

ComMod in a Development
Initiative:
implementation and evaluation

Paolo Campo

Outline of the presentation

- I. Research Questions
- II. Conceptual considerations
- III. Field results and discussions
- IV. Open forum

I. Research Questions

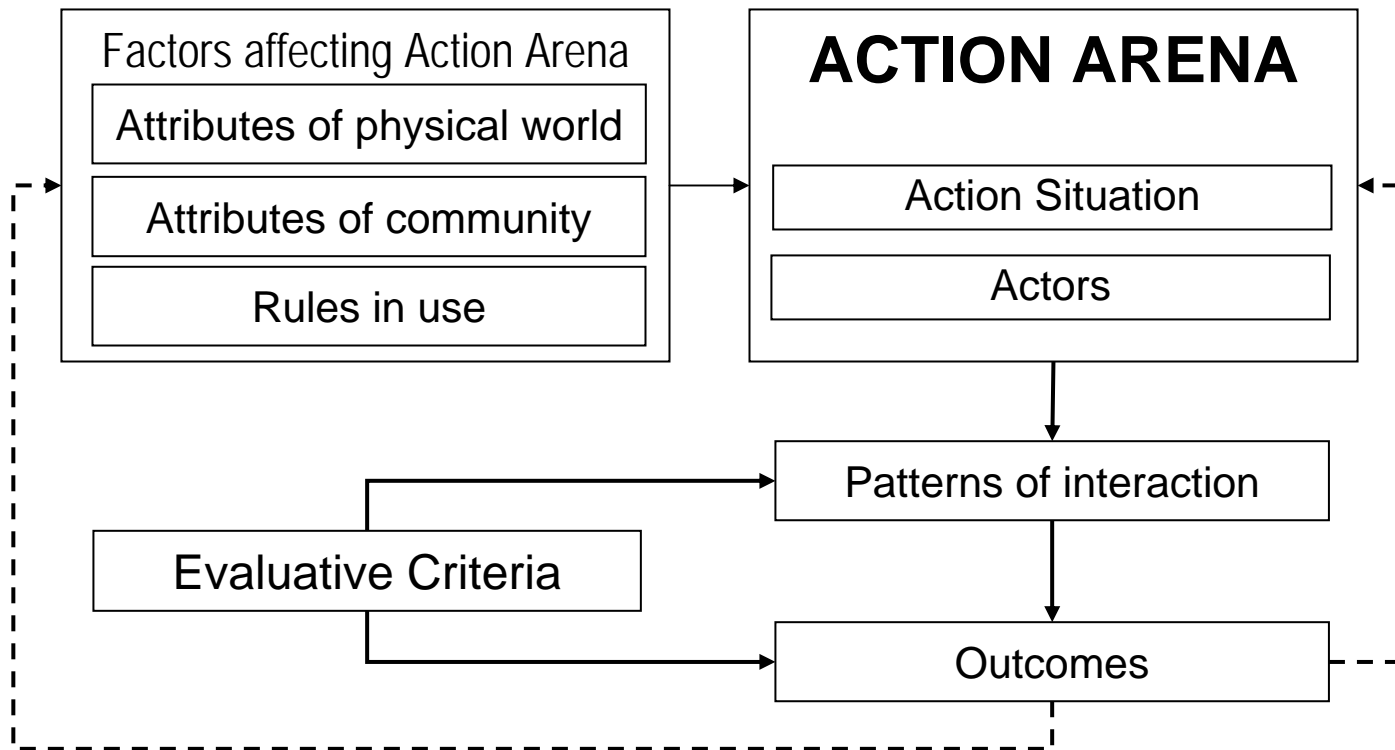
Research Questions (1)

- How and to what extent can Companion Modelling (ComMod) be applied in the context of multi-stakeholder processes which have been externally initiated, such as development projects, wherein problems and objectives (and maybe even methodology) may already have been identified? (*Would there be conflict in principles?*)

Research Questions (2)

- How can the principles of ComMod, spatially-explicit MAS model and Institutional Analysis and Development framework (IAD) be used to develop an alternative approach that can support/aid the analysis of multi-stakeholder processes for managing space and natural resources? (*an evaluation method or framework*)

Institutional Analysis and Development framework (IAD)



