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**Incorporating collective decision in public management:
practical coordination of actors' preferences**

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Abstract

Works on coordination issues in decision-making processes reveal the existence of two important facts. First, studies on decision-making failures show that simple hierarchical decision and management schemes do not often reach their objectives for they don't take into account interactions with and among stakeholders. Second, it has been showed that actors' choices are often based on preferences unlikely to be properly taken into account by market coordination mechanisms.

Arguments have been raised that beside the usual institutions that are the Market and the State, proper management of human societies and their impact had to acknowledge the existence of a third type of institutions grouped under the name of "civil society". However, while much attention has been paid to explain the functioning of these three social entities, few have proposed ways to analyse or improve their synergies.

It is understood that such task would imply changes in existing institutional arrangements. This can only be achieved (1) if stakeholders are willing to make such changes occur and (2) if they are involved in the design and implementation of the changes. However, while most agree that it implies strong participation and consensus building, the way to achieve this is not clear yet. Moreover, misinterpretations, misunderstandings, distinct views of the same situation and conflicts are frequent pitfalls making the task even harder.

To deal with such conditions, a team of scientists has developed an approach and applied it on practical cases. By generating and sharing different types of information, this approach develops common perceptions and ways to express them. Bridges between actors' different views take progressively shape and can then be used to design and apply new institutional arrangements, which can be accepted and implemented by most.

Key words: *public decision, decision-making, co-ordination, preferences, institutions*

Introduction: Is choice between hierarchy, markets and collective decisions needed?

Public decisions and their management are and have been a subject of extensive debate. Classically, proponents of State intervention oppose advocates of free market mechanisms. The latter argue that, provided a few simple conditions are respected, market is a simple mechanism ensuring that the use of resources, means of production and goods produced are driven to their optimum levels. They consider that any forced intervention would result in a sub-optimal situation compared to no intervention at all and, hence, that public intervention should be limited. The proponents of State intervention claim that market cannot efficiently regulate goods that are not subject to real market exchange. They point at public goods, which have long been designed and managed through hierarchical decision processes and, which existence is directly linked to the construction of State governments as means for society management.

While each opposing position blames past public decision failures on the other one, the range of decision-making modes is not limited to these two. Institutional arrangements to manage and coordinate actors' preferences in a society are more diverse than just the top-down hierarchical mode associated to the State or the self-regulating mechanisms associated with markets. They also include collective or common decision-making processes and rules. Besides, stakeholders with a determining role in the success of public decisions include more than just the State and individuals interacting on a global market. They also include a whole range of formal and informal institutions, each with a role to play at a certain level. "Political economists need a richer set of policy formulation than just 'the' Market and 'the' State" (Ostrom, 1997, page 2)

Although it is sometimes written, the weaknesses of one decision-making process do not legitimate the validity of the others and the aim, here is not to advocate collective/common processes as the only appropriate type of public decision management. Hierarchical decision-making has shown its limits. It can be slow and costly, and it is often subject to "bureaucratic failures" when individuals manage to subvert the goals defined by the highest levels of the system (Brinkerhoff, 1996a). This does not mean, though, that the emergence of the State is just a flaw in human evolution, nor that hierarchical processes have no utility. The existence of externalities, public goods, imperfect information and incomplete markets make it impossible for market mechanisms alone to ensure an efficient coordination of individual actions (Stiglitz, 1998). But this does not prove that markets are useless nor that the self-regulating properties of commercial exchanges cannot be worthwhile to manage human societies. In a similar way, collective or common decision, and their related institutions, also have their limits and their beneficial sides.

Rather than advocating one type of the three decision-making modes, the point is more, in fact, to take account of their co-existence and of the complexity of their interactions in our societies. Hierarchy, markets and collective/common decisions are all present in the real world, and they all have an impact on the success or failure of the ventures undertaken by our societies. Through them, and through the various stakeholders using them, a wide range of decisions made at various levels happen at the same time, on the same realities. These different decisions may go in different directions, ignoring or even opposing each other.

