

Interview results in Mae Salaep

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a. Participants of interviews

30 May 2007

Multiple Cropping Center (MCC-CMU) at the local Faculty of Agriculture, University of Chiang Mai

- **Mr. Panomsak Promburom, ComMod researcher from the MCC-CMU team, observatory in Mae Salaep**
- **Mrs. Thanya Promburom, researcher (MCC-CMU, Thai interpreter cum game facilitator Mae Salaep**
- **Research collaborator: Dr. Benchaphun Ekasingh, agricultural economist and chairperson of the Multiple Cropping Center (MCC-CMU), observator of one workshop Mae Salaep**

31 May - 2 June 2007

Selection of the participants to be interviewed

- **Criteria used in the selection: (i) Participants having different status in the village and representing different groups of stakeholders regarding the issues at stake, (ii) Participants who were most active during the ComMod activities.**
- **5 villagers (2 women and 3 men, 1 type A farmer, 1 type B farmer and 3 type C farmers) and two development workers (1 male and 1 female) were selected to be interviewed at the office of the local development agency in Mae Salaep village during 31 May - 2 June 2007.**

Schedule of the interviews in Mae Salaep

- **May 31:**
 - **Khun Mitila, female development worker and former facilitator in the three ComMod field workshops (translator Thai-Akha).**
 - **Khun Phini, Type C farmer (translator Thai - Akha: Khun Kittiphong Jhiko).**
- **June 1:**
 - **Khun Assui, Type C farmer & Leader of the local Christian community (translator Thai - Akha: Khun Kittiphong Jhiko).**
 - **Khun Bousoum, female typeA farmer (translator Thai - Akha: Khun Kittiphong Jhiko).**
- **June 2:**
 - **Khun Mibeu, female type B farmer (translator Thai - Akha: Khun Kittiphong Jhiko).**
 - **Khun Asseu, Type C farmer & TAO representative of the village (translator Thai - Akha: Khun Kittiphong Jhiko).**
 - **Khun Pom, officer of the local development agency.**

B. Interview results at MCC, Chiang Mai University

09:00 - 10:30: Khun Panomsak's interview

- Annemarie introduces the background of the ComMod evaluation exercise under ADD ComMod Project.
- How did he learn about ComMod: First he visited a seminar (1,5 hours) but he did not really grasp the importance at that time. Then Guy & François organized training activities at MCC (in 1998 & 1999). Joined later in the MAS for INRM activities (before it was named ComMod) because "it was about modelling" and of his academic background and past activities in crop modelling and GIS-remote sensing. And that he used to work with farmer system research before and was aware of this kind of soft science. Was curious about the possibility to have people's behaviour in the models. In the local context of seeing NRM problems becoming more complex.
- It is "challenging", because "it is a new way" to implement "bottom-up approaches" when the government was decentralizing resource management.
- What he liked: the bottom-up approach with more capacity than others to explain things scientifically. Also strengthen the local capacity but is able to link this with upper layer in the system hierarchy, researchers. It is more than answering questionnaires (like in other methods), especially during role-playing games (RPG), people "feel real, interact real".
- Annemarie asks him to compare ComMod with other approaches to know the difference. In 2004, he joined a workshop organized by ICRAF on scenario analysis: meeting with stakeholders to express their own views on the current situation, then ask them to "dream" about the future, facilitate the emergence of a collective scenario, then look at the pathways to reach that desired situation. This is where modelling and simulation may be needed to assess different pathways.
- Used to stay 15 months at the East-West Center at Hawaii University (it was his alternative to study for PhD with Dr. Jeff Fox) but the modelling work for the integration of the systems components were not very advanced there (while the language was friendly and the Hawaiian environment good!), but he thought about his future career and choose ComMod and asked F. Bousquet to be his adviser.
- Compared to Farming Systems Research (FSR), analysis of the village systems in an interactive way with farmers, then more in-depth studies on individual farms and decision-making. In FSR the scientist gained much more than farmers and collective activities were not frequent. Problems were identified and research done to find solutions. But could not touch on the policy aspects, social structure and empowerment and not much action occurred. ComMod is more action-research oriented and take social structures into account. Tools are very different: RRA in FSR, then PRA with more integration of the tools, but weak on sensitive aspects, and are more "static" tools. ComMod provides a better understanding of decision-making, you see things when the people play games dealing with sensitive issues like forest management. ComMod is also about how researchers get involved in such context.
- What is the most useful tool and phase in ComMod to understand the people behaviour? It is when you managed to create a good environment (in which people feel comfortable) for looking at things together and to react like in reality, feel at home (he shows the playing board of the Mae Salaep case study as a good example: "you need to do home work before you start", the introduction of the sessions is also important: "we come to learn from each other", respect to participants, give credit to them is important), and

the capacity to focus on key issues arising from the game or the collective debriefings or the individual interviews in an iterative way.