Definitions

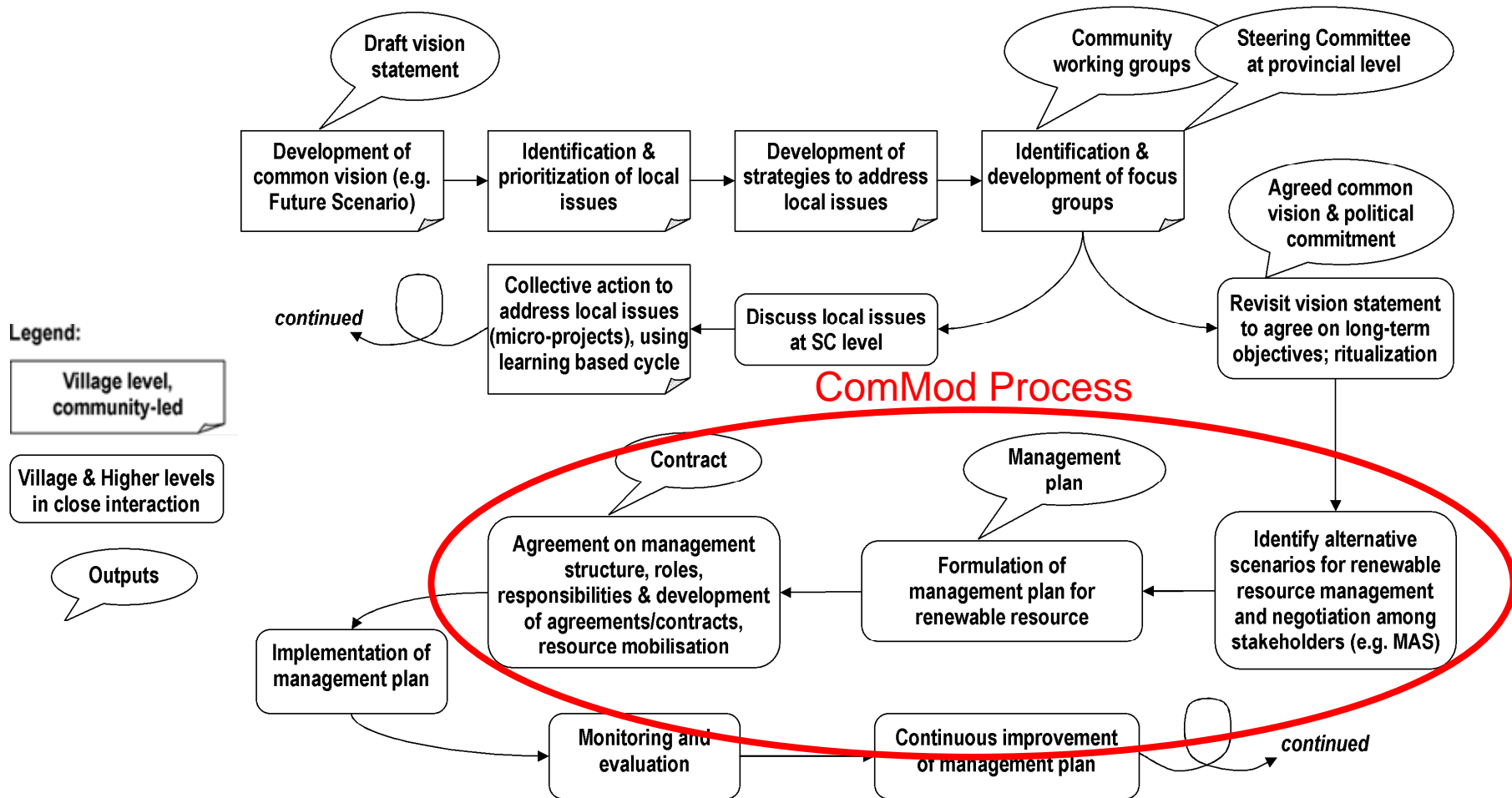
- Institutional analysis and development framework - a tool for organizing concepts that could be used to guide researchers in analyzing institutions, being able to link different theories and models into a coherent structure
- Action arena – focus of investigation
- Action situation – a social space where interactions take place. It is composed of actors who have become participants in the situation. A participant holds a position or role, with position role having a specific set of actions. Each action is related to an outcome and a pay-off (cost and benefits) through transformation functions. An action is performed depending on the information available or known by the participant.
- Attributes of the physical world – has direct impact on the interactions and outcomes of a situation because some actions and pay-offs are directly anchored to the physical world (not true for all cases)
- Attributes of community – the “Culture” or norms of behavior, level of homogeneity of understanding of action area, preferences, and distribution of resources (e.g. money) – What the community has to offer
- Rules-in-use – prescriptions on what actions are required, prohibited or permitted, as well as sanctions for breaking the rules

II. Conceptual considerations

For Research Question 1: ComMod Considerations

- The approach is implemented from the ground-up, beginning without any *a priori* implicit experimental hypothesis (Barreteau et al., 2003).
- The approach has been implemented exclusively, i.e. not being concurrent with or being under any other development initiative or project.

ComMod within a development project (Case: Levelling the Playing Field)



Context: ComMod within the Levelling the Playing Field project

- LPF Objective:
 - Improve renewable resource management thru capacity-building and improved communication and coordination among stakeholders.