While it seems clear that a proper co-ordination of the various decision-making modes would be beneficial, little has been done to actually do it and devise ways to take account of their mutual advantages. It would imply dealing with a wide set of actors and institutions: individuals, governmental organisations and, formal and informal structures of the civil society. And it would mean designing and implementing institutional changes based on the potential synergies of the three decision-process modes.

This paper proposes to deal with this challenging task. It first explores the implications raised by such prospect. Then it presents an approach to tackle the task. The approach pays special attention to the bounded perceptions of stakeholders, to the insufficient information they have and to the stakes related with diverging opinions. The structure of the approach combines practical methods to take account of these limitations. It is quickly presented and some achieved results are highlighted.

What lies behind various co-ordinating decision modes

Building synergies between the different types of decision processes has strong implications as regards stakeholders' involvement. It entails the design and successful implementation of new rules to coordinate

actors: it entails institutional¹ changes. Institutional changes build on existing rules and arrangements, they are build by actors who know these arrangements and are involved in their use: they are path dependent (Baslé, 1997). As thus, successful institutional changes such as the one considered here, can hardly be put up by outsiders alone: they require the involvement of the stakeholders themselves from their conception to their execution.

Difficulties then arise from the great variety of actors and institutions to be dealt with. Public decisions involve governments, individuals and all kinds of organisations at various levels. As stated above, they also involve a combination of various decision-making mechanisms. And the institutional changes required concern more than one institution. They involve different kinds of institutions at the same time, and, moreover, they involve the coordination of these institutions in a process that concerns them all, a meta-institutional change in a sense.

A whole range of hindrances occurs when trying to tackle such task, and many come from trying to have actors work together. No actor has a total comprehensive understanding of a situation: his/her perception is always bounded. All actors make up for this partial view of reality by guessing and interpreting what is missing. Through this process, past experiences play an important role in selecting interpretations that “work”, but misinterpretations can hardly be avoided. And when collaboration is at stake, misinterpretation often goes with misunderstanding, divergent opinions or even conflicts. All these elements limit the possibility of putting up an effective coordination of stakeholders for better public decisions.

To make it possible for collective decisions to be combined with hierarchical decisions and market mechanisms, it is necessary to overcome these limits. The risks linked with the of actors’ bounded views and information can be taken care of by widening their perceptions, making their point of view known and by completing the information they have. The risks linked with diverging opinions and the related possible conflicts can be reduced by constructing shared views of the situation and by identifying bridges between these different views.

Although these conclusions may seem easy to reach, practical applications require specific techniques and methods and insufficient work has been undertaken in this domain. For several years, a team of scientists from CIRAD² has developed an approach with such aim: the “ECOPOL approach”. Combining existing tools and methods with new ones especially designed for the purpose, the ECOPOL approach aims at facilitating the co-construction of public decisions by the stakeholders involved in a given problem. The following parts highlight how this approach can help tackle the two types of risks identified above.

Dealing with bounded perceptions

Widening partial views and sharing information is a broader domain than would seem at first. It involves the collection of existing information, the generation of new information and the sharing of this information with actors that can make use of it. Concerning the later, having information revealed and made accessible does not mean that actors will actually use it. Actual use of information for decision-making at any level implies a high level of information relevance to actors and it also requires specific efforts in order that actors realise the importance and value of the provided information.

The collection of information that already exists implies literature review and data compilations, but it also goes further than that. It involves the collection of relevant knowledge and information that are present among the different actors but not known to all. This type of knowledge, linked with direct experience, is often underestimated though it has a high strategic value in any planning or managing system (Ostrom et al. 1993). A whole range of survey techniques has been developed to gather such information. Technical, social, economic and institutional surveys, group interviews, key respondent consultations all have a role to play in the process and should be combined according to the problem at stake. The ECOPOL approach includes a selection of these techniques and methods in its core: from farm household surveys, commodity chain surveys, to group interviews, institutional surveys and key respondent consultation.

¹ In this document, **institutions** are to be understood in the sense given by North (1981): "Institutions provide the framework within which human beings interact. (...) Institutions are a set of rules, compliance procedures, and moral and ethical behavioural norms designed to constrain the behaviour of individuals" (North, 1981, pp 201-202).

