introduce the issues and help emerging proposals, followed by an assisted CoOPLAN version. Between January and June 2013, each Community Process Facilitator organised one to seven game-playing workshops with community members. 35 communities were involved with an average of 17 participants per community. Among the 597 participants, 46% were women, 38% were men and 17% were children. The vast majority were farmers and pastoralists. These local groups were scattered throughout the Rwenzori region, and in different ethnic groups.

These game sessions, followed by long debriefings, were used to foster discussion and suggest innovative actions among local communities to improve their livelihoods and better manage their natural resources. Monitoring and evaluation showed that the workshops significantly raised participants' awareness about their social-environmental systems. In June 2013, one workshop per group was dedicated to the development of a local plan using the knowledge and the action proposals shared during game sessions. A total of 27 local action plans were developed following a total of 135 local workshops. Among the 35 communities, eight stopped the process or could not draft their plan in time over the planned period, due to the level of engagement of the facilitators, or to the willingness of the local groups, never forced to deliver.

A fourth and final workshop was held in July 2013. Participants included the regional group of stakeholders, 26 Community Process Facilitators representing the communities and 13 district leaders. The objective of the workshop was to merge the three regional plans and the 27 local plans into one "Rwenzori regional INRM plan" and to discuss its implementation (steps 12 and 13). Participants were divided into five mixed-groups of 10 to 15 people. The five groups were: upland, midland, lowland, cross-regional scale and one of decision makers who had never played the game. The game was used as the spatial and functional substrate for the discussions, projecting onto it issues from CoOPLAN. Each group, except the decision makers, prepared a plan for its dedicated spatial scale by selecting actions from existing local and regional plans. This was followed by a discussion within and across groups on the feasibility and efficiency of these four merged plans. Facilitators then compiled and digitised the four plans into one including the four spatial areas: upland, midland, lowland, cross-regional. Next, in small groups, the participants discussed the implementation of the regional plan by filling-in "action implementation templates" specifying how each action would be implemented, with what resources and by whom. These sheets were then placed in an implementation matrix, which is a standard extension of the

core CoOPLAN framework. A formal commitment ceremony to the plan was set at the end, with individual statements of action by participants.

Ultimately, one last workshop was held in each community between July and December 2013 to make their own local implementation plan and provide their feedback on the "Rwenzori regional INRM plan".

At the regional scale, a "high-level policy meeting" was ultimately attempted in July 2013, organised by facilitators, but convened by the district authority itself. The objective was to increase ownership and commitment of regional decision makers towards the plan implementation. However, partly due to short-notice, attendance to this meeting was low. Participants suggested a follow-up process, yet by that time the AfroMaison project had finished and no commitment was made by the Kabarole district to fund a further meeting, or formalise its institutional form.

At the end of the process, in May 2014, the Rwenzori Regional Development Framework (RRDF, 2011), active since the beginning, endorsed the plan. The coalition took over the coordination and monitoring of plan implementation. Members of the coalition agreed to implement parts of the plan depending on their scope of work, such as agriculture, water, community organisations or education. Further feedback from the Ugandan partners expressed that some new actions had been started at various scales, but the informal quality of this ex-post assessment, outside the project framework, does not allow to produce relevant data on the implementation process.

However, several local "Mpanga clubs" were created, with participation on a voluntary basis. These clubs display environmental information, create environmental datasets, provide a forum for people to be involved in natural resource management, and link up with the RRDF coalition.

This CoOPLAN process was the first of this social and political extension, engagement intensity and duration, held ever. In the next part, we compare this CoOPLAN process with some others organised since.

⏩ A comparative assessment of four cases

Among 21 operational implementations of CoOPLAN, we compare four significant and contrasted ones, in France, Tunisia, New-Caledonia and this Ugandan case (table 17.2).

After a precursory development in Bulgaria (Daniell *et al.*, 2010), the experience in Uganda was the first implementation of CoOPLAN at multiple scales with a large number of participants (>700).

This experience helped developing further the methodology, which was then adapted to the context of Drôme (France), New Caledonia, Tunisia and others not mentioned here. In this section, we highlight the main differences, methodological evolutions and learnings from these different experiences.

