Eco Adapt

Adaptación al cambio climático para el desarrollo local

SEVENTH FRAMEWORK PROGRAMME

Deliverable N° 3.5

"Working paper on social dynamics during adaptation planning"

Work Package : 3
Task: 3.4

FP7-283163-WP3-D3.5-073-V1-I-PU-16-09-2014

Project	
Project acronym:	EcoAdapt
Project full title:	"Ecosystem-based strategies and innovations in water governance networks for adaptation to climate change in Latin American Landscapes"
Grant agreement no.:	283163
Project web-site:	www.ecoadapt.eu
Document	
Deliverable number:	3.5
Deliverable name:	Working paper on social dynamics during adaptation planning
Due date of deliverable:	30
Actual submission date:	28/07/2014
Led beneficiary	CATIE
Nature:	R
Participating beneficiaries:	Model Forests
Work Package no.:	3
Work Package title:	Participative exploratory scenario development
Work Package leader:	CIRAD
Work Package participants:	CIRAD, CATIE, Model Forests, SEI,
Task N°	3.4
Task name:	Participant Observation to document the participatory process, debates, and analyse social dynamics in project sites
Task leader:	CATIE
Dissemination level:	PU
Version:	1
Draft/Final:	Final
Authors:	Raffaele Vignola, Julian Gonzalez, Mariela Morales,
Collaborators:	Washington Alvarado, Claudio Sandoval, Romy Cronenbold, Ralf Schillinger, Virginia Canedi.
Reviewers:	Gregoire Leclerc
Keywords:	Social dynamics, adaptation planning, lessons, multi-stakeholders platforms

Content

Acronyms

BMAAM/AAMFM: Bosque Modelo Araucarias de Alto Malleco

BMCh/FCBC: Bosque Modelo Chiquitano

BMJ/JMF: Bosque Modelo Jujuy

FCBC: *Fundación para la Conservación del Bosque Chiquitano* – Fundation for the Conservation of the Chiquitano Forest

MF: Model Forest

SDM: Structure Decision making

1. Executive summary

This deliverable reports on the social dynamics we observed during the adaptation planning activities in each Model Forest (MF). We analyze the change in structure, participation, understanding of the water and development issues faced by the actors targeted by and/or taking part into EcoAdapt adaptation planning activities. We identify key factors that determine how multi-stakeholders platforms such as Model Forests (MF) can effectively engage in adaptation planning that can benefit water resources for local economic development at the scale of the whole territory. More specifically, at the landscape scale, social dynamics and the capacity of these platforms to engage in or lead effective adaptation planning is influenced by -and influcences- factors that determine the formal authority of these platforms such as i) ripeness of an issue that motivate collective action and transformations, ii) extent to which the key stakeholders recognize this formal authority to design and implement with local communities landscape-level planning (i.e. in our case the adaptation actions identified in the correspondent plan); iii) the extent to which on-going institutional processes at other scales are aligned with the objectives and motivations of the platform; iv) financial resources to address water security which influences motivation and engagement among stakeholders.

However, we are learning that, besides formal authority, informal authority of these platforms can help collective action also by engaging local stakeholders with formal authority in the planning process. Now that the project has entered a more action-oriented phase it needs to adapt quickly to stakeholders dynamics for greater impact. To that end the contingency plan proved to help in guiding methodological adjustments to tailor the adaptation planning phase to the different social dynamics of each territorial context of the MF.

2. Introduction

This deliverable reports on the social dynamics we observed during the adaptation planning activities in each Model Forest (MF) which started in the second semester of 2013. From this analysis we hope to contribute to identify interesting lessons for adaptation planning at the landscape scale. This can be especially valuable for landscape initiatives where multi-stakeholders platforms can play a key role to design alternative actions to conserve water resources in the face of a changing climate, reinforce their implementation and monitor their performance and adjust them to changing conditions.

It is worth mentioning that during this phase the project is transitioning from a research phase, where the efforts were devoted to research design and implementation together with knowledge validation and fertilization engaging stakeholders (with an empahsis on co-production and social learning (see Deliverable 1.1 and 1.2), to a more action-oriented phase aimed at co-building with a group of local stakeholders (i.e. the scenario panel) narratives of alternative development option that can be valued and assessed for adaptation planning. In other words we are moving from action-**research** to **action**-research where local participation, engagement in design and implementation of action becomes more prevalent (Figure 1).

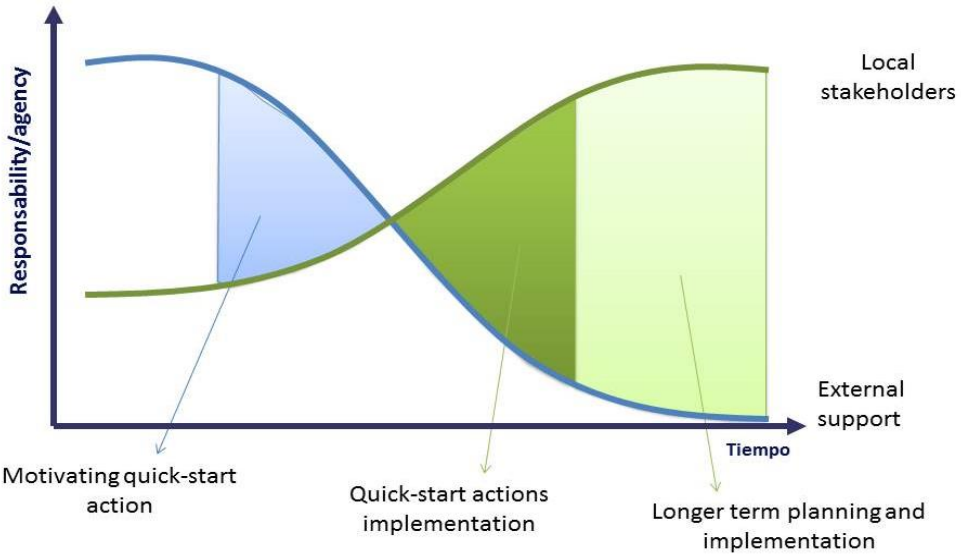

Figure 1. *Action-**research** to **action**-research*

In this context, issues of authority, trust, alliances, and contingencies play an important role as suggestd below by the details of social dynamics in each territory. In analyzing and discussing our findings when we are crossing this transition from more diagnostic to action oriented research, some recent literature on sustainability leadership can help clarifying the concepts we will use throughout this document. First of all, the concepts of formal and informal authority

are key to understand the power and capacity to enforce decisions in the governance network (Stone and Ostrower, 2007) in which we are navigating.