² International Cooperation Centre of Agricultural Research for Development.

The generation of new information can come either from field investigation or from the analysis of information collected through stakeholders' interviews or secondary sources. A diversity of tools and methods have been developed for this, though they will not be presented here. While it is clear that stakeholders' interview can provide new information, the potential role of synthetic analysis methods applied to information previously collected should not be underestimated in this domain. They can generate interesting outputs that are, in fact, new information. They reveal stakes that had been hidden in the maelstrom of dispersed raw information.

Once information has been located, collected or generated, it remains to be shared with stakeholders to widen and complete their view of the situation. Reports, media broadcasting, leaflets and meetings are all useful and should be exploited. But, as stated earlier, making information available may not be sufficient. Information designed and broadcast by outsiders does not usually have the same value as knowledge acquired by direct experience. The learning process of trials and errors make stakeholders consider the later more reliable.

Participatory techniques have the ability to enhance the value given by stakeholders to new information. Within the ECOPOL approach, various techniques have been developed (1) to have stakeholders directly involved in the generation of information and (2) to have them validate its accuracy and usefulness. For the former, expert meetings techniques have been designed and used to help stakeholders collectively build an organised representation of reality. Through this process they regard the results as their own, because they are the ones who produced them. For the later, validation meetings are organised in which stakeholders are invited to assess the accuracy and relevance of surveys and analysis results. By doing so stakeholders are more likely to trust this new information, and analysts can check the validity and usefulness of their work.

Two types of expert meeting have been designed for the ECOPOL approach to build organised representation of reality.

The first type, named "PRACTYP³" (Bourgeois, 2002), aims at identifying the different categories of actors present in a generic group. It is a useful tool to help local leaders and government representatives apprehend and take into account the diversity of actors hidden behind broad names, their various constraints, opportunities and strategies. Rather than considering that "farmers", "poor people", "inhabitants" are homogenous groups, it allows them to adapt their decisions to the diversity of cases and to tap on the existing potentials of each category.

Comparison between categories in a broad group can also help identify development constraints. In the case of pig-raising farmers in northern Vietnam, most leaders considered the activity as inefficient. The use of PRACTYP, helped identify that some specific categories of farmers were developing pig raising as a lucrative activity by decreasing their feeding costs. Today, the efforts of several stakeholders are directed towards actions to lower high feed price levels, considered as the main constraint.

A second type of expert meeting designed for the ECOPOL approach aims at describing the structure and functioning of a commodity chain⁴. For a given product, stakeholders representative of the different steps of the chain are invited to participate. In the meeting, they are guided to describe the technical steps that lead from a raw product to a retail product and to identify the actors that have a role in the chain from the production stage to the consumption stage. They also describe the role and importance of these actors in terms of bargaining power, quality and quantity marketed. The whole process helps identify the main marketing channels and the actors, within these channels, that have a key role in the functioning and evolution of the commodity chain system. Using this method on the case of forest products marketing in Borneo raised important questions. It highlighted the fact that local governments were putting much emphasis on limiting illegal logging although two third of the forest depletion and marketing was undertaken by big companies officially registered.

Bridging diverging views

Broadening stakeholders' views and completing their information is necessary but not sufficient to combine the different existing decision modes and construct public decisions with all stakeholders. The later would still have different perceptions of the same problems and they would still misunderstand each other's positions or even conflict on these positions. Mediation is needed to bridge the diverging opinions and allow

³ PRACTYP: Participatory Rapid Actor Typology.

⁴ A commodity chain encompass "all the activities that are closely interlocked and vertically linked by one product (or very similar ones)" (Montigaud, 1992). It is a system including all activities directly linked with a given product from production to consumption (i.e. including trading, processing, distribution, etc.).

actors to engage in a constructive debate. In the ECOPOL approach, three methods have been developed for the purpose. The first one is based on sharing technical and economic information, the second on analysing actors' perceptions and the third on reflecting on future possible evolution. The aim, for each method, is to develop a shared understanding of the situation, a shared vision among stakeholders, some even say a common language to discuss with (Ollagnon, 1998).