For Research Question 2: ComMod Considerations

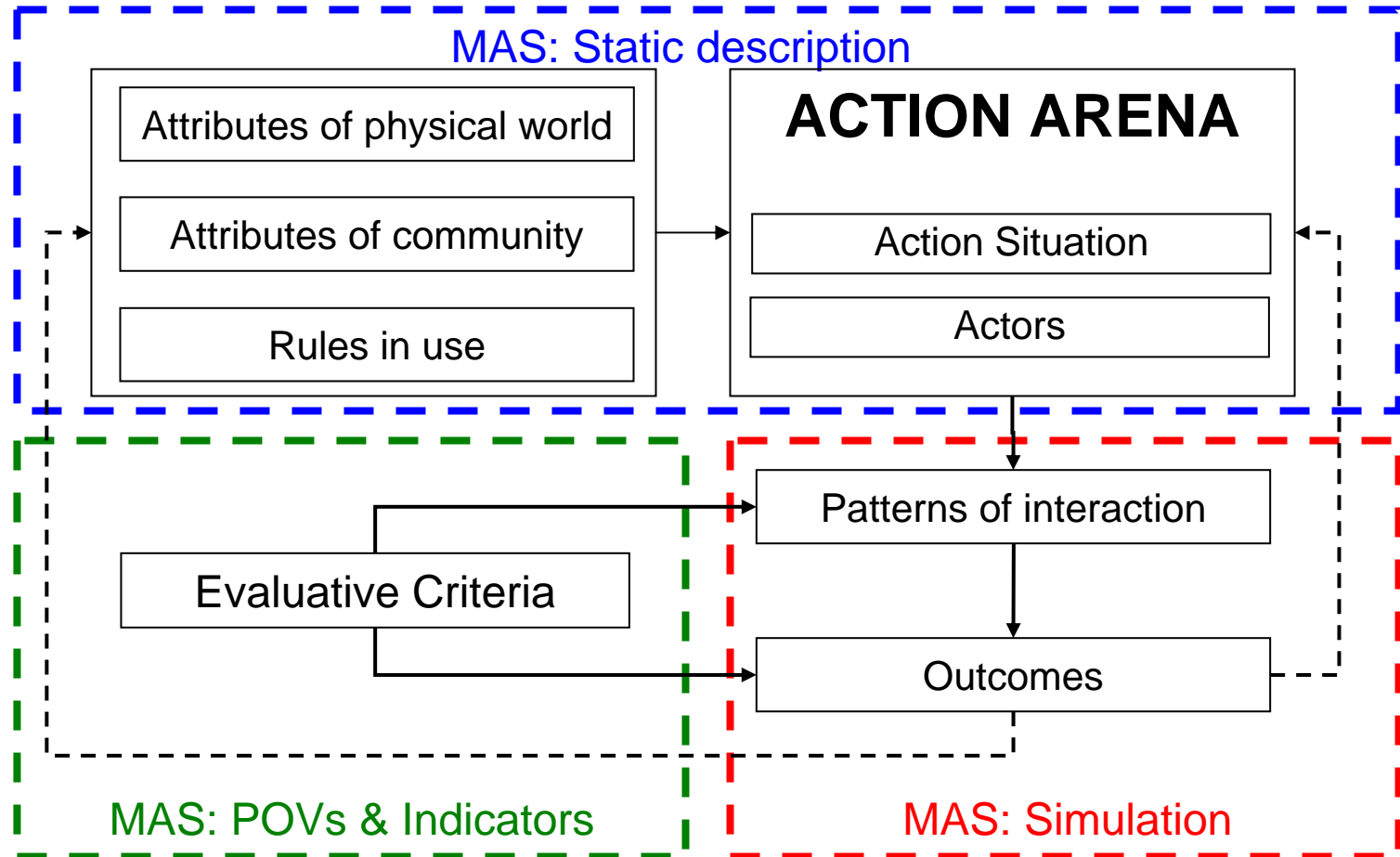
- Evaluation, in principle, is held to be very important in the ComMod approach and, yet, it is not explicitly defined.
- ComMod, being a dynamic process, should have a facility to be systematically evaluated dynamically as well within the process phases to allow it to adjust to the changing conditions but, at the same time, ensure that it remains true to its governing principles and objectives.

For Research Question 2: IAD Considerations

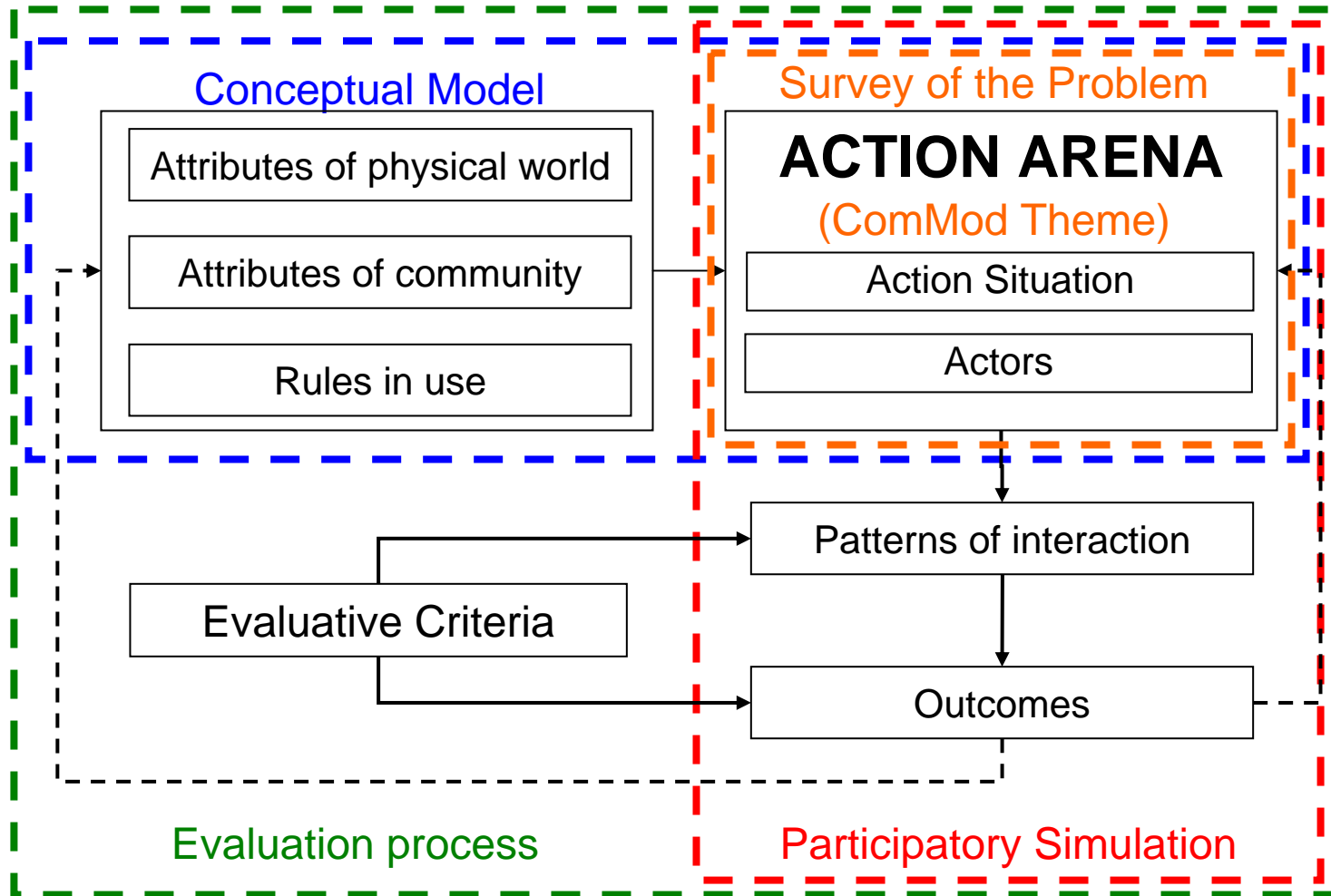
- Provides a only snapshot of the system
- The action situation has two sides, appropriation (where resources are extracted) and provisional (where mechanisms are established to sustain resources). It is prescribed in the use of IAD that the analyst is to be clear on which side of the action situation that is going to be analyzed. Therefore, analysis is done separately for the two sides of the action arena.
- The definition/description and analysis of a system is very limited to the point-of-view of the scientist doing the analysis.