- The GIS approach is mainly to serve the scientists with few interactions with stakeholders, it fits more with higher level layers of the system hierarchy (policy-makers). Does not provide a good understanding across disciplines, weak on the social aspects and their interactions with others. Could be used in a bottom-up approach when applied to some topics like looking where to promote fish in the paddies systems in NE Thailand by mobilizing villagers' knowledge, or when using 3D maps villagers find more easy to relate with. Was not very convincing/clear on the progress made by linking GIS with a MAS model in ComMod.
- On people following simulations: they could find their land on the screen, not all of them could follow the simulations (difficulty to remember which colour corresponded to which crop), nor were able to understand / analyze the results of simulations (they have to think back to what happened in the game. They relate it to their personal experience). How to improve? No immediate ideas on this.
- What makes that ComMod is helping farmers to think about an issue as such? "The game makes them feel like the real situation, they cannot fake, they cannot cheat!" The way things evolve during the game makes them understand what is the issue about (the critical issue), by learning through interactions in the group. "The game is a tool helping them to understand the situation". About the added value of MAS simulations: "both are needed, but he himself had problems understanding what simulations were about when used in isolation. You need a full day, after the game, to understand the "engine" of the computer model and how to use it (the one-day role playing game demonstrates the 'engine'/dynamic, which you need to know to follow the simulations. Simulations can help to understand long-term trends, to stimulate people to think about alternatives.
- About capacity building effects: the approach makes them realize that they do need to think further than their own daily life and sorrows. They need to think about others as well (including people higher in the hierarchy), about alternative scenarios, etc. This process impact on their "way of thinking".
- On the implication of "higher people" at the beginning of the process: "Usually the budget is limited!" Possible to use simulations to involve them from the start. At Mae Hae site he will provide "decision-makers" at the watershed level them with a model running for 14 villages as a way / tool to share their points of view. The technique or budget is not a problem, but the trust and confidence in the enforcement of the set of agreed upon rules are important issues. I do not know what will come out of such collective process.
- Training of local MAS modellers is a limitation, not only in Thailand (see Bhutan). I could help to improve this present situation. The Cormas platform is not user-friendly compared to other ones, but others put limitations on the models you can develop.
- After returning: will be challenged by new things happening in GIS, but have to know another network to go on and create "my own base". Continue to see how to better integrate GIS and simulation.
- About teaching at MCC: the focus is on the systems approach, MAS could be seen as a promising tool, more on sharing the approach and tools inside CMU.
- On future activities in Mae Salaep: cannot lead during the coming year. Will be too busy at his own site. Can collaborate if somebody else leads the activities.

10:30 - 12:00: Khun Thanya's interview

- Most difficult task in facilitating the gaming workshops: the management of language barriers, the quality of communication, the risk of mis-communication, that Mitila did not always understand what we wanted and did not translate exactly what we meant into Akha language. I also did not understand all the process, but fortunately we had a test with the students here at MCC [in September 2002 during a one-week training course on MAS & GIS held at MCC]. Tests are good before we go to the field. It might be good if we had Mitila to take part in testing the game too. Good preparation of the translators will help.
- Most difficult aspect of the game to understand for the players in the first game: where were their plots on the board & what kind of crops they could grow. Players had limited understanding of economics. But after one round of play some 4 players were able to manage by themselves, and some more after the second round.
- They liked the game, they found it enjoyable, had fun among themselves. They discussed but men with men and women with women. In the collective discussion, mainly the men talked. And this did not change along the process from the first to the third field workshops.
- In the second game: the credit idea was good as a new feature in the game. Players understood more about the economic aspects and had more choice of crops to select and they thought more about the economic aspects. But they borrowed money mainly from other players, from their friends or relatives, not much from the credit desk [the formal credit system]. She thinks that the players did not understand how the formal credit desk was operating. They learned more about credit, but not sure about the effects of the exercise on their behaviour about credit in reality.
- In the third game Thanya and the other assistants at the board were confused about the use of the pipes in the game because no previous test of this new game to better understand the technical details. Lively discussions occurred and they could negotiate among themselves. The simulations were good for them to discuss the water problem, but Thanya was more busy moderating the game. She thinks that it was easy for the players to switch from the game to the MAS simulations. But discussions were different during the game (more interactive) than during simulations (players were "sitting like students").
- To improve the work of facilitators, they should receive a specific training to better understand ComMod and the tools to be used in the field. They need more practice and tests of any new games.
- People get bored if we play more than 4 or 5 rounds. Should change the participants so that they do not get bored repeating the gaming exercises.
- Other stakeholders than the villagers (like TAO officers) should also be invited to join in the gaming sessions to learn about this kind of tool, learn about the situation and think about innovative solutions to problems.
- She thinks that the RPG is a powerful tool and that it can be transferred to development workers in Thailand. It is good to open the views of the people regarding an issue.
- Compared to other approaches, she liked the games in the approach. It is fun and the people understand and she also learned from the games about the issues being examined. Even if a longer preparation phase is needed for a good implementation. It can be applied about many kinds of issues, but not for all.
- Is it too costly: the first time yes. But no if repeated, material is re-used. The cost of the whole process is high, but taking the outcomes of the process into account, she thinks that it is good value for money.

- Most important aspect for the villagers according to her: the possibility to discuss with others.