For this, we draw from literature on policy implementation (Elkes, 1979) suggesting that the actual implementation of policies depends on the interplay between formal and informal authority. Formal authority travels from top to bottom where concrete problems happen. This form of authority is not sufficient to efficient and effective policy implementation as the decision context of intermediaries at local level may have significant influence on the intended policy action-behavior change. Informal authority travelling the opposite direction interplays with and should complement formal authority in order to achieve concrete action. Informal authority refers to the capacity to engage with and influence the decision-making regarding concrete landscape problems. Along with this author, informal authority is built on specific skills, knowledge and proximity to the probem to be addressed (e.g. as are producers' associations in a degradaded landscape or water managers). We argue that informal authority of an organization is built on the recognition of the parties involved in a specific decision-making process and, especially if displayed by civil society organizations, can be an asset as it can facilitate dialogue in a more open way (as there is no concrete power to hijack and/or enforce a decision). Of course, while formal authority is mandated and enforced by public agencies, in the case of civil society organizations working in EcoAdapt informal authority of Model Forest partners has been built over time along with credibility, trust, and legitimacy (Bryson et al., 2006).

From this authority perspective, this analysis of social dynamics refers to the observation and systematization of the key factors that guide change, transition, and innovation in social systems towards sustainable development goals (Loorbach et al., 2011). These authors argue that transition towards sustainability is a long and open-ended process requiring active engagement even of small group of motivated agents that from an informa authority can spur and inspire collective action. In our analysis we focus on how authority of social agents involved influence the shape of the planning exercise in each territory and how can the project address and/or take benefit of its activity to support landscape-tailored innovations and change as needed for adaptation planning and implementation.

The results of the analaysis of the socio-institutional context (Deliverable 2.4) suggests that cultural, institutional and formal and informal policy-making can significantly influence the social dynamics affecting the effectiveness and advancement of adaptation planning at landscape levels. For example in some cases, Model Forest presents some level of informal authority that is recognized by local actors for example in their role as mediators or advocacy leaders. However, the scenario panels that were conformed do not always reflect the recognition of this informal authority especially regarding the intended goal to design a landscape-level adaptation plan focusing on the role of water resources on local development. For such a task, more engagement of formal authority is a prerequisite for enforcing and sustainaing action over time. The multi-stakeholders' panel conformed so far are mainly

composed of actors representing economic and civil society sectors with informal authority. Then, EcoAdapt can help enhancing the legitimacy and informal authority of these groups at least regarding water adaptation planning in their landscape. The empowerment of these platforms to undertake and reinforce collective action can help engage formal authority and transit from the design and planning phase to the actual implementation of adaptation actions (Paloniemi and Vainio, 2011; Conway et al., 2014).

3. Objective and scope of Deliverable 3.5

Report on the social dynamics during debates and meetings held in the three model forests during the adaptation planning phase. Here, the analysis of social dynamics is intended to describe on the change in structure, participation, understanding of the water and development issues faced by the landscape among the actors targeted by and/or taking part into EcoAdapt adaptation planning activities.

4. Methodology and actions undertaken

The methodology for the adaptation planning phase (Task 4.2) outlined in the DoW was reported in the Terms of References for research on sites (Deliverable 2.3; Figure below) where Terms of Reference were discussed and validated among involved project partners.

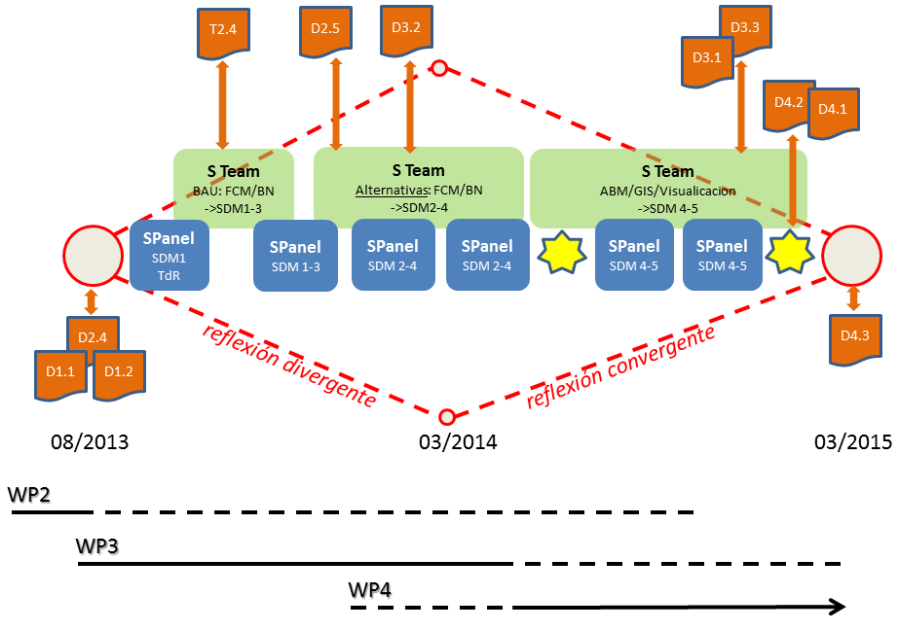

Figure 2. Methodoly for the adaptation planning.

Some adaptations to this design were due especially considering how the process displayed differently in each landscape. The first steps were run as described in Deliverable 3.1 entitled "Story and Stimulation (S&S) scenario building methodology: a value approach to create alternatives for adaptive management at territorial level". In the initial design, Step 1 to 3 were intended to provide information on what stakeholders in the panel value given the impacts of water degradation on local development and what actions could be suggested based on local experience and knowledge. This information was structured to identify strategic axes of a landscape-level adaptation plan. These Steps involved relatively large participation of local stakeholders endowed with some level of informal authority (except in areas as Bolivia where local Municipality maintained its involvement since the beginning of the project).

However, in order to make best use of project resources we adopt an adaptive approach in our methodology design for the following steps to tailor our following steps to the different authority and legimtimacy context of these multi-stakeholders' panels. In some cases, the following steps might concentrate on the creation and evaluation of specific actions among all the ones include in the landscape-level strategic plan. In this case instead of focusing on a superficial analysis of all actions we might focus on those that can be enforced by the authority of panel's members and so increase their visibility and legitimacy to promote larger involvement of actors. In some other cases (e.g. where the problem is little perceived), we might focus on using the evaluation in a strategic way along with local communication and awareness-raising actions as a way to promote larger support and increase urgency perception of water degradation problems among the population and formal authorities.

An additional modification of the SDM approach as described in Deliverable 4.2 also responded to some aspects of Social Dynamics. Indeed, in all three Model Forests among EcoAdapt's CSOs and RTDs we realized that there is some level of fatigue in collective processes dedicated general planning activities. In other words, communities and many stakeholders are tired of being called to meetings to discuss their problems and "possible" solutions.

As described in Deliverable 4.2 actual implementation of actions would have come in 2015 after a one year of iterative (and possibly tiring) process of planning. Realizing that urgent and motivating actions are needed we accordingly modified our methodology. We then decided to identify quick-start actions and and associated small plan as part of and strategically linked to the overall strategic landscape plan (Figure 3).