Objectives and context of the processes

A first difference lies in the initial theme and objective of the plan: in the cases of Uganda and Tunisia, the plans aimed at "natural resource management" (Uganda) and "integrated territorial planning and development" (Tunisia). They therefore

Table 17.2. A comparison of four CoOPLAN cases

	Uganda, Rwenzori	**France, Drôme** (see Chapter 20)	**New-Caledonia** (see Chapter 19)	**Tunisia** (see Chapter 7)
Goal	Natural resource management plan	Integrated water management plan with citizens ("SAGE" policy (1)	Toward the country water policy and management	Integrated territorial planning and development in six intervention areas
Pilot	Community university & local authorities	River syndicate	Government, inter-sectorial	Ministry of agriculture
Period	2011-2014	2016-2018	2018-2019	2018-2023
Support	AfroMaison project	SPARE project (2)	/	PACTE programme (3)
Region typology	Mountain tropical	Mediterranean mountain & river	Insular, tropical humid	Arid and semi-arid
Target area	14,000 km^2	1,640 km^2	18,572 km^2	666 km^2
Target population	All inhabitants of the area	All inhabitants of the river basin	All inhabitants	All inhabitants of the six intervention areas
# participants	597 (local scale) 125 (regional scale)	344 (122 on CoOPLAN)	500	4,550
# CoOPLAN sessions	27 (local scale) Three (regional scale)	3	One national (350 pers) + six local (25 pers each)	One in each local territory (61 in total) Seven in each intervention area (regional scale, 42 in total)
# CoOPLAN action proposals	559	189	708	11 583
# CoOPLAN plans	27 local plans communities + three regional plans	One regional plan	One national policy	Six regional plans
Status/impact of the plan	Re-used in design of regional planning.	Used to support the formal institutional plan	State policy enforced.	Implemented. Funded through aid program.

(1) SAGE = Schéma d'Aménagement et de Gestion de l'Eau = Water Development and Management Plan = French planning document elaborated in a collective way, for a coherent hydrographic perimeter
(2) SPARE project (2015-2018)= Strategic planning for alpine river ecosystems, European Interreg Project, http://www.alpine-space.eu/projects/spare/
(3) PACTE Program (2018-2014) Climate Change Adaptation Program for Vulnerable Rural Territories in Tunisia, funded by the French Development Agency (AFD) and the French Facility for Global Environment (FFEM)

had an initial ambition that was broader and more integrative than the cases of the Drôme and New Caledonia, which were focused on water. However, the integrative features of CoOPLAN has nevertheless opened up the spectrum of proposed actions, often more than the initial formal framing of the process, giving space to lay people to express other concerns. The challenge in Uganda and Tunisia was also to mobilise actors from different sectors (environment, energy, industry, education, health, etc.) through the planning process and to encourage cross-sectoral cooperation in order to adopt a more integrated territorial approach. Without being explicit, a similar dynamic has been established in New Caledonia around the water focus, mobilising other administrative sectors. In Tunisia, the Ministry of Agriculture only committed to financing the actions of the plan that fell directly within its mandate but it mobilised other public and private actors in the process in order not only to create a link with these actors, but also to secure financing for the other actions of the plan. In the Drôme, the regulatory priority of the water management plan over other territorial policies (e.g. Territorial Coherence Scheme – SCOT) also induces a constrained intersectoriality.

A major difference between the four cases is the institutional anchoring of the participatory planning exercise. In Uganda, the participatory planning process was conducted within the framework of a development project (AfroMaison). The process was not directly linked to the institutional planning or budgeting cycles, thereby contrasting with the other three cases. Institutional and administrative actors were involved in the process, but they were not the pilots of the process. As a result, ownership of the plan by public actors was lower. The ministry of water and environment accepted to use the Mpan'Game as a participatory tool for community sensitisation during the process of catchment management planning for quite a number of rivers in Uganda. But few other actions in the plan that were to be implemented by public actors were subsequently implemented. Most of the actions that were implemented were the actions supported by SATNET and MMU. Although two of the three other CoOPLAN processes were also supported by research and/or development projects, they were nevertheless directly part of an institutional planning calendar and cycle: the revision of the water management plan for the Drôme case, the national strategy for the conservation and protection of agricultural land in Tunisia and the establishment of the shared water policy in New Caledonia. Thus, in these three cases, it was agreed from the outset that public authorities would support and even finance the implementation of the plan. This was formulated in the initial collaboration agreement of the supporting projects. This last point is also a major difference between Uganda and the other cases, since in the case of Uganda, no funding was provided for the implementation of the plan. In the three other cases, a budgetary envelope was provided for the implementation of all or part of the plan (public funding for Drôme and New Caledonia, project and public funding for Tunisia).

