

TRANSFORMATIVE **PARTICIPATION** FOR **SOCIO-ECOLOGICAL** SUSTAINABILITY

Around the CoOPLAGE pathways

Emeline Hassenforder and Nils Ferrand, eds





Chapter 19

Opportunities and challenges of transferring the CoOPLAGE approach to Integrated Water Resources Management in a Beninese wetland

Raphaëlle Ducrot and William's Daré

This chapter presents the added value and the challenges of a CoOPLAGE planning approach to operationalise Integrated Water Resources Management in 22 villages of the lower Ouemé valley, Benin. After a capacity building phase in 13 pilot villages, facilitators replicated the approach on their own in a second set of nine villages. Participants appreciated the engaging capacity building process and the mobilisation power of the role-playing game used to support the choice of actions. Although the objective was to support institutional bricolage mechanisms, in practice the project framework constrained the engagement in socio-political issues questioning the long-term outcomes beyond action implementation.

Operationalising and sustaining Integrated Water Resource Management (IWRM¹) policies in deltas require facilitating the participation of local populations in the identification and implementation of actions to be undertaken, thereby ensuring the mobilisation and commitment of local populations over time. Ad hoc structures (such as management committees) are often set up to ensure this participation as well as to serve as an interface between the local population and water management projects. Large-scale engagement of the community and good governance are often viewed as a key requirement to build the legitimacy of such structures. Aware of these challenges, an NGO asked for support in developing an approach to facilitate the mobilisation of stakeholders in the implementation of development activities within an IWRM development project intervening in the lower Valley of the Ouémé delta in Benin.

Two Cirad researchers (an agro-geographer and a sociologist) offered to provide a support going beyond the development of communication and mobilisation strategy to engage the stakeholders in a participatory planning process, inspired by a CoOPLAGE² approach (chapter 2), while also factoring in equity issues. The objective

^{1.} Gestion Intégrée des Ressources en Eau (GIRE)

^{2.} CoOPLAGE (Coupler des Outils Ouverts et Participatifs pour Laisser les Acteurs s'adapter pour la Gestion de l'Environnement) = Coupling Open and Participatory Tools to Let Actors Adapt for Environmental Management.

was also to create conditions that support the development of institutional "bricolage", i.e. conditions adapted to the local context (Merrey and Cook, 2012; Cleaver, 2012; Booth, 2012; Batchelor *et al.*, 2000). It aims at allowing for individual or collective experiences to be shared and local institutional innovations perceived as fair and legit-imate based on local social networks, to emerge. In other words, rather than tools and methods, what matters is the posture and process.

The NGO agreed with this principle and acknowledged the need to offer space for the expression of a variety of viewpoints to be expressed, notably through the engagement of institutional actors and local stakeholders, to remain flexible in the implementation process and encourage institutional adaptations. Yet, our analysis of the participatory process shows that the frame of the project proved unadapted to ensure that the necessary specific posture was transferred rather than the tool.

This chapter looks back at the hiatus that finally emerged between the application of the principles of the participatory approach and the project constraints to which the NGO was subjected. The aim is to gain a clearer understanding of the determinants of this hiatus and to draw useful lessons for the future IWRM development projects.

After this introduction, the next section elicits the NGO request. The third section introduces the way we addressed this request, and show the different steps of the participatory process. The fourth section discusses the lessons learned and recommendations.

The request: engaging stakeholders to support the creation of water committee

The project was part of a Dutch cooperation program in the Beninese water sector, called OmiDelta³, more specifically funded by the Non-State Actors Fund (ANE) managed by SNV⁴. The ANE launched two calls in 2018 to fund project for operationalising IWRM in the lower and middle Ouemé Valley, notably in the Beninese coastal delta. The NVW-GIRE (Nouvelle Vallée de l'Ouémé GIRE) project was funded by one of this call more specifically targeting IWRM and aimed at promoting the valorisation of water resources, resilience to flood and drought, prevention of erosion process and improvement of the water resources governance in the basin. Domestic water supply and sanitation activities were funded under a second call and food security activities were excluded from funding. The propositions were also to have explicit consideration of good governance, innovation, gender, youth mobilisation and climate changes issues. In total six projects were funded under the ANE program which established a unique quantitative Monitoring and Evaluation (M&E) system to monitor the progress and outcomes of the 13 projects with periodical meetings to discuss methodological issues and results⁵.