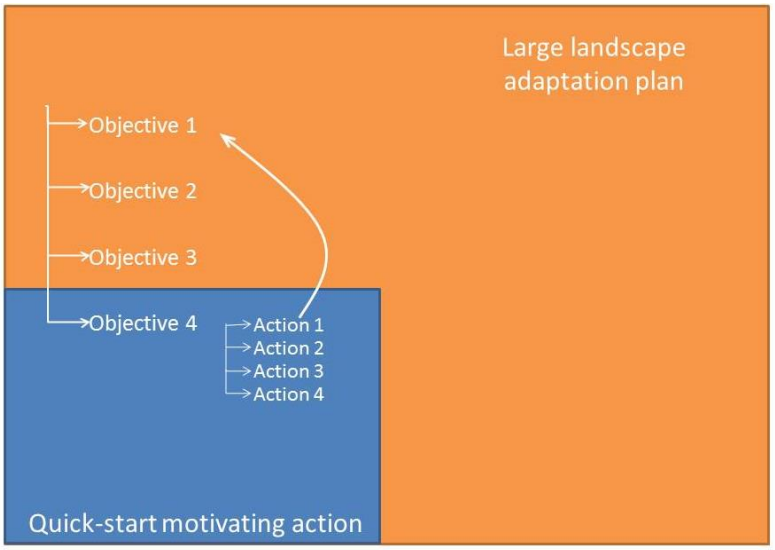

Figure 3. The adaptation planning process of EcoAdapt.

These quick-start actions can motivate participation and increase visibility of this planning initiative and possibly (and also with the strategic use of local communication) be able to get later on more formal authority engaged in the process (also possibly addressing other actions of the Strategic Plan). Then, according to this project planning, 2014 is dedicated to identification and evaluation of possible actions that can strategically spur and increase motivation of more formal and informal authority to participate. Socially and technically robust actions identified through this evaluation process can inform the formulation of a project or a program (depending on the partners' interests and capacities) that can search for funding for design and implementation of all actions identified in the Strategic Landscape Plan.

The inputs and information required to prepare and run the SDM 1-3 planning workshops in each landscape resulted from the previous project activities resumed in the figures below:

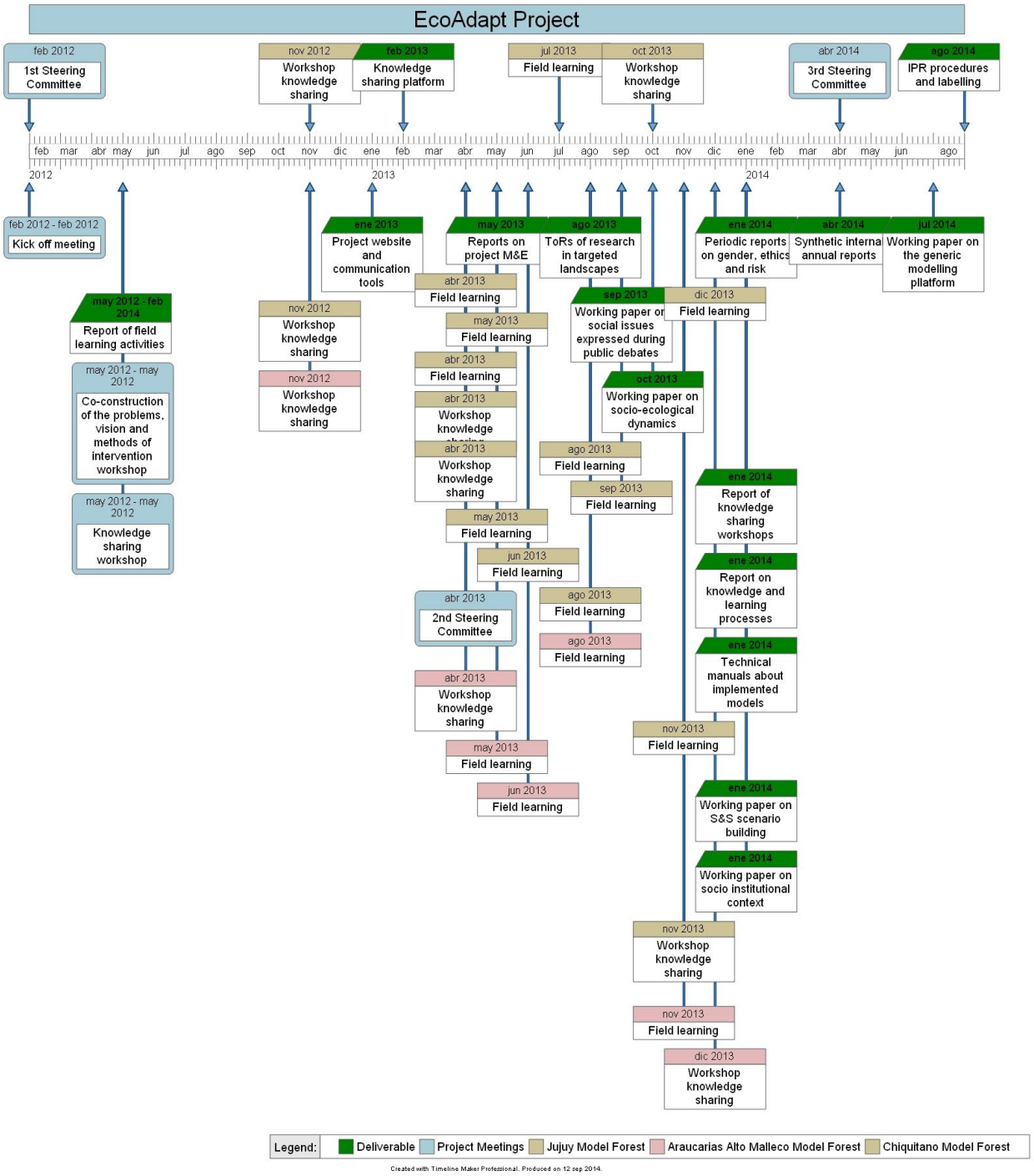

Figure 4. Timeline of EcoAdapt project.

At the moment we have identified objectives and have preliminary details of correspondent specific actions in each site. Through the active work of our CSOs partners engaging with the stakeholders in the landscape we also have identified the specific tasks of the motivating actions in each site. We are intensifying the use of local communication to disseminate the diagnostic infs information recompiled during the first phase of the project. This should help us capitalizing on this information to enhance understanding of the problem, build up urgency on the water adaptation action in each site and thus indirectly build up the informal authority of these stakeholders groups.