Finally, the articulation between the participatory process and the institutional calendar was also different in the three cases of Drôme, New Caledonia and Tunisia. In Drôme, the participatory process took place before the institutional revision of the water management plan. Citizens followed similar steps than the public actors, but two years ahead. Then, the public actors were able to use the citizens' productions to build the revised water management plan. In New Caledonia and Tunisia, the CoOPLAN process was the constitutive process of the elaboration of the public policy and the

structuring of new institutions. In New Caledonia, it was the CoOPLAN process that provided the content of the Shared Water Policy ("Politique de l'Eau Partagée", Davar, 2019), officially published at the end by the government. In Tunisia, the CoOPLAN process led to six regional plans, which are the operational tools for the implementation of the Ministry's strategy for the conservation and protection of agricultural land. Other regional plans have been built in other Tunisian regions by consultancy firms or through participatory approaches inspired by CoOPLAN and the PACTE program.

Methodology

There are major similarities between these four cases, which makes them comparable:
– having involved the population and the actors of the territories in the planning process directly (resource users, farmers, industrialists, etc.);
– opening very widely the spectrum of possible proposals;
– proposing an integrated framework for a comparative dialogue of heterogeneous actions, facing limited resources and for possibly divergent objectives:
– leading to the emergence of new institutions induced by the planning process itself.

Nevertheless, different methodological choices were made in terms of mobilising the various actors. In Uganda, as described above, planning took place at both the regional and local scales. Only representatives of the different communities attended the regional process and only a few regional actors participated in local workshops. A game was used both before and after the planning, with different purposes. In New Caledonia, after a pilot phase in three communities used as a reference for the dialogue, the process brought together the population, institutional and private actors, in the same events. In Drôme, as mentioned above, the process took place first with the population and then with institutional actors. In Tunisia, the beginning of the planning process (up to step 4, action synthesis) took place with the population, and then the rest of the planning process (steps 5 to 13) took place with a territorial committee including representatives of the population, the private sector, civil society and elected officials. The methodology was adapted to the context of the different cases: in Tunisia, for example, the number of participants was too high to be able to carry out the entire planning process with the population, so the pilot group decided to set up territorial committees, including elected representatives of the population and other actors. In New Caledonia, due to the territorial and cultural segmentation in a post-colonial context, it was necessary to work in customary and non-customary territory, with more or less mixed groups.

Several other methodological adaptations were made to fit the context. One of them concerns the mobilisation of experts. In the CoOPLAN procedure, experts are mobilised at different stages of the planning process (see table 17.1). In Drôme, some experts (technicians from the river union, researchers) participated in the CoOPLAN workshops (step 7) to exchange with participants and answer the questions and uncertainties of the population. In Tunisia, the position of many experts - reluctant to engage in open dialogue with the population - did not allow this direct exchange. The experts were therefore mobilised through the facilitators at various key moments to react to the actions and plans produced. The experts' comments and suggestions were then discussed again with the population or the territorial committees. In New Caledonia, the formal experts were integrated into the pilot group, and even among

the facilitators, and the pre-processing of the action sheets (step 4) was carried out by the governmental inter-service group. The technical-administrative experts were also present during all the participatory sessions.

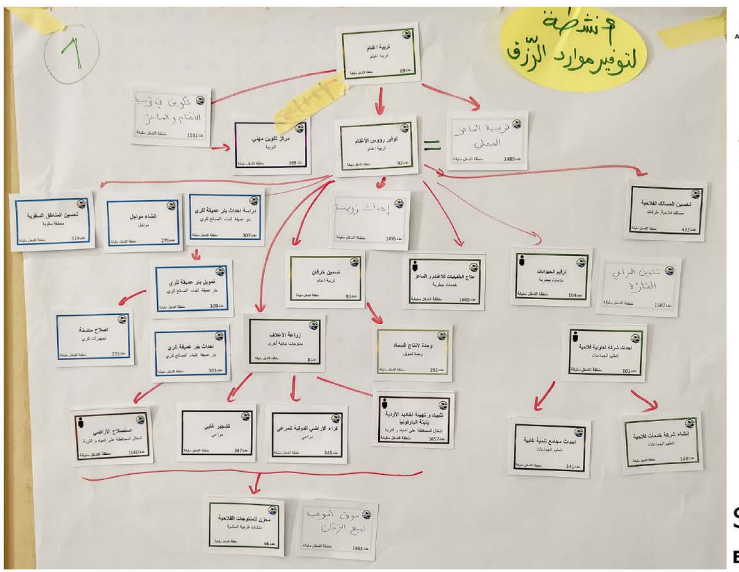
As specified previously, CoOPLAN, as a participatory modelling process, relies on two meta-models proposed to participants as a means of expression: the action sheet and the integration matrix. In all four processes, the action framework was designed by the pilot group, and the matrix was derived from it. These frameworks varied in complexity (the Drôme used the most composite one) and required varying degrees of effort on the part of the proposers and appropriate support from facilitators. The classification of actions (step 4) was critical to facilitate the processing of the numerous action proposals. Only Uganda had a prior typology; the other three cases were reclassified afterwards according to their contents.