^{3.} OMIDelta Fond Acteur Non Étatique, SNV, s.d. Un instrument de financement des ANE actifs dans AEPHA et GIRE. https://a.storyblok.com/f/191310/accec64dd5/plaquette_snv_omidelta_fonds_ane.pdf

^{4. &}quot;SNV is a mission-driven global development partner working across Africa and Asia. Our mission is to strengthen capacities and catalyse partnerships that transform the agri-food, energy, and water systems, which enable sustainable and more equitable lives for all" (www.snv.org).

^{5.} OMIDelta Fond Acteur Non Etatique, SNV, s.d. Services AEPHA améliorés et GIRE locale opérationnalisée grâce à 13 projets. https://a.storyblok.com/f/191310/210e1e0423/2022omideltaane_livretr-c3-a9capitulatif des13projets_snv_vf.pdf

In the lower Ouémé basin, IWRM issues are related to the evolution of the socioecological functioning inundation plains affected by increases in demographic, land and anthropic pressures over the last few decades. The waters now have high bacteriological, organic or heavy metal loads due to a very low level of sanitation as well as polluting agricultural and domestic practices (such as dumping of solid and/or liquid waste). Riverbank deforestation and certain fishing techniques based on the accumulation of branches (Acadja) are responsible for the gradual filling of Lake Nokoué in the south of the delta and the depletion of fish. Sand extraction is also increasing because of the area's rapid urbanisation. The dynamics of land tenure, soil fertility, as well as terrestrial and aquatic biodiversity directly or indirectly influence all of the livelihood strategies of local populations. Fishing is the main economic activity on account of the great ecological wealth of these environments. It is completed with hunting, gathering and craft activities. But agricultural activities play also an important role in the local livelihoods, as the lower delta soils benefits from the annual July to October flood. The associated flood agriculture is part of dynamic horticulture value chains which supply the main urban centers of Benin and neighbouring Nigeria, both easily accessed by river.

But the hydrological functioning of the delta is increasingly disturbed by climate change, which affects the flooding season including longer-lasting flood, and increases in saline levels coming from the mouth of the river. The locals complain about the consequences of the hydrological changes on long-cycle crops.

The NVW GIRE project mobilised the conceptual framework of ecosystem services (ES) to develop IWRM activities. ES are the benefits that people derive from ecosystems (Millennium Ecosystem Assessment, 2005)—such as the transport of goods and people through canals or the increase in fertility through the sediments of a flood. It was assumed that using this conceptual framework would facilitate the perceptions of benefits of the proposed activities within four types of ES for a river (provisioning, regulating, supporting, and cultural ES). In practice, the project aimed to facilitate the development of a local economy that values certain ES, and to highlight the dependence of development on ES (e.g. river transport disrupted by water hyacinth development). The specific objectives were to disseminate knowledge on these ES, to promote the implementation of sustainable economic alternatives favourable to ecosystems, notably the development of a hyacinth value chain around one innovative firm. Although the proposal aimed to address ES in general, the proposal targeted more specifically the river transport, erosion control, not excluding other activities.

The development of local water committees, which could later be integrated into basin water organisations that Dutch cooperation was committed to develop, ensured the sustainability of the actions undertaken by the project and their institutional anchoring. The project committed to create two types of committees, one at the local level and the other at a more regional level, the two structures of which were not predefined. The project was coordinated by the NGO Protos whose partners were a private company in charge of developing the hyacinth value chains and a consulting firm in charge of characterising ES. The NGO was in charge of proposing a methodology to identify activities, establishing the committees and subcontracting local NGOs to provide environmental mediators (EM) to implement activities in the communities. The objectives of the project, formalised in a contract between SNV and the Protos NGO, was to target 100,000 people in 22 villages in 36 months.

The project was thus looking for an approach that could facilitate the mobilisation of local stakeholders, use the ES conceptual framework to identify activities, and be easily replicated. A local consultant coordinator trained in companion modelling (Barreteau *et al.*, 2003) proposed to develop a role-playing game to disseminate the ES concept and mobilise local actors. The Consulting firm in charge of ES studies in the project contacted CIRAD for supporting the development of the methodology.