5. Social dynamics during adaptation planning

The different historical, socio-cultural and institutional contexts of EcoAdapt MFs' territories result in different social dynamics during adaptation planning which is strictly linked to the dynamics of previous planning and implementation processes in which the Model Forest partners have been involved. Then previous processes condition the political (alliances with formal authorities as municipalities, Government agencies, etc.) and governance regime (e.g. vertical and horizontal network integration as visualized for each site in Deliverable 2.4) in which EcoAdapt is running its adaptation planning and implementation phase. Indeed, as a result of these processes this project phase in each site counts with different level of engagement of formal authority, level of informal authority embodied by the stakeholders groups as well as their legitimacy and vertical (i.e. with organizations operating at higher geographical scales) and horizontal (with other organizations in the landscape) integration. In this respect, while the quick-start actions are supported by project resources as a fast-start adaptation implementationto motivate engagement and participation in the landscape, many of the actions envisaged in the landscape-level adaptation plans require, in order to evolve from a simple statement to a concrete action, engagement/endorsement of formal authority that can sustain action over time. In other words, the extent to which these platforms are connected to and can engage with organizations that have formal and/or informal authorities on water planning in the landscape determines where project efforts can contribute to ripen issues, visibilize and strengthen the informal authority of MFs and its capacity to contribute to informed debate that can result in design and implementation of concrete adaptation action.
Engagement and participation during planning meeting has been relatively varied but a core group of interested parties self-selected and constitute the reference for the project. However, we have decided to let participation open to be consistent with the modus operandi of our Model Forest partner CSOs that aim at ample inclusiveness in engaging with local communities and sectors' actors.

These issues are discussed in more details below for each MFs.

5.1 Chile

5.1.1 Who are the actors

Here, core group participants include representative of indigenous Mapuche communities (Asociación Indígena Trawün Longko and Asociación Indígena Quimquewentru), tourist operators (Association of Tourist Operators), local municipality (through Council members), representative of Community Aqueduct Associations (Mallin del Traile, Sierra Nevada and Rio Blanco) and Directors of the Board of the Model Forest (See annex 1).

5.1.2 Barriers and opportunities outlined in socio-institutional analysys (Deliverable 2.4)

In the case of Chile, social dynamics is conditioned by a series of social barriers and strengths affecting the detection of problems associated to water resources for development and climate change as well as the identification of adaptation-relevant solutions. From Deliverable 2.4 we identified key barriers to the detection of problems in as limited access to information on actual and future state of water resources in the area. Moreover, where information is available there are limited capacities to understand and/or use this information. In this respect, the recent Laws on Citizen Participation and on Transparency of Public Information are opportunities that are so far under utilized but provide an enabling context for improving landscape population access to relevant information. An important structural barrier is the Legal framework regarding water resources that poses serious limitations to joint actions and to design solutions that are environmentally and socially consistent (Gentes, 2002[1]). Other structural barriers to detection of the problem and design of solutions come also from a scarce policital willingness and opportunities to discuss water problem in the landscape together with a very low level of decentralization in water-related decision-making. Conflicts between CONADI (the local representative of the National Council on Indigenous Development) and entrepeneurs or the lack of linkages (also due to belonging to rival political parties) between the organizations with formal authority such as local Municipality of Lonquimay and local Government agencies related to forest and agriculture economic activities are also contingent barriers to discuss water problem for development and design joint solutions.

Among the strengths identified in Deliverable 2.4 we identified cultural[2] strengths but also indicators of proactive leadership in some communities and of some individuals in building economic activities associated to the sustainable use of resources (e.g. eco-tourism). Moreover, some details of the modified water law also open possibilities to address short-term problems

[1] Gentes, I. (2002). Estudio de la legislación oficial chilena y del derecho indígena a los recursos hídricos. *Indigenous Water Rights, Local Water Management, and National Legislation. WALIR Studies, 2.*

[2] The holistic vision of water and land in the Mapuche culture contrasts with the reductionist focus of the current legal framework where soil and water are separated resources that can be traded separately in the market. Tis holistic vision is a cultural strength that can inspire and be enforced under a future reform of the water law.

and reduce social conflicts (e.g. a disposition of a recent modification of the Water Law allowing to extract water during critical periods) as well as on-going changes in the political willingness to address the reform of the water Law (see below) suggest opportunities and strengths that should be accounted in the consideration of resulting social dynamics during adaptation planning. Existing institutional spaces for exterting collective leadership are also a social strength in landscape management issue. These are the associations managing rural water supply, territorial round table concerned with natural resource management (e.g. the Forest Table), and communities' and indigenous' associations some of which are part of our stakeholders' group engaged in adaptation planning.

5.1.3 A brief timeline of actions

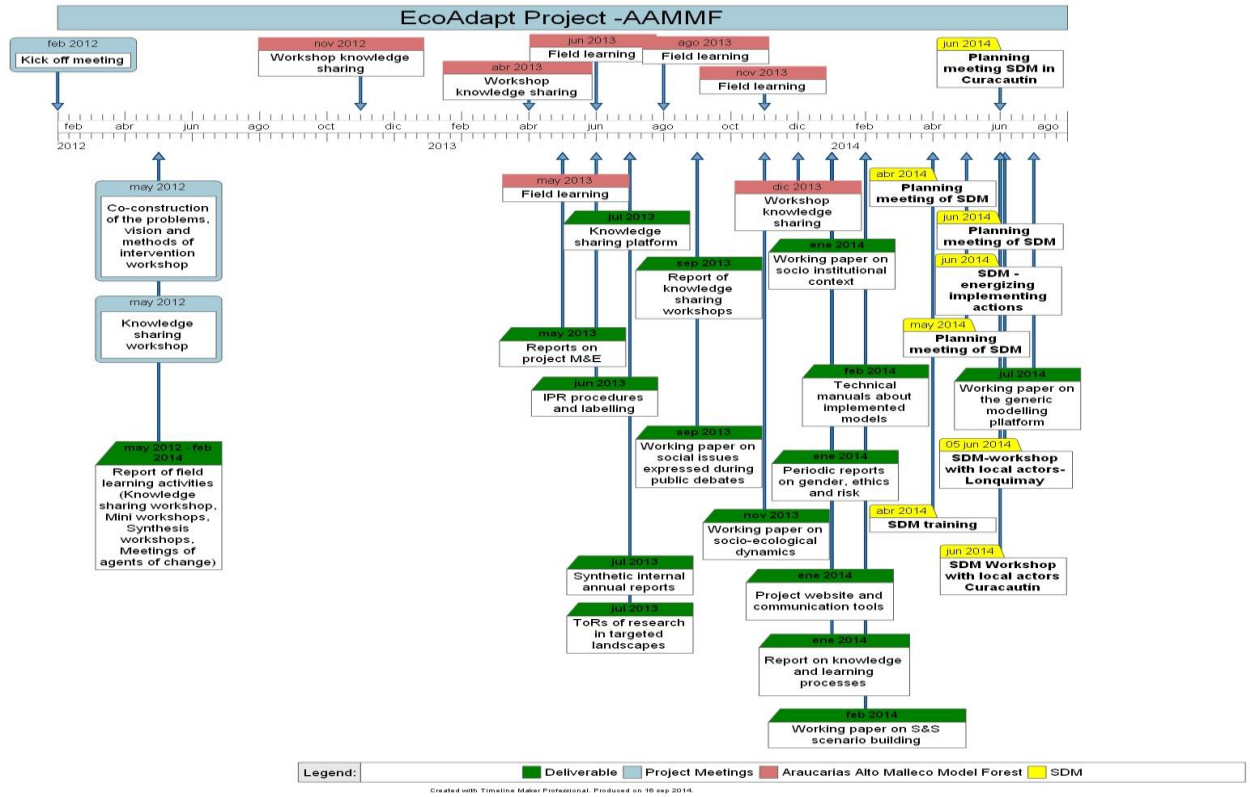

Figure 5. Timeline of project activities AAMMF.

