Environmental Non-Governmental Organisations' (ENGOs) participation in the process of sustainable spatial planning implementation

By Marie VAILLANT
Submitted in partial fulfillment of the requirements of the International Master in Environmental sciences degree, Lund University, Sweden

Submitted by:
Vaillant Marie
17 rue du 6 octobre 1914
59890 Quesnoy/Deûle
France
marievaillant@caramail.com
Supervisors:
Patrik Wallman

Lund University LUCSUS

Johanna Alkan Olson
johanna.alkan_olsson@lucsus.lu.se
Lund University LUCSUS

Acknowledgment

I want to thank all the people who supported me during the year of LUMES, and during the thesis. First, thanks to my supervisors, who gave me really important feedbacks to build the thesis. Second, thanks to Aniko Wolf, who, even if she does not know, pushed me to do my best for the thesis. Third, thanks to Michel who had the patience to motivate me to write when I was completely stressed and to do my best too, and a particular thanks to my classmates, with who, I had the opportunity to open my mind and a thanks to Rabbi who, all along the year, helped me. Finally, a special thanks to France Nature Environnement who welcome me during five months and where I gained precious working experience for my future.

Abstract

More and more Governments recognize that they cannot solve complex spatial planning problems on their own. Indeed, other stakeholders as Environmental Non Governmental Organisations (ENGOs) have a role to play in implementing plans. Even if the role of "external" stakeholders is accepted as the way to implement sustainable spatial planning, in most of case we are still in the traditional way of decision-making process, *i.e.* through hierarchy, vertical decision making process. This situation is due to our disabilities to understand reality as a whole, either because we do not care to understand, or because we do not have the tools to understand. Our perception of reality is build on these disabilities but also on the group's (Society, as the sum of individuals) disability to understand reality. However if one of the part of society change its behaviour, its mental model, it can impulse a change in the whole society. The change of behaviour can be reach if the different parts of society have conscious of their own identity and if they can have an adequate participation into the process of decision, we can have a whole view of what is happening.

Human mind has difficulties to dismiss the idea that hierarchy is a good way to take decision. However we organized ourselves in this way, organizing in pyramidal structure. Through the example of French ENGOs we will see that the way ENGOs are acting can be analysed and used to see that the change can come from them. They provide the opportunity, thanks to their participation, to shift to an establish system, hierarchy (administrative organizations), to an innovative one, in creation on the bases of ecosystem examples.

The government, in France, is generally entrusted with the responsibility to implement spatial plans through the Region, Department and Communes (local government). Although ENGOs are not in charge to implement the plans, they are involved in many implementations, decision making process as representative of civil society.

The thesis will focus on ENGOs that is making effort to change their structure, to avoid hierarchy, and implement a more participatory structure in order to implement Sustainable Spatial planning.

Key words: *ENGOs, participation, hierarchy, sustainable spatial planning, sociology of organisation, ecoliteracy principles*

Table of content

Table of CLD,

Table of figure

Table of chart

Table of Appendices

INTRODUCTION

From the outset of the first human settlements, they have continued to organize themselves and their activities to meet their basics needs. Overtime, rules were created and a special field/science was born to organize and develop these rules: one of such rules is spatial planning. However, recent events suggest that planning become less easy to control as our perception of the world becomes more and more complex (Schumacher, 1973). Confronted with the disabilities of human mind to understand the world comprehensively, spatial planning's management has turned out to be more difficult especially as human activities gradually take up the remnants of available lands. Such land take-up (or land use) apart from being a form of resource depletion has not turned out to lead to sustainable communities

In line with the foregoing Capra notes that "the great challenge of our time is to create sustainable communities, communities designed in such a manner that their ways of life, technologies and social institutions honor, support and cooperate with the nature's inherent ability to sustain life" (Capra, 1996). However, in order to attain this goal, it is my contention that we need to be ecologically literate, *i.e.* to understand the principles which make an ecosystem sustainable, and then spread this ecological knowledge throughout the whole society.
That is a strong reason why the question of sustainable spatial planning and the participation of Environmental Non Governmental Organisation (ENGOs) in the process of decision making had emerged in the political and economic sphere as well as in the civil society perspective. At this juncture it is important to note that there has been some recognition of the fact that civil society participation is indeed of paramount necessity for spatial planning. Thus, civil society participation in spatial planning is found existent not only in the political agenda of the UN, but also within the European Union and at the national and local level government levels of some areas (*Territoires*, September-October 1999). Nevertheless, even though there are political and legal frameworks to ensure civil society participation, civil societies do not have the feeling that they are fully incorporated, listened to or understand by others realms of Society. Their participation does not appear to be really effective and efficient. The consequent scenario invokes pertinent questions that address the inefficiency and ineffectivity of civil societies. But it also raises other important questions: why do we have their participation? What can make them become properly involved in the process? What factors influence their performances? A very important question from these deals with how our perception of the system guide the way we alter our living system, our land, which has properties to procure needs, that human require, as a support of all living systems (FAO, 1993).

In this thesis I attempt to demonstrate the roles which ENGOs can play in making the necessary transition from unsustainable spatial planning to sustainable spatial planning. I opine that ENGOs are living systems which have peculiar characteristics and capabilities. Armed with such characteristics, these small-scale Organizations can become key elements possessing the impulsive strength required to make the right changes in decision-making process and thus to implement sustainable spatial planning. This is especially possible since their essential

characteristic makes them the right tool needed to increase the awareness of the population with respect to environmental issues while at the same being representative of civil society.

In the thesis I will discuss two kinds of organizational structure as related to decision making process: bureaucracy versus network. In the empirical case studies I focus on a French ENGOs example. Analysis will be made with respect to the way ENGOs perceive spatial planning in France and how they evaluate their participation. Thus in no circumstances will I generalize the results of our study (even though some allusions will be made to how the analysis could be related to a global perspective), and that similarities with other countries might be finding.

For the purpose of the discussion, hypotheses which have backgrounds from different disciplines such as philosophy, sociology, and ecology and land management will be made. The theories from which these hypotheses are drawn may not be fully explored (as I do not see this as very important for the purposes of this study). What I have done, which I think is very important for the study, is to use the stances of the critics and analyses of these multidisciplinary theoretical background to make my points clear.

I argue that we are living in a situation of unsustainability. Even if we implement sustainable development principles, it will only be a shadow of a real sustainable development. This is because of the organizational structure we have; administrative bureaucracy represented by its structure in hierarchy. I see sustainable development as a substance which does not have the well designed "container" to contain it properly. In addition, it is my contention that this "container" will be found if the three realms of society (economic, politics and environment) can participate on an equal footing in the process of decision making as it relates to spatial planning. To this effect, I contend that an integration of sectors, cross-disciplinary thinking and a more efficient ENGOs participation can lead to this change. The way I see it, the type of structure in which society is organized, that is, bureaucracy is not suitable "to receive" sustainable spatial planning and thus to implement sustainable development. Along this line, I strongly argue that paying attention to ENGOs participation will provide the opportunity to analyze this participation as a tool to increase environmental consciousness within the whole society and to implement sustainable spatial planning by clarifying the perception we have of the causes and the consequences of our actions.

Spatial planning is a field which has the capacity to take into account the three realms of the concept of sustainable development. Indeed we need to have a strategy of development, to plan in order to meet our present and future economic needs and social needs while being careful not to deplete natural resources now such that enough remains to meet the needs of the future generation (Nordic countries action programme, 2001-2004). Moreover "Planning procedures are based on and should be developed further to ensure the involvement of the public in a democratic decision-making process so that various societal interests can be weighed and balanced in decisions on development." (*ibid*: 7) This trend of thought is also recommended in the Aarhus Convention of access to environmental information (UNECE, 2005).

From the foregoing, the thesis can be seen to be based on a trans-disciplinary worldview and ecological thinking. In developing ideas, the thesis we will use different theories, concepts and findings of different disciplines to explain our mental model and solutions. I argue that this will be a good means to approach the lack of trans-disciplinary perspectives and applications obtainable in nowadays' spatial planning. I concede that by going about this study in the way I have proposed does not afford the opportunity to make an in-depth analysis of the theories that are used. In addition it does not allow for making quick and comprehensive generalizations. However, I believe that what has been done in the case study is to show how ENGOs' change of perception and ENGOs participation can induce Organizational change.

Different materials and methodologies are used to facilitate the study:

- **literature reviews** to have a large amount of data to help build the content as well as the discussion in the thesis;
- **Single case study: the French ENGOs' case**. The case study will help to explain and bring information out of the phenomenon under research (http://www.bookrags.com/other/sociology/case-studies-eos-01.html). I do not intend to make comparison because, as explain above, even if similarities can be seen in situations in other countries other country, I prefer to concentrate my contentions and efforts on a single case study analysis for some reasons. First, to ensure that I really make an in-depth concentration of the used case. Aligned to this is the fact that such in depth analysis will provide the more needed information and insights about the "ins" and "out" of the issue. Furthermore, because the topic of consideration is actually a wide subject there is need to have it narrowed as much as possible to make for better understanding. Thus working on a precise example gives the opportunity to narrow the subject of research in light of the above noted explanations. The subject of this case study will be France. France seems to be one of the best examples to take into account to illustrate our point as it is an administrative State based on numerals administrative layers and numerals specialisations compare to its European neighbors (John, 2001).

To analyze the situation in the best way possible, the case study is carried out in three different steps:

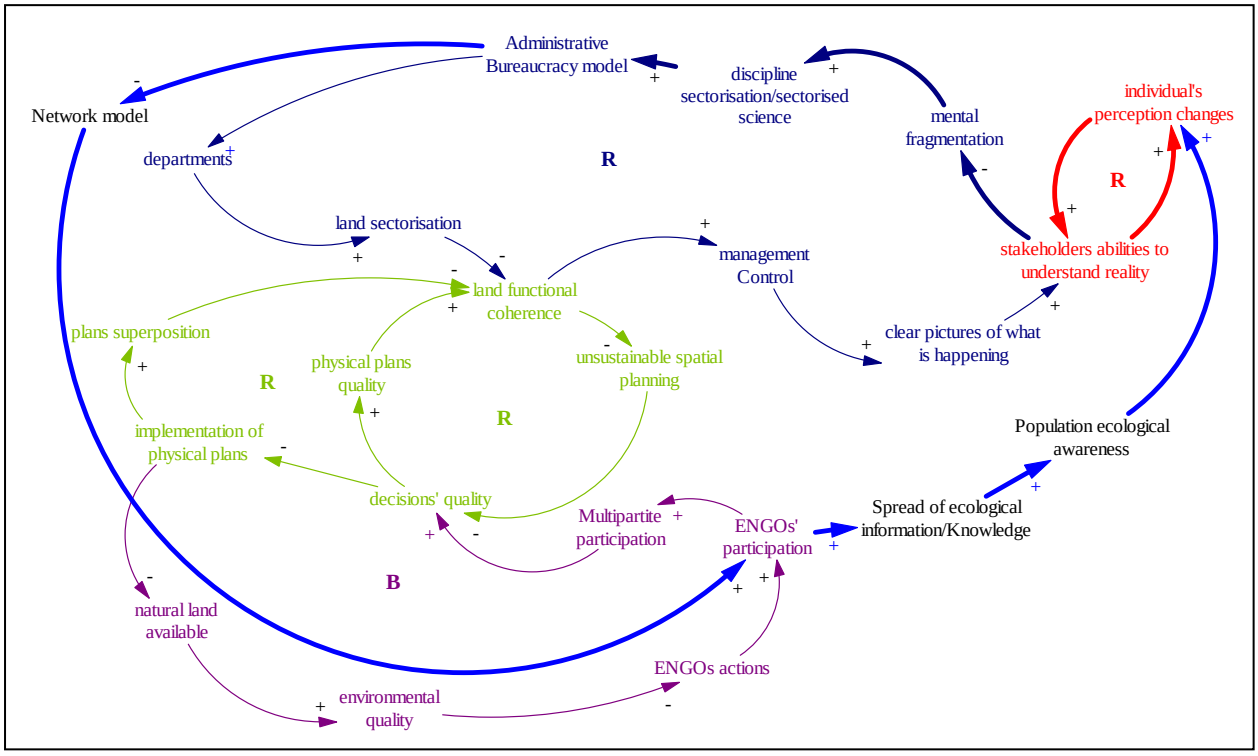
1. For the study, I focused on, while working with, the French **ENGO "France Nature Environnement"** which is an umbrella ENGO that groups together almost all the French ENGOs (National, Regional, departmental and local). I consider this to be a very good way of having access to information concerning ENGOs as well as creating opportunities to share information with them. Thanks to six months observations in this Organization some important issues and facts, which we will present in the study findings, were obtained.
2. **Questionnaires** were used, and their analysis give insight to ENGOs seize, spatial planning and their participation in the decision making process. This analysis s gives a succinct capturing of the perception of ENGOs.
3. As follow-up to the questionnaires' analysis, I analyze the results of a **workshop**. The aim of the workshop was to situate system thinking within the context of the study of ENGO and to see how system thinking could be used as tool for building a common identity. The workshop was based on discussions. In this case it was conducted with the main aim of obtaining information from participant

ENGO's their perceptions and experiences as it relates in order to their participation in the procedures of spatial planning.

It is important to note at this point that whereas the results from questionnaires can to some extent be used to make generalizations, the results from the workshop cannot be used in a similar fashion.

- A Causal loop diagram **(CLD)** is also used to aid the creation of a holistic perspective to the situation. The CLD provides the opportunity for the attainment of clarity in the explanation of thoughts and concepts. It gives a framework for the thesis. The CLD is the reflection of my understanding of the situation. Reinforcing links and the balancing links between each key variable are used to create and represent the system I want to study. Literature reviews and the single case-study were used to build the CLD and they went a long way to enable the creation of a CLD that captures and represents the situation of the thesis topic.

To succeed in corroborating the thesis hypothesis as well as answer the fundamental questions of the thesis topic, the structure of the thesis has its starting point with the CLD presented in following section. The CLD is used to create relationships between the variables that play out in the context of the study. In addition it is used to make explanations that are formulated in the following questions: what is unsustainable Spatial Planning? How do we perceive reality and what are our cognition limitations? What are the consequences of our perception? What is an Organization? Furthermore it is used to make analysis of the structure, pattern and process of French ENGOs. The ensuing analysis and findings will provide the opportunity to discuss if ENGO are really a key element in terms of their ability to make for changes within Organizations to attain sustainability.



CLD. The problem formulation

The system is led by our perception of the reality (—) and the way organizations are built to respond to our goals: sustainable spatial planning. However the strategy used in attaining spatial planning which consists in cutting reality into pieces does not work.

Similarly, we have a central loop (—) which is a reinforcing loop which gets stronger over time. On one hand, we have the loop of bureaucracy (—) which reinforces the speed of the central loop (*see theoretical framework: 11*), and in this way reinforcing itself by the loop of perception. On the other hand, the balancing loop of ENGOs participation (—) is a way to balance the system toward a more sustainable spatial planning. One issue is worthy of mention at this point. The issue is that we have a time span, a delay, between our understanding of reality and the time it takes to implement physical plans. In general, when physical plans are implemented, the situation is changed. The resultant system is not pro reactive enough until ENGO's participation increase within the system, provoking a change in the perception of reality, and so reinforcing the central loop toward sustainability (*See the case study and results: 20).*

At the initial point, we have different forces, one growing stronger (bureaucracy) than the other (ENGO's participation) This ensuing scenario makes the central loop turn faster and from this point of view making the situation more unsustainable. The question of speed or reactivity with relation to the issue of spatial planning as found existent between the different loops or subsystems is what makes the complexity of the situation. Both of these forces are reinforced by humans perceptions of reality which misses one important fact that is paramount in understanding reality; that of seeing it as a whole, which enhances the understanding needed for the formulation of better solutions so as to attain sustainability (*see discussion : 32*). The focus of the thesis and so to show how ENGOs participation can lead to a shift of mind that makes a transition from bureaucratic based model to a network model as a means to structure our decision making process in a more sustainable manner.

THEORETICAL FRAMEWORK

Chapter 1. Unsustainable spatial planning vs. sustainable spatial planning: the situation

1. What is sustainable spatial planning?

First of all, it appears important to define what we mean by unsustainable spatial planning. Spatial planning can be seen as a balancing process with a delay (Senge, 1999: 378). Indeed, "The term sustainable land use planning embraces different aspects: sustainability (environmental and socio/economic sustainability) and spatial planning (physical plans and improvement plans)" (Appendix 1: 38). We have an organization, society, acting toward a goal to organize territory to meet our consumption needs and our environmental needs, livelihood. Society and its different stakeholders adjust their behavior in response to delay feedbacks: they conceive plans in response to a demand in housing, food, activities in general, and in response of what we see as external factors: foods, resource depletion, etc. (FAO, 1993). Spatial Planning can be considered as a distribution/production system (Senge, 1999: 379). We need to have a strategy of development, of planning, in order to meet our present and future social and economic needs being careful to do not deplete all the natural resources needed to sustain human life (Nordic countries action programme, 2001-2004). Spatial planning is a field which is advantageous because it takes into account the three realms of the sustainable development concept as it is a discipline dealing with economy, society and environment. Planning is actually a strategy to organize our territory to answer economical welfare, social well being and environmental quality (FAO, 1993). Therefore, spatial planning seems to be an adequate tool to implement sustainable development and thus sustainable society. Actually, "the challenge for planning is to ensure the efficient use of limited land resources and to contribute to balanced regional business development and balanced use of resources, including natural and landscape resources, soil, water and air" (Nordic countries action programme, 2001-2004 : 7). However as we look around; natural catastrophes, depletion of resources, depletion of natural areas, even recent events (hurricane Wilma, forest fire, depletion of fuels etc.) shows us that even if we are making spatial plans to protect human activities; natural phenomenon still put us in face of a situation: we are living in an unsustainable way, *i.e.* in a way where soon we will not be able to meet our basic needs.