The NGO also had its own agenda and constraints in the process. First of all, as a newly intervening NGO in the IWRM sector and in the region, it wanted to establish its credibility and to build its legitimacy at the local level, in a context where the population was tired of interventions with no concrete impacts. They were also engaged to the program with specific quantitative objectives. Thus, the NGO wanted to engage in concrete actions as soon as possible. Due to the size of the target population, the NGO was looking for an approach that could be easily upscaled to 22 villages and easily transferable to local mediators. Thirdly, the NGO wanted also to address gender issues, in order that the development plans also combine views of the most vulnerable people (notably women and youth).

>> The proposition: a participatory planning process

Rather than mobilising the role-playing game as a tool to disseminate the concepts of ES, we proposed to integrate it within a process that could facilitate (1) the hybridisation of ES concept with local knowledge and know-how concerning the functioning of the wetlands area and (2) the emergence of local institutions adapted to local context to ensure the sustainability of actions funded by the project, that is supporting "institutional bricolage" rather than implementing ad hoc governance bodies disconnected from local socio-political functioning.

But we identified various challenges to the approach: (1) We were not completely convinced that the ES framework was adapted to engage stakeholders into the collective mechanisms underpinned by many of the activities or the governance rules necessary to improve the access to the related services that could be proposed by the actors during the participatory process. (2) The timeframe seemed to us too tight to be able to grasp the complexity of socio-political relationships that are needed to account for long term changes to occur. Especially as sustainability of activities and their institutionalisation supposed to engage non-village stakeholders such as communes and/or other active NGOs in the planning and implementation processes. (3) Local mediators had not only to master the different tools of the CoOPLAGE⁶ approach but also to develop mediating skills as they were crucial for the facilitation process to achieve the outcomes planned. Therefore, the six months schedule devoted to the planning and preparation phase was very short to develop the approach and related tools, enrol the different stakeholders in the process and build the capacities of the agents.

This context led us to propose a CoOPLAGE planning process to be facilitated by EM at village level with four main adaptations:

 the participation basis in each step of the process should vary with steps restrained to some "representatives", steps open to all and specific steps to coordinate with non-village stakeholders;

 $^{6.\} http://www.g-eau.fr/index.php/fr/productions/methodes-et-outils/item/888-l-approche-cooplage$

- the intervention should be developed in two phases: one devoted to the training, development and testing of the approach in a first set of villages that would take place during the first six months of the project and the second phase for its replication in the other sets of villages;

– the role-playing game should focus on the ecological functioning of the area sustaining ES and its contribution to family livelihood but should also offer opportunities to discuss the role of socio-political links in their access;

- an explicit attention should be given to social justice and equity in the approach.

The different steps of the planning process approach

The approach included several stages (figure 19.1):

 a rapid diagnostic of the villages was undertaken to understand the village territory and the village influential people;

 a collective discussion was held on the environmental issues related to the socioecological functioning of the delta with the support of a role-playing game;

- proposals of actions were formulated;

a community-actions plan based on one of the tools proposed in the CoOPLAGE kit, was constructed and validated by the villagers (called CoOPLAN);

– a discussion of these plans with non-villagers (technical services of the communes, and other institutions) in order to propose implementation plans where the role of the different actors was specified.

Each of these stages involved varying levels of participation. Restrained 'Participation' was based on the mobilisation of influential people-that is village representatives with influence capacity over other actors—and we proposed to differentiate people around gender groups (women, men, youth): during the diagnostic, EM were asked to map the village main institutions and related actors (administration, committees and organisations including religious, cultural or economic oriented one), to tell the main historic steps of village development and impacts on its territory and to identify key environmental and water issues by engaging with villagers and key actors in an informal manner and/or small group discussions. The expected outcomes were to identify key water related preoccupations of the community as well as identify village people interested in the environmental and/or water related issues linked to village development and livelihood with local "influence". In practice this would include a diversified group including elected members of the village councils, association members and some individuals with specific influence (religious...). They were to form the representative group mobilised in the following steps of the process: the identification of different possible actions, their prioritisation and the characterisation of the resource needs⁷ for each action. Each person consulted in these first steps was then invited to collectively select the final five to seven actions to be prioritised on the basis of the hierarchy proposed previously in each group. Small groups (again based on gender division) drew up an action plan for each action, after which a final collective group discussion was conducted that aimed at arbitrating and ensuring consistency. This final action plan was then presented to all the villagers for discussion and validation. Lastly, the elaboration of the implementation plans themselves mobilised representatives from the village and the commune as well as external actors (other NGO...) working in the village.