Sharing technical and socio-economic information

Technical and socio-economic information can sometimes be used as a means to bridge actors' views. In many cases, most actors' do not have sufficient information on the technical and socio-economic conditions of other actors' activities or even on their own domain of activity. The collection, generation and presentation of such information to stakeholders can help them in three ways. It completes their information, it helps them understand better the situation of other actors and it provides a common ground of information for all. The later can act as a basis for discussion since all are aware of it and understand what the others are speaking about on the matter.

In the ECOPOL approach, validation meetings have been designed to share with stakeholders results from secondary information sources, in-depth surveys, and their analysis. In these validation meetings, also called technical workshops (Bourgeois and Herrera, 2000), the different types of stakeholders are gathered for a presentation of current findings and invited to assess their validity and discuss their implications.

In the case of agricultural commodity chains in northern Vietnam, many thought that traders (collectors, wholesalers and retailers) were making profit by buying farm products cheap and selling them at high prices in urban markets. This did not entice non-traders to develop good relations with them. Surveys, then, showed that contrary to this assessment, trade margin were quite low in fact. Urban consumers were proposed rice at a price only 15 percent higher than the farm gate price, and the difference between consumer and farmer price for pork meat reached no more than 20-30 percent (Jésus, 2000; Figure 1). In comparison, the farm-wholesale price difference for rice is around 40 percent in Indonesia (Erwidodo and Hadi, 1999), and, in the United States, the farm-retail price difference attains more than 1 000 percent for rice and 150-300 percent for pork meat (USDA data 1990-1999). In fact, trade margin for agricultural products in Vietnam were even decreasing due to an increasing competition among traders (I.F.P.R.I. 1996; Jésus, 2000). Consequently to the implementation of a validation meeting on this topic, farmers and leaders at various level started to regard traders in a different way.

Generating information and sharing it with all stakeholders facilitate the good functioning of the various decision-making modes and their combination. It can provide ground for better choices and resolutions by traditional decision makers. It can limit the occurrence of market failure linked with asymmetric information, incomplete markets and opportunistic behaviours. And it can facilitate the construction of agreements and contracts (Ostrom et al., 1993). This proves useful for collective decision processes and when trying to combine the different decision modes.

Sharing information through validation meetings has its limits, though. It does not provide insights on how to build better public decisions with the participation of all stakeholders. And it may be delicate to use when important uncertainties exist on the technical and socio-economic aspects, or when actors are arguing regarding the interpretation of these aspects. This is likely to occur on problems where complex environmental interactions are at stake. As in the case of the ozone layer, some stakeholders may refute the validity of technical or socio-economic assessments and therefore refuse to involve in discussions on how to solve the problems revealed by these assessments.

Bridges over actors' perceptions

Other than using "objective" technical and socio-economic information, it is possible to analyse actors' perceptions as they are and use this analysis to help stakeholders discuss on the design of coordinated actions. Actors' perceptions of reality, though weighted by partiality, strongly determine their choices and actions. They affect decisions of the all types of actors from consumers' choices (Jones, 1989; Lin and Milon, 1993), farmers' technical choices (Adesina and Baidu-Forson, 1995; Feather and Amacher, 1994; Wossink et al. 1996; Negatu and Parikh, 1999) to citizens' willingness to pay for environment protection (Sukharomana and Supalla, 1998; Johnston et al. 2000). Within the ECOPOL approach, an institutional analysis method has been developed

to identify the perceptions of stakeholders and analyse them. It is named PACT, the Pro-Active Conciliation Tool (Jésus, 2001).

In the PACT method, for a given problem, interviews of stakeholders are carried out along a specific grid to make out four aspects of their perceptions: (1) what is their assessment of the current situation and who do they think is concerned; (2) which actors' actions and interactions have an influence on this situation and what is this influence; (3) what evolutions actors consider possible in the future; (4) what would they propose to do to improve the current situation and what role would they propose for each actor, including themselves.

Results from such interviews help find ways to bridge actors' different points of view. Through the analysis of interview results, it is possible to assess what each stakeholder pay attention to, what he/she would like to see improved. These are the "qualities" of the system. Qualities are identified by the analyst based on the interview results. They point at system features that have a positive value for stakeholders. Because of their positive values, qualities have the ability to facilitate dialogue and collective actions. From there, a detailed analysis of qualities and actors' positions regarding these qualities can facilitate conciliation processes in three ways.