2. The way we plan

Two indicators provide the opportunity to "measure" the degree of sustainability of spatial planning. Indeed, according to ESPON (European spatial planning observation network, 2005) the quality and the quantity of plans produced, by the decision makers lead to more or less sustainable spatial planning (ESPON, 2005). As the CLD shows us, the more that plans overlap and the lesser the quality of physical plans, the more this creates poor functional coherence. Plans are made for several reasons. They can be the translation of national governmental strategy or local government strategy. For example they can be directed by desires to reduce the emissions of transport, to synchronize industrial attraction with housing, or to preserve natural area. These different political reasons, have to be coherent in relation to each other to reach the assigned goals, *i.e.* sustainable spatial planning. That is why in the thesis what we call high quality plans are plans which achieve their goals. The quality of the plans depends also on the quality of the decisions by decision-makers who implement the plans (where it is important to have of tools to analyze the success of a plan or decision). At the same time, the quality of plans is

linked to their quantity. Indeed, we assume that the higher the quality the of the plan, *i.e.* the better it fulfills its requirement and the reasons for what it was implemented, the less we need to implement new ones to correct a situation targeted as a problem. This depends on the quality of the decision taken. Indeed, the more we take quality decisions the more we will have quality plans and so the fewer plans we will need to implement. This will reduce at the same time their numbers as well as their overlapping, clearing the situation, to have more land use coherence. Moreover, to be of high quality, plans have to be coherent with other plans (*ibid*). For example if a government implements a plan to reduce the emissions of transport, the government should be coherent with other plans such as the emission of industries, or forestry practices.

Every socio-economic activity is taking a part of the physical land. We have traditionally a territory cut into parts (*ibid*). Planners have organized and are organizing the territories into pieces following two patterns. On one hand we implement physical plans for specific activities. For example, in one area we will build accommodations, in this other area, industries etc.. On the other hand, we build up plans to protect natural areas for recreation services, to preserve natural resources etc. (*Ibid*).

Actually as we are not able to see the situation as a whole, we are continue making plans, which decreases the quality of plans because they are not linked sufficiently to each other. As they are not good quality, they are inefficient, as evaluated when a catastrophe occurs. Therefore we implement new plans to correct the non-effect of previous plans which increases the total plan quantity. After a while, the situation due to ineffectiveness and overlapping of plans creates a land functional incoherence leading to unsustainable spatial planning. We are loosing control of the decision and the only answer we find is to implement new plans. We will see in the following chapter the mechanisms which promotes this disability to confront the real situation (*Ibid*).

3. The causes of unsustainable spatial planning and the way we make decisions (Appendix 2 : 39)

The way we planned in past decades compounds the situation (Schumacher, 1973). Thus, spatial planning cannot create the economy of a global thinking. It is a discipline which needs, to be really efficient, to have a cross disciplinary vision, and a global view of all the interconnections between events, territories, stakeholders (FAO, 1993). However, as mentioned above, when we observe reality, this is not the case. That is why for the purpose of the discussion we will claim that spatial planning as we know it is not sustainable. Many reasons can lead to this conclusion when we compare it to what sustainable spatial planning should be (Appendix 1: 38).

That is why decision makers act and take corrective actions, and their decisions are translated into physical plans. They are implementing a chain of decisions taken by different stakeholders. As Senge showed with the "beer game", in spatial planning, as in all process of decisions, each stakeholder makes their decisions depending on the other stakeholders choices and actions and also, depending on external events, without having a clear vision of what other stakeholders are doing (Senge , 1999).

As we will see in the following chapter there are forces behind the decisions, and these forces influence the decision making process to leading to results. The quality of decisions in spatial planning greatly influences the existence of sustainable plans, and long term plan efficiency (FAO, 1993). We state that the way plans are implemented is important. Indeed, facing the increasing demand of housing, areas for industries *etc*. we are

going to make plans to correct the situation. The problem is that we are planning using wrong information. We have delays (*figure 2: 12*). Delays are due to the time humans need to analyze phenomenon. In the time we are taking decisions, we (i) do not have time to have an entire picture of what is happening, (ii) we are not reactive enough. How we structure our decision making process (bureaucracy) is not a reactive enough structure to face changes in reality (Scieur, 2005). So we are moving faster and faster toward unsustainable spatial planning. By the time we implement plans, reality has changed. There is a gap between the human mind and events (Capra, 1996) as we will explain hereafter.

In the following chapters we will bring out three interrelated mechanisms which have an effect on spatial planning, making it sustainable or not. The first one is Bureaucracy, *i.e*. how we organize our system to structure our decision making process. The second one is participation of the three realms of the Society (environment, economy and politic) which can affect the structure of the decision making process. And finally both of them are dependent on the third mechanism which is how we perceive the situation, our perception of the situation.

Chapter 2. Organizations and their consequences on the decision process

1. What is an Organization?

After to have showed what we defined as unsustainable spatial planning, we should precise what an Organization is, because the nexus of the thesis is to study how the structure, patterns and processes within an Organization can influence the decision making process in Spatial planning and ENGOs participation.

Organization is a "space, site where we have complex relationships between humans and society. Society in which humans take part and contribute to work" (Scieur, 2005: 1). Since Aristotle humans have organized themselves to ensure the that efficient decisions are made to answer the objectives laid down in their strategy to meet the needs of the population, industrial productivity *etc*. (*Ibid* : 3). There are different kinds of Organizations and different ways to explain how we organize ourselves. As the predominant model of Organization is bureaucracy, based on rationality, the decisions are taken on rationality (Weber cited in Scieur, 2005).

The basis of Organisation as an element of study rose with the industrial period when people were searching for more efficient, productive industries to produce benefits. Their thought finds its grassroots in Xenophon who established "the causal links between work division and the increase of income as an efficient administrative model to run property" (Scieur, 2005: 3). This analysis was the first step of the Cartesian way of thinking and seeing reality. Organisations try to structure human society to provide the opportunity for humans to make decisions easier. Indeed Organisations should provide the opportunity for simplifying the understanding of reality and circumstances in order to make efficient decisions.

2. Hindrances to understanding reality

Sustainable planning is a discipline which needs to have a strategy (Bouvier, 2000). The strategy has to define the objectives and all the actions we have to take to reach the final goals (here reaching sustainable spatial planning). For every strategy or "politics" a decision has to be made. The decision we are taking comes from a mental model, through a path affected by external factors such as the structure of the Organisation (Simon,

1983). Stakeholders are taking decisions on pictures they have of reality, of the situation as seen through the "mirror" of their mind.

Decisions are taken on rationality (Weber cited in Scieur, 2005). However, this phenomenon can be balanced by the theory of "bounded rationality" (Simon cited in Scieur, 2005). Indeed the lack of coherence in the results of spatial planning strategy, leading to a loss of control, can be explain by the theory of Organization developed by Simon which showed that : "human knowledge is imperfect, from here arises the difficulty for an individual to anticipate the consequences of their choices, decisions" (Scieur, 2005 : 69). As underlined in Schumacher we loose control of the situation because we are unable to understand the phenomenon as they approach a certain point of complexity, here a certain point of land incoherence. Indeed as we do not realize the interconnections between components of the system to the other one, the view we have is linear (Capra, 1996).

3. Perception related misunderstandings

When we are making decisions it still remains in our Cartesian view of the world and we elaborate an analytical framework to understand the world (Capra, 1996). The way we "see" the world, determines what we "do" to it (Allen *et al*, 1995). We are seeing reality through a mirror, the mirror of our mind.

External Factors such as quality and quantity of physical plans, which are considered to cause "disorder", a loss of control to manage, push us to enter in a decision making process to find solutions to these issues (Scieur, 2005). However the way the decision making process is designed plays a role also in how individuals react. Organization's structure can shape individual behavior (Senge, 1999; Merton cited in Scieur, 2005).

Actually, reality is running in long term whereas human mind and actions, more often, are running in short term (Capra, 1996). Moreover, making decisions in spatial planning implies a sum of individuals, stakeholders' decisions and perceptions of reality. As the CLD underlines the more distorted a picture of the situation we have, the less we are able to understand all the ins and outs of the situation, so the more we create perception. However the more we create perception on wrong information the more incomprehensible the situation becomes.

Individuals are unable to see, to understand reality (Step 1, *Appendix 2 : 39*) Individuals do not perceive themselves as taking part of the reality, we are often not conscious that our actions have consequences on the facts we perceive as to the external factors of our reality (flood, resource depletion, food activities *etc*.). Therefore individuals base their decisions on what they perceived from reality (Capra, 1996), (*steps 2 and 4, appendix 2 : 39*).

The result of the decisions we make are to implement physical plans, curative plans, to correct the action of external factors *(step 3, appendix 2 : 39).*

After a plan's implementation we just see that they have corrected nothing (*step 5, appendix 2 : 39*), we are left with a problem unresolved. So we return to step 1 and enter a vicious cycle *(step 6, appendix 2 :39*) due to our disability to see reality, we repeat again and again the same process, and so we arrive to an overlapping of plans.

This overlapping of layers increases the complexity of reality and so we compound our ability to decipher reality.

How individuals react is based on a reality, perceived as external events, factors and based on a perception of the world. This perception is built even though we do not succeed in understanding reality as a whole due to our fragmented structure. As it is explained by Weber, in this comprehensive perspective is that we have individual's action which leads to regular actions, approved by everybody which leads to building a social type as bureaucracy (Scieur, 2005). Bureaucracy seems to be the most adapt organization translated by individual's action based on rationality and fragmentation of mind and activities (Scieur, 2005). Indeed, the more we are not able to understand a situation, the more we cut into pieces the phenomenon which occurs, so the more we are separating our mind into different specializations. This leads each individual to specialize himself in a particular field, this individual will study one element in depth, completely disconnected from other elements compounding the whole. According to Weber perception leads to the formulation of ideas, we then shape these ideas into actions. When the ideas are firmly in the mind of individuals, the actions issued from them start to produce human behavior (Scieur, 2005).

4. Rationality versus system thinking: a paradigm shift

In spatial planning, the inability to understand the phenomenon, and the lack of the ability to see with cross-disciplinary vision, leads to the idea of a perception of complexity. To understand this complexity we cut everything into parts. The fragmentation of mind and the physical fragmentation is an action as mentioned above. From this fragmentation the individuals adapt their behavior and start to organize themselves into Bureaucracy. Fragmented mind and fragmented activities come from our Cartesian view of the world which consequently developed a mechanist conception of the world translated into a mechanist structure: Bureaucracy (Scieur, 2005). The bureaucracy Organization is compounded of three major key elements. First, we have an establishment of hierarchy, a reflection of human duality (Hypergeo, 2004; Capra, 1996). Moreover, in hierarchy, individuals see their identity as part of the structure: they are their levels. That is why a change in the structure can be accompanied by fear and this fear hinders flexibility to change, so we have a force to not change anything (Crozier cited in Scieur, 2005). Second, we have a sectorization of activities because of Bureaucracy (Scieur, 2005). Each individual manages its own tasks without being connected to others. Third, there is the question of time. Indeed, the question is not to arrive at high quality results (high quality of physical plans), but to answer the problem to the issues in the shortest period of time as possible (Weber cited in Scieur, 2005). Indeed, one of the major characteristics of bureaucracy is to separate the functions into different administrative layers. Thus the more we have administrative layers the more we have departments dedicated to a specific discipline (water, soil, and industrial risks for example). This leads to more land sectorisation, because the layers do not have relationships to know what is happening in other layers.

Similarly to these three elements, however, bureaucracy is still viewed, in the mind of individuals as a way to manage the collective well-being (Marx cited in Scieur, 2005). Moreover the way Organizations are structured is pure “human projection” (Capra, 1996: 35). As we have difficulty embracing reality we founded an Organization based on rationality. Bureaucracy is viewed as to ideally have a stable state and as a way to help understand

reality (Weber cited in Scieur, 2005). Weber "considers that bureaucratic Organization is the more adequate kind of ideal typic of the rational legal domination, which is imposed in Western countries within the modern State" (Scieur, 2005: 36). Moreover, the human mind has affects our Organization structure and at the same time Organization has impacts on the way we construct our mind. According to Simon, we have two kinds of influence of the organisation on the individual. "First, an Organization as bureaucracy provides the opportunity to estimate the consequences of an action or a decision. Second Organization is a vector of general stimuli to focus, to narrow the attention of its members through in-between goals." (Scieur, 2005: 73). Thus, structure and perceptions reinforce themselves. We are making decisions based on a wrong understanding of reality, so the correctives or preventive actions we take as plans are not adapted appropriately. They just reduce the legibility of reality having as an effect the further complication of what is actually happening, provoking more misunderstanding of reality (Capra, 1996).

Reality as the result of planning in an analytical way appears like a patchwork of fragmented areas where it is really difficult to see the links between each piece (Senge, 1999). However a shift appears since when discussing the characteristics of long-term natural entities, we realized step by step that using reductionism methods and terminology has lead to a deadlock in understanding. (Scieur, 2005).

Nevertheless, bureaucracy Organization, as the translation of the mechanistic worldview we have, was called into question, mainly, by the work of cybernetics and all the system theories which have followed. System theory studies the interest in analyzing issues as a whole, to have a holistic view, ecological view (Capra, 1996). Actually, this paradigm shift induces also a shift in social Organizations from bureaucracy to networks (*Ibid*). In contrast with a mechanistic view, the systemic approach “the properties of the parts can be understood only from the organization of the whole” (Capra, 1996: 29). Systems thinking is contextual more than particulate (*ibid*). According to system theory, Organizations are defined according to pattern, structure and process (Capra, 1996). "The pattern of organization of any system, living or nonliving, is the configuration of relationships among the system's components that determines the system's essential characteristics" (*Ibid*: 154), whereas "the structure of a system is the physical embodiment of its pattern of organization" (*ibid*). Thus the process "is the link between pattern and structure…, the continual embodiment of the system's pattern of organization" (*Ibid*: 155-6).

To explain our social system here we will make a parallel with what was defined by Maturana and Varela about autopoiesis as the pattern of life. We will also see what was explained by Prigorine as dissipative structure as the structure of living system and we want to talk about cognition as the process of life as underlined, first by Bateson and then, by Maturana and Varela (Capra, 1996).

Herein we will be interested in autopoiesis[1] as the pattern of life developed by Maturana and Varela. We have to expound, as pointed out by Capra, autopoiesis is rarely used to explain social systems because “current ideas about the network patterns in those living systems are therefore still rather speculative” (Capra : 204). However, we will take as an assumption what developed the school of thought led by Luhman. Luhman said that we can

[1] "Autopoiesis, or "self-making", is a network pattern in which the function of each component is to participate in the production or transformation of other components in the network" (Capra, 1996: 158).

describe an autopoietic social network if the "description of human social systems remains entirely within the social domain." Here the main point is the process of communication in the social processes of the autopoietic network as underlined by Luhman: "social systems use communication as their particular mode of autopoietic reproduction. Their elements are communication that are […] produced and reproduced by a network of communication and that cannot exist outside of such network" (*Ibid*: 207). Moreover "the closure of the network results in a shared system of beliefs, explanations, and values, a context of meaning, which is continually sustained by further conversation" (*ibid*). Therefore the roles on individuals and the boundary of the system are maintained thanks to the "autopoietic network of conversation" (*ibid*).

Then, since Prigorine discovered the existence of dissipative structure, a new horizon to understanding Organizations (their structure and their changes) is opened. The main scientist who worked on dissipative structure was Prigorine. He argued that to understand dissipative structure, we had "to realize that they are structures which maintain themselves in a stable state far from equilibrium" (*Ibid* : 175). He had to define the "points of instability at which new structures and forms of order can emerge" (*ibid*). Dissipative structures can be considered as "a system that exits far from thermodynamic equilibrium, hence efficiently dissipates the heat generated to sustain it, and has the capacity of changing to higher levels of orderliness"(*ibid*). According to Prigogine, systems contain subsystems that continuously fluctuate. At times a single fluctuation or a combination of them may become so magnified by possible feedbacks, that it shatters the preexisting organizations. At such revolutionary moments or "bifurcation points", it is impossible to determine in advance whether the system will disintegrate into "chaos" or leap to a new, more differentiated, higher level of "order". The latter case defines dissipative structures so termed because they need more energy to sustain them than the simpler structures they replace and are limited in growth by the amount of heat they are able to disperse." (http://pespmc1.vub.ac.be/ASC/Dissip_struc.html).

Third, the notion of mind developed by Bateson broke down entirely the Cartesian approach, actually, Mind is not separated from matter. "According to the theory of living systems, mind is not a thing but a process" (Capra, 1996: 168). Bateson works, coupled with those of Maturana and Varela lead to the creation of the Santiago theory, a system theory of cognition. The theory claimed that "the simplest organisms are capable of perception and thus of cognition", cognition as a process of knowing which involves "perception, emotion, and action" (*Ibid*: 170). For humans we can add that "cognition involves also, language, conceptual thinking and all other attributes of human consciousness" (*ibid*).