^{7.} Three linked resources that are money, materials, labour, as well as knowledge, rights and legal resources, and capacity for collective mobilisation



A two phases process

The participatory planning process was developed in two phases. The researchers were deeply engaged in the first phase through several field trip missions. Whereas, in the second phase, due to the combination of planning constraints, researchers' interventions not funded and COVID 19 period, the NGO and its local agents had to develop the activities on their own.

The objective of the first phase was to finalise the proposed tools and train the facilitators in the process. It was conducted using a first pilot batch of 13 villages located in four target communes of the project between June and November 2019. During this phase, the two researchers, helped by a local consultant, were in charge of designing the approach, building tools and creating training for the EM who will be deployed in 13 villages, where they were expected to stay. To achieve this in the six months planning schedule, each of the work stages was preceded by a training workshop gathering EM and the process team (table 19.1). The training aimed to introduce the proposed tools, the principles of facilitation and the skills needed to facilitate the related discussions. Between each training period, the EM implemented the proposed tools in their assigned villages.

Step	Outcomes	Date	Activities	location
1	visit report	24-28 / 05/19	Selecting villages (NGO leadership)	villages
2	Workshop report	25/06/2019	First contact with selected pilot villages (NGO leadership)	villages
		27/06/2019	Training NGO facilitators on participatory village mapping and introducing them to role playing games	Hotel Dangbo
3	Game prototype	Jul-19	Building the first version of game prototype based on literature available on internet	France
4	Workshop report	02-06/07/2019	Workshop for testing and finalising the RPG; training NGO facilitators in the game	Hotel Dangbo
		07/08/2019	Testing the game in two villages	Villages
		08-09/08/2019	Game fine tuning and training workshop for NGO facilitators on game facilitation	Hotel Dangbo
5	13 game sessions	12-24 /08/2019	Building 13 game supports	Cotonou
6	visit report	27-30 /08/2019	Introduction of the game in villages, on-site coaching of facilitators by NGO	villages
7	Village Game report	Sep-19	Game sessions in 13 villages with three target groups (men, women and young people)	villages
8	Workshop report	20-27/09/2019	Training workshop on the development of participatory actions plans; training facilitators on facilitation processes	Hotel Dangbo
9	Village planning report	Oct - Nov 2019	Participatory village planning in 13 villages	villages
10	Workshop report	19-23/09/2019	Training workshop on plan implementation and institutionalisation	Hotel Dangbo

Table 19.1. The different stages of the approach and training in the pilot phase

The programme of the following training workshops began with a collective assessment of activities previously implemented to allow, if needed, for them to be adapted, followed by training on the tools to be used in the next phase (table 19.2). At the end of each stage of the pilot phase, the EM agents were required to provide a report on the implementation of activities per village, summarising the level of participation, the main results and main difficulties.

At the end of the first six-month pilot phase, the EM were responsible for independently implementing the seven stages of the intervention in the other nine villages, under the direct responsibility of the NGO. At the same time, they were developing the priority activities in villages of the pilot phase. In practice the second phase was initiated in the first trimester of 2020, that is at the start of the COVID19 epidemic.

An ecosystem services game

Although the conceptual model underpinning this non computerised role-playing game relies on the ES framework, the term is not used during the game session or the concept formally explained. To reduce conception time, it was chosen to model game format on a pre-existing WAG⁸ that engaged into the ES service framework⁹. The game objective is to instigate discussion of the relationships between floodplain ecosystems in the delta and family livelihoods. It thus connects livelihood activities with eutrophication process, hyacinth growth, fish dynamics and availability of family labour due to health issues. ES are mobilised as qualitative indicators of the outcomes of game rounds. We chose to focus on four types of ES using around six aspects: the productive function of ecosystems (production ES), navigability (support ES), maintenance of biodiversity, environmental pollution (regulation ES), tourist attractiveness and social cohesion (cultural ES). The first five services are directly linked to different livelihood activities. The two last indicators were included to bring into the discussion emergent properties of individual actions as well as links with governance.