First, it helps assessing where consensuses of position exist. Actors' positions can be translated in terms of demands and offers for the qualities previously identified. The will of an actor to see a quality improved defines his "demand" for the quality. And actions of an actor that can have a positive effect on a quality define his "offer" for the quality. With interview results, the analyst can estimate levels of offer and demand (using a scale between 0 and 5 for instance). Qualities for which most actors have demands are qualities for which all agree to say there is a need for improvements. The importance of existing consensuses can then be weighted by the importance of each quality, which can be evaluated through the total demands of each actor and through the relative importance of existing offers compared to existing demands.

The method applied to the case of the performance of the pig commodity chain in Vietnam showed unexpected results. It was commonly considered that producers were mostly concerned with improving their incomes and that traders paid attention to improving their trade margin. However, interview realised and analysed with the PACT method showed that the two actors, along with government authorities and services at all levels, agreed to say that farmers needed to reduce their production costs, that producers' prices needed to be higher and volume sold more regular and that pork product supply to consumers in urban areas, far away provinces and international markets was to be improved (Jésus and Bourgeois, 2002a).

A second way to facilitate conciliation processes with the PACT method goes through the identification of collaboration opportunities among stakeholders. Once qualities' offers and demands have been estimated, simple cross analysis can provide information on existing complementarities among actors. It is possible, for instance, to assess which actor has quality offers that match the demands of another actor. Beside this actor-by-actor analysis, it is also possible to reveal stakeholders whose offers match the demands of a whole range of other actors. In the case of the pig commodity chain in northern Vietnam, this showed that peri-urban wholesalers had interesting complementarities to most other actors' demands. Strikingly, they were not considered in the different policies and actions contemplated by decision-makers.

The third type of result facilitating conciliation processes comes from the identification of potential key stakeholders in a positive process of change. Once qualities have been defined, it is possible to categorize the different types of actions contemplated by stakeholders willing to see the current situation improved. Similar types of action can be grouped in "domains of action". Then, for each domain, it is possible to evaluate what each actor does today and what the other actors would like to see him do. The former defines the "involvement in action" of an actor, and the later his "acknowledged capacity of action" or legitimacy, both estimated by the analyst using interview results. Then, a cross analysis can reveal, for all important quality, which actor is, at the same time, willing to do something (he/she has an offer), able to do something (his/her involvement in action is not null) and legitimate to do something (his/her acknowledged capacity of action is different from zero). Such actors have clearly a strong potential capacity to make things change.

Another way to identify key actors of change consists in analysing the mutual influences of actors on one another. As interview respondents express themselves on what should be done and whose role it would be to do it, they provide clues on whose actions can trigger other actions from the different actors. This defines a web of influences and dependences among stakeholders. A proper analysis (Jésus, 2001) enable to assess which stakeholder has strong influences combined with low dependences on others. Such person is a determining actor, since his/her conduct may initiate a whole cascade of actions from other actors.

Using the PACT institutional analysis method provides more than just the definition of qualities that help bridge actors' opinions. By revealing complementarities between stakeholders' offers and demands on qualities, it facilitates the design of practical collaborative actions among them. By revealing actors that are voluntary, able and legitimate or by revealing key actors able to trigger cascades of actions, it also provides information on how to organise the co-ordination of actors for public decisions. It shows both the areas where co-construction of change is possible and the actors on which the whole process could be based and organised.

Still, the PACT method has its limits too. If it is possible to identify consensus in actors' perceptions, if opportunities for collaboration are latent, the method is designed to unveil them. But situations exist where this is not feasible. Conflict may have practical objective causes that make actors unwilling to compromise or collaborate, and consensus on the importance of qualities impossible to find. Using the PACT method in such situation will help recognise and assert this fact, but it will not provide clues on how to improve the situation.