The theories of living systems provide an insight of the links between ecological community (ecosystems) and human communities. That is why, for human communities to be sustainable, they should respect the six principles of ecoliteracy (Capra, 1996). These six principles are: Interdependence, cyclical flow of resources, cooperation, partnership, flexibility and diversity are what we need to implement a sustainable human community (*Ibid*: 289).

Facing what we just said, human community has a lot to learn from ecosystem organization to reach a sustainable development. The principles brought forward by the studies of Capra provide the opportunity to

evaluate in which way our society can evolve to a more sustainable one. As he underlined, our society is based on economics and politics which follows the "concept" of domination and expansion whereas ecology and sustainability follow cooperation, conservation and partnership. These "concepts" explain the gap we have between the environment and economic/political views. The three realms of society do not have the same foundation to understand reality and events happening (Perlas, 2000). It is opined here that it is because of how we organize our decision making process in a pyramidal structure that these principles cannot be truly applied, nor can they appear clearly as we saw above. We will see also that, thanks to the ENGOs participation a change can be done; we can shift to another model of decision making which will provide the opportunity to implement sustainable spatial planning and so on a sustainable society.

Chapter 3. The role of ENGOs

1. The consequences of Unsustainable spatial Planning

The situation of unsustainability leads to a decrease in environmental quality. Actually, we have less and less available natural land and land degradation due to a bad management of spatial planning (FAO, 1993).

ENGOs as kinds of Organizations within a large-scale Organization (society), address the environmental degradations. They try to react to implement more environmental consciousness by increasing population awareness on what leads society to unsustainable spatial planning. However, ENGOs take part of a larger-scale Organization and so the way they act is driven in the same way as large-scale Organizations as seen above (we assume that a small-scale organizations within a wider systems react as individuals). More often decisions are bipolar, *i.e.* lead by politic and business realms because of the model of Organization we have (Hypergeo, 2004). Politics and business seems to be more adapt to the rationality principles as a key element at the heart of the decision making process (Weber, 1919).

2. What is Participation?

Waddell developed a model to characterize what is a NGO in front of other realms of society. He highlights that the three realms of society have "three different logic or organizational imperatives" (Perlas, 2000: 272). The realm of the government is a political system in charge of implementing laws and to make law the order, have the power of police and justice. Whereas the economic realm is dominated by owners and where the most important mechanism to make people behave the way the organization wants is to pay them. The associative realm, where ENGOs take part, has a concern toward social systems and privilege relationships based on moral values (*Ibid*). Thus, the realm of civil society has principally a social interest, it is controlled by local population, the principal kind of power is normative and they produce results in group. Their main goal is to spread values through a non-profit Organization and where the main criteria of evaluation are justice based on relationships guided by moral values (*ibid*).

So, we can say that ENGOs are the interface between the decision makers and the population. Their main role being to spread information and knowledge about issues related to the environment. They play a role of environmental expert. ENGOs are fighting for a public and common good: Environment. Indeed their main interest is to protect the environment. ENGOs are organizations which accomplish service roles for the whole community (Scieur, 2005).

In sociology (humanities), participation is a "personal engagement into the group, permitting, contributing to multiply interactions within the group". In psychology, participation is "the action to take part directly or not to a social activity implying, more often a group identification". However in politics and public administration, participation "is a system in which a part or piece of accountability are entrusted to the members of an Organization by associating it to the thought activities, projects of changes and also to the process of decision" (www.granddictionnaire.com). Participation can be seen also as a "community dialogue processes, within which people interact to create new knowledge and broaden their perspectives of the world (Allen *et al*, 1995). Participation can be seen as a kind of communication (*Ibid*). As underlined Allen, participation provides the opportunity to spread information within a network of stakeholders. Information has a contextual nature (*Ibid*). Indeed, "information depends on a particular social, economic and ecological setting" (*Ibid*: 5). Thus, participation is taking part in the process of decision-making at one moment or another, but it is not taking a decision.

In recent decades, civil society participation within the process of decision making is possible whereas before it was a reserved privilege for the elite of society who had the competences and the knowledge to take decisions (Taylor cited in Scieur, 2005). It appears more and more important to have coherence between State participation supply and a bottom up demand to participate, in order for civil society to give their advice to the spatial planning projects (Diniz *et al*, 2002). Civil society participation is done in different steps: access to information, consultation, dialogues and co-decision (Maier, 2000)

Real participation is a dialogue which provides the opportunity to have a co-management; a co-development. Real participation needs time. But more often we are faced with emergency. That is why the process of decision making is based on the bureaucracy model since hierarchy is known to be the structure most appropriate for addressing a problem quickly (Scieur, 2005).

3. The role of ENGOs in participation

"Planning procedures are based on and should be developed further to ensure the involvement of the public in a democratic decision-making process so that various societal interests can be weighed and balanced in decisions on development" (Allen *et al*, 1995: 7). ENGOS have legitimacy to participate and give ideas since they have weight and they are representative of Civil society (Perlas, 2000). Indeed ENGOs can carry out actions that citizens alone could not do (*Ibid).*

One of the characteristics of the ENGO decision making process is to involve stakeholders. "Involving the community in the participatory process if sustainable land management issues are to be resolved in a constantly changing environment" (Allen *et al*, 1995: 8). Thus, it becomes more and more important to have a cross-disciplinary approach to take decisions and in this manner to manage a project of spatial planning. Parallel to this importance of cross disciplinary action, for better territorial coherence, it is also important to have cross-realms participation as sustainable development principles underline: economy, environment and social. Thus ENGOs have an accountability to represent one of these realms, as a representative of the environment (Perlas, 2000).

Moreover, ENGOs can increase population awareness on environmental issues by communicating. ENGOs provide an opportunity to add part of the picture of the reality. The more knowledge we have about an issue, the better we understand this issue. Thus, participation induces knowledge (Allen *et al*, 1995).

Civil society participation provides an opportunity to solve either the local problems or global problems by their contributions to the public discussion. Civil society is at the beginning of the dialogue between different stakeholders. There are three elements which make civil society different from other realms of society such as the political and industrial. First, by the fact that they are numerous, they provide a whole vision of a situation to counteract the fact that we normally see everything in pieces (Diniz *et al*, 2002). Second, as civil society is found throughout a territory they participate to have a better picture of the situation everywhere (Perlas, 2000). Third, civil society has other ways to express itself, it has other customs, and practices compared to the political and industrial sector which also provide the opportunity to build a whole (*Ibid*).

However, we meet one major difficulty in this debate. More often civil society participation is connected with very local decisions, at the scale of a neighborhood, a certain natural area, a pond, or a commune. Although civil society's contribution to this kind of project is important, as territories are encased and mixed, there is a lack of a whole vision to see the real stakes, which is needed to move to a sustainable spatial planning. Thus participation only makes sense if society creates the opportunity for everyone to be sufficiently informed. Information is a necessary beginning for participation (Allen *et al*, 1995).

CASE STUDY

It may be argued that there remains a real need for ENGOs to change their strategies in order to put forward their common agenda – the natural environment. It has been observed that ENGOs are not commonly recognized as full participants in decision-making processes in the context of spatial planning. Thus it is important for them to more clearly define their identity and their vision of a sustainable spatial planning. Moreover, it is a necessity that ENGOs change their own decision-making structures and strategies in order for them to be able to participate as fully as possible.

In order to understand how this may come about, then, the case study focuses on one French umbrella ENGO – *France Nature Environment* – along with its various federate ENGOs. It is shown that, as these ENGOs increasingly perceive of their role as representatives of environmental concerns in the context of spatial planning, actual participation in the processes of decision-making is increased. Thus ecological information is propagated throughout the decision-making system. This is because – through increased ENGO participation – changes are implemented in the structures of spatial land-use planning which more completely take into account environmental concerns. In this way a general shift in worldview from one which is mechanistic to one which is more holistic is brought about.

1. Presentation of the case study

The case study analyses the role of ENGO's in society. The focus is on one subsystem – where, as ENGOs increasingly perceive of their role as agents in society, their real actions are influenced. Thus, as ENGOs become

increasingly aware of their function as representing environmental issues in the cultural space, they become an active agent which is able to spread new ideas within society.

To illustrate how ENGOs can introduce sustainable spatial planning according to the process of participation in decision-making, a French case study is analysed in three steps. These are as follows: - (i) an analysis of the structure of the studied Organisation based on personal observations; (ii) an analysis of the answers of a questionnaire (Appendix 4 : 41); and (iii) an analysis of the results of a participatory workshop attended by representatives of 16 ENGOs (Appendix 7 : 44). Firstly however, we will provide a contextualization of the case study. This will be followed by an analysis according to the above three steps. It is important to note that the case study will be analysed from the perspectives of the ENGOs themselves.

2. Contextualization

The case study is based on field research with French ENGOs – *France Nature Environment* and its federate Organisations. France was chosen as the specific locality of the case study, as spatial planning and decision-making procedures here are similar to those presented in the theoretical framework, as will be shown below.

Firstly, France has a multi-administrative level bureaucracy. The French State consists of 22 Regions; 95 departments; 2500 intercommunalities; and 36880 communes, with additional layers of decision-making in various places (John, 2001). Each layer possesses the ability to take decisions within the legal framework implemented by the State. The framework for spatial planning in France is according to the European strategy of spatial planning (SDEC) as instituted through the European Union. This strategy is in the process of being translated into the French national spatial planning strategy through different laws. In order for these laws to be applied efficiently they must be translated into plans. These include national; regional; departmental; inter-communal and local plans. Each lower level plan must be coherent with the upper level plans. In some instances there is a superimposition of plans, *i.e.* lower and upper level plans overlap.

Secondly, the French State is a "strong state" – where citizens have two distinct rights, according to their roles as private or public individuals. The public interest is defined by the "elite" (high officials), who stipulate laws according to the good of the entire population. This particular version of a state generates a certain kind of decision-making process – one which is based on bureaucratic decisions. The model is different to the Anglo-Saxon State – which is a "weak state" where the public interest does not exist (Sainteny, officials of the environmental ministry, the ecological Interview, October 2005). This State structure (*i.e.* the "strong state") means that in practice ENGOs have difficulties in finding a space within society to participate. ENGOs are, in fact, organized to counteract the power of the French State.

Third, the French State is in a process of decentralization – which brings new elements to the decision-making process. Decentralization of power provides the opportunity to shift power from the upper to the lower levels of decision-making. Nevertheless, decision-making always remains under control of the highest level (Diniz *et al*, 2002) (Appendix 9, *see figure 7 and 19: 53*).

3. France Nature Environment (FNE)

The focus of the case study is on an ENGO called *France Nature Environment* (FNE). It is a national umbrella ENGO which functions as an interface between the government and various local ENGOs. It groups together over 3000 Organisations at each level of administration – 12 national ENGOs, 54 regional ENGOs, 42 departmental and 3000 local ENGOs. FNE has an additional 81 indirect members as Greenpeace France.

FNE was created in 1968 from a network of various already-existing grassroots ENGOs. It was recognized as a public Organisation in 1976 after assisting the French Ministry of the Environment in implementing an Environmental Law which is the basis of current French Environmental Protection Laws. FNE is a generalist Organisation, with a wide-ranging focus. It is non political and aims to function along democratic principles.

Since 1968 FNE's primary objectives have been to protect and preserve biodiversity, as well as to restore ecological resources and natural habitats. FNE operates according to separate themes – water; air; soils; living environment; and livelihoods. Additionally, an important role of FNE is to represent citizens on issues related to environmental justice. Perhaps most importantly though, a major goal of FNE is to stimulate and develop an environmental debate.

FNE is structured in two ways: it has an internal (FNE) and an external structure (FNE federation), as follows.

3.1. The Internal Structure (Appendix 3: 40 and Appendix 9, figure 9: 53)

FNE is an ENGO comprised of both employees and volunteers. FNE is organized in different elements: pole, networks and missions – led by volunteers who work closely with employees. There are six different poles – each with a specific theme: - waste; energy; forestry; spatial planning; health; and agriculture. Each pole is shared in different networks and missions. For example the spatial planning pole is shared in four networks and one mission – each with its own particular theme: - The transport network; the tourism network; the sustainable spatial planning network; the littoral network; and finally the mountain mission. There are also cross-disciplinary networks, which by definition relate to all the poles: the juridical network and the educational network.

The links between the different poles, networks and missions are effected through volunteers – one volunteer may take part in one or more poles, missions and networks. The role of the voluntary work is to discuss various projects and the work of the employees. Indeed, it may be argued that this organizational structure provides a good opportunity to liven up the environmental debate.

FNE further participates in the debate concerning environmental issues by taking part in different consultative commissions, as well as various national and international scale programs. The Organisation often plays a lobbying role here. Some examples of these programs are the Environment Ministry (MEDD); the Land-use Planning Ministry (DATAR); the Inter-ministerial Committee (CITES); the National Council of Sustainable Development; the National Institute of the Environment (IFEN); the European Environmental Citizens Organizations for Standardization (ECOS); and NATURA 2000.

Figures 9 and 11 (Appendix 9 : 53) illustrate that FNE is comprised of different levels of "power". The first level of power consists only of volunteers. The second level consists of both employees and volunteers.

3.1.1. Volunteers

The sole role of the president is as a representative. The president inspires projects and gives guidelines for the functioning of FNE. He takes decisions only if no other solutions can be found within the administrative council and the federal bureau. The administrative council votes for the FNE political strategy developed by the federal bureau. The federal bureau consists of the president and vice-president(s). The volunteers, guided by this strategy, have roles as representatives in various councils and commissions, and are the driving forces of the different projects lead by the poles, networks and missions.

3.1.2. Employees and volunteers

The director works in partnership with the president. They have some administrative functions and obtain financial support from, for example, different ministries. The employees are in charge of various administrative functions, as well as leading projects and keeping track of records concerning voluntary partnerships. They are additionally responsible for finding partnerships with the ministry and local government, such that they are more fully integrated into the processes of decision-making. Volunteers are charged with consolidating and following up on these links.

Participation on various commissions and councils occurs through volunteers. The weight of "power" within FNE is not a function of the number of individuals at that level. Rather, it depends on the particular roles of representatives in the decision making processes.

3.2. The external structure (FNE federation) (Appendix 9, Figure 8: 53)

FNE is an umbrella Organization uniting different ENGOs at different levels. The different ENGOs work horizontally but are ordered according to varying scales – where each scale has a special role and networking function in the spread of information. FNE transfers information through national ENGOs first, which spread the information to their own ENGOs. Secondly, FNE spreads information to the Regional ENGOs, which then spread it to their own local ENGOs. Information exchange occurs predominantly in a top-down and bottom-up manner, but also to a lesser degree horizontally. Within these ENGOs a similar process of information spread occurs as within FNE itself, *i.e.* predominantly top-down and bottom-up, with a lesser amount of horizontal spread.

There are some difficulties with this external structure. Firstly, there are problems transferring and recuperating information to and from local ENGOs. Secondly, it is difficult to institute overarching projects incorporating all 3000 ENGOs. Additionally, there is low participation in the construction of FNE strategy. This is especially so in the context of local ENGOs.

The following section outlines how ENGOs are viewing their participation into spatial planning decision-making process.

4. Methodologies used in the analysis of ENGOs perceptions of their role in French spatial planning

To analyse the case study different but complementary methodologies were employed. Firstly, **personal observations** were used during the course of 5 working months within FNE. These were as a participant in a project aiming to build a common strategy enabling more federal ENGOs to have real weight in decision making procedures. These observations provided the opportunity to evaluate the extent to which the umbrella ENGO (FNE) is organized in as opposed to a pyramidal structure. Federate ENGOs are attempting to work in a more cross-disciplinary way in order to re-structure, both internally and externally, the federation – such that an inter-associative network is built that more efficiently circulates information. In order to do this, a strategy must be formulated whereby federate ENGOs have the opportunity to spread knowledge throughout the umbrella Organisation. Indeed, in the context of the relative sectorization of FNE it is important to implement cross-disciplinary work.

Secondly, 80 **questionnaires** were sent to Regional ENGOs (as members of separate federations, in order for them to spread information to their respective lower federal levels). It is assumed that they are representatives of more local ENGOs and have knowledge of local ENGO issues. A total of 14 answers (20%) were received – two from national ENGOs, six from regional and six from the departmental levels. The questionnaires were sent in mid-July, with the first answers being received at the end of august. The low response rate may be explained by the following factors: -

- The questionnaires were sent during holidays, thus human resources were limited within the ENGOs;
- As questionnaires were sent to national, regional and departmental levels, they had to spread the information within their own network of ENGOs - a system which takes time. Thus a time limitation coupled with a lack of human resources provokes a lack of reactivity;
- Many respondent ENGOs had to validate their answers through their administrative councils – increasing response time;
- Some ENGOs were financially constrained, and thus could not afford the employee time to answer;
- There is some resentment where lower level ENGOs perceive of a necessity to "fight for power". As the questionnaire came from the umbrella FNE organisation, some ENGOs did not want to answer because the questionnaires came from a considered superior level.
- Some are still in the process of completing the questionnaire through the implementation of an internal process. Indeed, the questionnaire has provided them with the opportunity to initiate a dialogue within their own federation – which of course can be seen as a positive point.
- The low response rate can also reveal a lack of knowledge about spatial planning, as well as a lack of will.