We ran a first SDM workshop (SDM 1-3 steps) to elicit objectives and actions of the stakeholder group in Curacautin and Lonquimay. This workshop was divided in two sessions: a knowledge sharing session in the morning focusing on building up participants common understanding of water resources for development and the threat posed by social and environmental changes.

During the morning knowledge-sharing session, we shared and discussed through panels and participants plenary discussions the diagnostic information recompiled previously on past and present aspects of water resources in the landscape (Image 1).

Image 1. Workshop with Stakeholder group – Curacaotín/Lonquimay – Chile.

We thus presented the research on the systematization of past precipitation and streamflows observed in the landscape that we implemented through an agreement with the Environmental Studies Centre of the local Austral University of Chile in Valdivia. We also presented a study on the history of the landscape we implemented with an historian from Chile whom recompiled existing information on landscape transformation. We then presented on the systematization of communities' case studies on water management problems and their relevance for adaptation to climate change as well as a review of the existing institutional framework on water resurces in Chile and its implications for adaptation planning.

In May 2014 we ran another workshop in each of the two sites of BMAAM to validate the structuring of obj action, detail some (SDM-3), and quick-start.

Image 2: Stakeholders SDM-2 workshop in the BMAAM office of Curacautin, Chile.

5.1.4 Social dynamics in the Adaptation planning process

A first important change in social dynamics in EcoAdapt Chilean site concern the introduction of the water adaptation as a key priority in the multi-stakeholder platform of the Model Forest. Initially, the MF was focusing mainly on forest, tourism and agriculture and only after their involvement in EcoAdapt they started to realize the threat posed by climate change on water resources and their function in local economic development. As a result their 2013-2016 Strategic Plan of Forest Model Araucarias Alto Malleco, explicitly introduced water adaptation for local economic development.

In Chile the presence of the multi-stakeholder platform is acknowledged by local actors and, at least according to previous experience in fostering a Forest Sector Discussion Group, possibly the MF represent a appropriate place for discussion as experienced in former multi stakeholder' initiatives. In this respect, participating actors have also mentioned the importance of considering the formation of a Water Discussion Group at the landscape level. In Chile, the MF has informal authority to facilitate and call for debate but no formal authority to legally reinforce regulations and implementation of actions identified in adaptation plans in the landscape and in scope of climate change, water, and local development.

Given that there is not yet predefined joint agreement to develop and implement an adaptation plan the objective of the workshops was to strengthen the bonds of trust and collaboration between the individuals representing the multitude of organizations. This was done by allowing a number of thematic axes to coexist with each other in such a way that everyone felt included in the process. The drawback of this approach was that the scale and scope of the plan remained very broad. Similarly to the workshop in Argentina, a number of quick-starts were identified in the workshop with the purpose of: (1) strengthening the informal authority of the MF; (2) fostering working relationships between the formal authority organizations that participated in the workshop; and (3) ripening the challenges of climate change and water in the territory.

Stakeholders in the Model Forest identified objectives and actions that aim at water resources planning and ecosystem-based adaptation in their thriennial Strategic Plan to build on the work of EcoAdapt. Introducing these themes in the Model Forest Strategic Plan resulted from the first years of EcoAdapt involvement and have helped increasing the legitimacy and visibility of the Model Forest Platform in the debate on water resources in the region. Most of the participating actors have been engaged in previous knowledge-sharing workshops where results from the diagnostic phase have been presented and discussed (cf deliverable 1.2). All these stakeholders have maintained their interest and engagement in the planning meetings (have interest but also some knowledge of the problem and its relevance for adaptation planning).

These efforts at the landscape level are happening while important social changes are occurring in Chile due to the on-going establishment of the new Government including an analysis of the social, environmental and economic impacts of the current water regulation policy as a first step for a reform towards decentralization and engagement of local economic and social sectors. This on-going social change is of special relevance to our adaptation planning phase. For example, EcoAdapt partners in Chile were invited to a meeting in the Office of the Regional Head of Social Development Ministry in Temuco to share EcoAdapt experience for mobilizing collective action on adaptation planning regarding water resources. In this meeting (where other participants included the National Representative of Indigenous Issues of the CONAF, the CONAF Technical Department of Landscape Planning, the NGO DAS and other social actors) we came to know that the National Government has started a debate on water resources establishing a National Delegate on Water with dependencies branched till the local level where, at least in Alto Malleco, these could be engaged with our process as its mandate is to identify critical problems and innovative solutions regarding access, availability and sustainability of water resources in the Country. In this respect, as confirmed during this meeting, the experience of EcoAdapt is highly valued for its innovative focus based on fostering and enhancing multi-stakeholders' participation in water adaptation planning. These important contingencies open opportunities for our group of stakeholders to enagage organizations with formal authority in the adaptation planning process. For example, BMAAM takes part to a Regional forum on water resources and will engage with this local representative of water resources to promote the project approach and increase local capacities for an effective and efficient water adaptation planning.

5.2 Bolivia

5.2.1 Who are the actors

Core group participants in Bolivia, include local municipality (through Council members), the local Ministry of Health, local water management and others key actors in the community. (See annex 2).

5.2.2 How do the Chiquitano Model Forest operate

Say there is none, it is forming and will be a pilot a nd learning case for the larger Chiquitano Model Forest (20 millon Has), mention the meeting with santa Cruz Regional Government Focal Point on Climate Change.