In addition, Uganda, Drôme and New Caledonia highlighted CoOPLAN's weakness in structuring the various actions around the major issues or problems to be solved. For example, Uganda's plan is centered around a problem, and includes actions from different sectors of activity to address this problem. The final plan obtained had 98 actions distributed over three spatial scales: household, community and regional; two terms: short and middle-to-long; and three areas: upstream/midstream/downstream. Actions were very diverse, including e.g. family farming, tree planting, family planning, energy saving stoves, demarcation, sanitation, education, collective marketing, environmental monitoring, mass sensitisation, ecotourism, etc. But the planning process did not include a reflection about how to support each of these production sectors or supply chains. The Ugandan plan therefore includes several actions to develop beekeeping but no specific design for their synergy. We have therefore modified the methodology in Tunisia by adding a step (between steps 8 and 9) encouraging participants to structure "clusters" or "chains" of actions around major issues (e.g. water supply, sheep breeding, etc., see figure 17.6). This forced them to establish the links between the different actions e.g. recoupling the purchase of livestock with their food needs upstream, and their commercial and food exploitation downstream. This type of embedded action meta-model existed in Bulgaria (ibid.), but has not been generalised. Spatialisation was also given an increased importance in the Tunisian case, with a more pronounced effort to precisely locate the actions and to address spatial equity issues.

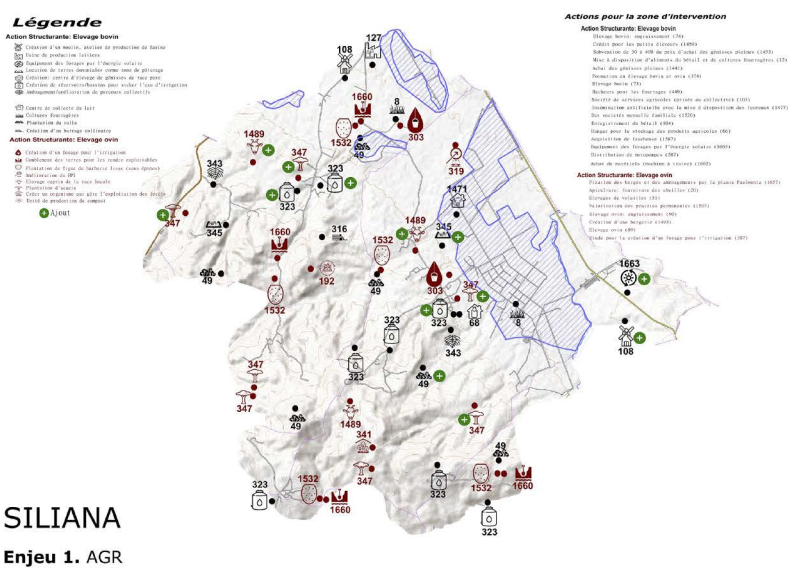
The economic evaluation of the action proposals was integrated directly into the CoOPLAN matrix through administrative expertise in New Caledonia, whereas this was postponed to a later phase in the other three cases.

Only the Drôme process used an internet collection of proposals, while the other three mainly used a paper collection followed by a later re-entry by the facilitators. In all cases, the manual work of reprocessing and preparing the materials was very important.

In all cases, the CoOPLAN approach presented at the beginning of this chapter and its components (action sheets, CoOPLAN matrix, evaluation procedure, etc.) were discussed and re-constructed with the process leaders in order to adapt it to local contexts and specificities. This explains the differences between these four cases, even though these adaptations are not yet part of an explicit adaptation strategy.