Nevertheless, as we have seen, we can consider the ENGOs which answered a complete sample, as they are representatives of their own federation of ENGOs. Thus the analysis is based on these results.

The particular objectives of the questionnaires are outlined below: -

- To know the actual perceptions and concerns of ENGOs towards spatial planning. The analysis of the questionnaires will show similarities and differences in ENGOs perspectives concerning spatial planning. The questionnaires aim to underline specific issues faced in the field. Furthermore, the analysis will

provide the opportunity to more deeply understand spatial planning, as well as adequate actions and solutions which will contribute to a coherent spatial planning politics.

- To know the quantity and quality of ENGOs participation in the decision-making process in spatial planning
- To know the prospects for increased ENGO participation in the field of spatial planning

Third**,** as a result of the questionnaire a **workshop** was planned – in order to more fully analyse the perceived role of ENGOs in spatial planning. Indeed it appeared that ENGOs share similar problems of not fully understanding complexities of the issue – tending to mimic at their scale the decision making structures existing at a wider scale (the State). Thus the workshop aims principally to assist ENGOs through the development of a mental map, whereby ENGOs may become conscious of their own capabilities to express themselves in decision making processes. The workshop aims to illustrate that ENGOs are an important tool to reach sustainable spatial planning. During a complete day, 16 ENGOs (from all around France) were grouped together in Paris. This was in order to work on building a common model – a common identity which clearly defines their role in spatial planning in comparison with other stakeholders. The complete details of the workshop are outlined in Appendix 7 : 44.

RESULTS/ANALYSIS

In order to aid the researcher in the preparation and formulation of the questionnaires used for this study, a group was constituted by this author composing of three persons from France Nature Environnement. Questions were formulated taking into account the personal and observed information and experiences of each participant. This, the questionnaire contained the following questions, among others (translated from the original French wordings):

- What is your understanding of land use/spatial planning? What is your ENGO's perception of spatial planning and how does it approach this area? What do you think are the objectives of spatial planning?
- What is the role you play and what is your participation in spatial planning process? What is the extent of your participation in both the decision-making process and implementation? As part of ENGOs, what is your perception about spatial planning process? What is your understanding of the concept of spatial planning? Who to you are the stakeholders in spatial planning?
- Who do you think are the beneficiaries of spatial planning? Do you think this is realized in actuality?
- What committee does your ENGO belong to? Do you receive financial support from outside sources and in what form? Does this financial support influence your participation in the decision making process?
- What do you think is the actual role of ENGO in spatial planning? From their participation: compare with the actual situation?
- Do you believe that your participation is valued by decision-makers? What is needed for more efficient participation of ENGOs in spatial planning?

The group came up with a table summarizing the results of the questionnaires. The questionnaires were then examined using the "sustainability indicators", or the ecoliteracy principles as enunciated by Capra (1996). The principles are as follows:

- *Interdependence* means that every elements of a system are interrelated and linked by certain levels of dependency with each other. In other words, each forms a certain part in the entire system.
- *Flexibility* is a consequence of the multiple feedback loops within the system. This provides possibility for a structure to change its composition, shape, and characteristic in instances involving disturbances. In an ecosystem, elements have to directly or indirectly cooperate and build partnerships to thrive.
- *Partnership* as *cooperation* functions as the ability to associate, establish links, live with one another, and cooperate.
- *Diversity* represents different characteristics or identity of elements within the system. As ecosystems are sustainable, compare our system with these principles could give an idea of the degree of sustainability of our system.
- *Cyclical Flow* means that resources and information are generated and shared from inside the system.

In addition to the answers provided in the questionnaires, the results of the workshop conducted for this study was also analyzed in accordance with the sustainability indicators. The workshop is considered relevant for an objective evaluation of the ENGO perception on spatial planning (appendix 7: 44).
It should be noted however that this study recognizes certain limitations of this methodology and therefore acknowledges the need for a more comprehensive study of the issue at hand. However, it is argued that although representativeness of samples cannot be acquired, through estimation, the results of these exercises can provide a window to see the ENGO's perception.

Evaluation of answers in the questionnaires and the result of the workshop were done by assigning each within a scale of 1 to 10. This 10-point scale system provides an opportunity to make some comparisons between perception and reality on the field. We want to show what the ENGOs spatial planning and participation perception are. And how this perception can be different to what is happening in reality on the field. The numbers 1 to 10 provide the opportunity to show whether on the field or in practical reality, perceptions are realized and whether they are in accordance with the ecoliteracy principles. The increasing scale (1-10) denotes a range of closeness to sustainability. 1 is an indicator of being farthest from sustainability whereas 10 represents a maximum closeness to sustainability. Thus, observations, questionnaires and workshop give data to fulfill the following table. They are complementary approaches to evaluate ENGOs spatial planning and participation perception and reality.

		Actual situation	
		Perception	***On the field***
Spatial planning	***Interdependence***	***10***	***10***
	Flexibility	***6***	***4***
	Cooperation	***8***	***3***
	Partnership	***5***	***2***
	Cyclical flow	***3***	***2***
	Diversity	***10***	***1***
Participation	***Interdependence***	***5***	***9***
	Flexibility	***7***	***9***
	Cooperation	***10***	***8***
	Partnership	***10***	***4***
	Cyclical flow	***3***	***6***
	Diversity	***8***	***7***

Chart . ENGOs' perception on Spatial planning and participation compare to reality

1. Interdependency

Different elements make ENGOs perceive that they are interdependent in the area of spatial planning and participation.

First, the way the land area is organized and the activities therein have an impact on ENGOs. For most of ENGOs, spatial planning is a cornerstone of their activities. And conversely, ENGOs play a role on spatial planning through their participation in the decision-making process and implementation (*i.e.*, as it is underlined in the questionnaire with the questions 1.3. and 2.1). An analysis of the answers to questions relating thereto showed that the ENGO's decisions and participation is linked to the organizational and to the societal contexts. Second, ENGOs interdependence on spatial planning and participation depends also the decision making process. It appears *(i.e.*, responses to question 2.1.) that ENGOs are still organized in a bureaucratic manner because of their perceived dependence on the State, on the matter of spatial planning, as it is the State which makes the final decisions. Thus to gain some relevance in the spatial planning decision-making process, ENGOs seem to be mimicking the State structure. Furthermore, it appears that, on the field, ENGOs perceive that in the numerous physical plans implemented they have no coherence among themselves. However, an analysis of the questionnaires shows that in the regional and departmental levels of ENGOs they participate in the spreading of ecological knowledge. Nevertheless there is some difference on their advocacy and work themes. Departmental ENGOs seem to be more inclined towards participating and working for subjects as "air" and "risks". Third**,** ENGOs participation seems to be dependent on the theme (water, soil, air …) as shown by the questions 1.1. and 1.2. in the questionnaires (Appendices 4, 5, 6 : 41).

An analysis of the answered questionnaires and the workshop also shows that for ENGOs, the most optimistic change they can hope for can be realized only in the local level. More importantly, while ENGOs are perceived

by themselves as a hub for information and knowledge, democracy, dialogue, and creative discussion to fulfill common goals, thus leading to an effective participation on the spatial planning process, the reality on the field suggests the opposite. It turns out that, on the field, these ENGOs play a minimal role in a bureaucratic decision making process in spatial planning (questions 1.3. questionnaires).

ENGOs are generally conscious that they have a big role to play in the decision-making process of spatial planning especially in the area of environmental protection and sustainability. They are fully aware that they have the responsibility to spread information to their local ENGOs in order to make them aware of the situation and issues and to better equip them in confronting challenges in the spatial planning decision making process at the local levels. However, the case study reveal lack of knowledge at the local level about the procedures in decision-making as well as other stakeholders (in the questionnaire, roughly translated as, *What are the brakes of your participation?* and *What are the problems that you meet and that your association meets locally*?) Interestingly, the answered questionnaires reveal that in areas where the spatial planning decision-making process was doing well and where the ENGOs had the impression that their participation mattered, are areas where they created links with other stakeholders and organized inter-stakeholder discussions on how to make the process more efficient. Thus, although they feel that general public perception has a tendency towards marginalizing ENGOs for past protests attributable to them, connecting with other stakeholders in the community elevates their relevance in the process and allows them to be effective instruments in promoting sustainability at the local level. This suggests that creating links and networking, even with supposed "adversaries"(as ENGOs perceive the other stakeholders), allows greater participation in the decision-making process in spatial planning.

It is worth mentioning that in local French communities, other stakeholders seem keep in mind the history and reputation of ENGOs in publicly protesting against policies incompatible with their advocacies. Protests have the potential to sway public perception and beliefs. For this reason, ENGOs participation in spatial planning is considered important. Indeed, ENGOs play a key role in protecting environmental ecosystems that are likely to be affected by spatial planning, thus they are a stakeholder in that sense. This study further shows that ENGOs observe that in the hierarchy of state governmental system, it is easier for them to coordinate and participate effectively in the local rather than in higher levels. We can assume that the reason for this is that, on the field, ENGOs and local government, along with other stakeholders, are in the same level in the decision making process (Appendix 9, *figure 11:53*).

To explain further, FNE is interdependent with other organizations (other ENGOs and the government). For example, "FNE external" needs "FNE internal" and *vice versa* to exist and to lead actions. They need to cooperate with the government to participate effectively in the decision making process. However, ENGOs do not perceive this interdependence with other organizations. They feel free to link with other Organizations, in the case of FNE internal federate, they do not perceive any form of interdependency. This suggests a gap between FNE Internal and FNE external as ENGOs taking part of the federation need the interdependence with FNE to act.

2. Flexibility

Flexibility can be seen as the translation of the ENGOs proactive role in spatial planning and participation. ENGOs, however, perceive a lack of proactiveness due to several aspects in spatial planning. First, in spatial

planning we are confronted with a multiplicity of administrative layers which has its "own" sphere of power. Second, in spatial planning it is needed to have all the essential information. Indeed the knowledge of essential information affecting the entire system is a key element in spatial planning because this allows a comprehensive analysis of the ins and the out of a planning project. However, for ENGOs, a shortcoming of a bureaucratic structure is its inability to effectively spread information throughout the whole system. For them, it is not a proactive structure. ENGOs (as shown by the answer to the question, roughly translated as, "*which territorial scale should be the more relevant in order to have the more efficient ENGOs participation as possible?*), feel that there is a problem with the way most organizations involved in spatial planning are organized. First the results of the questionnaire show those departmental ENGOs are able to participate in regional spatial planning decision-making process. Thus it seems that ENGOs, even if they are organized in different levels, do not mind to work with related-administrative level. Somehow ENGOs can adapt themselves to each kind of administrative decision procedures in function of their working theme. Indeed ENGOs can have a particular theme to deal with (protection of a river, air, sea, etc). The more local the ENGOs, the more focused its actions and advocacy. Secondly, they need to be flexible because it is difficult to be heard in a bureaucratic setting such as the current State structure. Indeed to participate more effectively ENGOs have to focus on a specific subject.

3. Cooperation and Partnership

For the cooperation and partnership principles there is a tremendous gap between the perception ENGOs have about their own way to cooperate with other stakeholders and other ENGOs and the way they are making partnerships with different stakeholders.

Cooperation and partnerships go through, mainly a spread of information. With insights from the case study, that more information is spread within an Organization, this information provides the opportunity to build a common identity to all individuals within the Organization. They recognized themselves as being a part of the Organization if they adhere to the information. Organizations implement a system to disseminate information to link internally and influence cognition within itself. Information can be seen as important resources within an Organization. Figure 10 built from the results of the questionnaires and the workshop shows that the type of structure of an organization has an influence on how information is spread. Thus, the more bureaucratic (in the sense of being *hierarchical*) an Organization is, the more difficult or inefficient information are spread. On the contrary, more an Organization is structured as a network the faster the spread of information and facilitation of communication within a level and among its components. (Appendix 9, *Figure 10: 53*).

It appears that intercommunal decision procedure admits regional, departmental and local ENGOs participation. This is but logical as these intercommunalities are not considered as administrative layers. They do not care about administrative boundaries, so they are more flexible (Serin *et al, 2005*). Thus a flexible procedure admits easier ENGOs participation. However, as intercommunalities are not recognized as administrative level (at least by laws) they do not have great power in decision-making process and implementation of physical plans. It is within this participation procedures developed by intercommunalities that ENGOs feel useful and they feel that they are not used by the administrative structure for publicity purposes only (answer of the question "*Do you think that your participation succeed in changing spatial planning? Which kind? At which scale?*").

Thus, it can be concluded from this exercises that ENGOs organize their work and participation in spatial planning decision making process in accordance with their respective advocacies or with respect to specific themes rather than according to their level (i.e., national, regional ..). In addition, it is shown that in the case of

local ENGOs, they perceive that the level where they are (the lower level of a pyramidal structure), does not allow them to effectively participate in the same level as other stakeholders (whereas this structure was created to counteract, to mimic the State structure to have the same levels and to be in an equal footing). In reality, and as perceived by the public, ENGOs participate from the peripheral through protest actions than participative action from within the process. Thus, the threat of ENGO-led protests influence national, regional and departmental (to a slightest extent) to consider ENGOs in the decision-making process (Appendix 9, *figure 11:53*).

However, the results of the analysis of the questionnaires and the workshop reveal that national, regional, departmental and local ENGOs can participate in the implementation of a same physical plan, within the internal structure of FNE (Appendix 9, *figure 11:53)*. Even if they are organized in scale, levels, they have *a-priori* the same "power" to participate to the same decision procedure with the different actors as FNE does not follow the traditional bureaucratic structure. In most instances, they just participate in one or more decision-making process in accordance with their major working theme. But the problem is that more often than not, on the local setting where ENGOs are variedly represented, they are forced to participate in planning projects that are far from their advocacies and they do not know about the interplay of issues involved. For this reason, it is essential that ENGOs share a common federal strategy, which can be useful as a "guide" to lead the discussion into the spatial planning decision-making process.

Thirdly, departmental ENGOs argue that they think that their participation is not very efficient because the other stakeholders do not have the will to integrate and push for greater environmental protection. Indeed, despite the fact the generally the ENGOs' overarching goal is environmental protection; it appears in reality that they have a problem in coordination and communication on environmental issues with the other stakeholders. There is a gap between their subject of interests, the same subject of attention.

ENGOs want to change the situation and they have wishes about how it should be done. First, they see the necessity to have multidisciplinary partners. Second that participation depends a lot on who is participating. Third, they are convinced that their participation will be more efficient if the other stakeholders become aware of the environmental issues. Fourth, they are aware that solutions are long compared with the time they had to participate in the process. Fifth, they are convinced also that their participation will be more effective if they reinforce their own cohesion and if they coordinate more before their actual participation. Sixth, they have also the feeling that it's because of their structure that they cannot participate with more efficiently. Finally they are aware that lack or insufficiency of knowledge of necessary information hinders a more effective participation.

4. Cyclical flow

For ENGOs, it is the public who has to be the beneficiary of the spatial planning process. Herein, there is a gap: they are beneficiaries but they cannot participate directly. This is a problem in bureaucratic democracy. The main role they perceived to have (this is reinforced by author's observation) is in the spread information. (Appendix 9, *Figures 9 and 10 : 53*). The analysis of the case study lead us to see that the more integrated the element of the system (here is FNE internal), the easier it is for an organization to spread information inside and outside its structure. At the same time, the more an Organization is organized in a network the more information can be spread to other organizations (Appendix 9, *figure 9 : 53*). Similarly, it is not because the information are spread that they are always integrated within Organizations (this fact can be due to the different weaknesses that ENGOs perceived as above mentioned).

5. Diversity

The problem also is the sustainability of the spatial planning politic. There is a great turnover of person into those who have the "power" to decide. As abovementioned, FNE is diverse in its members but there is a difficulty to control it, which leads to their having less weight in the decision making process. However, one of the most important perception of ENGOs is that they are catalysts in the spread of consciousness to preserve natural resources either quantitatively ort qualitatively. ENGOs can drive the choices of all the stakeholders in spatial planning, at least make the decisions with an environmental point of view, with environmental consciousness. But each stakeholder is not willing to loose a part of its decisional power.

Another point that ENGOs underline is that participation is hampered by lack of individual potential, lack of financial support and also a lack of time. ENGOs need more time to prepare for a meeting, to elaborate their arguments effectively. Indeed ENGOs views and opinions have to be clear and comprehensible to allow an opportunity to spread their message with other stakeholders and act more efficiently for preservation of the environment. More often, there is only one ENGO representative among all the others stakeholders. Financial support is also seen as a vehicle for more effective participation by ENGOs.

Also, it appears that inside FNE there are some disagreements between the "pure" naturalists and environmentalists. There is lack of unity in FNE, but this one tends to be minimal. This diversity in point of view within FNE can have positive effects but it can also be a stumbling block to more efficient spread of information to other stakeholders or even within FNE about their strategy and agenda (Appendix 7 : *44*).

DISCUSSION

The initial question of the thesis was: to what extent ENGOs can be a tool to impulse a change in the structure of Organization to lead to a more adapted decision process in order to implement sustainable planning? That issue will be now discussed thanks to the insights obtained by analyzing the case study.
The results of the case study show that more or less, the ENGOs Organization follows the ecoliteracy principles. The case study was one ENGO. It is difficult to make a generalization, but we can assume that some other ENGOs can have the same issues and be adapted to the case we just saw. However, even if the generalization is difficult, we can discuss what was found in the case study, and it can be as a guideline for other Organizations which would want to follow the same way, *i.e.*, to go toward sustainability.