These indicators are being qualified collectively at the end of each round by the players. In the debriefing phase, the discussion focuses on the evolution of these indicators, how this could be connected to players' interactions and how it connects with real life situations. After this discussion, players are encouraged to identify possible actions to address the same real-life issues.

Due to the short period of time available for the building of the game, the conceptual model was based on the initial project and program reports and a literature review concerning geographical, sociological, anthropological and economic aspects of the delta. This basis was later fine-tuned with the outcomes of the village's diagnostic and tests in two villages. The game development and testing phase was used to strengthen the facilitators' capacities on the concept of ES, on developing/strengthening their facilitation skill concerning the game itself and on strengthening the facilitator's posture. The speed with which the players from the communities appropriated the

^{8.} The water game (WAG) MyRiverKit was created in the scope of the European Interreg SPARE (Strategic Planning for Alpine River Ecosystems) project (https://spare.boku.ac.at/index.php/en/myriverkit).

^{9.} The NGO has developed a short video presenting the game and its role (https://www.youtube.com/ watch?v=I-g-sOWP7h8).

Date	Type of workshop	objectives
27/06/2019	Training of facilitators	Introduction to non-computerised role-playing games with the MyRiverKit game that mobilises the concept of ecosystems services
		Participatory mapping exercises (village and stakeholder mapping)
02/08/2019	Debriefing of villages exercises	Sharing information gathered in each village and participatory comparative analysis
		Identification of commonalities and differences in the 13 villages
05/08/2019	Game workshop	Test of game prototype V1 (laboratory game)
		Introduction to facilitators of game mechanisms, general framework, the different roles and processes included, and artefacts mobilised
		Introduction to game implementation and facilitation
07/08/2019	Game session	Test of game prototype V2 in a real context (two villages)
	in village	Coaching facilitators in real life situation of game facilitation (two in charge of game facilitation, two facilitators for game monitoring in two villages)
09/08/2019	Training workshop	Test of prototype V3 with NGO members (two game sessions facilitated by NGO run in parallel)
		Two facilitators in charge of each game
		Different specific exercises in the afternoon concerning the facilitation stance (statement reformulation, neutrality etc.)
19/09/2019	Training workshops	Debriefing of information collected during the game sessions with facilitators, categorisation of actions, and training of facilitators on the tool "action sheet"
20 & 21 and 23 & 24 09/19	Workshop on village participatory planning in small groups	Training facilitators in the use of different tools for building the action plans with village representatives (one session with two men/village; one session with two women/village + village chief) in the form of coaching in real planning situation
		Training facilitators on presenting the plan, qualifying actions, building action plans and putting outcome of planning exercise up for discussion
27/09/2019	Workshop with facilitators and stakeholders	Introduction to the overall approach to build the action plan with focus on how different steps relate to each other
		In a mock exercise, facilitators confronted with other facilitators on methodology steps not yet developed in the workshop (qualification of needed resources for each action) and coaching on facilitation of each steps
		Questions concerning overall approach
	Workshop with stakeholders' representatives	Coaching facilitators in real life situation to build implementation plan with representatives of villages and communes, four sub-groups each dealing with one type of action

Table 19.2. Facilitator training workshop content in the pilot phase

game elements, the strategies retained and discussed, and the comments made during the debriefing confirmed that the game's economic focus and the way it was represented made sense to the community.

In practice, two different game boards were designed in order to consider the specific territorial, landscape and ecological realities south of the delta (Aguégués commune) on the one hand, and the three other communes highlighted by the initial diagnostic on the other (Dangbo, Bounou, Adjohoun). The principles and calibration of the two games are identical.



Figure 19.2. Game session

Revealing social justice issues

Aware that project development may fail notably because some principles of justice are not considered in the project design, we also proposed an approach to allow the principles of social justice to be revealed upstream of the process of drawing up the community action plans, within the course of three exercises. These exercises were conducted by the researchers with the influential persons. We assumed that the gender issue might be a crucial point in the identification of actions (in the development plan) and should be addressed directly.

In the first exercise, participants were invited to collectively share a situation that they felt was particularly unjust. With the support of a facilitator, a discussion helped to bring out the reasons for the feeling of injustice, which were then reformulated into principles of justice reflecting the group's values (table 19.3). The principles stated here were mainly related to distributive justice, i.e. the final distribution of benefits or losses amongst actors (e.g. unequal access, respect for traditional values) or procedural justice (e.g. discrimination, transparency).