How are ComMod and IAD related?

IAD vis-à-vis spatially-explicit MAS



IAD vis-à-vis ComMod



III. Field Results and Discussion

Going back to Research Question 1

- How and to what extent can Companion Modelling (ComMod) be applied in the context of multi-stakeholder processes which have been externally initiated, such as development projects, wherein problems and objectives (and maybe even methodology) may already have been identified? (*Would there be conflict in principles?*)

ComMod and Development: The instantiation of ComMod within LPF

Objectives		
LPF Project	ComMod Approach	Process with stakeholders
<ul style="list-style-type: none"> - Develop a model together with the stakeholders to collectively learn more about the NRM and livelihood situation in the light of existing and impending rules of access and use of resources. - Use the tools that have been developed in the modelling process, i.e. role-playing game and computer simulation, to initiate and stimulate discussion among the stakeholders in finding a balance between sustainable NRM and livelihood. 	<ul style="list-style-type: none"> - Understand complex systems - Support collective decision-making processes in complex situations 	<ul style="list-style-type: none"> - Develop an alternative to very formal negotiation such that the stakeholders are able to talk and negotiate. - Have a representation of all

ComMod and Development

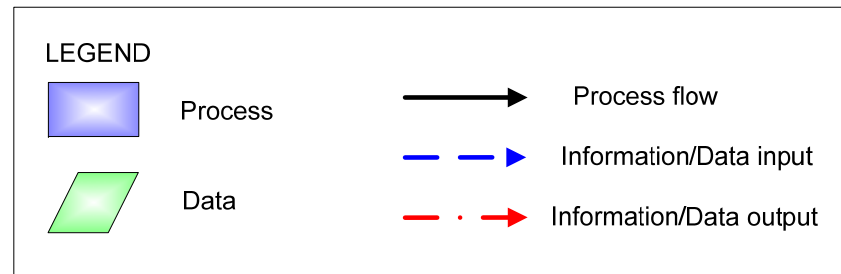
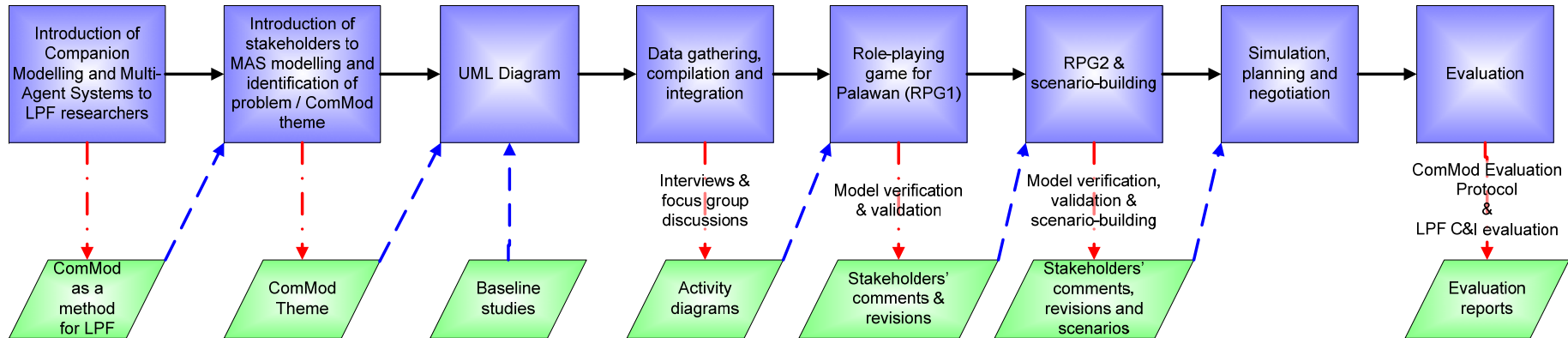
In principle, ComMod fits very well the objectives of development initiatives, such that it can be used to support or complement the development activities. However...