Chapter 1. A shift of structure

Whereas the ecosystem is composed of dissipative structures, making it flexible to changes. The social system State/ENGO appears to be less flexible (see appendix 10: 56). Humans are looking for stability rather than for flexibility because people tend to be scared of changes. Bureaucracy procures an answer facing this fear, as bureaucracy brings stability. However, looking at the results of the case study, ENGOs, a small-scale Organization, as an element of the larger-scale Organization, seem to react as a dissipative structure, even if the structure of ENGOs have to follow a general pattern for not being completely out of the decision-making process within the State. With ENGOs we are gaining in flexibility, we are going toward ecosystem characteristics. Furthermore, we can say that the more we have small-scale Organizations, the more we are going to mimic ecosystem's characteristics. As it is difficult for individuals to have an appropriate holistic vision, they make experiments in small-scale Organizations, such as ENGOs, before using the results of these experiments in a larger-scale (Schumacher, 1973).
The results of the case study showed more or less unpredictable results. Indeed, it seems that ENGOs react as a living system and that they apply, at least for FNE, the ecoliteracy principles developed by Capra (1996). ENGOs are on the way to change their perception of the issues of spatial planning and participation as the results of the case study showed.

The studied system is compounded of two key elements defined by Capra and Maturana: the pattern and the structure. One cannot be understood without the other (Capra, 1996).
ENGOs appear to be flexible enough to adapt themselves where the decision procedures take place (regional, departmental, local level). The problem is that these decision procedures are too spread, too scattered for ENGOs to have the opportunity to answer with efficiency to all the demands. However, they concentrate all the elements to make them considered as learning Organization.

As we saw above, it seems that FNE experiences the seven learning disabilities showed by Senge (Senge, 1999). That might be related to the fact that each individual has his own tasks (specialization of work), the fact that "the enemy is out there" (that we cannot see that the factor of disturbance can be the structure by itself). To that is has to be added the lack of proactiveness. As Senge (1999:21) stated, "true proactiveness comes from seeing how we contribute to our own problems. It is a product of our way of thinking, not our emotional state", which causes the

disability for humans to imagine that there can be different causes to one event. Also, decisions are taken in emergency and we do not take time to analyze or see the gradual changes in our systems. The fact that "we learn best from experiences but we never directly experience the consequences of many of our most important decision" (*Ibid*: 23) is another principle related to the learning disabilities. Indeed, in spatial planning, if the state takes a decision about a commune, it is not the state who will feel the impacts of its decision, but the local people who do not really take part in the decision making. There is a gap between who makes the decision and the ones who have to bear the effects of an unsustainable spatial planning.

Each level of ENGOs does not have exactly the same preoccupation; even if we saw that they are not really specialized in a particular domain. ENGOs adapt themselves in function of the needs they have. To fulfill this characteristic they need to be flexible. Their structure changes according to external and internal factors and, as we saw, ENGOs can be considered as "contextual" more than organizational (Scieur, 2005). However, we can say that the Organizational impact has more effects than the contextual one. There is a constant flow of information that makes them act differently depending on the events. Their structure stays more or less the same but the interrelations inside the ENGOs can change over a period of time depending on the context. They can form and destruct intern relations. However, they keep the same overall structure over time, as in a dissipative structure "the same overall structure is maintained in spite of the ongoing flow and change of components" (Capra, 1996: 176). ENGOs are always dependent on how the State is organized, if they want to have a weight in the decision making process, even if they are dependent, they have to have interdependence with the State even if by definition they are non-governmental. On the contrary, "far from equilibrium, dissipative structure may develop into forms with increasing complexity" (*ibid).*

Thus, ENGOs can be agent of structural changes as their Perception is changing and that perception is leading the system.

Chapter 2. To bipolar to tripolar decision making process

1. Cognition

As we saw above, ENGOs have a specific structure of Organization and a specific pattern too. We saw that the larger the scale of the Organization, the more they need to be really organized to implement order within the Organization. So it appears that bureaucracy is a good answer to put order within an Organization.

As ENGOs are composed of individuals, their perception of how they see the world around them is omnipresent. Indeed, as humans we cannot do without perception. This perception is at the beginning of the process of cognition (Capra, 1996). Traditionally, we characterize the way information and also participation are going top down. Since few years ago the trends had reversed, and we implement what we call the bottom-up approach, *i.e*. the initiatives are coming for the grassroots movements giving more weight to the levels which *a priori* had less in the top down approach (Bifarello, 2002). The bottom-up approach is known to contribute to have more citizen participation (*Ibid*). However as we saw in our example, this participation is still perceived as not enough, with still too much control from the upper level. This approach is a remain of a linear vision. However, information and participation are needed by the ENGOs to do what they want, when they want, to go where they want. To keep the participation and the spread of information within a top down or bottom up approach creates boundaries

to the participation and to information (*Ibid*). Although the bottom-up approach is recognized as more efficient that the top down approach, it lacks certain flexibility. It is an *order* limiting the *freedom* (Schumacher, 1973). To the bottom up approach we need to add a left-right and *vice versa* approach and a real cycle of information (Diniz *et al*, 2002). A top down or bottom up approach means to give more importance to a certain category of population at the expense of the other groups, whereas in a cyclical approach all the Organizations will have the same information and then spread them to other Organizations. At the same time each Organization can have information and spread it and used it. It is a continuous process (Capra, 1996).

However, humans have limited cognition. Some psychological processes limit our understanding of the world. First, we have a trend to select our information. Naturally, the human brain only remembers the information we need and the information we are interested in. This is the mirror of mind talked about in the theoretical framework. The system thinking approach proposes to build a mental model to alleviate these disabilities to understand the complexity of the reality. Mental models, on the other hand, are our internal pictures of how the world works (Senge, 1999). So as mental model is the translation of our mind and that we have a selective perception and interpretation, the mental model has a limited scope. That is why building mental model in a group provides the opportunity to have a translation of a larger picture of reality and so have a better holistic view of a phenomenon (*Ibid*).

2. Tripolar decision making process

The cognition process can be expressed by the concept of threefolding participation. Participation nowadays is more often bipolar than really taking into account the three realms of society, social, political and cultural (where ENGOs take part) as underlined by Perlas (Perlas, 2000). We could say that it is not a problem. Why not to have a bipolar participation? What is wrong with that? The fact is that there is still a fragmentation or sectorization in the way we are thinking, planning, and dealing with reality. Participation by a wide variety of community stakeholders in the planning process is essential. In a report written by the Center for Livable Communities titled *Participation Tools for Better Land Use Planning*, the value and necessity of civic participation is outlined in the following five points.: "civic participation in the land use planning process: ensures that good plans remain intact over time, reduces the likelihood of contentious battles before councils and planning commissions , speeds the development process and reduces the cost of good projects , increases the quality of planning , enhances the general sense of community and trust in government" (http://www.sustainable.doe.gov/landuse/civic.shtml).

With the tripolar participation, the advantage is that the more we have pieces with different views, the more it is possible to have a complete vision of reality. However it is important to have coherence. Indeed, the example of the metaphor of the Mirror developed by Senge shows that when we want to repair a mirror which broke, we put all the pieces together again and we re-build the mirror to have a "new" one. However we will have only a kind of the same mirror than before but not the same one, because there is no link between the pieces, if you look at you through this new mirror you will see only your flawed reflection (Senge, 1999). Thus, it is the same for participation, we can have numerous stakeholders to the decision making process but if they do not have a coherence between them this might be useless. That is why Perlas proposed that threefolding (to participate in a tripolar way, with the three realms of society together) is the solution. Indeed the threefolding theory arguments

that if each realm is aware of its own identity they will form better relations between each other and have more coherence (Perlas, 2000). By the creation of these relationships as participation in one group increases, we should have a spread of information and knowledge into the other realms of society increasing cross-disciplinary awareness (Perlas, 2000: 245).

Chapter 3. To linearity to network: Pattern

The case study aroused the fact that ENGOs have not yet a real network pattern. ENGOs are conscious of the relationships that they need, but they are still linear, without really feedback loops. Indeed, those relationships provide the grounds for spreading information. But these information is almost going in the same way; they are linear relationships, even if they seem cyclical (Appendix 9, *figure 9: 53*). It is not the same information going one way or another. It can be the same information but change. We can consider these changes as recycled information. The limitation comes from the fact that in our system we have a gap between the "ecological vision which is cyclical, whereas our industrial systems are linear" (Capra, 1996: 291). Indeed, what is important is to make the proper information circulate within the system. The sense of the word «information» does not have the same meaning in a sustainable community or in an unsustainable one due to a lack of feedbacks in unsustainable conditions.

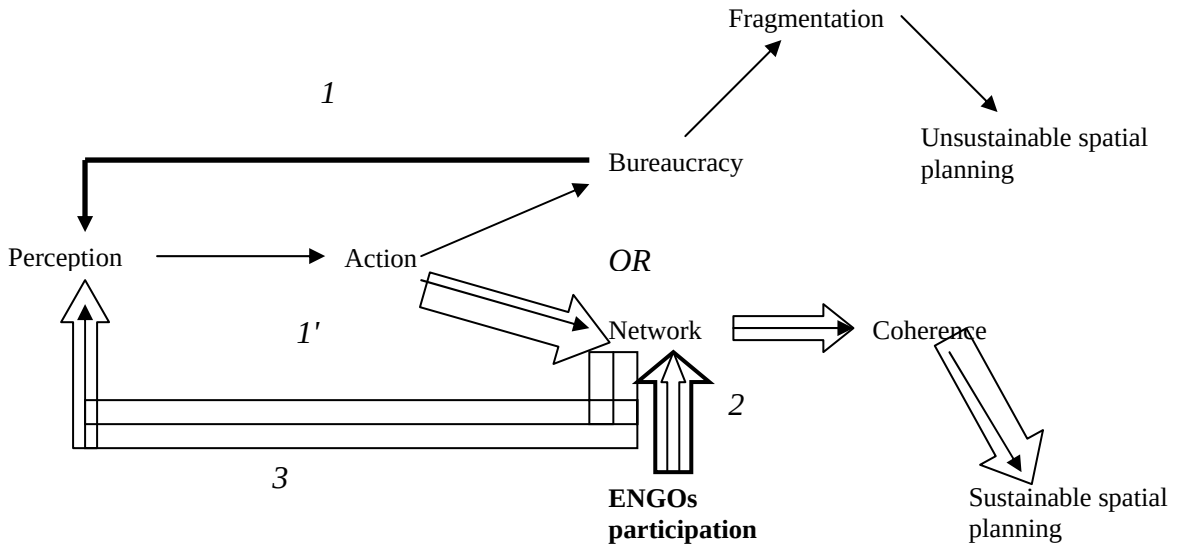


Figure 1. **Pattern of the system**

Therefore, the process of change follows a certain pattern. Actually, we have an interrelationship between bureaucracy and how we react and our perception (*1* figure 1 : 35). As we are in bureaucratic system we react following a certain way, and all of our actions are within the framework of bureaucracy (*1'* figure 1 : 35). Then, in a second step (*2* figure 1:35), more and more ENGOs are participating in the decision-making process. As they participate increasingly, due to the fact that they are structured in a network, they find their own identity. The perception of individuals about spatial planning issues is changing to attain a change in the global structure,

until it becomes a network, which reinforces coherence of physical plans and therefore implements sustainable spatial planning (*3* and *2* figure 1 : 35).

Thus, thanks to efficient ENGOs participation, they arrive to change the whole structure step by step. We can make a quick comparison with the chemistry work of Chauvin (Nobel Price 2005) who showed the existence of a small molecule which, with particular characteristics can come to agglomerate with the bigger molecule and change its structure. We can consider that ENGOs should be this small molecule, a key element of the system, which comes to agglomerate with a larger-scale molecule, the State for example. The chemistry links should be participation. Therefore, under certain conditions, the change in structure can be achieved.

Chapter 4. Do ENGOs can induce a change in the whole decision-making procedure?

Ecosystems have a direct effect on ENGO Organization (see appendix 11 : 56). ENGO are directly interdependent on ecosystems. Indeed, as the environment is the key element of study of ENGO, the ENGO's behavior changes in function of the ecosystem's changes. However, ecosystem related State bodies and ecosystem related ENGOs federations have indirect interdependence. Their interdependence comes through the environmental awareness spread by ENGO (*CLD 1: 9: the more we have ENGO's participation, the more the population awareness*). Therefore, all the elements of a same system are dependent of each other, so "the behavior of every living member of the ecosystem depends on the behavior of many other" and "the relationships among the members of an ecological community are nonlinear, involving multiple feedbacks" (Capra, 1996 :290). In our system this characteristic can be seen only within ENGOs, and a to some extent within the ENGO federation. ENGOs are aware of the importance to weave links with other stakeholders. However, as it has to be a mutual, two ways phenomenon, the situation is not depending only on ENGOs (Bifarello, 2002).

As we saw, ENGOs are learning organizations (Senge, 1999). This system responds to environmental changes, it is coupled structurally with its environment. We are in our system in a way where we have a structural coupling as defined by Maturana and Varela, it means that when the environment changes our system responds automatically in an unpredictable way, which can bring a change within the structure (Capra, 1996).

Therefore, the thesis shows that ENGO's participation challenges the traditional organization of the State. In other words, the centralized bureaucratic state gives preference to a public private partnership. "This implies that the transformation of governance towards a more participatory and democratic model depends on how the traditional bureaucratic state is being reshaped by no-state actors including civil society" (Kim, J., 2003). Indeed, as underlined by Diniz *et al* "the ideal situation within any governance process would be a balance of power dynamics so that no one stakeholder dominates the governance process. In practice, this is difficult to achieve, but if structural processes are in place to necessitate collaborative decision-making, then the propensity for one-sided power dynamics can be minimized" (2002).

Thus pattern, structure and process are three elements really connected. These elements together with the six ecoliteracy principles can give a picture of what an Organization should reach to implement sustainable spatial planning. As we can saw in the CLD, the more we will have ENGO's participation, as a process of information

spreads within the whole system, the more coherent will be the decisions we will take, based on a larger picture of reality. Thus, we will reach sustainable spatial planning, which will reinforce the ability of individuals to understand reality and change their behavior toward a new pattern based on network. This pattern will reinforce the accountability of ENGOs to participate even more, and so on. However, we will have to deal again, with the "old" Cartesian vision.

CONCLUSION

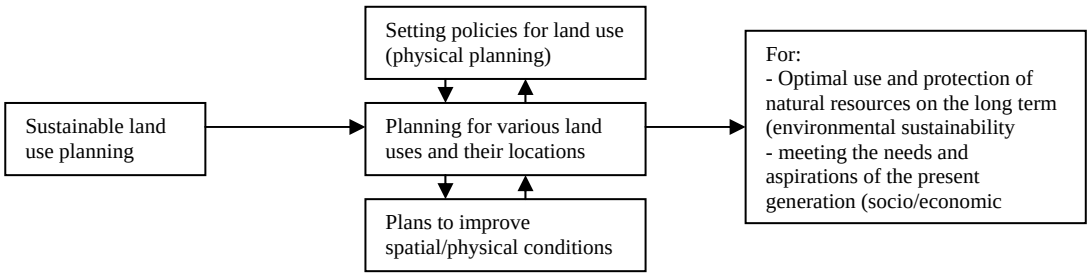
Bureaucracy is a structure not adapted to implement sustainable spatial planning and therefore reach sustainable development due to the kind of decision making process it is built upon. Bureaucracy reinforces even unsustainability. We are going right into a wall without really being conscious of it, because we are impregnated of the thought convey by the system where we are living. However, as we saw, other kinds of thoughts and vision of the world are possible based on the comprehension of the ecosystem. Organisations are dependent on the people value. We build Bureaucracy to answer to a certain kind of value whereas networks are built to follow an ecological value spread by ENGOs.

We saw also, in this thesis, that ENGOs participation can be a tool to progress toward a change in perception of our worldview. However, if the structure of our Organization (*i.e.* society as a whole in fact) and the way we are taking decisions does not change, ENGOs participation will provide only the opportunity to decrease the speed at which our Society will collapse, instead of a real flashback toward sustainability. Actually, each individual, within each realms of society has to be conscious that it is only by their own change of behavior and perception that we will go toward a real sustainable society.