Future bridges for today's actions

Another way to go beyond diverging opinions and facilitate the co-construction of public decisions is to have stakeholders reflect on future evolutions. Considering today's problems and trying to find ways to solve them is a sure way to engage in quarrels as different views are likely to oppose one another. On the contrary, stakeholders reflecting on what could happen in the future are more likely to agree on the probable long term consequences (Weber, 1996). From this point, it becomes possible to discuss on how to avoid getting to unwanted futures and how to promote more positive ones. Gradually, starting from what should be avoided or promoted in the future, stakeholders can be led to discuss and design processes of change down to what should be done in the present.

Prospective analysis tools have been designed to foster constructive reflections on what could happen in the future. Initially developed to help private public enterprises build their strategies (Godet, 1991; Godet, 1996), they have since been used on broader issues such as regional development strategies (Chastel and Griffon, 1994). Prospective analysis is not forecasting. The aim is not to predict what will happen, but to focus on defining and analysing different possible evolutions over a middle or long-term time period and to evaluate their possible consequences. Users can then infer, from there, what would be best to do today in order to prepare for the various important effects that may result from these evolutions.

To achieve this, the prospective method goes over three main steps: (i) defining the variables that most influence the future of the system considered, (ii) defining the various possible states of these variables, (iii) designing likely scenarios of evolution. The first step starts as a brainstorming session in which selected experts are invited to list all the variables they think have an influence what the future may be. Then, inter-relations among these variables are examined to evaluate their mutual influence on one another. Variables, which have a strong global influence and are little influenced, are identified as the most determining ones. In the second steps, the experts are asked to consider how these most determining variables could change in the future and to define contrasted possible states for each of them. The third step aims at identifying the different possible and likely combinations of the various states identified. Each likely combination of states defines a scenario.

Making the bridges work

Analysis methods as those presented above are useful to understand how actors' positions can be bridged, but additional tools are required for practical applications. Within the ECOPOL approach, the PACT method and the prospective analysis method are associated with participatory workshop techniques. These workshops are designed not only to present the insights gained through analysis but also to guide stakeholders into co-constructing actions for better public decision processes.

In both cases, the workshops gather selected representatives of the different types of stakeholders concerned by the situation considered. Although it is not the subject of this paper, it is important to note that specific methods are needed to identify these actors. Each time, proper attention needs to be paid on informing the participants well in advance on the aim and organisation of the workshop and on making sure that all stakeholders have the necessary means to express their views. The workshop is guided by a group of facilitators whose aim is to help participants design actions and reflect on their implementation.

Policy arena workshops

Policy arena workshops, designed to complete the PACT method, facilitate the dialogue among stakeholders both by widening their perceptions of reality and by revealing areas of collaboration (Jésus and Bourgeois, 2002b). With the PACT method, information generation is conducted through surveys and analysis that are carried out by a group of analysts. The results need to be validated by the stakeholders during the workshops. Through this validation, they also become aware of what the other actors see as important and of how the other actors propose to change the current situation. They discover that for some important qualities most stakeholders agree to say there is a need for improvement. Moreover, they realise that complementarities and areas of collaboration exist. Through this validation process, actors are, in fact, provided with concepts, words, and ideas enabling them to discuss and to construct changes together.

Once results have been discussed and validated, facilitators assist the collective reflection on and design of possible actions. The process starts with the qualities determined as important and on which a consensus of position exist. For these qualities, several domains of action have been defined by the actors within the interview phase. Many among them deal with improving stakeholders' interactions modes and the facilitators focus the reflection of the participants on such domains for which the actions and interactions of multiple stakeholders is at stake. For these domains, participants are invited to discuss (1) what should be done, (2) which stakeholders would be best to do it and (3) what means would be necessary to make this possible.

During the discussion, the facilitators use results of the analysis to assist a co-construction of change. Actors whose complementarities have been identified are invited to proceed further on how to make these complementarities applicable. Actors whose key roles have been identified because of their will, their capacity and their legitimacy are encouraged to take the lead in the co-construction process. When a set of actions has been defined, knowing who the potential key stakeholders are facilitate the definition of a co-ordination scheme for all actions and the identification of the first steps that will follow the workshops.