ComMod and Development

Several questions arise:

- 1) What would be the added value of ComMod in a development initiative?
- 2) Under what conditions and to what extent can ComMod be practically used in development initiatives?
- 3) How do we effectively implement ComMod in such a scenario? What are the challenges/obstacles and dangers/pit-falls of such a scenario?
- 4) Would there be any difference if the development initiative is initiated from within or external to the system?
- 5) ???

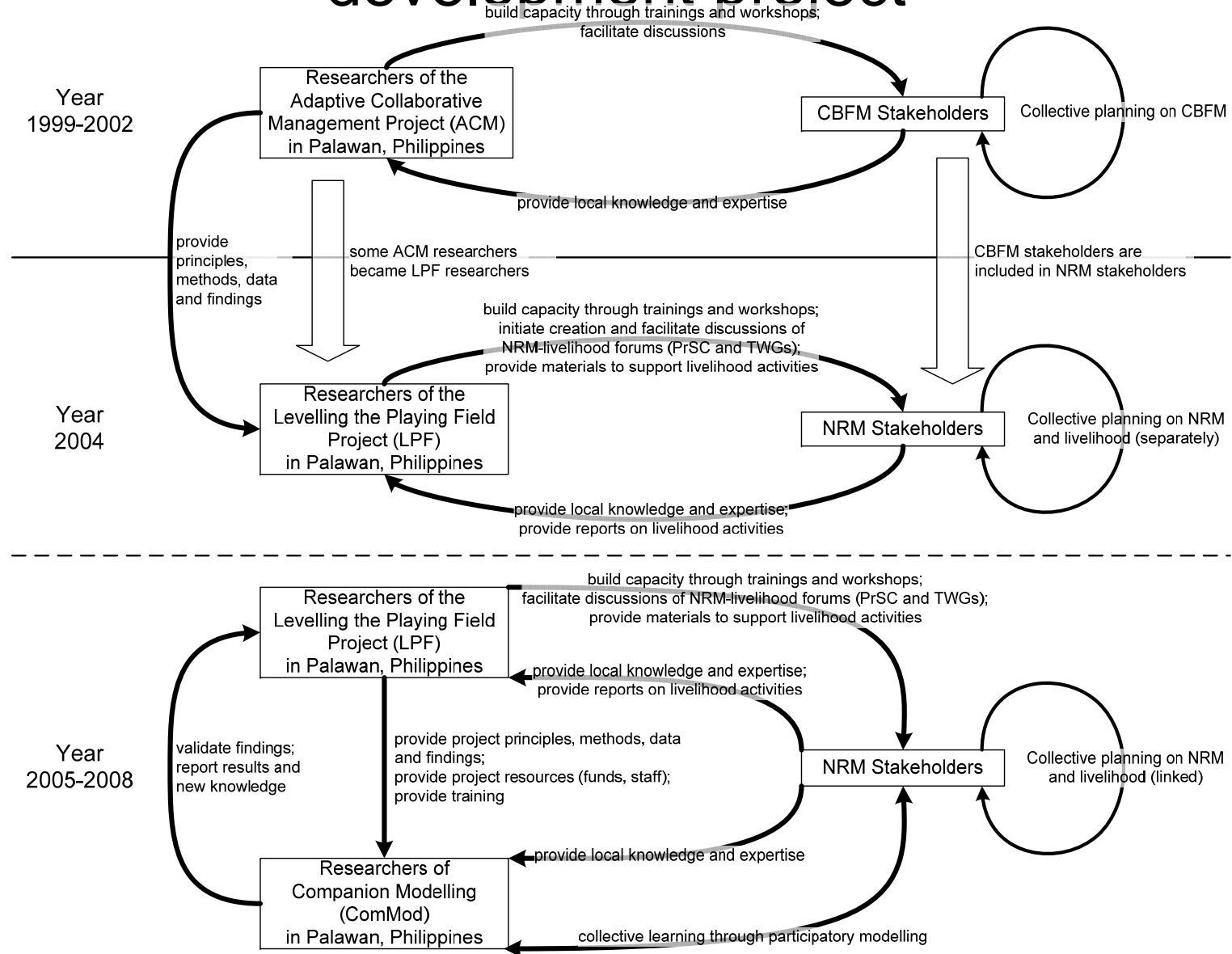
ComMod and Development: The instantiation of ComMod within LPF



Available Materials

- ACM Reports (Final report, C&I evaluation)
- LPF Baseline studies (C&I Reassessment, Stakeholder survey and analysis, Institutional Analysis, Multidisciplinary Landscape Assessment) and year reports (except for the final year)
- Discussions and workshop evaluations from MAS activities (written records, videos)
- RPG and Simulation (and their results, the RPGs have been saved in IM files)
- ComMod evaluation protocol results (individual interviews from 12 villagers & 12 mediating institutions, 2 focus group discussions with villagers with about 12 participants each, divided into 2 groups per session)
- LPF C&I evaluation (draft report)

Lessons from implementing ComMod in a development project



(Potential) Advantages of ComMod being within a development project

- ComMod may benefit from the resources and knowledge base of development projects
- Networks among stakeholders may facilitate the logistical implementation of ComMod activities, e.g. inviting participants and providing venues.