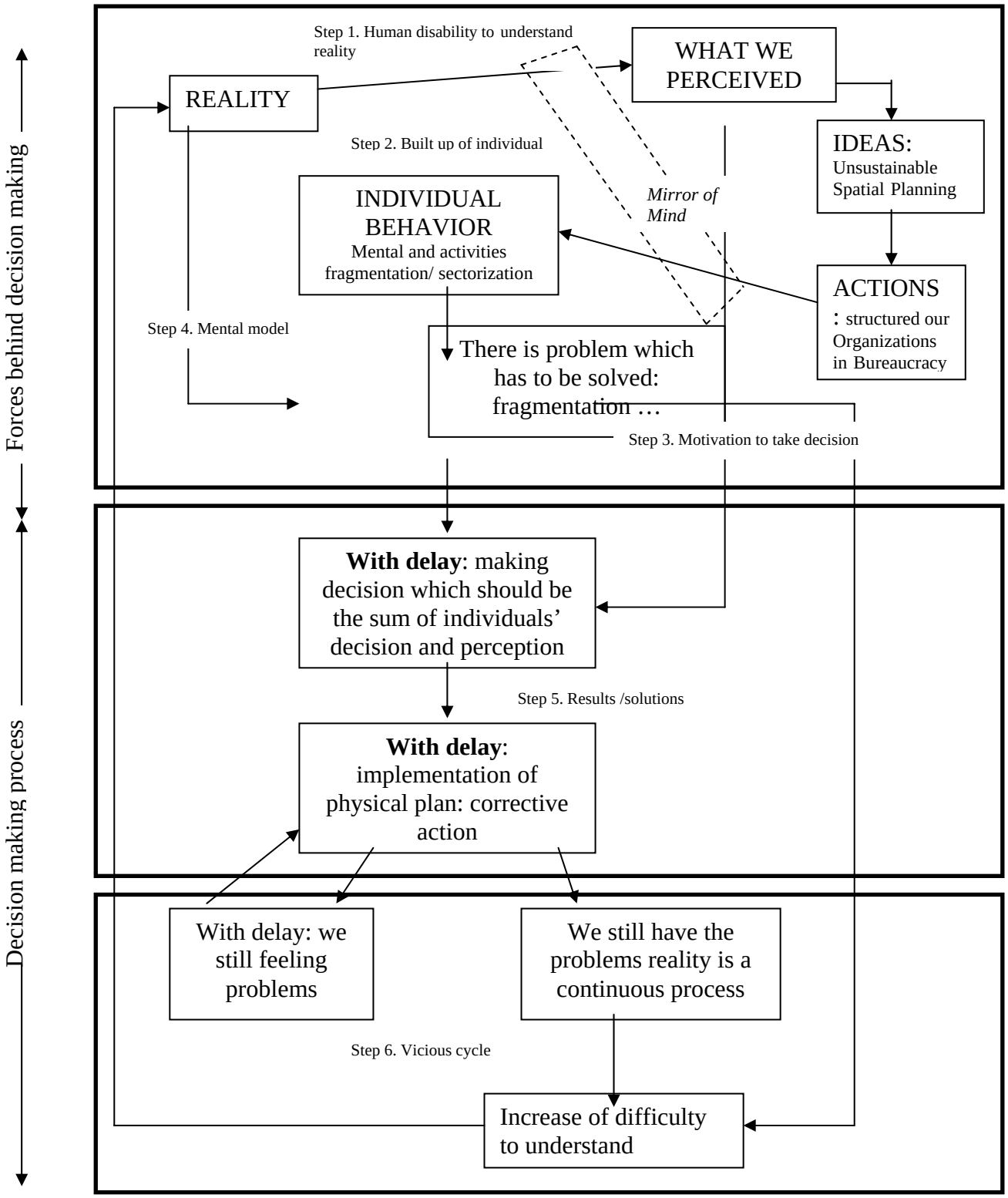
APPENDICES

THEORETICAL FRAMEWORK

Appendix 1. Sustainable Spatial Planning. *(FAO, 1993)*

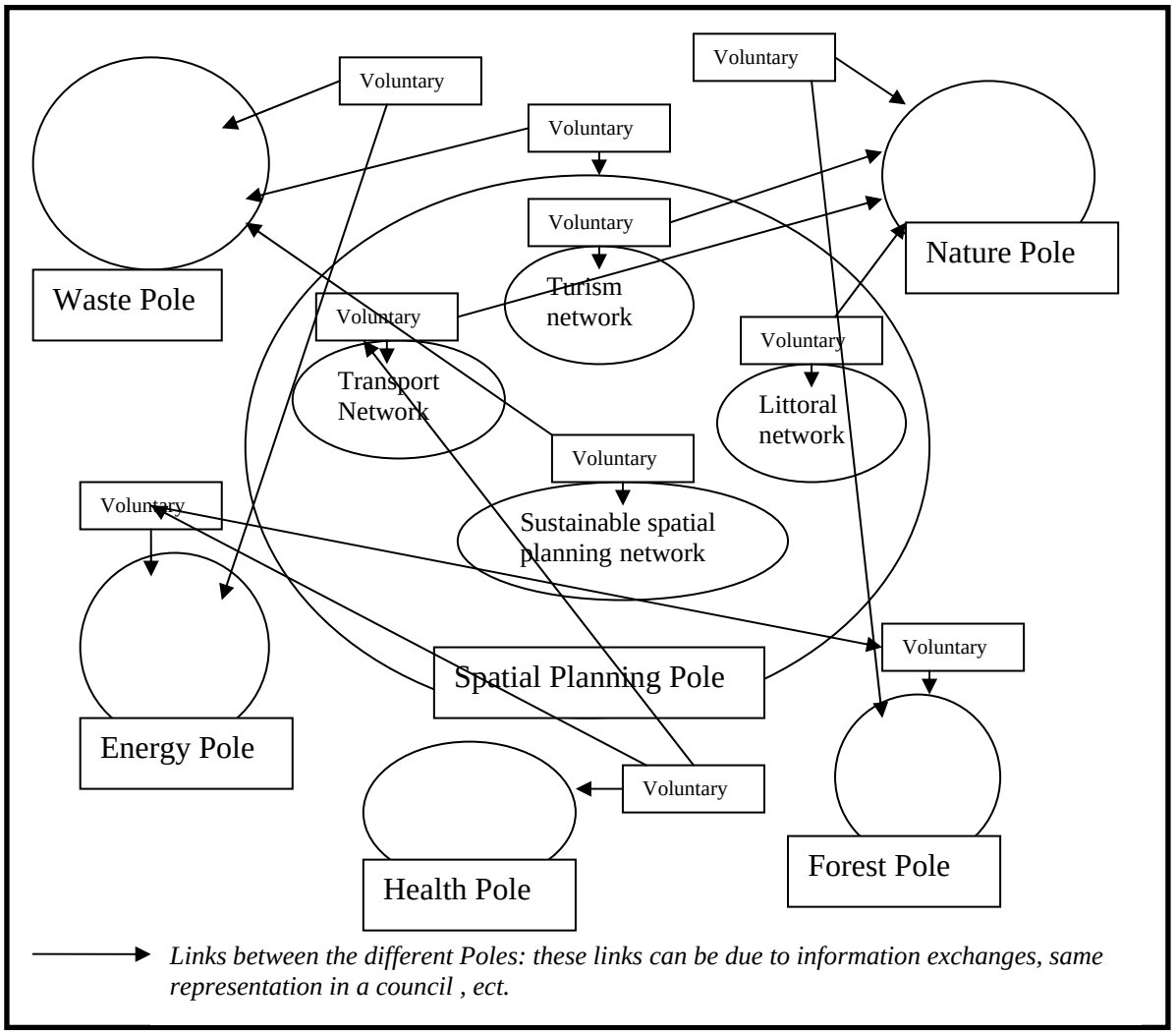


Appendix 2. **The way we analyze problems and our cognitive limitations**. *"Behaviour in the social domain is governed by rules generated by the social system and often codified into law" (Capra, 1996 : 206).*



CASE STUDY

Appendix 3. **France Nature Environnement internal organisations**.



Appendix 4. Questionnaire in English

What are the objectives of the questionnaire?

- **To know the actual perception and concern of NGOs face to spatial planning**. The analysis of the questionnaires will show similarities or difference in the vision NGOs have about spatial planning. The questionnaires aim to underline the issues we meet on the field. Also, the analysis will provide the opportunity to question ourselves about what is really spatial planning and how finding adequate actions, solutions to have a coherence of spatial planning politics.
- To know the "amount", and the quality of **NGOs participation** in the decision making process in spatial planning
- To know the **prospect and attempts** of NGOs in the field of spatial planning
- the questionnaire served also to build the workshop.

Title: NGOs and their lived of spatial planning/Land use Planning

1. NGOs' contribution and participation (yesterday and today)

1.1. Your participation within the process of spatial planning

- Did you still encounter spatial planning problems in your activities?

☐ Yes ☐ no

- Were you involve or are you involving in territorial planning thinking processes? And for the implementation of territorial and plans as :☐ physical ground occupation (SCOT, PLU…)

☐ collectives services
☐ water (SDAGE, SAGE…)
☐ Risks (PPRI, …)
☐ Air (PPA, PRQA,…)
☐ Transport (PDU,…)
☐ Other

- Are you involved in the implementation of … at which scale?

☐ Charter
☐ contract
☐ agenda 21
☐ other

- Your are participating because :

☐ Territorial collectivities' request?
☐ Due to a specific theme of a commission where you sit?

1.2. Processes in which your participation was integrated

- In which comity, council your NGOs is integrated to take part of the decision making process?

☐ Council of development (Pays, Agglo ..)
☐ CESR (economical and social council of the region)
☐ Comittee of bassin (about water)
☐ Communal commission
☐ CRADT (regional council of spatial planning)
☐ Others

☐ After your own demand?

- Do you have a financial support?

☐ Yes ☐ no

Which kind?

☐ Pay back of your travel tickets

☐ Allowance to participate to the meeting

☐ Convention between your NGOs and the one who organize the meeting

☐ Others

- Do you think that the fact you get financial support help you to participate in the decision making process of spatial planning?

☐ Yes, why? ☐ No, Why?

1.3. Your critical vis a vis how your participation is taken into account

- How do you judge that your participation is well take into account by the decisional authorities?
- What should it be needed to have a more efficient participation in your case?
- What are the brakes of your participation?
- What is helping you to participate?
- Do you think that NGOs participation is important for a suitable territories management?
- When you take part of land use planning projects, do you organise, do you realize follow up and a time to give information to your NGOs, and others people (civil society …)? Which kind?
- Do you think that your participation succeed in changing spatial planning? Which kind? At which scale?
- What are the consequences of your participation on your casual life? On the environment?
- Does your participation provide you the opportunity to think about spatial planning? if yes, what are these thoughts ?
- Does your participation provide you the opportunity to have links between the different stakeholders in spatial planning?

2. Your perception of spatial planning

2.1. Spatial planning in general: for whom, in which context?

- To you, what is land use planning/spatial planning?
- According to you, what is the perception, vision of spatial planning within your ENGOs?
- According to you, what are the reasons to manage the territories?
- According to you , what are the objectives of spatial planning ?
- Who and/or what have to take advantage (recipient) of spatial planning?
- According to you who are responsible to make choices in spatial planning?
- To you, what are the weaknesses of Spatial Planning?
- According to you what is the actual role of the NGOs into spatial planning?

2.2. You, your NGOs and spatial planning

- What are the problems that you meet and that your association meets locally?

- How spatial planning is taking into account within the actions of your association? Which kind of actions your association produce in term of spatial planning?

3. Prospect and future for tomorrow's territories

- Do you participate to prospect work in spatial planning?

3.1. Your spatial Planning prospect (future as you wish, as" utopia")

- What are your waiting for your territory, your living space?
- How do you wish spatial planning will evolve within your territory, in France?
- According to you, who should have in charge land use planning (in term of propositions, choices, realisation, financing)
- Which territorial scale should be the more relevant in order to have the more efficient NGOs participation as possible?

3.2. Your spatial planning vision for the future (future if we are following the present trend)

- *Scenarios of evolution:*

How do you think that is going to evolve

  - spatial planning
  - the organization of decision making process in the field of spatial planning
  - NGOs participation into the processes of decision in spatial planning

How would you like this situation evolves in the future? :

  - spatial planning
  - the organization of decision making process in the field of spatial planning
  - NGOs participation into the processes of decision in spatial planning

---

<u>Appendix 5</u> List of ENGOs which answered to the Questionnaires

Name	Surname	abbréviation of ENGOs	Questionnaires
MAILLET	Colette	ADEV	x
BLANQUET	Jacques	ANPER-TOS	x
BARAILLER	JL	ANCER	x
HUOT	colette	CORIF	x
DAUBREMOT RIBOULEAU	Jean michel	CLAPE LR	x
FAUCONNIER	Jm	CDPNE Loir et Cher	x
GARNIER	Edouard	FRAPNA Région	x
RIVOAL	Bertrand	FRAPNE Isère	x
BONTEMPS	Pierre	IDFE	x
JANVROT	Guy	Nature Centre	x
NARS	Aurélie	Nature MP	x
ECHAUBARD	Michel	SNPN	x
CAMBOU	José	UMINATE	x
CHEVALIER	Johan	PhD	x

Appendix 6. Questionnaire in French

Les APNE et leur vécu de l'aménagement du territoire

Remontée d'expériences de la participation des APNE dans les processus de décision à l'aménagement du territoire (AdT)

Merci de nous renvoyer ce questionnaire **AVANT LE 15 SEPTEMBRE** en copiant votre fédération régionale et de nous le retourner à l'adresse postale ou électronique spécifiée en entête

>>> **Coordonnées personnelles**

Nom :

Adresse :

Tel :

Fax :

Courriel :

>>> **L'association**

- Nom de l'association :

☐ Association ou ☐ fédération

- Fonction du référent dans l'association :

- Quel est le territoire d'influence de votre association ?

☐ Local
☐ Départemental
☐ Régional
☐ National
☐ Interrégional
☐ International

1. Contribution et participation des associations (hier et aujourd'hui)

1.1. Votre participation à l'Aménagement du Territoire

- Avez-vous déjà été confronté dans vos activités à l'aménagement du territoire?

☐ Oui ☐ Non

- Avez-vous participé ou participez-vous à la réflexion sur la planification territoriale, la mise en place de schémas/plans territoriaux tels que ☐ Occupation du sol (SCOT, PLU…)

☐ Schémas de Services collectifs

☐ Eau (SDAGE, SAGE…)

☐ Risques (PPRI, …)

☐ Air (PPA, PRQA,…)

☐ Transport (PDU,…)

☐ Autres : (schémas départementaux des carrières,…) Participez-vous à la mise en place de … et à quelle(s) échelle(s) territoriale(s) ? (local, régional…) ☐ Chartes,

échelle :

☐ Contrats, _____.

échelle :

☐ Agenda 21, échelle :

☐ Autres : échelle :

1.2. Processus dans lesquels votre participation a été intégrée

- Grâce à quelle(s) instance(s) votre association s'intégre-t-elle dans les processus d'élaboration et/ou de consultation?

Selon quelle procédure ?

☐ Conseil de développement (Pays, Agglo)
☐ CESR (Conseil Economique et social Régional)

☐ Commission de Comité de bassin

☐ Commissions communales

☐ CRADT (Conseil Régional d'Aménagement du Territoire)

☐ Autres :

- Votre participation a fait suite à :

☐ Une sollicitation des collectivités territoriales ?

☐ Due à une compétence spécifique d'une commission où vous siégez (exemple avec les SDAGE)

☐ Une demande d'intégration de votre part au processus de participation ?

- Est-ce que ces participations sont aidées financièrement ?

☐ Oui ☐ Non

☐ Remboursement des frais de déplacement

☐ Indemnités pour participation aux réunions,

☐ Convention entre votre association et l'organisateur de la réunion

☐ Autre:

Est-ce que les aides financières sont une condition indispensable pour vous permettre de participer ?

☐ ***Oui, pourquoi?*** ☐ ***Non, pourquoi?***

1.3. Votre critique sur la prise en compte de votre participation

- Comment jugez-vous que votre participation a bien été prise en compte par les instances décisionnelles?
- Pour que votre participation soit plus efficace que faudrait-il?
- Quels sont les freins à votre bonne participation?
- Qu'est ce qui vous a aidé à participer?
- Pensez-vous que la participation des APNE est importante pour un aménagement, une gestion durable des territoires ?
- Lorsque vous prenez part à des projets d'ADT, organisez-vous, réalisez-vous, par la suite, des retours à votre association, à d'autres personnes ? Qui ? (Société civile, …), Sous quelle(s) forme(s) ?
- Votre participation a-t-elle abouti à des changements en ADT ? De quel(s) type(s) ? A quelle(s) échelle(s) ?
- Quelles ont été les conséquences de cette participation sur la vie quotidienne de votre territoire ? Sur l'environnement ?
- La participation à ce projet d'aménagement vous a-t-elle permis d'avoir une réflexion sur l'ADT ? si oui quelles ont été ces réflexions ?
- Votre participation vous a-t-elle permis de tisser des liens avec d'autres acteurs impliqués dans la démarche d'aménagement du territoire?

2. Perception de l'aménagement du territoire

2.1. L'aménagement du territoire en général: Pour qui, Pourquoi, Dans quel Contexte?

- Pour vous qu'est-ce que l'Aménagement du territoire?
- Qu'elle est, selon vous, la perception de l'ADT au sein de votre association ?

- Selon vous quelles sont les raisons d'aménager le territoire ? (donner trois phrases clés)

> ----------

> ----------

> ----------

- Selon vous dans quel(s) but(s), quels sont les objectifs essentiels d'un aménagement du territoire?

> ----------

> ----------

> ----------

- Qui et/ou quoi doit en bénéficier?

- Selon vous, qui est responsable des choix en aménagement du territoire?

- Quelles sont pour vous les lacunes (passées ou actuelles) de l'aménagement du territoire ?

- Selon vous, quel est le rôle actuel des associations de protection de la nature et de l'environnement (APNE) en AdT ?

2.2. Vous, votre association et l'aménagement du territoire

- Quelles sont les problématiques de terrain que votre association rencontre ?

- Comment prenez-vous en compte l'AdT dans les actions de votre association ? Sous quelle forme cette prise en compte se manifeste-t-elle ?