13:30 - 15:00: Ajarn Benchaphun's interview

- How she became aware and interested in the ComMod activities: it started with a seminar with François & Guy about the work done in Senegal [That was a two-hour seminar in the MCC Ag. Systems International Master Program in late 1998], MCC people got excited and decided to learn more about the subject. The initial excitement was about having an effective modelling approach to incorporate the behaviour of people and to test behaviour rules and their effects on the natural system. In late 1999 a two-week training course was held at MCC to introduce the full methodology and tools and she participated in it. She had a common student with Guy in Mae Salaep building a typology of the farming systems [That was in 1994-95]. Then she was involved in the preparation and implementation of the first field workshop in Mae Salaep in late 2002 with several members of her research team [who also helped to implement the second and third sequences in which she did not participate personally].
- The most critical point about the ComMod approach: the gaming phase is most important because this is when the people learn about the model, interact, while the simulation phase "enrich the process" (but is less interactive, with less exchanges, about a narrower scope /focus).
- ComMod is about to have people understanding the problem and themselves and the second aim is about acting.
- She thinks that the gaming sessions are "more prominent", they discuss in a lively mode about their reality, it is more powerful as a collective process, while in the simulations they can discuss some specifics.
- About learning: they learn most in the game, because it is lively: they make decisions, see the effects, compare with others, etc. while only persons who are more vocal will intervene about simulations, interact with the facilitator. While "outsiders, researchers like us" learn a lot during the individual interviews, after just observing what they did and say (depending on the language used / can understand or not) during the game.
- In the first round we did not have enough time for the people to speak during the collective debriefing, no time to probe what the people who did not volunteer to speak had in mind.
- She tends to like the idea of using simulations in smaller groups [like done by Cécile in the 3rd sequence] to boost participation by all participants.
- She feels that there could be a mental block between the gaming exercise on a 3D model and the 2D CORMAS interface, a big change regarding the connection with reality. "If you can do it without the computer it is better I think, if you can get rid of this machine, it is intimidating".
- About the final effects on the people: to "come up with some real change, something they can do about it". You need to **follow-up**, go back to them, do not stop after the interviews, get them to recognize that some action & changes are needed to improve the situation, that there should be an agreement in the community to agree on some action, and let this be known in the village, among those who were not involved in the initial activities, by getting the leaders to spread the message for example.
- As a scientist, what is the most important effect of the process? To see how this process can be used effectively to lead to conclusion, policy and be applied to other contexts. "Because I am involved, but not really into it, I want one of our staff to have

the full capacity to use it and to teach other people to do it. But for myself I understand enough". "I see the potential but I am not the person driving this approach, I will rely on them".

- About ComMod specificity: "the active involvement of the villagers", in the "mechanics" of the process, this is different from other methods. Other modelling approaches are aggregative but weak on the real understanding of behaviour / decision-making.
- Is ComMod useful to give advice to policy-makers, to involve them? It should be used differently from other models, it is powerful to give insights on the behaviour of people, on the rules of behaviour. The relevance of ComMod depends on the type of policy to be examined. We need to have more cases how this is used, in different domains, how it affects policies, to demonstrate how it can be used and applied in different contexts.
- What other modelling approaches are you using yourself or in your team? We have work on decision tree to do modelling on the agronomy of watershed management, but not very successful, not well-linked to bio-physical functions. Also used linear programming to look at the interaction between decision-making and (price & agronomic) risk, but integration is a problem beyond simple things. Other modelling approaches are used to generate different kinds of probability functions (on prices, crops, etc.) that we integrate with a database to see how the system could change at the provincial level. She also worked with multiple linear programming but the economists and agronomist have problems to integrate their knowledge in one model.
- Presently, the villagers are not powerful enough to convince policy-makers, even local ones [Exact! See the situation in Mae Salaep with the TAO President]. Possibly, the scientists have to carry on, to do more on the conclusions, make sensitivity analyses, etc. and then with stronger results call meetings with policy-makers. Dealing with policy-makers is "another battle".
- Is it more costly: "I would say that it is more time demanding in term of the time needed to set up these things. You need to think very well the different features like the game, etc. And you also need more people to be involved in it compared to other approaches." Other modelling is also costly, but less people are involved.
- The modelling part is not essential, but it is better to do it as well as it forces to think systematically, step by step. Simulation can also be used the validate/cross check/explore the outcome of the role playing game.
- About the obstacles to wider use of ComMod in Thailand: the MAS modelling, we do not have this capacity in Thailand yet, waiting for PhD students to finish, then practice it together with NGOs.
- About strategies for scaling-up and scaling-out the ComMod approach? It is more important to scale-up (see her remarks above on the "middleman" role of scientists to demonstrate convincingly) rather than scale-out with the same questions and subjects, constraints.

C. Interview results Local stakeholders Mae Salaep

1. What do you (best) remember from the ComMod activities? What did you get / find interesting / learned from them? What changes did the ComMod exercise produce? What was most interesting about ComMod?

Participants:

Boussoum (poor Female Head of Household (FHH, cat A): Irrigation water was the most interesting issue, because she realises the possibilities of gaining access to water (She does not have the means yet to implement. Her neighbour helps her out when she needs water to spray insecticides on her few Lychee trees).

Mibeu (elder FHH, cat B): The water issue was most interesting. She remembers the dynamics between the production of different crops and irrigation water.

Phini (elder farmer, cat C): Most interesting was the water issue, irrigation will allow to produce outside the rainy season [not exactly in this case: irrigation is mainly needed here to improve yields and quality of the product in perennial plantations - Lychee, tea- It is about complementary irrigation at some critical periods in the dry season (like Lychee flowering- and not much to add a new crop cycle in the dry season as there will never be enough water available for that in those highlands]. Second was the credit: that you could borrow money to invest, and gain money to pay back your loan.

Assui (Christian leader, cat C): Most interesting was the water issue, to gain new knowledge and confidence, and to generate new ideas like how to better apply fertiliser or do weeding in plantations. He discussed this issue with participants during the role playing game. Through the workshop he also acquired an overall view ("picture") of the situation.

Asseu (TAO representative, cat C): The most interesting was the water discussion. Farmers learned about different crops and their economic revenues. This will incite youngsters to plant tea and to practice sustainable agriculture with less erosion.

Interpreter/facilitator Mitila:

- She was interested to see how people decide about what crops to grow etc. Before the game people did not know how, but through ComMod they have new ideas and confidence about farm production.
- Before villagers only communicated with relatives and neighbours at night, but due to ComMod they now communicate with other people in the village as well.
- For the villagers the discussion about irrigation water was most interesting. There was a lot of discussion after the game.

Interpreter/facilitator Khun Thanya: Most important is the possibility to discuss with others.