The case of the pig commodity chain in northern Vietnam can illustrate the potential of such workshop. Pig farmers and pig traders realised at this occasion they had more in common than they initially thought. Farmers started to reveal that they were willing to produce leaner pigs but that they feared they would not be able to find regular buyers or higher prices. At the same time, Pig traders expressed that they had great difficulties in finding sufficient supplies of lean pigs for urban markets and that they would be happy to pay higher prices and more regular supplies for such pigs. Clearly they had mutual interests in devising new collaboration schemes. In a similar way, government officials at various level, initially convinced that traders had only their margin in mind, discovered that many traders were in fact in favour of a healthier economic situation for farmers. Traders explained that they had nothing to gain from poor farmers unable to produce lean pigs and deliver regular quantities. Officials thus discovered that wholesalers were key actors, willing to improve the situation of the commodity chain as a whole. They also discovered that some were even willing to invest in processing and exporting ventures, projects many officials had been trying to develop through poorly competitive state-owned companies.

The workshops resulted in practical action proposals for all actors, but did not directly lead to actual operations. Stakeholders proposed, among other things, to design contracts between wholesalers and farmers who were to form groups able to ensure regular supply of lean pig. These would be supported by extension services and local government for the technical and institutional aspects. It was also stated that better link were to be build between private traders and government services in charge of contacts with foreign buyers or services managing financial facilities for processing and export investment. However, actions proposals did not translate in actual implementation yet. A further step was required.

Prospective workshops

Prospective workshops use prospective analysis tools in a participatory way to help stakeholders construct their own future strategies (Jésus and Bourgeois, 2002b). With prospective workshops, there is no presentation of results to start with. In the ECOPOL approach, prospective workshop come at the end of a process with strong implication of stakeholders. Therefore, a great deal of information and perceptions is already known and shared among them. Compared to policy arena workshop the participants do not have to shape their reflection in a mould coming from the result of a previous analysis. Prospective workshops help groups of stakeholders co-construct their own vision of the future risks and opportunities and co-design the relevant strategies to deal with them.

Stakeholders are guided into implementing a real prospective analysis from the identification of variables and factors influencing the evolution of their system to the definition of future scenarios and their consequences. Each step is constructed by stakeholders. The inputs come from the stakeholders, the analysis is done by the stakeholders and the conclusions are drawn by the stakeholders.

Prospective workshops, applied to the performance of the pig commodity chain in northern Vietnam, generated, among stakeholders, an inner understanding of the real stakes related with taking action or doing nothing in the future. They identified, from a whole list of elements they thought were influencing their system's future, the most determinant ones: consumers demand, public policies and rules of interaction among the actors of the chain. They stated that, while consumers demand is hard to influence, the consequences of its possible evolution are serious enough to demand important modification in the existing routines and arrangements used by farmers, collectors, wholesalers and retailers. Without any change of their current behaviours, they saw that they faced important risks: rising competition with imported pork products of either higher quality or lower prices, inability to develop exports and competition with integrated industrial pork production units. Realising the importance of these prospects, they felt compelled to devise a strategy that would allow them to survive and develop in the future.

This strategy, synthesised in Figure 2, is not very different from what came out of the policy arena workshop. But it came from an analysis actors had performed themselves. It came from an inner awareness that something should be done and an inner understanding of how it should be achieved. As institutional arrangements designed with stakeholders have more chances to be successful, insights and comprehension assembled by stakeholders are also more powerful. And at the end of the workshops, we had the pleasure of seeing stakeholders planning for future meetings and inviting the others to start implementing a new co-management of the pig commodity chain. Compared to the previous results achieved with policy arena workshops, prospective workshops lead to similar proposals that were more valuable because actors had decided to really implement them.

Rationale of the ECOPOL approach stages

The success achieved using prospective workshops should not undermine the role of the other methods applied in the ECOPOL approach. The fact that actors finally decided to design and implement changes is not a result of the sole prospective workshops. The different steps implemented before helped actors better understand the situation of the others and their own, it provided them with a shared comprehension the situation and it enabled early contacts among stakeholders. The success of the last workshops draws on all these achievement and would probably not have happened independently. In fact various experiences tend to show that prospective workshops implemented separately provide good insights on the dynamics of a system but do not lead to concrete decisions without preliminary activities shared by all stakeholders. The various phases that make up the ECOPOL approach have their rationale. They combine methods and tools in a certain order, which ends up with potential success during prospective workshops.