- Votre association a-t-elle déjà organisé des formations sur le thème de l'aménagement du territoire ? Sous quelle(s) forme(s) ? (actions en cours ou en projet?)

- Votre association a-t-elle ou est-elle en train de réaliser des documents sur l'AdT (livret, guide, articles, études …), si oui sur quel(s) sujet(s) ?

3. Perspectives et prospective pour les territoires de demain.

3.1. Vos perspectives de l'ADT

- Qu'attendez-vous pour votre territoire, votre bassin de vie ? (donner trois propositions)

> ----------

> ----------

> ----------

- Comment souhaiteriez-vous que se passe l'ADT dans votre territoire, en France ? (donner trois propositions)

> ----------
> ----------
> ----------

- Selon vous, qui devrait prendre en charge l'ADT ? (en terme de propositions, choix, réalisations, financements…)

- Quel échelon territorial serait le plus adéquat pour que la participation des APNE soit la plus efficace des associations?

3.2. Vos prospectives d'AdT

- Participez-vous à des travaux de prospective sur l'ADT?

Scénarii d'évolution : Comment pensez-vous que va évoluer (dans la continuité d'aujourd'hui) :

- L'aménagement du territoire ?
- L'organisation décisionnelle en matière d'ADT ?
- La participation des associations, et notamment des APNE, aux processus de décisions en aménagement du territoire ?

Comment souhaiteriez-vous qu'évolue:

- L'aménagement du territoire ?
- L'organisation décisionnelle en matière d'ADT ?
- La participation des associations, et notamment des APNE, aux processus de décisions en aménagement du territoire ?

3.3. Le projet "TerritoireS" et vous

- Qu'attendez-vous du projet fédéral TerritoireS de FNE ? qu'elles questions aimeriez-vous que soient soulevées par le projet "TerritoireS"?

- Dans le secteur de l'aménagement du territoire, pensez vous avoir besoin d'informations et de formations ?

☐ Oui ☐ Non

sujet(s): ----------

- Pour cela quel(s) outil(s) (guide, fiches pratiques, base de données…) et support(s) (CD ROM, pages internet, publications…) souhaitez-vous? Auriez-vous besoin?

- Le projet "TerritoireS " prévoit un séminaire de lancement au mois de novembre 2005 sur la participation des APNE à l'aménagement du territoire, avec pour objectif de construire ensemble une vision claire et cohérente des APNE face à l'aménagement du territoire. Seriez-vous prêt à vous investir pour la préparation du séminaire au mois de novembre (en termes de contenu/matériel, logistique/ conception…)?

☐ OUI ☐ NON

Qui: Se propose de:

NB: Sentez-vous libre de nous faire-part de toute autre remarque qui n'aurait pas été pris en compte par le questionnaire
Bien cordialement.

Appendix 7. Workshop's presentation

The workshop has for main objective to have a first approach of system thinking. It was also an opportunity to group together different ENGOs taking part of FNE to discuss about the issues of Spatial Planning and ENGOs participation in the decision-making process. Firstly, during the morning, we have different presentations about the main issues in Spatial planning in France, followed by a discussion with the audience. The themes of discussion are:

- What is Spatial planning? Which definition ENGOs can give to this concept ?
- What is Participation? Which definition ENGOs can give to this concept? How they live their participation on the field?
- Spatial planning and stakeholders: Which role for the ENGOs ?
- The European Context
- Sectorisation of Land: what are the consequences?

Secondly, when the presentation will be done, we will work in small groups, to confront ideas and start to build a common mental model.

Hereafter we can see how was organised the day of the workshop (in French, above was a summary of it).

1° Séminaire - novembre 2005

Les APNE dans les processus de décisions en Aménagement du Territoire
Construire la vision fédérale des APNE sur l'aménagement du territoire

Programme proposé

Rappel de l'Objectif principal du projet "TerritoireS"

Cette journée de formation (audition d'acteurs extra-associatifs et associatifs pour alimenter le débat) doit permettre d'échanger sur la politique fédérale à adopter pour l'aménagement du territoire en France. Elle a pour but aussi de sensibiliser chaque association par le biais de leur référent, à la problématique "aménagement du territoire".

Il s'agit de travaux préparatoires à la formulation de la vision et des préoccupations des associations et réseaux FNE relatives à l'aménagement du territoire ainsi que les enjeux que les associations fédérées et réseaux y voient.

Les objectifs pédagogiques du projet sont:
- évaluer la sensibilité et l'intérêt des associations membres de FNE sur la problématique aménagement du territoire.
- évaluer la place des APNE dans les processus de décisions en Aménagement du Territoire par rapport aux autres acteurs et instances de la Société.
- construire les bases d'une position fédérale pour un aménagement durable du territoire.
- commencer à penser en termes de prospective pour le territoire de demain;
- Déterminer ce que les APNE voient comme enjeux et priorités d'action, en les mettant dans un ordre de priorités et avec leurs modalités d'application, d'actions;
- Plus que la construction d'une plateforme, il faudrait arriver à déterminer une politique, une vision partagée;

Méthodologie générale : les séminaires/Objectifs/calendrier

Suite aux retours de questionnaires, nous avons développé des thèmes de travail. Ces thèmes sont un premier cadre permettant une base de la réflexion et dans lequel doit s'inscrire la réflexion des APNE. Il faut aller vers une vision territoriale plus globale et transversale. En nous plaçant dans une dynamique il faut trouver les moyens de mettre en place cette globalité comme nous le précisait notre président S.Genest.

Nous avons structuré ces thèmes en parties. Ces parties représentent le plan de travail, le calendrier qui guidera notre réflexion commune. Chaque partie fera l'objet d'un séminaire de travail et/ou d'un travail en continue via le yahoogroup.

L'objectif final de ces séminaires est double:
- La **production** d'une plateforme associative sur l'aménagement du territoire qui se veut globale et transversale pour le congrès de 2007;
- La **formation** du milieu associatif sur les problématiques d'aménagement du territoire, et sur l'utilisation d'outils adaptés à la prise en compte de la globalité, pour que les APNE puissent démultiplier cette formation à leur tour au sein d'instances participatives sur le long terme au-delà de 2007.

Il sera important aussi de veiller à ce que ce ne soit pas seulement de la production de pensées. En effet il faut replacer cette réflexion dans des perspectives d'actions. Ainsi la première étape est donc bien de bâtir une culture commune dans une perspective d'action.
Le fond (le contenu) et la forme des séminaires de travail (de novembre 2005 et mars 2006) et les échanges via le yahoogroup répondent à ce double objectif.

Modalités pratiques

- **Lieu de réalisation :** Péniche d'ALTERNAT, réseau interassociatif, quai de Bercy, 75012 PARIS
- **Date de mise en œuvre prévue :** 19 novembre 2005
- **Durée de l'action :** Une journée entière

Présentation de la première partie= séminaire de novembre 2005
Partie 1. Mise en place du contexte : mise au point de vocabulaire

Etapes	Horaires	Déroulé	Intervenant
	9 h 00	Accueil	
Etape 1	9h15	Mot d'accueil, explication de la journée, données pratiques Présentation du contexte Présentation : avoir une vision globale	SG CG
	9h45	Cadrage sur les interventions	
Etape 2	10h00	A. Qu'est ce que l'aménagement du territoire ?	J.Theys
	10h20	B. Qu'est ce que la Participation ?	Directoire ADT
	10h40	C. Le jeu des acteurs. Qui ? Quel pouvoir? (Décisions, intérêts, rôles..)	Directoire ADT
	11h00	D. L'intégration et le déploiement de toutes ces questions dans le contexte européen, à l'échelle européenne/ les échelles territoriales emboîtées, décentralisation.	Directoire ADT
	11h20	E.Territoires : zonages, catégorisation des espaces	Directoire ADT
	11h40	Explication des groupes de travail	Directoire ADT
	11h45	PAUSE	
Etape 3	12h00	Travail en groupes	Animateurs de groupes
	13h30	REPAS	
Etape 4	14h30	Travail en groupes	Animateurs de groupes
	15h30	PAUSE	
Etape 5	15h45	Synthèse Construction d'une carte mentale et questionnaire d'évaluation	Animateur réunion, et animateurs de groupes
	17h45	Mot de conclusion/ouverture sur partie 2	Animateur réunion
	18h00	FIN/cocktail	

Etape 1 (45 min): Approche de la vision globale
1. Accueil des participants.
2. Mot introductif expliquant toute l'importance d'un travail partagé pour aboutir à une vision globale et transversale de l'aménagement du territoire et le rôle des APNE dans ces processus. L'intervention devrait faire référence à la deuxième partie : sectorisation versus approche systémique en aménagement du territoire et Communication/Participation.
Objectifs :
- Donner le contexte général dans lequel s'inscrit le séminaire de travail;
- Poser les bases de la réflexion.

Etape 2 (1h45min) : Interventions informatives, formatives/ présentation des cinq points par un intervenant extérieur spécialiste du sujet
1. une note de synthèse particulière aura été réalisée auparavant pour chaque sujet pour permettre une réflexion préalable de chacun sur les sujets qui seront abordés (notes de synthèse qui seront disponibles sur le yahoogroup). Les présentations auront pour objectifs d'approfondir les notes et de donner un éclaircissement supplémentaire sur les sujets.
2. chaque présentation durera 15 min permettant ainsi deux à trois questions dans la salle. Il n'y aura pas de débat. Les 5 interventions se succèdent sans pauses.
Objectif : Introduire et former les participants à des problématiques d'aménagement du territoire

Etape 3 (1h30min) : Première séquence de travail en groupe, autoformation, communication
1. Chaque interventions (5 points) fera l'objet d'un groupe de travail (de A à E voir shéma page suivante). Chaque participant choisit un groupe de travail, les groupes de travail doivent être équilibrés.
2. chaque groupe comprendra un animateur et l'intervenant de l'étape 2 sur le sujet.
3. travail de groupe sur la problématique choisie par les participants pendant 1h30.
L'objectif est de proposer une définition partagée, une vision partagée de la problématique et des enjeux mis à jour. A partir des interventions, les APNE se positionnent.
Objectif/ Productions attendues :
- Rédiger une définition partagée (ou plusieurs)
- réalisation de post-it avec des mots clés sur la discussion que le groupe vient d'avoir. Ces post-it serviront au moment de la synthèse, en séance plénière, pour construire la carte mentale.

Etape 4 (1h00) : Deuxième séquence de travail en groupe, autoformation, communication, échanges
1. chaque groupe de l'étape 3 se sépare en deux moitiés.
2. deux sous-groupes de thème différent se rassemblent pour former un nouveau groupe (cf schéma page suivante).
3. chaque demi groupe du matin en 15 min présente le résultat de son travail du matin à l'autre sous-groupe. Cela fait un échange d'information durant 30min. Puis ils échangent et élaborent un point de vue partagé, présentant les aspects d'interconnexion entre leur deux sujets.
Objectifs :
- travailler transversalement
- réalisation de post-it avec des mots clés sur la discussion que le groupe vient d'avoir. Ces post-it serviront au moment de la synthèse, en séance plénière, pour construire la carte mentale.

Etape 5 (2h00) : Synthèse/ Création de la carte mentale/questionnaires d'évaluation
1. Pendant une heure les groupes de travail du matin viennent présenter leurs résultats durant 10 min et 5 min de mini-débat avec la salle. Les post it préparés seront collés sur un panneau servant à la carte mentale
2. Puis pendant une heure les groupes de l'après midi viennent présenter leurs résultats durant 10 min et 5 min de mini-débat avec la salle. Les post it préparés seront collés sur le panneau servant à la carte mentale, en lien avec les post-it du matin.
3. Synthèse : création de liens entre les post-it. Il apparaîtra alors une carte mentale construite de façon partagée par les APNE au cours de la journée. Cette carte mentale représente LA vision des APNE sur leur participation en aménagement du territoire et permettra d'avoir une base commune de définitions et de compréhension de la problématique dans la suite du projet "TerritoireS".
Objectif : création d'une carte mentale

Conclusion
Les résultats de la carte mentale seront retravaillés en yahoogroup jusqu'au séminaire suivant (mars 2006), dans la perspective des deux points/deux objectifs : l'approche systémique et communication/participation.
La manière de travailler durant ce séminaire met directement en application une manière de pensée (globale) et une manière d'agir et de se former.
De plus la manière de travailler répond parfaitement au deuxième objectif fixé par le projet "TerritoireS", à savoir la formation des APNE. En effet au cours du séminaire on met en place une méthodologie de travail réutilisable par les APNE pour faire entendre leurs voix, leurs idées.
De plus la vision globale ainsi créée va servir de cadre à la réflexion future et ainsi servir de guide de référence (pour des projets futurs ou lors de participation des APNE dans les processus de décisions à l'aménagement du territoire).

Appendix 8. List of the participants at the Participatory Workshop

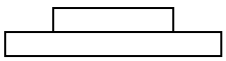
abbréviation	Nom	Prénom
ADDNE	GUENOT	Mr
association mieux vivre au vert à Maurs	MADELPUECH	Jean-François
Charente Nature	MARSAT	Gilles
CLAPE LR	Ribouleau	jean michel
FFCAM	BONTEMPS	Pierre
FFUTAN	LAIZE	
IDFE	MERLIN	Pierre
LNE	REMY	Guy
SEPNB	PIQUET-PELLORCE	Daniel
UMINATE	Geoffre	Michel
Membre directoire ADT	GARNIER	Christian
Membre directoire ADT	GUILLEMOT	Bernard
Membre directoire ADT	MAILLET	Marc
Membre directoire ADT	URBANO	Serge
Président FNE	GENEST	Sébastien
Directeur FNE	BOUSQUET	Pierre
réseau Forêt FNE	LEFEVRE	François
réseau Forêt FNE	Le Gallo	pierre Marie
réseau Forêt FNE	GRAVIER	Cécile
Pôle Nature FNE	AUBEL	Christophe
FNE	PY	Dominique
Pôle ADT FNE	DE L'EPREVIER	Agnès
Pôle ADT FNE	Chambou	Bérangère
Pôle ADT FNE	SERIN	Ludovic
Pôle ADT FNE	VIOLLETTE	Matthieu
pôle ADT (stagiaire)	VAILLANT	Marie
Thésard	CHEVALIER	Johan

RESULTS

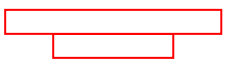
Appendix 9. Presentation of the results

Legend figures

Structure



Show how we represent the structure of the Organization: Figures 6, 7 and 8.
It is the drawing representation of the Organizations.



Representation of the « weight » in decision making process of each level within and in relation with the other Organizations. Figure 11.

200

Numbers of « individuals » or entities for each level.

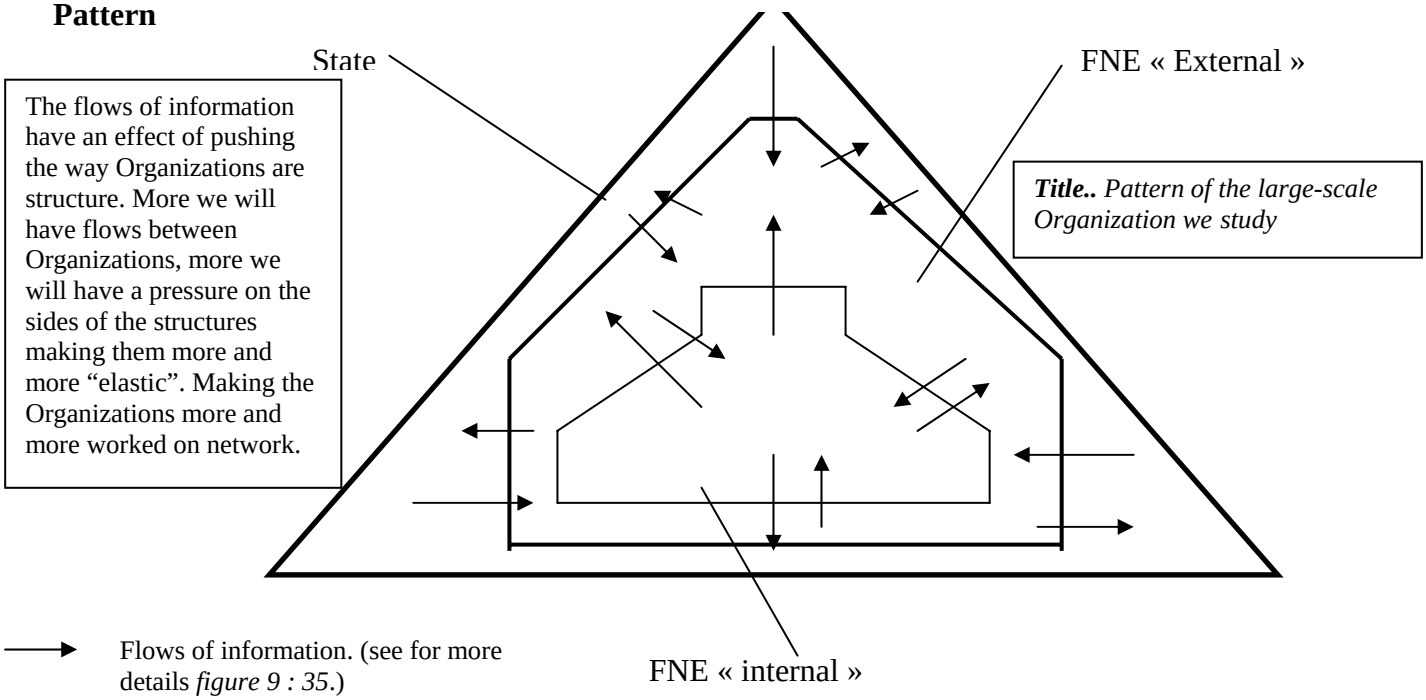
Process

Flows of information within each Organization. More he flow is important and of good quality, i.e. not altered information more the arrow is thick.