Thai associates to the ComMod process:

Observing PhD student, Khun Panomsak: ComMod is a bottom-up action approach, which also links up with the scientific world. While Farming system research (a) did not touch upon policy aspects and social structure and (b) little empowerment and action occurred.

Ajarn Benchaphun (Research associate, Chair MCC Chiang Mai University): ComMod is about to have people understanding the problem, their own behaviour and the effect of the behaviour. The second aim is the action. As a scientist, I am interested to see how this process can be used effectively to lead to conclusion, policy and be applied to other contexts.

How did he/she become interested?

Observing PhD Khun Panomsak: First he attended a short seminar on MAS by Bousquet-Trébuil but he did not really grasp the importance of the subject at that time (late 1998). Late 1999, he participated in a two-week training course on MAS for INRM at MCC, organised by Francois Bousquet and Guy Trebuil. He joined the MAS-INRM activities because "it was about modelling" and he had an academic background and past experiences in crop modelling and GIS-remote sensing. It is "challenging", because "it is a new way" to implement "bottom-up approaches" when the government is decentralizing resource management.

Ajarn Benchaphun (Director FSR Chiang Mai University): It started with a seminar with François & Guy about the work done in Senegal [That was the two-hour seminar in the MCC Ag. Systems International Master Program in late 1998], MCC people got excited and decided to learn more about the subject. The initial excitement was about having an effective modelling approach to incorporate the behaviour of people and to test behaviour rules and their effects on the natural system.

What kind of learning does ComMod trigger?

Participants:

Boussoum (poor FHH, cat A): She used to farm as usual, without knowing the underlying biophysical and economic dynamics. She did not know what to do. Now she learned about farm dynamics: Lack of water gives bad harvests; you can invest in your farm to earn more; tea shrubs give an interesting revenue after about 3 years. This knowledge gives her the confidence to try out new things to make a better living. She now can anticipate what effect a farm practice will have.

Mibeu (elder FFH, cat B): The game is realistic. She observed how things work and this gave her ideas about what direction to go in the future.

Phini (elder farmer, cat C): He learned a lot, but may not realise everything due to old age.

Assui (Christian leader, cat C): He seems to always look from the perspective of the group. During the role playing game everybody is learning individually. The simulations are important ComMod method as they provide new insights (also at group level). In the consecutive plenary discussion they exchange about the new knowledge that they acquired individually. Then he needs to inform others, which forces him to structure his thoughts and increase his understanding. You need to grasp the concept, before being able to get ideas about options worthwhile to test.

Asseu (TAO representative, cat C): He learned about relations between cultivated crops and the farm revenue. As a consequence people started to plant more perennial crops such as tea.

Interpreter/facilitator Mitila: During the game people see what other people do, what effect it has on their income, etc. In this way they get ideas about how to do it themselves [quite a lot of imitation behaviour involved here].

Interpreter/facilitator Khun Thanya: Most difficult aspect of the game to understand for the players in the first round of play was the location of their plots on the board and the kind of crops they could grow. Players had limited understanding of economics. But after one round of play some 4 players were able to manage by themselves, and some more after the second round. In the second and third games there were more crops to select from and they thought more about the economic aspects.

Observing local development officer Khun Pom: The villagers now know how to think to solve problems. Before, things just happened to them. Now they reflect on issues and they copy best practices. More and more, they look for the information themselves. Like other participatory projects nowadays, ComMod does not bring assistance and funds but incites people to start to reflect themselves. In general, projects demonstrate things and organise discussions. ComMod is specific, as it is more concrete: it visualises phenomena and provides scenarios. In ComMod workshops, all social categories participate, and they start to copy practices in a selective and prudent way. Conclusion: ComMod is effective. And ComMod has a specific strong point: in contrast to other participatory approaches ComMod is able to facilitate reflections on collective issues.

Observing PhD Khun Panomsak: The approach makes villagers realize that they need to look further than their own daily life and sorrows. They need to think about others as well (including people higher in the hierarchy), about alternative scenarios, etc. ComMod has an impact on their "way of thinking".

2. Learning about the issues examined in succession

- At the beginning of the ComMod process, what was your idea about the issue at stake: What was the problem about? (The causes, consequences, worrying aspects and possible solutions?)
- What did you feel: was the problem urgent, important to take action upon?
- What did you learn during the ComMod process?

[Could be repetitive compared to question 1 / to be adjusted accordingly]

- Did you learn new things about the problem? (new ecological or agronomic aspects, an idea about its complexity etc.)
- Did you get a better insight in the consequences of the problem for the different stakeholder situations?
- Did you learn new kinds of solutions?

Erosion

Boussoum (poor FHH, cat A): The ComMod workshop made her realise the danger of erosion. She does not have much land (0.6 ha Maize, 0,3 ha Assam tea; no upland rice as she is in lack of labour), so she cannot afford to loose this. She had seen 'declining ditches to deviate run off, and as soon as she understood the erosion threat she knows she needed to apply them [It is interesting to see how this technique, that was not specifically discussed during the formal exchanges in the workshop, seems to have gained importance].

Mibeu (elder FFH, cat B): After the ComMod workshop she was more confident in using the 'declining ditch' technique in her fields to limit soil losses. In fact she practiced this a bit before, but now she was decisive and sure about its utility.

Asseu (TAO representative, cat C): When learning about different crops and the economic returns, youngsters will start to plant tea and sustainable crops that cause less soil loss. Now they have more confidence to plant these crops.

Credit

Participants:

Boussoum (poor FHH, cat A): Before she borrowed money from her younger brother to make ends meet in her household. After the ComMod workshop she borrowed money from her brother to invest in a small plantation of 0.3 ha of non-irrigated Assam tea.