5.2.3 Barriers and opportunities outlined in socio-institutional analysis

Social dynamics in Bolivia is conditioned on institutional/social barriers affecting bottom-up detection of problems and design of solutions (Deliverable 2.4) such as a limited understanding/knowledge of the watershed geography and resources, contrasting cultural perspectives on water resources (e.g. indigenous vs livestock producers), fatigue with participatory processes, scarce organization in communities and evident conflicting mandates and operation of public administration Agencies (e.g. among ABT, Municipality and INRA), scarce jurisdictional security on land. However, there are also strengths and on-going initiatives that influence the social dynamics for adaptation planning. For example, awareness and concerns regarding water availability and quality are motivating social interactions among the Hospital, the local Municiaplity of Concepcion and interested communities. Cultural sensibility to the protection of land and water resources and a general awareness of the linkages among forest, water and climate are also assets that motivate the social engagement of some communities. Additionally, the existence of different landscape plans (e.g. PMOT, Zapoco Protected Area, PDM) concerned with natural resources of the Zapoco watershed resulting from previous initiatives are also strengths that enforce social engagement in water-related planning process. Finally, the Municipality of Concepcion has used the People Participation Law to engage population in the discussion of its Annual Operative Plans which legitimize the Municipality as an important planning organization and opens the possibility to population to have a say on Annual development investments of the Municipality.

5.2.4 Brief timeline of actions

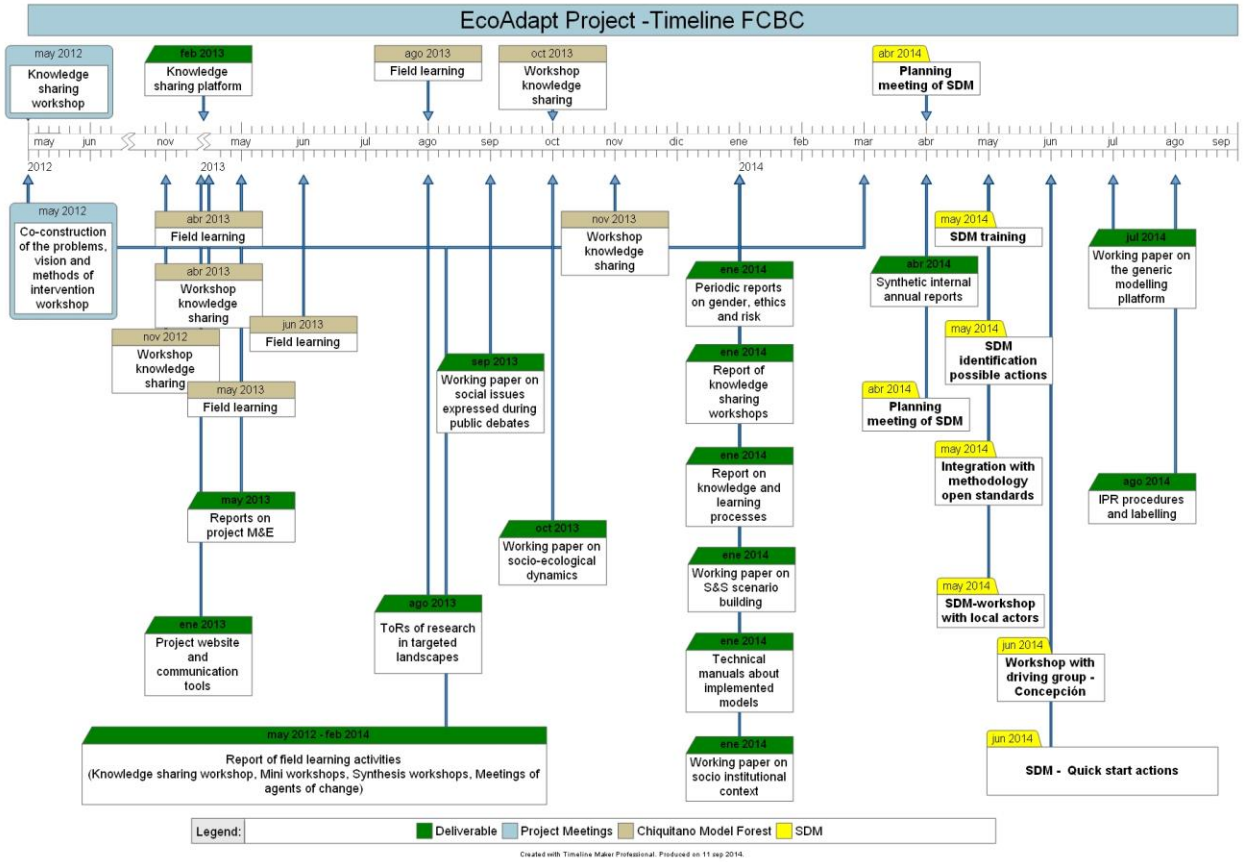

Figure 7. Timeline of project activities FCBC.

5.2.5 Social dynamics in the adaptation planning process

In Bolivia the MFC is much larger than in the other EcoAdapt MF, encompassing xxx municipalities[3]. EcoAdapt focused on the Zapoco watershed wich is under the jurisdiction of the municipality of Concepcion. During the first two years of EcoAdapt FCBC was able to conform a group of stakeholders ("grupo impulsor")that desired to be part of a formally-established possibly as a watershed committee (this is also line with the mandate of a recent Law in Bolivia auspiciating the creation of watershed committee). In Argentina, the Model Forest institutional context is characterized (see Deliverable 2.4 for more details) by the politization of institutions and some level of distrust in bottom-up built collective action. More specific assessment of the social dynamics became clearer during the meetings held between May and June 2014 by Raffaele Vignola from CATIE and Julian Gonzalez (consultant with CATIE specialized in participatory planning) with each of the three sites of the Model Forests involved in EcoAdapt. The objective of this trip was to collaborate with the three local Model Forest

[3] There is only a platform at the larger multi-municipality Chiquitania Model Forest but our experience in the Municipality of Concepcion is providing a pilot for the conformation of municipal level platforms.

partners in the design and implementation of the second round of meetings with local stakeholders.
During the last planning meetings, we focused our work to concretize the SDM methodology with our partner using the results of the socio-ecological and socio-institutional analysis and from the previous SDM1 workshop held in November 2013. Using this information, and along with the work in Chile, we identified thematic axes based on fundamental objectives (as defined by the SDm methodology, see Deliverable 3.1) and concrete actions and responsibilities. We also identified sets of criteria to evaluate alternative actions to achieve fundamental objectives. The workshop with stakeholders held by FCBC with the panel members suggests that different social actors are summing to the process. The latest adaptation planning workshop in Concepcion (in July 2014) confirmed the interested participation of the core group of stakeholders (representing rural and urban areas) and the engagement of communities. During these meetings, the informed participation of core group members facilitated discussion on the strategic objectives and thematic actions foreseen in the adaptation plan. This also helped identify and discuss on potential winners and losers regarding actions such as increasing the protected areas of the watershed using hydrological priority classes. The informal authority of FCBC, the engagement of a local community leaders and the formal authority of the Municipality of Concepcion (as the other members of the Grupo Impulsor the Municipality has always been engaged in the Ecoadapt process) open the possibility to increase momentum and foster concrete adaptation action. In this respect, actors are mobilizing themselves to identify additional resources to implement th action identified.