(Potential) Added value of ComMod in a development project

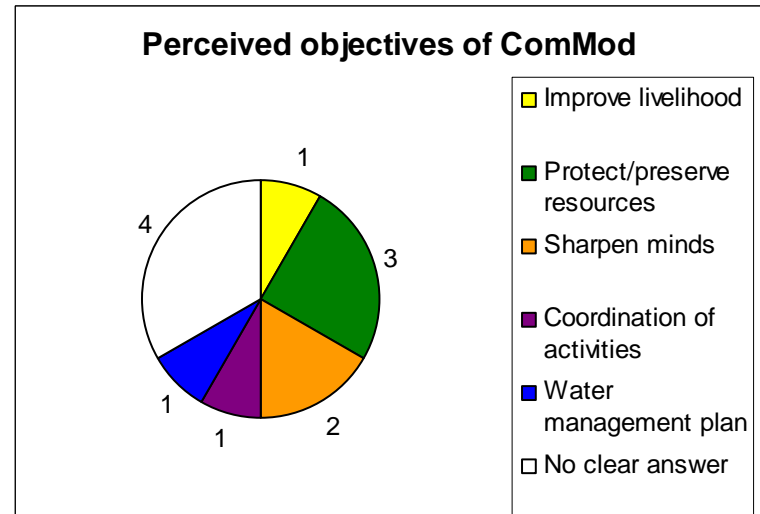
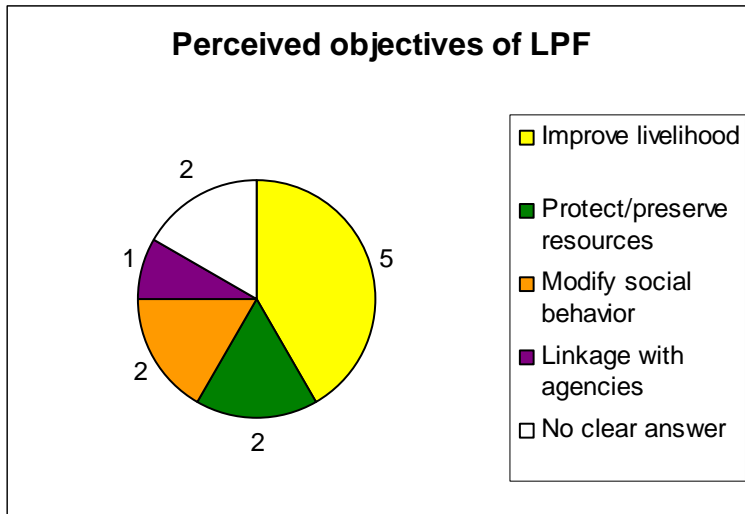
- The ComMod approach offers a unique way of collective learning through participatory modelling, which may not be typically found in the more commonly used methods.
- ComMod may validate the initial findings and assumptions of a project and bring in new knowledge as well.

(Potential) Obstacles between ComMod- Development Project interactions

- Difficulties befalling a project may also be experienced by ComMod, such as lack of support from the stakeholders.
- Competition on project resources among a project's different components may compromise the integrity of these components.

LPF vs ComMod: the perceived objectives of the stakeholders

From the point of view of the villagers



From the point of view of the Mediating Institutions

LPF → to promote and support bottom-up planning to improve livelihood

ComMod → a method for learning about how to improve livelihood and sustain the natural resources, and for evaluation of processes (e.g. workshops)

LPF vs ComMod:

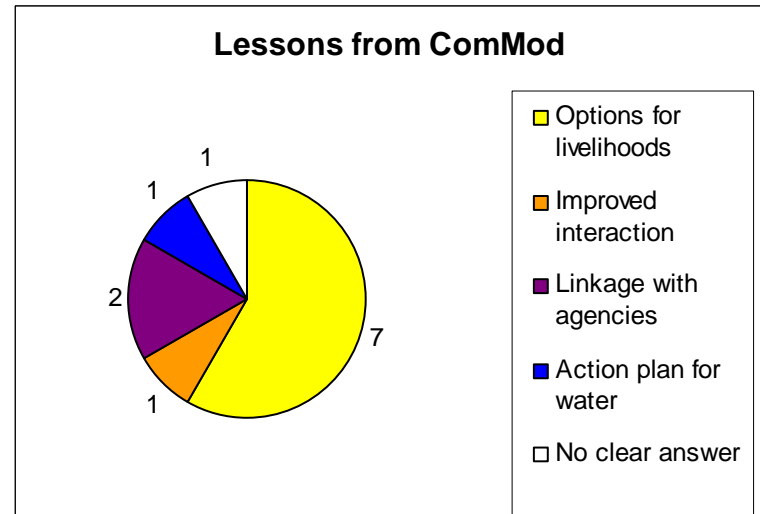
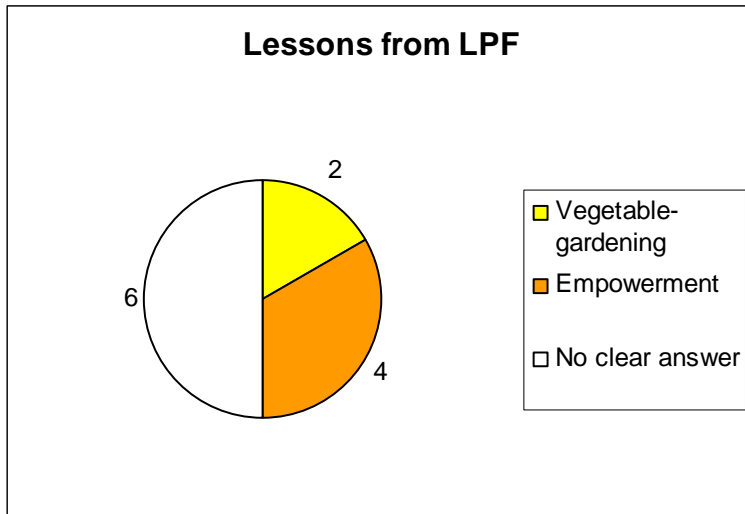
the perceived objectives of the stakeholders

- The results of the ComMod evaluation protocol with the villagers show that the villagers perceived that LPF and ComMod had similar objectives.
- For both LPF and ComMod, the responses were not that extraordinary but, it is the number of people, or lack of it, that seems to be significant.
- It was observed during the ComMod evaluation protocol that the interviewees from the mediating institutions showed lack of interest to the processes of LPF and ComMod.