A “cluster of actions” on sheep breeding in Siliana



Map showing the location of the actions related to income-generating activies in Siliana

Figure 17.6. Modifications of the CoOPLAN methodology in the Tunisian case: “clusters of actions” and improved spatialisation of actions

Conclusion

Planning has returned to the heart of public policy, but it often remains an essentially technocratic process, and is still too often considered to be a tool for producing a plan, or even for justifying a political agenda. The participatory design process is not central. Yet planning can structure a collective capacity to build resilience and sustainability, and thus support social and institutional changes that are more decisive than the plan itself, which is intended to be adapted along the way (Daniell, 2008; Hassenforder, 2015). Participatory planning, and in this case the CoOPLAN approach, really includes all actors in a deeply structuring process, in an open, transparent and dedicated process. It should be noted that this type of participatory planning can also be carried out by civil society actors alone. In all cases, guaranteeing in advance the financing of some or all of the actions contained in the plan, and contracting their future implementation in advance, is key to participants' commitment.

The planning process can be an integrator between different sectors if it aims at integrated development. But as soon as the process is piloted by one sector (e.g. agriculture in Tunisia), the mobilisation of other sectors can be a challenge, especially in contexts where the actors operate in silos. The CoOPLAN approach, through its total openness in terms of theme, scales and actors, is a major factor in reconciling issues and sectors, and therefore actors. On the other hand, it does not allow for fully scientific arbitration of all conditions (technical, economic, social) and impacts.

An important learning from these four cases is also that it is complicated to conduct the entire planning process with a large number of people in one place, as the different steps and materials require many exchanges that are difficult to facilitate with a large group. Broad participation will therefore require either running the process in parallel or successively with several groups at different scales (as in Uganda or Drôme), or involving the population only at certain stages of the planning process and then mobilising representatives of the population (as in Tunisia). These four cases also revealed that the involvement of participants should be tailored to the social context. For example, experts cannot be mobilised in workshops if they are not open to dialogue. Nor can we immediately put different users in the same room if there are strong tensions or even conflicts between them.

In conclusion, CoOPLAN is a "meta-process" that must be adapted to each context. This meta-process nevertheless includes structuring principles (listed at the beginning of this chapter), notably:
– the use of a meta-model of action formalising the resources needed and the expected impacts of the different action proposals;
– a totally open participatory formulation of proposals, without censorship, including technical and non-technical issues;
– an integration process questioning the competition on resources and the satisfaction of objectives;
– a multi-level input of expertise, without authoritarianism.

As explained in chapter 8, a digital version e-CoOPLAN nowadays exists, and the challenge is to proceed with the validation of the CoOPLAN protocols in many contexts, even outside the field of socio-environmental management.

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Feedback from a large-scale citizen participatory process on the Drôme river basin

Claire Petitjean and Chrystel Fermond

The Drôme valley is one of five pilot Alpine valleys selected to experiment with new forms of citizen participation in water and river management through the SPARE (Strategic planning for alpine river ecosystem) programme. Between 2016 and 2018, over three hundred and forty participants shared their perceptions of and their visions for the rivers and water resource of the Drôme catchment area. Approximately one hundred and ninety proposals for action were recorded.

The mixed syndicate for the Drôme river and its tributaries (SMRD[1]) undertook a large-scale participatory process aimed at the citizens of the Drôme catchment area through the SPARE programme. It took place from 2016 to 2018 and was supported by European funds; the Interreg SPARE programme brought together five European case studies on participatory water management, including the Drôme catchment area for France[2].

At the local level, the SMRD and the local water commission considered it would be an advantage to engage in citizen participation upstream of the second revision of the water development and management plan (SAGE[3]) for the Drôme catchment area. This would complement the work of the water commission by collecting user perceptions and proposals. After more than two years of participation, over eight hundred opinions and reflections were collected and approximately one hundred and ninety proposals for action were recorded. Three hundred and forty-four different people were involved in the project. Several participatory activities were implemented, including walls for collective expression, field trips, a form to be completed online or on paper, as well as interviews with stakeholders. Only one online activity was used in order to diversify the participant pool.

This far-reaching participatory process included three major phases: a participatory preparation phase for participation, a citizen-driven diagnostic phase and a proposal for action phase (figure I3.1). In addition, the participatory process included a set-up phase and a synthesis and restitution phase (Girard *et al.*, 2018)[4]. The SMRD team was accompanied by a team of researchers from INRAE[5], partners in the SPARE project.