As in Chile, important on-going social dynamics occurring at higher scales represent window of opportunity for EcoAdapt. More specifically, during a meeting with the Head of Climate Change for the Department of Santa Cruz we confirmed that the on-going experience of EcoAdapt in Zapoco constitutes a pilot and learning case for the larger Chiquitania Model Forest (more than twenty million has large) since the Gobernacion has established a strategic objective to conform multi-stakeholder platforms in all its Municipalities and watersheds as a way to easy bottom-up planning and the design of solutions tailored to local landscape characteristics.

5.3 Argentina

5.3.1 Who are the actors

In the Socio-Institutional analysis several social key change-agents were identified among whom the Municipality, the local Ministry of Health, the head of the Dam operations and Provincial water management Agency, the Tobaco Chamber, the Irrigation District Association, communities and private tourist operators benefitting from the dam's lake, and the smallholder agricultural associations. We also add the INTA Jujuy office which is a member of the Model Forest Directorate and whose representant has been and still is a constant participant in EcoAdapt process. Although many organizations with formal and informal authority have been

identified as change agents their actual engagement in the planning phase deserve some considerations as detailed below.

5.3.2 How does the Jujuy Model Forest operate

They have monthly board meetings, mainly to interchange information. There's no formal mandate to plan and/or enforce landscape level multisectorial plan to manage water resources. This meetings help the identification and discussion of opportunities were some of its members composing collaborate to implement development projects, (e.g. Holcim).

5.3.3 Brief timeline of actions

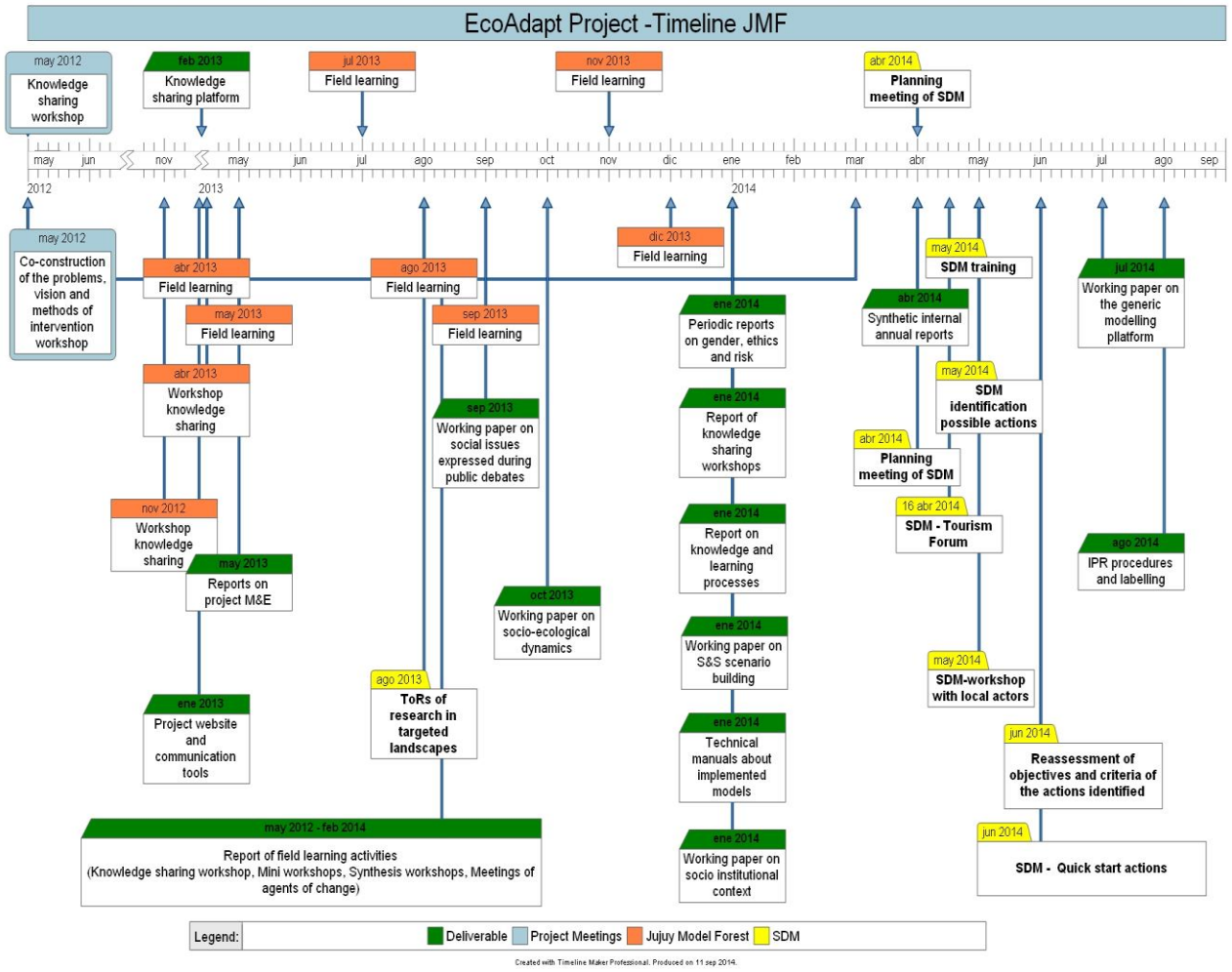

Figure 7. Timeline of project activities JMF.

5.3.4 Social dynamics in the adaptation planning process

The socio-institutional context in Argentina in which EcoAdapt is running this adaptation planning phase is characterized, as in the other MFs, by the history and relations among multiple stakeholders inside the platform of the Model Forest and with other organizations. In this case, The MF Jujuy has been able to maintain continuously this institutional space favoring the interchange of information and knowledge and in some cases promoting concrete initiatives to promote ecosystem-based and socially relevant development projects. It has so gained visibility and legitimacy in the landscape and promoted the adoption of the *Ley de Diques* and the creation of the Intendencia de Diques. However, the centralized and politicisized characteristics of key institutions for water planning at the landscape level (cf Deliverable 2.4) limits participation of formal authority in the institutional space of the Model Forest posing some challenges to EcoAdapt goal of designing an adaptation plan at the landscape level. Concrete hints in this direction come from the discontinuous permanence of individual in key positions that could enforce with authority the participation of his/her institution in such a process. In such a context, the social dynamics associated to the adaptation planning phase suggests that this process requires working on increasing legitimacy and informal authority of ABMJ at least in structuring and providing technical inputs to several parties engaged in the landscape debate on water planning. Indeed, former experiences of the ABMJ in promoting the Area de Perilagos with a protection status suggests that it has capacities to advocate and promote ecosystem-based strategies relevant for protection of water resources. EcoAdapt recent experience in adaptation planning activities in El Carmen of Jujuy illustrate the challenge faced due to this social dynamics and some hints on the way forward.