Mibeu (elder FFH, cat B): She used to borrow money, but after ComMod she was more decisive and sure when she borrowed money to extend the area under Assam tea shrubs.

Phini (elder farmer, cat C): He learned that you can ask credit to invest productively and pay back your loan.

Interpreter/facilitator Khun Thanya: In the game, villagers borrowed money mainly from other players [as in reality], from their friends or relatives, not much from the credit desk [the formal credit system]. Players did not understand how the formal credit desk was operating.

Water

Participants:

Boussoum (poor FHH, cat A): She realizes the important role of water in agricultural production.

Mibeu (elder FHH, cat B): She remembers the dynamics between the production of different crops and irrigation water.

Phini (elder farmer, cat C): He learned that irrigation enables you to produce vegetables, when it does not rain. Now he is sharing water for irrigation with three neighbours (others' plots are too far away). They take turns, but in case of extra need they discuss to prioritise among the fields to be irrigated. Water is sufficient: they are able to cover their needs in 2-3 days per week.

3. Learning about other peoples' situation and opinions

- Did the ComMod process encourage you to exchange your point of view with others?
- Do you now better understand other people's situation and opinion: their concerns and priorities? (do they understand the reasoning and interests of other actors?)
- What were the critical issues you needed to discuss together?
- What was the result of the discussions: what things did you agree on and on what were the points of disagreement?

Participants:

Phini (elder farmer, cat C): Not really. The main issue was education.

Assui (Christian leader, cat C): He seems to always look from the perspective of the group. He does not like the game as everybody is learning individually. The simulations are the most important ComMod method as they provide new insights (also at group level).

Facilitator/interpreter:

Observing external scientist:

4. Collective engagement

- Did the process raise your engagement/excitement to solve this problem?
- Did the process mobilise the community as a whole? (Does everybody feel engaged to solve the issue together? Are there fractions/disagreement?)

- Did you observed a change in some people's relationships during the ComMod process? (some people communicate, collaborate or quarrel more?)
- **Did people get engaged in some kind of negotiation?**
- Did the community come to a joint agreement, action plan? Was this written down/formalised?

Participants:

Boussoum (poor FHH, cat A): Within the village there has always been a good atmosphere. She does not know about any collective projects.

Phini (elder farmer, cat C):

Facilitator/interpreter Mitila: Concerning the water issue no action is taken because the TAO prefers road construction. In a couple of years however the pressure to do something about water will increase and probably something will be done.

5 Specific effects of the various ComMod methods applied, notably:

a. Role Playing Games, b. participatory simulations, c. plenary debates and d. individual interviews

When playing the 'RPG':

- What did you learn about the issue? (Did it help you to better know the issue and what is involved?)
- Did it help you to better understand the impact of the problem on other people's life, their concerns and interests?
- Did it make you feel interested and engaged?
- Did it help to you discuss and come to a joint goal/collective agreement how to solve the problem?
- Did it help you to identify and implement concrete solutions/actions?

(We will try whether we can do this for each cycle, or we should ask these things in general)

When doing the participatory simulations etc, etc.....

Miscellaneous

Participants:

Boussoum (poor FHH, cat A): It was never boring, because she always learned something new.

Mibeu (elder FHH, cat B): ComMod is more effective than agricultural TV programmes, as the ComMod game is more adapted to their local situation and a facilitator helps her to better understand the issue and possible options.

Assui (Christian leader, cat C): The most important thing of ComMod is the fact that it enables people to meet and discuss together.

Facilitator/interpreter:

Mitila: Though the role playing game, discussions and simulations took quite some time, she did never have the feeling that people were bored.

Observing external scientist:

Role playing game

Participants:

Mibeu (elder FHH, cat B): She has learned some things from the role playing game. She remembers the relation between the production of certain crops and the use of water.

Phini (elder farmer, cat C): He saw how things worked out, even though imaginary it gave him ideas to try new practices such as having water for irrigation and applying formal credit to invest.

Assui (Christian leader, cat C): This is not the most interesting part of ComMod, because it is not real and everybody learns for him/herself. However, it enables people to get into the subject and to follow the simulations.

Asseu (TAO representative, cat C): The game is essential to generate concrete examples they can learn from and discuss about.

Interpreter/facilitator Mitila: In the game people act like in real life. She can see how they decide about things. Through the game they learned how others handled issues. They have confidence to do new things themselves.

Interpreter/facilitator Thanya:

- The difficult part of translation/facilitation was the management of language barriers, the quality of communication, the risk of mis-communication. Fortunately, herself, she participated in pre-test with the students at MCC, but Mitila did not always understand what we wanted. Good preparation of the translators/facilitators will help.
- They enjoyed the game and had fun among themselves. Men discussed with men and women with women. She herself also learned from the games about the issues examined. It can be applied about many kinds of issues, but not for all.
- The RPG is a powerful tool and that it can be transferred to development workers in Thailand. It is good to open the views of the people regarding an issue.
- People get bored if we play more than 4 or 5 rounds. We should change the participants so that they do not get bored repeating the gaming exercises.

Observing Local welfare officer Khun Pom: The role-playing-game is good because it provides concrete examples of the present farm dynamics/situation and possible scenario's. He esteems RPGs are more important than computer simulations, as it incites people to reflect, imagine and to try something new. Without computer simulations they might have a less clear idea about the possible future, but the context may change (no considered by the computer simulation) and farmers will manage. They have a lot of farm experience and know which crops are more risky to cultivate than other. Furthermore, this area is so fertile that farmers, in case of failure in one activity, may fall back on forest products and other farm crops.