1. Syndicat mixte de la rivière Drôme et ses affluents
2. Page dedicated to the SPARE project on the SMRD website: https://www.riviere-drome.fr/actions-etudes/les-etudes/projet-spare
3. Schéma d'aménagement et de gestion de l'eau
4. Girard S., Hassenforder E., Ferrand N., Mammoliti Mochet A., Petitjean C., *et al.*, 2018. Citizen participation in Strategic Planning for Alpine River Ecosystems. I.S.RIVERS, 3e conférence internationale Recherches et actions au service des fleuves et grandes rivières, Jun 2018, Lyon, France. pp.248-249. https://hal.inrae.fr/hal-02607827
5. Unité mixte de recherche Gestion de l'eau, acteurs, usages (UMR G-EAU) et Laboratoire écosystèmes et sociétés en montagne (LESSEM)

A good take-away for the project carriers is that participation takes time and represents a certain financial commitment, whether it be for overall process set-up upstream with the project team and elected representatives, the preparation of workshops and materials, the deployment of communication tools to mobilise participants or the processing and restitution of data a. The participatory process required a great deal of work, staff involvement and many transversal skills. The time required for this work obviously translates into a financial cost for the organising structure.

In the case of SMRD, the financial commitment was largely offset by European support from the SPARE programme. In addition to financial commitment, political support is essential to a participatory process. This last point, which was crucial throughout the SPARE project, has been identified as a real success factor in comparison with the other case studies in the programme. On a more technical aspect, one of the difficulties SMRD had to face internally was communication (creation of communication networks and press relations, creation of communication tools, online platform for dialogue among participants, etc.). Significant efforts were made to popularise the technical aspects and to ensure transparency and information sharing. At the end of the SPARE project, the SMRD decided to create a new website, to maintain its Facebook page created for the SPARE project and to maintain an outsourced press relations contract.

Among the effects identified through this experiment in the Drôme catchment area, two levels of impact have been identified for the project carrier: impacts related to the objective of revising the SAGE and so-called "environmental" impacts, for the SMRD and participating citizens.

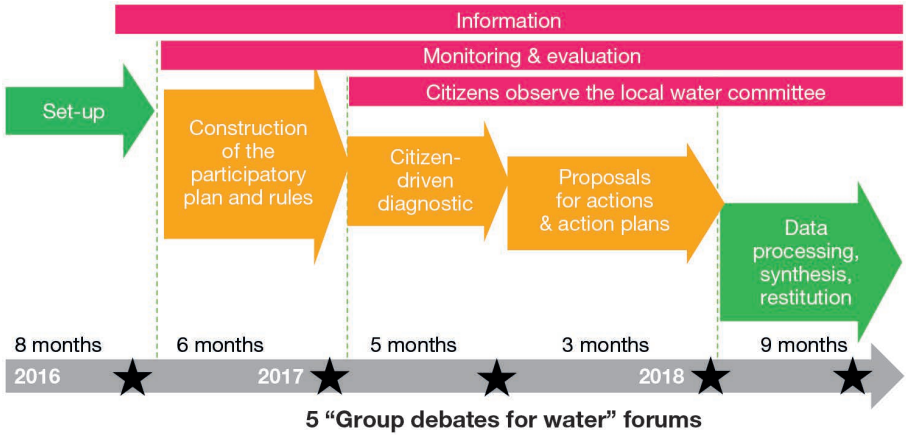

Figure I3.1. Overview of the participatory process for the Drôme catchment area

For the revision of the SAGE, the SMRD gathered concrete feedback and action from citizens:
– detailed proposals for action, arranged into action plans;
– a diagnostic of citizens' perceptions, which allowed for users' needs to be better understood and communication on SMRD and SAGE to be reoriented;
– the presence of users in the revision process and in the water commission (by including citizens as observers in meetings on the one hand and by including new members of the water commission on the other).

These points were used to draw up the new water management plan and provide input to the various thematic projects of the structure. Initial expectations were largely met as well as other impacts measured by the "monitoring and evaluation" group and process (see chapter 10). Some are described hereafter..

In terms of "environmental" effects, these include:
– strengthening the SMRD's communication strategy;
– better understanding and recognition of the SMRD by civil society and institutions, including at the national level;
– improved team skills in using participation and its tools, and a change in work methods;
– renewal and expansion of partner network.

For the participants, notable impacts of the process include:
– the establishment of cooperation between participants;
– the establishment of cooperation between the SMRD and certain participants;
– better knowledge of the SMRD, the water management plan and the local water commission;
– change in perceptions;
– improved skills;
– disappointments and tensions;
– mobilised local groups on water issues.

In brief, the SMRD's experience in this large-scale participatory process remains above all a human adventure which has given rise to numerous outputs and experiences. It is good to remember to extend collaboration, to call on participation professionals to support or facilitate the process, as well as to help resolve tensions along the way.