ABMJ ran two workshops at the beginning of May 2014 focused on water for the landscape economic activities of tourism (only 3 representants tourism operators around the on the dam's lakes) and agriculture sector (more than forty participants from the Tobacco Chamber, smallholder agriculturalists, etc.). Several actions were identified along with their objectives in these key land use based economic sectors in the landscape.

The joint sectoral workshop implemented in end of May attracted 7 participants. Acknowledging the social dynamics we faced, we adapted the methodology fo this workshop focusing on the need of validating and detailing quick start actions that could be implemented immediately also to motivate engagement of other actors and substantiate informal authority and that have been identified in the previous sectoral workshops with the agriculture and tourism groups. In this workshop the participants committed to a follow-up meeting where the MFs with this group of motivated stakeholders would further detail the quick starts and begin implementation in the following months.

One of the quick start action was a awareness-raising campaign. We also foresee that the results of the economic, bio-physical and institutional evaluation of the adaptation actions identified during the two initial sectoral workshops can provide inputs into the landscape

debate on water planning. Along with awareness-raising, social communication and sharing the results of the adaptation action evaluations we can contribute to raise awareness ripening the urgency to take collective actions and strengthen the capacity of MF to contribute to water adaptation planning in the territory. In the tourism sector the social dynamics suggest that although this sector in the landscape is highly dependent on the lake health and existence knowledge-sharing and awareness-raising are key to promote their engagement. In the agriculture sector, summing inputs to the debate on water adaptation planning in institutional spaces with formal authority as the Intendencia de Diques (manager of the Perilago Area) and the Irrigation District Coordinator will be key.

6. Conclusions

One major challenge faced in EcoAdapt planning process is related to the question of authority of the MF (or more precisely of the scenario panel) to decide over a plan for water security and implement correspondent actions. In each MF the Scenario Panel has some level of representativeness of organization with authority however there are strong differences among them.

The MFs are multi-sectorial platforms with some representatives, among its members, of organizations and institutions that have formal authority to decide on design and implementation of many of these actions. However, these platforms function mainly as an information-exchange clearing-house mechanism of actions occuring in the territory and, at times, also serves to mediate conflicts or concert common actions. Given this reality, the project, methods and process adapt to the MFs' contexts as NGOs working with multiple stakeholders, but with no formal authority and in some sites with limited informal authority.

The project adaptation planning phase will then contribute to strengthen the the MF platforms as an important space for discussion on actions and responbilities and for mobilizing resources for design and implementation of adaptation measures. In other words, the project focuses on the opportunity provided by these platforms to generate, share and disseminate knowledge on solutions for water adaptation planning and contribute to debates with organizations that have formal authority to reinforce action and planning compromises.

7. References

Paloniemi, R., Vainio, A., 2011. Legitimacy and empowerment: combining two conceptual approaches for explaining forest owners' willingness to cooperate in nature conservation. *Journal of Integrative Environmental Sciences*, 8(2) 123–138.

Conway, D., & Mustelin, J. (2014). Strategies for improving adaptation practice in developing countries. *Nature Climate Change*, 4(5), 339-342.

Loorbach, D., Frantzeskaki, N., & Thissen, W. (2011). A transition research perspective on governance for sustainability. In *European Research on sustainable development* (pp. 73-89). Springer Berlin Heidelberg.

Proyecto	EcoAdapt
Autor	Vignola, González, Morales
Colaborador	Alvarado, Sandoval, Cronembold, Schillinger, Canedi
Revisado por	Leclerc
Fecha	28-07-2014
Work Package	3
Nombre del archivo	Working paper on social dynamics during S&S
Nivel de Difusión	PU

Annex 1: *Participant list to the core group of stakeholders in Lonquimay and Curacautín, Chile.*

NOMBRE	INSTITUCIÓN	COMUNA
Sara Castillo: invitarla.	Concejal I.M. de Curacautín	Curacautín
Andrea Saquel, invitarla	Consejo de la Sociedad Civil (COSOC) Curacautín / Oficina Diputado Fuad Chain	Curacautín
Luis Parra Arias,	Comité de Agua Potable Rural (APR) de Río Blanco, Manchuria y Lefuco.	Curacautín
Cristian Parra	BMAAM	Curacautín
Luis Antonio Soto Alarcon	Vive Curacautín	Curacautín
Alex Jarpa	SSC Wood	Curacautín
Gustavo Montes Weise	Consultora PuroBosque	Curacautín
Jorge Vera	CONAF	Curacautín
Maria Isabel Muñoz Palma	INDAP	Curacautín
Karin Campos	Agrupación Mujeres con Maleta	Curacautín
Jorge Saquel	Alcaldía	Curacautín
Alejandro Bascur	Alcaldía	Curacautín
Alejandra Caceres	Alcaldía	Curacautín
Luciana Lavalle	Agrupación Mujeres con Maleta	Curacautín
Paulo Palma	Departamento de Acción Social del Obispado de Temuco (DAS)	Lonquimay
Uta Hashagen	Lonco Patagonia Ecoturismo	Lonquimay
Winibaldo Arriagada	Comité pro-defensa de veranadas de Ranquil	Lonquimay
Joaquin Meliñir	Asociación indígena Quinquewentru	Lonquimay
Flor Lagos	Junta de Vecinos de Ranquil	Lonquimay
Emilio Roa	Concejal I.M. de Lonquimay	Lonquimay
Mario Curical	Comunidad Mallín del Treile	Lonquimay
Patricio Lagos	Concejal I.M. de Lonquimay	Lonquimay
Carlos Alegría	Mesa de Campesinos de Montaña de la zona norte	Lonquimay
Eduardo Yañez	INDAP	Lonquimay

Annex 2: *Participant list to the core group of stakeholders in the Zapoco watershed, Municipality of Concepcion, Bolivia.*

Nombre	**Institución / Comunidad en la que trabaja y/o representa**
GRUPO IMPULSOR	
Laurenz Romero	**D**irector de Área – Alcaldía Municipal
Alonso Soqueré	Comunidad San Andrés
Pedro Luis	Comité de Agua San Andrés
Roxana Durán	OTB Comunidad Limoncito
Tiziano Baruto	Administrador ganadero
Gionina Viera	Cooperativa de agua
Solange Montero	Cooperativa de agua
José Vargas	Subgobernación
Manuel Jesús Román	Profesor de Escuela Primaria
Elvio Rodríguez	Técnico Subgobernación
Margarita Balcázar	Técnica RRNN Subgobernación
Carlos René Terrazas	Director Hospital Municipal
Lorenzo PasaberésCuasace	Técnico Municipal
Marco Urey	Oficial Desarrollo Humano – Alcaldía Municipal
PROYECTO ECOADAPT	
Romy Cronenbold	Gestión Proyecto Ecoadapt - FCBC
Nelson Pacheco	Comunicador FCBC
Pilar Maldonado	Comunicadora FFLA
Susana Viteri	Tecnica FFLA
GrégoireLeclerc	Cientifico Senior CIRAD