Observing PhD Khun Panomsak: "The game makes them feel like the real situation, they cannot fake, they cannot cheat. The way things evolve during the game makes them understand what is the issue about. The game is a tool helping them to understand the situation".

Ajarn Benchaphun (Research collaborator, Chair MCC, Chiang Mai University): People learn most in the game, because it is lively: they make decisions, see the effects, compare with others. In the game, villagers discuss in a lively mode about their reality. This is more powerful as a collective process, then the plenary discussions with the simulation models. The simulation phase "enriches the process", but is less interactive, with less exchanges, with more specific focus.

Individual interviews

Interpreter/facilitator Thanya: Outsiders, researchers like us, learn a lot during the individual interviews, after just observing what they did and say (depending on the language used / can understand or not) during the game.

MAS model

Participants:

Boussoum (poor FHH, cat A): She understood the computer simulations, but with time it becomes a bit vague. From the simulations she learned about the utility of small weirs.

Mibeu (elder FHH, cat B): She understood the simulations, when they represented the role- playing games, they played together. She could not really understand the demonstrated scenarios.

Phini (elder farmer, cat C): He did not understand everything as it is very difficult. Nevertheless he likes the scenarios as it stimulates him to imagine possible projects.

Assui (Christian leader, cat C): The simulations are the most important ComMod method as they provide new insights. It enables and stimulates them to observe long term effects, and "in their imagination they even go further than this!" [Waouh!]

Asseu (TAO representative, cat C): The simulations integrate all kind of data, necessary to enlarge the perspective of the participants. The simulations visualise the scenarios and enrich the debate about possible future options.

Interpreter/facilitator Mitila: She thinks the MAS model is just like reality and people can easily identify their plots. The added value of the model is that it visualised the options, enabling farmers to imagine the future, how they can connect their fields for irrigation with the water source. How to improve the management of their resources.

Interpreter/facilitator Thanya: It seemed to be easy for the players to switch from the game to the MAS simulations. But discussions were different during the game (more interactive) than during simulations (players were "sitting like students").

Observing Local welfare officer Khun Pom: The simulation model is good because it visualises the issue, and shows possible future scenarios. However many farmers seem to have problems to understand the simulations in time.

Observing PhD Khun Panomsak: Simulations can help to understand long-term trends, to stimulate people to think about alternatives. Farmers found their land on the screen, but several did not managed to follow the simulations (difficulty to remember which colour corresponded to which crop), nor were able to understand / analyze the results of simulations (they have to think back to what happened in the game. They relate it to their personal experience).

Ajarn Benchaphun (Research collaborator, Chair MCC, Chiang Mai University):

- The simulation phase "enriches the process". It triggers less interaction and exchanges than the game. If you can do it without the computer it is better I think, if you can get rid of this machine. It is intimidating. Here, only vocal persons will intervene with respect to the simulations, interact with the facilitator. In the first round we did not have enough time for people to speak out during the collective debriefing. There was no time to probe what the people who did not volunteer to speak had in mind.
- The modelling part is not essential, but it is better to do it as well as it forces to think systematically, step by step. Simulation can also be used the validate/cross check/explore the outcome of the role playing game.

Plenary discussions

Participants:

Boussoum (poor FHH, cat A): She prefers the plenary discussion because of the exchange of ideas. She may not participate in the ComMod plenary discussions, but she talks with others afterwards.

Mibeu (elder FHH, cat B): She participated in the discussions in her way. During the ComMod plenaries, she did not talk but listen. Afterwards she talks with relatives and others.

Phini (elder farmer, cat C): He liked the discussions most as it gave him more ideas how to do things, though he did not contribute to the plenary discussion himself.

Assui (Christian leader, cat C): In the plenary discussions they exchange knowledge and insights. In this way they synthesise the knowledge.

Asseu (TAO representative, cat C): Most interesting part! The discussions lead to the formulation of recommendations/advice.

Interpreter/facilitator Thanya: In the plenary sessions it was mainly the men who talked. And this did not change along the process from the first to the third field workshops.

Observing scientists

6. Capacity building

Taking initiative/leading

ComMod introduces a new way to analyse, discuss and decide upon community problems.

- Did the ComMod team take the lead, initiating meetings, or did you discuss and jointly develop the programme of meetings, issues to be discussed etc. Did you organise additional meetings on this topic?
- Did the ComMod team use the RPG and simulations to show/teach you certain aspects about the problem, or was their intention to jointly develop the game/model? Did they insist that they wanted critique on the model, asking you whether you felt the model was realistic?

Replicability and scaling up

Do you like the ComMod approach to solve collective problems:

- What were the new things you appreciated? Why?
- What were the things, you esteemed difficult to apply, and why? (which method is too complex or sensitive to apply in a certain context)
- Are you **interested and capable** to apply the whole or parts of the approach in the future, to tackle similar problems?

Participants:

Boussoum (poor FHH, cat A): Other people ask for ComMod games as it seems to be fun, but if there is another game she prefers to participate herself than to give this position to somebody else! She would like to know more about cheap ways to gain water, how to invest on her farm, etc.

Mibeu (elder FFH, cat B): She is the only one available to attend ComMod workshops, as her children need to go to work. She takes care of the small children. She esteems ComMod to be especially important to discuss community/collective issues.

Phini (elder farmer, cat C): The ComMod games changed during the process, due to us!

Assui (Christian leader, cat C): He would like to have another workshop about markets, for instance of the Assam (non-irrigated) tea market. People do not understand the market and price dynamics. They really need this so they make time to attend!