Flows of information between Organizations. More he flow is important and of good quality, i.e. not altered information more the arrow is thick.

Flows of information between Organizations or Flows of information within each Organization. These arrows represent flows which are going to be created. More the arrow is thick more it makes time it is on way to exist.

Pattern



Title.. *Pattern of the large-scale Organization we study*

Flows of information. (see for more details *figure 9 : 35*.)

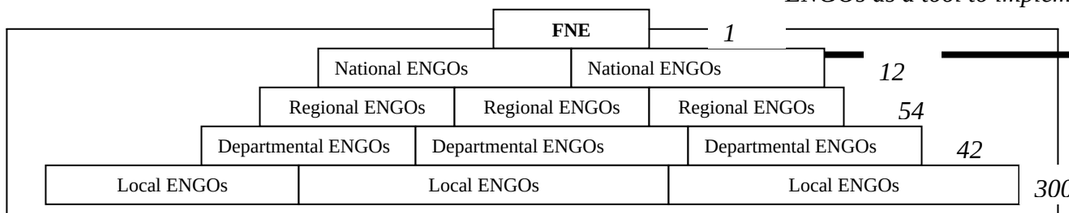


Figure 8. FNE "external" structure

Characteristics:

- Grids of local ENGOs
- Way of participation: each level participate to the corresponding level of the french administrative level within decision making procedures.

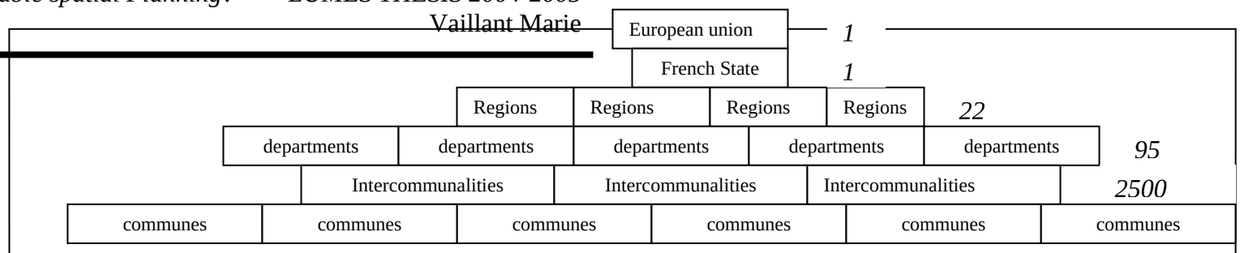


Figure 7. French administrative structure

Characteristics :

- Centralized state in a way of decentralization of power
- "Strong State"
- Ways of participation: each administrative levels is doing is own plans. They should be coherent to each other

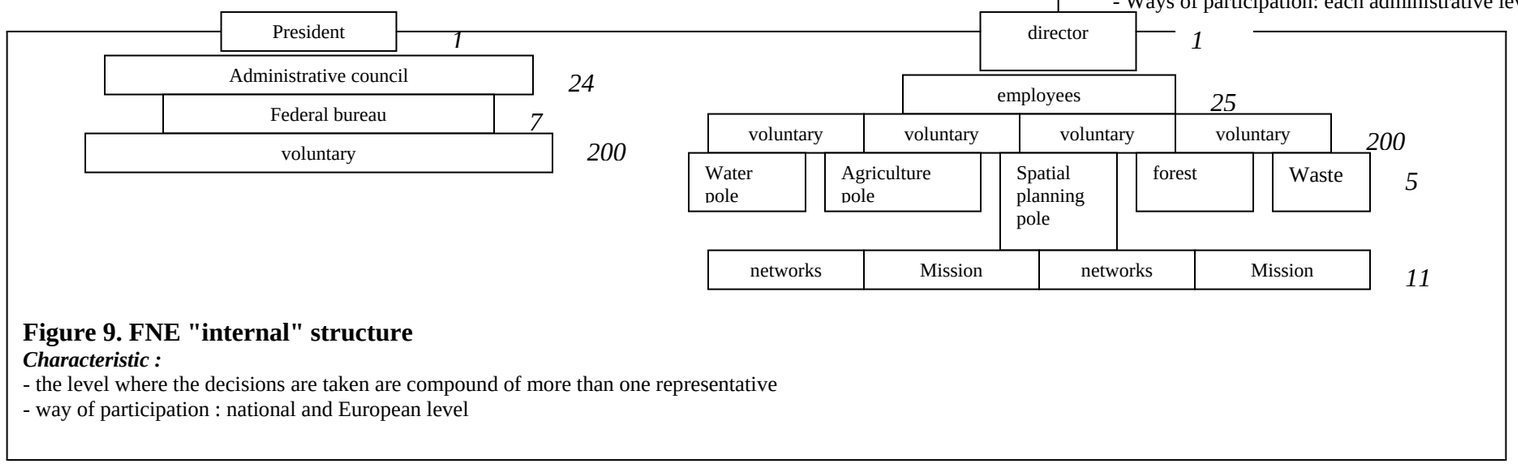


Figure 9. FNE "internal" structure

Characteristic :

- the level where the decisions are taken are compound of more than one representative
- way of participation : national and European level

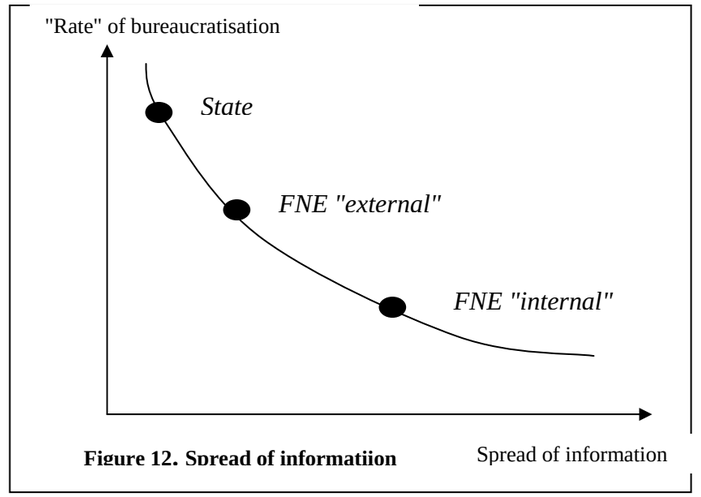


Figure 12. Spread of information

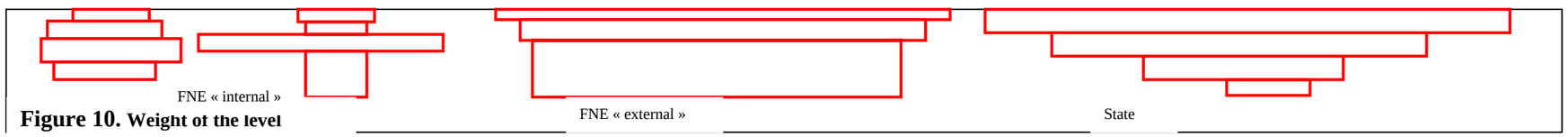
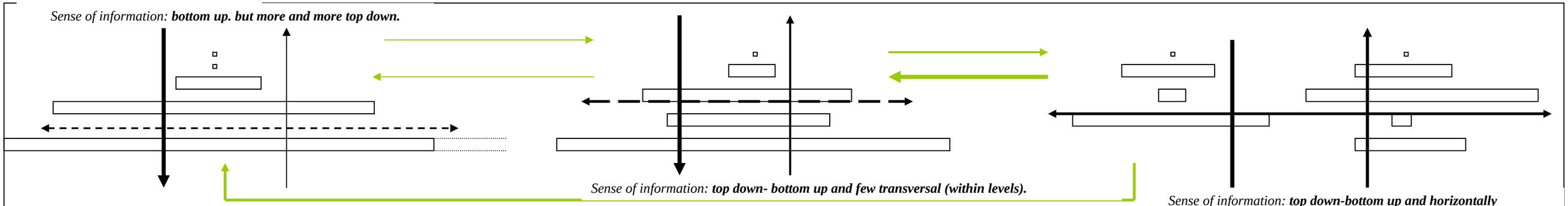


Figure 10. Weight of the level

Sense of information: ***bottom up. but more and more top down.***



Sense of information: ***top down- bottom up and few transversal (within levels).***

Sense of information: ***top down-bottom up and horizontally***

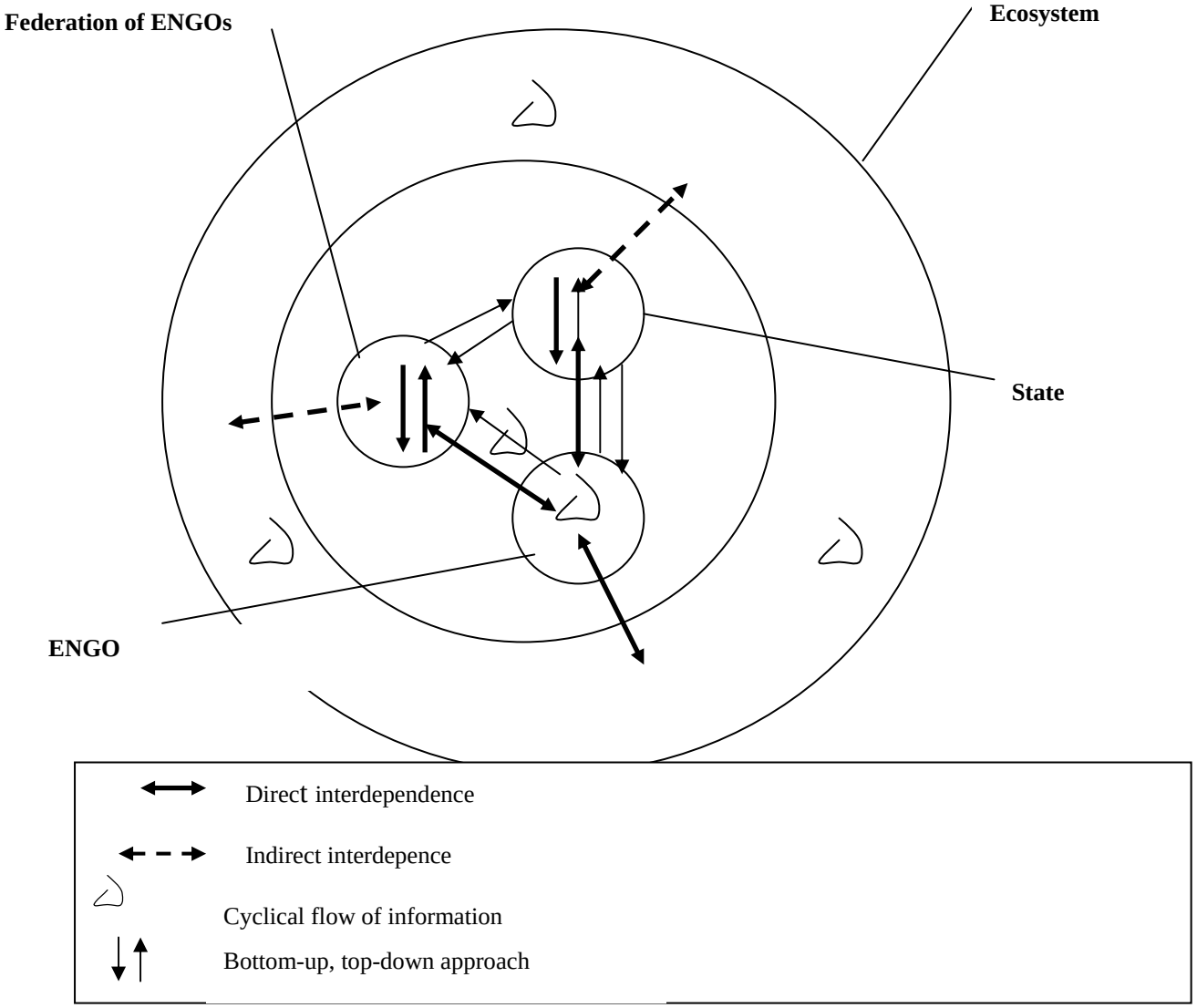
Figure 11. Sense of Information within Organizations and between Organizations

DISCUSSION

Appendix 10. Comparison of the different studied Organizations (Capra, 1996; based on the results of the case study)

	Structure	Process	Pattern
Ecosystem	Dissipative structure	cognition -Cyclical flux of matter and resources	Autopoietic network
State : Bureaucracy Organizations	Pyramidal structure	Linear circulation of information	linear
Federation of ENGOs	"Elastic" pyramidal structure	between linear and cyclical flow	Between linearity and network (linearity is dominant)
ENGO	Dissipative structure with remains of pyramidal structure	Cyclical flow of information	Between network and linearity (network is dominant)

Apendix 11. ENGOs as a factor of change



REFERENCES

ADELS, 1999. *Participation.. Territoires*, September-october 1999, Paris.

Allen, W.J *et al*, 1995. *Farmers and scientists working together to achieve more sustainable land management*. Conference paper presented at the 1995 North American Farming Systems Research-Extension Symposium: Linkages among Farming Systems and Communities. Ames, Iowa, 5-8 November.

Bifarello, Monica, 2002. *From delegation to participation, the third sector and the State in associative networks.* Fifth conference of the International Society for third-Sector Research;

Bouvier, Yves, 2000. Une histoire de la prospective, [a story of prospective]. Ed. CHRI, Seminaire sur la prospective.

Capra, Fritjof. , 1996. *The Web of Life.* Ed. Harper Collins;

Diniz et al, 2002. *Holographic structures creating Dynamic Governance for NGOs*. Available from. <http://www.jhu.edu/~istr/conferences/toronto/workingpapers/diniz.lisa.pdf>, September 2005

Kim, junki, 2003. *Accountability, Governance, and non-governmental Organizations: A Comparative Study of Twelve Asia-Pacific Nations.* Available from http://www.jhu.edu/~istr/conferences/toronto/workingpapers/kim.junki.pdf , September 2005

John, Peter, 2001. *Local Governance in Western Europe*. Ed. Sage politics texts;

Maier, Karel, 2000. *Citizen participation in planning: Climbing a ladder?*. Ed. European Planning study, vol.9, n°6, 2001.

Ministries of environment: Denmark, Finland, Iceland, Norway and Sweden, 2001. *Spatial planning as an instrument to implement sustainable development in the Nordic Countries, action programme, 2001-2004.* Ed.Ministry of Environment, Denmark.

Perlas, Nicanor, 2000. *La société civile: le 3ème pouvoir, changer la face de la mondialisation*, [Shaping Globalization. Civil Society, Cultural Power and Threefolding]. Ed. Yves Michel ;

Scieur, Philippe, 2005. *Sociologie des Organisations*, [Sociology of Organizations]. Ed. Armand Colin ;

Senge, Peter M., 1999. *The fifth disciplines, The art and practices of the Learning Organization*. Ed. Random House.

Schumacher, E.F., 1973. *Small is beautiful, a study of economics as if people mattered*. Ed. Vintage;

Ministries of environment: Denmark, Finland, Iceland, Norway and Sweden, 2001. *Spatial planning as an instrument to implement sustainable development in the Nordic Countries, action programme, 2001-2004.* Ed.Ministry of Environment, Denmark.

Internet

Chauvin, 2005 available from **<http://www.cpe.fr/lcoms/chauvin/>,** November 2005**.**

EPSON, 2005. What is spatial planning? Available from< http://www.espon.org.uk/whatisespon.htm,> august 2005;

Encyclopedia. *Observation as methodology*. Available from< http://www.britannica.com/ebi/article-208209,>, Student Encyclopedia articles, October 2005

Encyclopedia. *What is a Case study*? Available from <http://www.bookrags.com/other/sociology/case-studies-
ADELS, 1999. *Participation.. Territoires*, September-october 1999, Paris.
eos-01.html>, Student Encyclopedia articles, October 2005

FAO, 1993. *Guidelines for land-use planning*. FAO Development Series, n°1;

Heylighen F. *et al*, 2001. *Dissipative Structures*, available from <http://pespmc1.vub.ac.be/ASC/Dissip_struc.html>, July 2005;

Pumain D., May 24th 2004. Hierarchy. Hypergeo available from <http://hypergeo.free.fr/article.php3?id_article=71&var_recherche=hierarchie>, November 2005,

UNECE, 2005. Aarhus Convention: Access to information, public participation in decision making and access to justice in environmental matters. Available from <http://www.unece.org/env/pp/>, October 2005.

Serin et al, 2005. La prise en compte du développement durable dans les conseils de développement, analyse par le mouvement associatif de protection de la nature et de l'environnement. Rapport final. [Taking into account sustainable development in the development council, analysis by the ENGOs movement];

<www.granddictionnaire.com>

<www.fne.asso.fr>

Seminar

- **Sainteny, 2005**. The 10th Ecological Interview, ministry of Environmental, October 2005