Based on these principles, a second exercise of the JustAGrid type from the CoOPLAGE approach (Ferrand *et al.*, 2017) made the participants aware of the individual variability of the principles of justice and led them to identify the differences between a choice through voting and a choice through consensus.

The third exercise consisted of an anonymous questionnaire to be completed individually. Each participant was asked to indicate a single preference on how funds should be allocated. The result of these exercises highlighted that (i) non-local residents (transhumant or households that moved away) are not considered in the same manner as local resident households, (ii) men and women do not have the same preferences. Women tend to favour a strictly equal allocation or one that favours the most disadvantaged, while men tend to favour a merit-based distribution.

Origin of unfair situation for men	Origin of unfair situation for women
Lack of respect: for the public good, for others, for collective rules, for tradition, especially in relation to nature	Lack of respect: for the public good, for others, for collective rules, for tradition, and for commitment
Selfishness and its negative consequences on the group	Selfishness and lack of group spirit and its negative consequences on the community
Discrimination (age, gender)	Lack of love
Unequal access to infrastructure	Lack of transparency in decision-making and corruption
	Unequal situation
	Ignorance

Table 19.3. Principles of justice per sub-group of men and women

Engaging the non-village stakeholders

The last step of the process was the development of an implementation plan based on the mobilisation of institutionals, NGOs and private actors along with community representatives, in order to obtain a plan negotiated by these different parties. The village authorities were invited to discuss the community action plans, to refine them and to identify legal, financial and organisational constraints and activities that could cause tensions. The aim was also to discuss possible ways of resolving or preventing these tensions, thereby also minimising the risk that the implementation of an action be solely determined by the actor funding it. Indeed, a unilateral approach limits the range of institutional bricolage that is needed at the local level to implement organisational and institutional mechanisms that allow the sustainability of the action.

>> From protocol to implementation: lessons learned

An engaging capacity building process

The capacity process has been developed based on learning-by-doing principles (Kolb *et al.*, 2014). The alternance of collective capacity building sessions and individual on-site implementation was initially conceived as a way to keep with the project planning schedule. It proved to be particularly interesting to support not only the appropriation of the technical aspects of the tools but also to tackle more qualitative posture such as

the facilitation posture, strengthen group cohesion as well as build EM confidence in implementation. Thus, this type of training that mixes formal knowledge transfer, mock implementation (in the EM group), immediate implementation and collective exchange of experience facilitates the development of technical skills and functional capacities which help the innovation process to develop (Thoillier *et al.*, 2020).

But the implementation schedule (around three to four weeks to undertake the consultations at village level) was intense and very demanding for the EM who had other responsibilities in the project. Besides, EM had different backgrounds and some of them struggled more than others to master the tools and posture: they would have benefited from a closer on-site coaching. An organisation permitting to have two EM by village during the pilot phase and less time pressure would have increased the benefit of the capacity building. A final evaluation workshop of the complete sequence was also missing.

It is likely that village representatives had also built capacity along the planning process, which could be as important as an identification of priority actions. But this objective had not been sufficiently formalised to really assess how participants benefited from the intensive interactions.

A sectorial and economic view of IWRM

As mentioned, the program emphasised economic valorisation of water resources but excluded "food security" activities from funding. Yet not only flood recession horticulture and fish farming activities are one of the most important livelihood activities locally but they are part of very dynamic value chains as observed in the villages. Moreover, these activities are directly connected to flood plains functioning: in such an environment, IWRM goes beyond issues of multi-use water allocation, water management through supply and demand, or upstream/downstream relationships. Local communities who live in villages surrounded by water six months a year also considered village hygiene and sanitation as key priorities. Yet related activities were funded by another part of the program through projects that intervened in other areas. Thus many priority activities identified during the participatory process could not be financed by the project due to the constraints of the project funder. This situation created frustration for all the actors, facilitators, researchers and representatives of the NGO.