Asseu (TAO representative, cat C): It would be nice to use ComMod in the future to discuss the quality of life, health aspects (e.g. to reduce illness due to pesticide use).

Interpreter/facilitator Mitila: Though she was contacted several times by the designers, she cannot repeat the gaming with other people as she has another job to attend to.

Observing Local welfare officer Khun Pom: If another workshop is organised, you should look for new participants as people get tired. A possible focus is economic activities. Look for half of the people less than 30 years old and the other half older than that. The proposed topics of 'markets' or 'marketing cooperation' might also be interesting.

Observing PhD Kuhn Panomsak: Training of local MAS modellers is a limitation, not only in Thailand (see Bhutan). Panomsak cannot lead more/new ComMod workshops in Mae Salaep during the coming year. He will be too busy at his own research site to complete his PhD. However he is willing to collaborate if somebody else leads the activities.

Ajarn Benchaphun (Research collaborator, Chair MCC, Chiang Mai University):

- To attain wider use, unfortunately we do not have this capacity for MAS modelling in Thailand yet, waiting for PhD students to finish, and then practice it together with NGOs.
- It is more important to scale-up (see her remarks on the "middleman" role of scientists between communities and policy makers to demonstrate convincingly) rather than scale-out with the same questions, subjects and constraints.

Place of ComMod vis-à-vis other scientific and development approaches

Ajarn Benchaphun (Research collaborator, Chair MCC, Chiang Mai University):

- The ComMod specificity vis-à-vis other modelling approaches: "the active involvement of the villagers", in the "mechanics" of the process, this is different from other methods. Other modelling approaches are aggregative but weak on the real understanding of behaviour / decision-making.
- Is ComMod useful to give advice to policy-makers, to involve them? It should be used differently from other models, it is powerful to give insights on the behaviour of people, on the rules of behaviour. The relevance of ComMod depends on the type of policy to be examined. We need to have more cases on how this is used, in different domains, how it affects policies, to demonstrate how it can be used and applied in different contexts.

Costs

Interpreter/facilitator Thanya: The first time you prepare a ComMod workshop in an area is costly. However, if repeated in nearby areas or for other issues, material is re-used. The cost of the whole process is high, but taking the outcomes of the process into account,

she thinks that it is good value for money. Even if a longer preparation phase is needed for a good implementation.

Ajarn Benchaphun (Research collaborator, Chair MCC, Chiang Mai University): Compared to other modelling approaches MAS modelling is more time demanding. You need to develop the different features like the game, etc. And you also need more people to be involved in it compared to other approaches." Other modelling is also costly, but less people are involved.

7. Anchoring of the local decision making process in context: networking to get the recognition and resources for implementation

Persuading and committing co-villagers

- Did you (participants in the ComMod meetings) discuss issues of the ComMod meetings with non-participants? In the family? With the neighbours? Outside of the village?
- What issues did you discuss? Did you evoke interest? What was the reaction?

Participants:

Boussoum (poor FHH, cat A): Before she did not say much during the mutual labour parties, but now she talks and discusses on issues of the ComMod workshop. She tells others that the ComMod workshop is fun, but that she also learned things.

Mibeu (elder FHH, cat B): She talks about what she did and learned at the ComMod workshops with other women, in between the work and on Sundays. However in daily life you tell something and then the subject switches. ComMod workshops are more effective: there is a good atmosphere, discussions are structured and facilitated by external people. Local people more or less know the same, but external people can add crucial knowledge.

Phini (elder farmer, cat C): He discussed his idea of sharing water for irrigation amongst neighbours with other villagers. Several came to see how they shared water.

Assui (Christian leader, cat C): Before they discussed the water issue just among relatives and neighbours, but now he uses his position to talk about this issue in his own and neighbouring villages (10-20 km around Mae Salaep). Along the road, discussions become richer, covering more aspects. He cannot brief people in detail about the ComMod approach, but he explains that ComMod is very useful.

Asseu (TAO representative, cat C): He organises village meetings. In these meeting he explained the link between a certain crop and soil loss, to elaborate on possible solutions. Hereby he uses the knowledge he acquired during the ComMod workshop. Other ComMod participants add what they have learned. These meetings are mainly attended by women, as their husbands left to work elsewhere [or already passed away - cf. AIDS- were jailed, etc.].

Interpreter/facilitator Mitila: Before villagers only communicated with relatives, family members and neighbours at night after work, but due to ComMod they now communicate with other people. They talk about the game (what they did and how it worked out) for about a month and then it was business as usual. The discussions led to some changes at individual level but not at the collective/village level. Only few villagers actually participated in the game. Others would like to join the game as they see it as amusement. Due to her new job she has no time to re-do the game with other villagers. She has no ideas how to mobilise the other villagers. It might have been better when selected participants were no old people, but people able to really inform others.

Observing Local welfare officer Khun Pom: The Christian leader is very specific. Though he does not understand everything [this comment is questionable] nor speaks Thai he attends

all agricultural trainings that projects organise in the area. He wants to inform his Christian constituency. Christian people communicate a lot, especially on Sundays.

Ajarn Benchaphun (Research collaborator, Chair MCC, Chiang Mai University): To attain a real change, to solve a problem, you need to follow-up as ComMod team. You need to go back. Do not stop after the interviews, but get them to recognize that some action & changes are needed to improve the situation, that there should be an agreement in the community to agree on some action, and let this be known in the village, among those who were not involved in the initial activities, by getting the leaders to spread the message for example.