If LPF and ComMod had same objectives, would the stakeholders be able to differentiate the lessons learned from each of them?

LPF vs ComMod: the lessons for the stakeholders

From the point of view of the villagers



From the point of view of the Mediating Institutions

LPF → They learned about the livelihood needs of the people and the need for water distribution systems in the villages, as well as the people being able to identify the right people to help them for their needs.

ComMod → They saw that potential of RPGs and simulations to teach villagers about depletion of resources.

LPF vs ComMod: the lessons for the stakeholders

- The villagers believed that LPF empowered them, that is to say that they are now able to stand up and voice their opinions.
- Relating the response of “options for livelihoods” with the perceived objectives of ComMod by the villagers, this may be the result of achieving the objectives for improving livelihood, protecting/preserving resources, and sharpening the minds. This can be confirmed in the C&I evaluation of LPF.

LPF vs ComMod: the lessons for the stakeholders

- It indicates that, for the mediating institutions, the LPF development component had nothing new to offer them and, thus, they have learned little or have become uninterested in the process.
- There is a strong mindset among mediating institutions in which they possess the idea that they are the resource managers and the villagers are there to be taught and carry out the management schemes. It further suggests that the mediating institutions view the LPF project as being in direct competition to their work and, thus, have resentment towards LPF.

LPF vs ComMod: the lessons for the stakeholders

- On the other hand, the mediating institutions stand to learn from the ComMod process, at least in its tools, and have kept their interest so much so that they have requested further training in the development of RPGs and simulations. This can be confirmed in the C&I evaluation as well.

Conclusions

- The principles of the Companion modeling approach are directly in line with development projects that support multi-stakeholder processes for sustainable natural resource management and its implementation in such projects is a valuable addition.
- Synchronization and coordination between project activities is imperative. An incomplete implementation of the ComMod approach may perpetuate, or worse, support mindsets that hinder or prevent learning and for a truly collaborative management system to take place, which could eventually lead to the approach's failure.
- It is therefore imperative to detect and rectify such a situation (strong mindsets of stakeholders) throughout the process. This could be achieved through a dynamic evaluation process that could monitor the ComMod process in relation to the project context and allow it to adjust accordingly in time.

ComMod: Collective learning among the stakeholders

- Results from the field were framed in terms of organizational learning (OL)
- The NRM is considered as an organization with stakeholders as its members
- The lessons were related to the constructs that support OL
 - Knowledge acquisition
 - Information dissemination
 - Information interpretation
 - Organizational memory

A discussion on the collective learning from ComMod is found in the EMS paper that is in the process of being completed.

Going back to Research Question 2

- How can the principles of ComMod, spatially-explicit MAS model and Institutional Analysis and Development framework (IAD) be used to develop an alternative approach that can support/aid the analysis of multi-stakeholder processes for managing space and natural resources? (*an evaluation method or framework*)

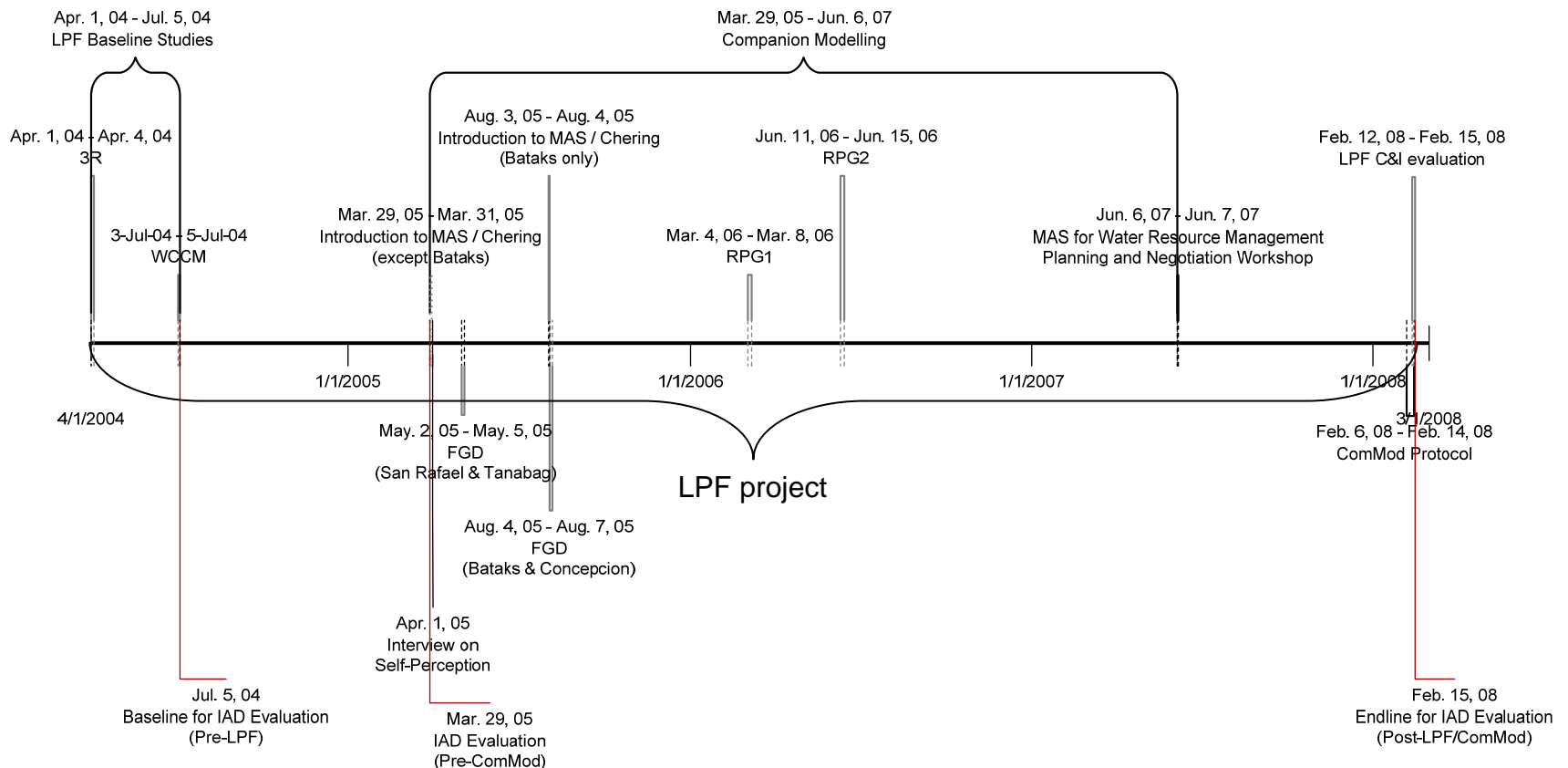
At this point, the answer to this question is not yet clear because there are several directions on how to answer this question. However...