In order to avoid such tensions during the second phase, the NGO asked its local facilitators to guide the discussion around a given set of actions that could be funded: mainly reforestation, riverbank protection, canal cleaning, water hyacinth collection and transformation, and small business. In the pilot villages of the first phase, villagers were encouraged to look for alternative funding opportunities. This adaptive strategy was considered by the program as one of the "good practice" to capitalise on (SNV, 2022). What is at stake here is who should fund and bear the effort to remedy the local impact of water issues, some of them created upstream (nitrogen and phosphorus levels enhancing hyacinth growth) or downstream (urbanisation process driving sand mining for example). But overall, it reveals that the sectorial organisation and utilitarian perspective of the program do not match the way how villagers interact with their environment. A variety of "interests" attach them to their (water) environment, including economy and others. Fostering effective mobilisation to address water issues supposes to consider this diversity of attachment links.

A limited monitoring and evaluation focus that makes the process' assessment difficult

Although we were aware of the importance of Monitoring and Evaluation (M&E), this aspect was clearly not given enough importance during the development of the approach and training of the EM. During the first phase, EM were asked to provide reports at each step of the process following a report template, but they have not received clear recommendations on how to complete this report. Consequently, reporting quality is inconsistent between EM and makes it difficult to really assess the process.

Five out of the 13 M&E reports produced by EM during the first phase permitted a quantitative monitoring of participation. The case reports show that the methodology mobilised between six and 60% of village households. The 'influential' women remained strongly mobilised throughout the process, showing their interest in an approach that allowed them to express themselves independently.

The NGO for itself organised the M&E to monitor activities progress and to comply with the quantitative requirement of the program (surface reclaimed by action, number of women engaged to new value chain activity, number of proto water committee created, number of technical training). The OMIDelta program nonetheless organised sessions of exchange of experiences between projects where more qualitative issues were discussed, such as the difficulty to engage with non-village actors and to institutionalise activities, the tensions linked to land tenure issues, etc.

It is in practice complicated to even know what activity of the process was effectively carried out during the second stage and how they were conducted. An internship work underlined however that (1) implementation plans were not carried out in any of the villages, (2) the process was simplified in the second phase, no workshops dedicated to detailed characterisation of actions were undertaken, and the general discussion of each plan with community members was not conducted either. As a result, the obtained plans are not as substantial as those from the first phase. The simplification was linked to a choice to focus on quick and targeted consultations which better suited the project's agenda and limited travel possibilities due to seasonal constraints. Yet the participatory elaboration of local water management plans is viewed as a key contribution of the project at program level (SNV, 2022).

In the end, a greater number of issues were mentioned in the villages of the second group upon the implementation of actions. Although the level of mobilisation was locally high in the second group, the mobilisation difficulties are more noticeable in the latter than in the first (Yabi, 2021).

Games and ES framework

The game was designed as a tool to introduce ES notions but does not fully engage in ES conceptual framework and its challenges such as how to address trade-offs and synergies of ES and scale emergence issues. Our ambition with the game was not only to support the choice of actions valuing some ES services, but more importantly to engage villagers in discussing the role of the socio-political institutions needed to mobilise these services in practices (Maris, 2014) and thus to discuss the constraints of action implementation. Ultimately, the ES framework was not mobilised in the planning process. For the NGO, the main interests of the process were the strong feeling of trust between the project and the communities, which was built on the experience of the game and its participatory and mobilising scope for identifying action. Past experience shows that the game does not have a reflective function in essence. Indeed, it is only a tool at the service of a participatory process, the purpose of which may be to encourage discussion, lead to consultation, emancipation or, on the contrary, manipulation. It is therefore extremely important to be aware of this and to underline the importance of training game facilitators on the facilitation posture itself.

A too limited engagement into socio-political issues

Socio-political issues were integrated in the process in an explicit manner in two steps of the process: in the implementation plan and the identification of equity perception. Although the NGO wanted to involve existing institutions in the process, they initially had no clear view of their role in the village activities. We intended the implementation plan to be multi-institutional so as to take into account possible obstacles (land, institutional or legal issues), deal with them and facilitate the institutionalisation process. Yet, the multi-institutional factor and the way technical expertise could intervene was not sufficiently clarified during the training phase. In practice, technical expertise was not really mobilised during the experimental implementation planning process and the NGO assessed the outcomes as unrealistic and technically unsound. The NGO therefore chose to propose their own implementation protocols rather than co-construct them in a multi-institutional approach. On the other hand, the NGO was not experienced enough to anticipate socio- political issues notably those associated with resource tenure that would likely have emerged in a multi-institutional process. Indeed, land conflicts and collaboration of local authorities not surprisingly emerged as some of the key limiting factors to the program (SNV, 2021).