Persuading and committing key actors

- Before the ComMod experience, how were these kinds of issues usually solved? Who were key actor: Who identified the problem; who were consulted and who took the final decision?
- Were these key actors contacted? How were they informed or did they participate.
- How did they react on your proposals? What was their point of view?
- Did they consider your proposal in their decision making? Is there a negotiation, collaboration (or rather a culminating conflict)?
- Do you feel interested to apply similar (bottom-up) discussion and decision making approach in the future, to tackle collective problems, or would you change the approach a bit? What would you change?

Participants:

Phini (elder farmer, cat C): The exercise with ComMod, give him ideas and the confidence to approach a formal credit institution to ask credit for an investment. However the group as such did get the idea and confidence to approach NGO's ??? with a (irrigation) project proposal to attain funds/assistance.

Assui (Christian leader, cat C): After the game he had several informal meetings with Asseu (TAO representative) to prepare a project proposal for new village water storage and distribution infrastructure. At this moment there are no meeting, nor activities or investments at this level. There are rumours, but nothing else. He does not know where else to go to get support.

Asseu (TAO representative, cat C): At the moment they do not discuss the water project amongst the TAO responsible. Personally, he prefers one big reservoir and says tha all the villagers agree with him (sic). Afterwards they will see how different farmers can benefit from this reservoir (it seems there is a commitment with a potential investor in Oolong tea, to arrange the water problem). However the owner of the land, where the reservoir is to be located, only wants to sell it for 70.000 Baht. They first need to solve this problem.

Interpreter/facilitator Thanya: Other stakeholders than the villagers (like TAO officers) should also be invited to join in the gaming sessions to learn about this kind of tool, learn about the situation and think about innovative solutions to problems.

Observing PhD Khun Panomsak: ComMod is more action-research oriented and take social structures into account. It is possible to use simulations to involve higher level decision makings from the start. At Mae Hae site he will provide "decision-makers" at the sub-watershed level with a model running for 14 villages as a way / tool to share their points of view. The technique or budget is not a problem, but the trust and confidence in the

enforcement of the set of agreed upon rules are important issues. I do not know what will come out of such collective process.

Ajarn Benchaphun (Research collaborator, Chair MCC, Chiang Mai University): Presently, the villagers are not powerful enough to convince policy-makers, even local ones. Possibly, the scientists have to carry on, to do more on the conclusions, make sensitivity analyses, etc. and then with stronger results call meetings with policy-makers. Dealing with policy-makers is "another battle".

8. Actions/new practices

- What concrete actions are taken? (Individual technical practices, collective action, initiating new forms of organisation etc.)
- Did you identify indicators and procedures for shared monitoring?
- Did you formulate sanctions for non-compliance to the action plan?
- Does someone have the responsibility to initiate and monitor the execution, to put sanctions and solve emerging problems and conflicts?

Participants:

Boussoum (poor FHH, cat A): After the ComMod workshop she borrowed money to invest in 0.3 ha Assam tea (rather than to make ends meet). She assured herself that the tea price was OK.

Mibeu (elder FHH, cat B): ComMod stimulated tree planting. Personally she prefers (Assam) tea to as you can harvest tea during a longer period (to smooth the labour requirement). After the workshops she constructed 'declining ditches' against erosion, and she took a credit to plant more tea. She takes farm decisions together with her adult children, as it concerns their future. She cannot tell in what way the ComMod workshop changes her cropping pattern. From another project she got a small fishpond, and she uses the water to irrigate her orchards. She does not share with neighbours as they did not ask her. Her preoccupation seems more in the collective/village domain (she starts to talk very dynamic): like many others she would like to have 4 village water reservoirs, which would allow most farmers to irrigate their fields. Nothing happened so far. She discusses this issue with other people, but needs to rely on the men for the final decisions.

Phini (elder farmer, cat C): Due to ComMod he invested in irrigation pipes and now shares water with 3 neighbours. The exercise with ComMod, give him ideas and the confidence to approach a formal credit institution to ask credit for an investment.

Assui (Christian leader, cat C): Despite some efforts with respect to the water issue, there are no concrete activities at this level, so far. At the individual level, he himself already started irrigation before the ComMod water workshop, but now more resourceful farmers buy pipes to start irrigation. The situation is not yet acute, as various farmers help out neighbours. Others do not help and are socially more isolated.

Asseu (TAO representative, cat C): Farmers learned to see the link between cultivated crops, the farm revenue and the soil erosion, and started to plant more perennial crops such as tea. For Annual crops you have to clear and plough the field every year, which gives more soil loss. Perennial crops are more sustainable. In 2-3 years these trees will start to produce. He estimates that presently 50% (probably less) of the cultivated area is covered by perennial crops and expects this to increase to about 70% (long term).

Interpreter/facilitator Mitila: She stressed that the resolutions on complex issues such as water take time. You cannot expect them to be solved quickly. It will take time (1-3 years) during which the water problem will increase and then a solution will be found.

Observing Local welfare officer

Khun Pom: After the ComMod water workshop (2 years ago) they formulated an irrigation plan/request for the Ministry of natural resources (of the former Taksin government). Local NGOs are of no use as they have small funds and are merely interested in social activities. Last year, just before the political upheaval he inquired about the progress but now they have to wait till the time when the political situation stabilises.

The current water problem is not yet acute, Given that farmers and share some water with less favoured ones. Even the poorest underscored that people still share and there are no real urgent problems...for which action is needed.

9. Concluding synthesis

Again at the end of the interview we ask:

- What do you consider immediate effects of the ComMod process?
- What are the longer term development impacts?
- (What could be improved?)

Assui (Christian leader, cat C):

Immediate effect is that they have some new ideas to try out. In the longer term, after the testing they will master various aspects to better solve the issue at stake.

With respect to their exchange of knowledge and decision making he just tries to act as a role model.