Objectives for the Evaluation process for ComMod in a development initiative

- The evaluation should strike a balance among the benefits for the stakeholders (lessons), the scientists employing ComMod (analysis of the process and improvement of the approach) and the development initiative/project proponents (reports).
- It should be an adaptive method to allow ComMod adjust to the changing conditions but, at the same time, remain within its contexts (a process with the stakeholders, as an approach, and as a component of a development initiative).
- Evaluation may be enhanced with IAD by allowing the evaluators to determine what to look for at a specific time.

Possibilities for the articulation between ComMod and IAD

1) Analyze/evaluate the ComMod approach before and after the process using the IAD framework.



Possibilities for the articulation between ComMod and IAD

2) Integrate the IAD framework in the ComMod approach

- This would allow a more precise identification of the data and information needed for the modelling process.
- Guide the evaluator (modeler, stakeholders, external evaluator) in monitoring and analyzing the evolution of the system within the development process (*i.e. what to look for at what time*).

Possibilities for the articulation between ComMod and IAD

- 3) Integrate the principles of ComMod to develop a dynamic and participatory IAD
 - The description/definition and analysis of the system would be more holistic as it now directly considers the POV of the stakeholders, and not only that of the IAD analyst. (although some argue that institutional analysis should be left to the experts)
 - It can make use of virtual laboratories (i.e. tools) used in ComMod, which could incorporate different levels of the system, to analyze it (the system).

Preliminary Findings

- There is added value in developing evaluation method/s for ComMod at the beginning of a development initiative in which the method/s are designed to address the different contexts of the approach. This is recommended to guide the implementation of the approach and make sure that it continuously addresses the objectives it was designed to achieve in relation to its contexts.
- As part of the evaluation process, a joint timetable (for objectives) between ComMod and the development initiative should be made to monitor, evaluate and synchronize ComMod and the development initiative.

Merci beaucoup

Perceived objectives of ComMod by the stakeholders

	Modeler-researcher	Villagers	Mediating Institutions
Objectives	<p>General:</p> <ul style="list-style-type: none"> -Develop an alternative to very formal negotiation such that the stakeholders are able to talk and negotiate -Have a representation of all <p>Specific to activity: <i>RPGs</i></p> <ul style="list-style-type: none"> -Discuss and learn about livelihood activities and strategies with the stakeholders -Discuss, learn and establish NRM scenarios with stakeholders -Evaluate an activity <p><i>Water Resource Management Planning and Negotiation (WRMPN) workshop</i></p> <ul style="list-style-type: none"> -Link the RPG with the computer simulation -Understand the effect of ECAN -Learn to make a plan together -Establish agreements within communities and with the mediating institutions 	<ul style="list-style-type: none"> -Improve livelihood -Protect/preserve resources -Sharpen minds -Coordination of activities -Water management plan 	<ul style="list-style-type: none"> -Improve livelihood -Sustainability of resources -Evaluation

Lessons of ComMod

	Modeler-researcher	Villagers	Mediating Institutions
Lessons	<p>Specific to activity:</p> <p><i>Introduction</i> Stakeholders had difficulty in understanding the sample simulation model</p> <p><i>FGD</i> Learn about each others' livelihoods</p> <p><i>RPG</i> Players tested livelihoods NGOs and GOs would propose livelihoods in the future</p> <p><i>WRMPN</i> The objectives for the workshop were met except for ECAN. The computer simulation wasn't able to show its effect on livelihood and natural resources</p>	<ul style="list-style-type: none"> -Options for livelihood -Improved interaction among each other -Linkages with agencies -Action plan for water 	<p>-Show to the villagers the over-exploitation of resources, i.e. the depletion of resources if there is no shift in livelihood</p>