Equity perception exercise was not fully integrated in the participatory process. This was all the more an issue that the choice to rely mainly on influential people is likely to have biased the information gathered even if we sought to have a representation of the different groups. For example, sand mining was discarded by participants because it was considered as a too demanding and dangerous activity but a better representation of less favoured households with more limited livelihood options might have not led to this outcome. The co-option process may also have generated frustrations that the young EM didn't have the time to take into account, or didn't dare to bring to the attention of the NGO leadership.

Conclusion

The experience highlights the difficulty of initiating innovative processes in face of the way development programmes work and the expectations of communities with regard to external interventions. The CoOPLAGE "ideal" methodology (if it has ever existed) was implemented under constraints that were imposed on us as experts, but also on the NGO as the operator of a development programme designed by the donor. A number of limitations have been mentioned in the preceding sections. Our aim here was to take stock of them, to reveal the biases that were introduced, and the adaptations that we tried to make to preserve the principles of our approach while trying to respond to the constraints of the NGO. It is a balancing act that we have undertaken.

From the point of view of this book and its didactic ambition, our aim is not to hide them so that, faced with such a situation, other consultants in charge of setting up an IWRM project can anticipate some of these difficulties, and so that donors can propose funding frameworks that are more consistent with the well-known difficulties of setting up IWRM.

➡ References

Barreteau O., Antona M., D'Aquino P., Aubert S., Boissau S., Bousquet F., *et al.*, 2003. Our companion modelling approach. *Journal of Artificial Societies and Social Simulation*, 6 (2):1, n.p. http://jasss.soc. surrey.ac.uk/6/2/1.html

Batchelor S., McKemey K., Scott N., 2000. *Exit strategies for resettlement of drought prone populations. Project technical report*, In, 123. London: ODI.

Booth D., 2012. Development as a collective action problem, Africa power and politics programme.

Cleaver F., 2012. Development through bricolage: rethinking institutions for natural resource management, Routledge.

Ferrand N., Abrami G., Hassenforder E., Noury B., Ducrot R., Farolfi S., et al., 2017. Coupling for Coping, CoOPLAaGE: an integrative strategy and toolbox fostering multi-level hydrosocial adaptation. European Union.

Kolb D.A., Boyatzis R.E., Mainemelis C., 2014. Experiential learning theory: Previous research and new directions. *In: Perspectives on thinking, learning, and cognitive styles*. Routledge, p. 227-247.

Maris V. 2014. Nature à vendre : Les limites des services écosystémiques. Nature à vendre, 1-96.

Merrey D.J., Cook S., 2012. Fostering institutional creativity at multiple levels: Towards facilitated institutional bricolage. *Water Alternatives*, 5: 1-19.

Millennium Ecosystem Assessment. 2005. *Ecosystems and Human Well-being: Synthesis*. Washington, DC.

Toillier A., Guillonnet R., Bucciarelli M., Hawkins R., 2020. *Developing capacities for agricultural innovation systems: lessons from implementing a common framework in eight countries.* Rome, FAO and Paris, Agrinatura. https://doi.org/10.4060/cb1251en.

SNV, 2021. *Capitalisation de la durabilité : expérience de mise en œuvre de 11 projets AEPHA et GIRE.* OmiDelta, Fond Acteurs Non étatiques, capitalisation des experiences de mise en oeuvre de la durabilité. Rapport, 65 p + Annexes. https://a.storyblok.com/f/191310/c648a7a5fc/2021omideltaane_gire_capitalisationdesexp-c3-a9riences2020-2021_snv_vf.pdf

SNV, 2022. Six études de cas tirées de la mise en oeuvre des 13 projets financés par le Fonds Acteurs Non Etatiques du Programme OmiDelta. Rapport. Etude de cas– success stories. 79p. https://a.storyblok.com/f/191310/0b340f21f0/2021omideltaane_successstories_6-c3-a9tudesdecas_snv_vf.pdf

Yabi A., 2021. Suivi évaluation de l'impact de la démarche participative de valorisation des services écosystémiques liés à la ressource en eau dans la BMVO. Msc AgroCampus Ouest, 67 p + annexes.