Conclusion: Towards a “science of action” for better public decisions

This paper has underlined the interest of designing methods to enable the combination of individual, hierarchical and collective decision making mechanisms into new public decision processes. It has provided insights on the difficulties underlying such task and, in particular, on the necessity to take into accounts the bounded perceptions of actors and their different and potentially diverging points of view. It has proposed an approach to accomplish the task: the ECOPOL approach. Regarding this approach, the paper described how, through the use and combination of various methods, actors' views can be broadened, comprehension of a situation can be shared, and diverging views can be bridged in order to help the various stakeholders co-construct new arrangements and actions.

The approach appears to have great potentials for all kinds of problems where public decision and multiple actors' interactions are at stake. It should prove useful for natural resource management, development project design and management, concerted policy definition, common property management, etc.

Still, as previous authors stated, with this type of issue, the problem “involves not just knowing which direction to move in, but paying attention to how to get there” (Brinkerhoff, 1996b page 1395). Although the ECOPOL approach already goes a long way in proposing ways to successfully design and execute changes and reforms in public decision, efforts are still needed to further strengthen the implementation phase. Practical

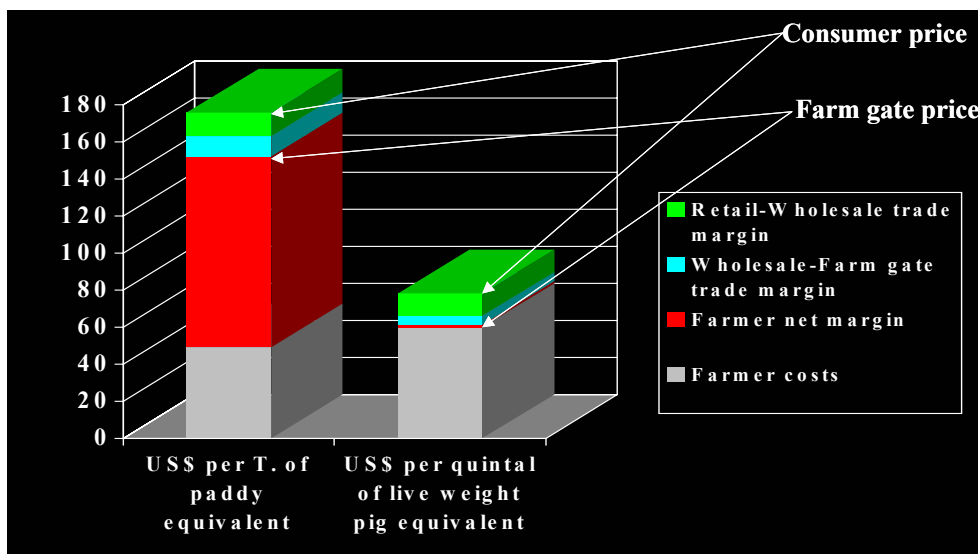
difficulties faced by stakeholders in an implementation process are real and often underestimated by analysts. Work is still required in designing concepts, tools and methods that can help go over such difficulties. Future research in the domain could be directed (1) at paths to further strengthen actors' commitment, (2) at means to help actors design and operate monitoring and directing entities in charge of facilitating processes of change, or (3) at approaches to develop inner abilities of stakeholders to mediate new forms of public decisions. More generally, while science related to public decision has and is doing a good job in providing concepts and methods to better describe and understand real situations, it might be time to advocate for the development of a "science of action".

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Figure 1
Components of rice and pork price in Northern Vietnam



Source: surveys conducted in the Red River Delta by the author and a team of Vietnamese scientists from VASI⁵ led by Le Thi Châu Dung (1998-1999) using the ECOPOL approach.

⁵ VASI is the Vietnam National Agricultural Science Institute, located in Hanoi, Vietnam.

Figure 2

Improving the performance of the pig commodity chain in Northern Vietnam

