

# Negotiating land and water use: participatory planning of resource management



September 2013

# Negotiating land and water use: participatory planning of resource management<sup>1</sup>



**Photo credit: Margherita Brunori**

**Jean Bonnal**

September 2013

---

<sup>1</sup> This document was originally written in French and published electronically as FAO. 2011. *Thematic Paper No. 10 of The State of the World's Land and Water Resources for Food and Agriculture (SOLAW)*. 25 pp. (Available at [http://www.fao.org/fileadmin/templates/solaw/files/thematic\\_reports/TR\\_10\\_web.pdf](http://www.fao.org/fileadmin/templates/solaw/files/thematic_reports/TR_10_web.pdf)).

*The views expressed in this paper are those of the authors and do not necessarily reflect the views of the Food and Agriculture Organization of the United Nations FAO.*

*The designations employed and the presentation in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or developmental status of any country, territory, city or area, or of its authorities, or concerning the delimitation of frontiers or boundaries.*

*The mention of specific companies or products, irrespective of whether these have been patented or not, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.*

## Table of Contents

<b>Introduction</b>	<b>3</b>
<b>1. Issues and challenges: Experienced Space vs Space as an object of study</b>	<b>4</b>
<b>2. Taking advantage of shared methodologies/appropriating shared methodologies</b>	<b>11</b>
<b>A. How should the integrated approach be managed?</b>	<b>11</b>
<b>B. How should the decentralized approach be managed?</b>	<b>12</b>
<b>C. How should the participative approach be managed?</b>	<b>14</b>
<b>D. How should the negotiated approach be applied?</b>	<b>17</b>
<b>Boxes:</b>	
<b>Zoom 1: Zoning criteria</b>	<b>5</b>
<b>Zoom 2: Payments for Environmental Services</b>	<b>7</b>
<b>Zoom 3: Diverse solutions for diverse regions</b>	<b>8</b>
<b>Zoom 4: Vulnerable Mountain Populations and resource access</b>	<b>9</b>
<b>Zoom 5: Three examples partnerships in favor of regional nature parks from France</b>	<b>10</b>
<b>Zoom 6: The requirements of integrated land planning</b>	<b>14</b>
<b>Zoom 7: Multi-level planning</b>	<b>16</b>
<b>Zoom 8: Local participation in planning: An example from Italy</b>	<b>18</b>
<b>Zoom 9: Negotiation and Payments for Environmental Services</b>	<b>20</b>
<b>References</b>	<b>22</b>

## **Introduction**

This chapter expands on the broad challenges and issues explored in previous sections by examining them from two interrelated angles. It looks at the relationship between rural producers and the land and water resources that they use, with a focus on the ways in which they manage, use, regenerate, and/or damage these resources and, at the same time, considers their knowledge and attitudes towards global problems that affect them locally.

Secondly, it examines how researchers, developers, planners, decision makers organize their approaches (material support, guidance, and/or scientific and technical directives) in response to the dynamic relationships between producers and resources. In particular, it looks at the ways in which external stakeholders balance their attempts to improve or modify rural producers' every-day experiences with the need to develop more comprehensive solutions to global challenges.

This analysis is based on two major observations: firstly, that land and resource users adapt their practices to limitations on natural resources. Secondly, that external stakeholders adapt their perspectives and approaches to these new behaviors, which raise new theoretical and practical questions and complicate attempts to identify, analyse and comprehend natural resource use. Methodologies developed with the goal of guaranteeing equitable and sustainable resources use are progressively being revised to address these new limitations and changing practices, in particular by promoting the use of participative land and resource planning and management.

Approaches that put people and their relationships with their environment first should allow local populations to define adequate, sustainable ways of using the water and land resources available to them. Progressive negotiation processes -that gradually address as many aspects of land and water resource management as possible- do just this. They take advantage of political and administrative decentralization, and encourage intermediary levels of government to link resource management at the local and national levels by balancing local expectations with broader concerns. They also use participative approach to fully involve all actors that are affected by resource exploitation and regeneration.

Land and water management are therefore best addressed using a participatory, negotiated rural development approach, because it uses a variety of different tools and perspectives to tackle the issues explored in this chapter. We would like to demonstrate the comparative advantage of using a territorial approach, which thanks to an integrated view of the environment, combines participative techniques with sustainable environmental management.

### **1. Issues and challenges: Experienced Space vs Space as an object of study**

Over time, efforts to fully comprehend the development potential of different territories and resources have improved the methods that are used to evaluate and manage natural resources. New techniques have made it possible to build up detailed inventories of existing resources, which result in more accurate research (from both a quantitative and a qualitative point of view). These inventories result in a higher appreciation for, and understanding of, the resources being identified. Moreover, they draw on the fields of geology, pedology, agronomy, climatology, etc. This reflects an increasingly open-minded, in-depth vision that evaluates comprehensively the complexity of the environments being studied. This said, it is important to note that the studies conducted within different disciplines have remained relatively separate. New methods and research have also made it possible to create more detailed descriptions of territories and local spaces and to significantly improve cartographic representations. Research is increasingly addressed exclusively to the scientific community becoming inaccessible to non-specialists. This said, it is also conducted with development concerns in mind, and sometimes uses inclusive methodologies. The need to communicate with decision makers, which requires that their work be both accessible and operational, has motivated researchers to adopt a more pedagogical approach.

Analytical criteria have therefore been refined over time, and new classifications of agro-ecological zones provide more information about them (while remaining focused on productive use). This information is beneficial insofar as it makes it easier to address local issues. While these documents are frequently overly optimistic and focused on productivity -they often give the impression that newly identified resources have unlimited potential- the evolutions discussed above (the multi-disciplinary nature of current research, and its efforts to target a wider public) represent a positive shift in technical practices. They have opened the door to future support for multi-disciplinarity and participation, which will influence new methodologies.

Both local populations and planners are affected by new limitations on natural resource use. While growing pressure on natural resources is not new, its impact is more deleterious than it has been in the past. Populations attempting to fulfill their needs, or further their interests, use land, water, pastures, and forest in different and sometimes conflicting ways. Conflict occurs when there is competition over material goods, economic advantages, and/or property. These conflicts are usually local, but they may involve regional and national stakeholders as well. They are characterized by assertions of power, threats, open disagreement, confrontational opinions, and sometimes by violence. They sometimes remain latent, creating tension between basic beliefs and preconceived notions and/or attitudes. While these differences of opinion do not always result in open conflict, it is important to recognize and understand their negative effects on resource management.

### ***Zoom 1: Zoning criteria***

*In recent decades, a series of events have made it clear that agricultural production is increasingly linked to the degradation and/or exhaustion of natural resources, to environmental pollution, and to the contamination of food stocks. We have witnessed an increase in droughts, crop pests, epidemics, and illness, not to mention nutritional deficiency and famine. These trends create serious doubts about our ability to safely, sufficiently and reliably feed the growing world population. During the United Nations' conference on the environment and sustainable development, held in Rio de Janeiro in 1992, measures in three of the FAO's areas of responsibility were adopted: sustainable agriculture and rural development, combating desertification and drought, and integrated planning and management of land resources.*

*The Rio conference and those that followed it (for example the conference on biodiversity and desertification) resulted in Agenda 21, which calls for more integrated planning and management of land resources. In particular, it highlights the importance of including local populations and other stakeholders in decisions about land management and use. In this context, land planning is primarily viewed as a tool that can be used to facilitate decision-making, rather than a technical evaluation procedure. From a conceptual point of view, this resembles the way that land-planning is defined in Bhutan: as a way of helping farmers and rural communities who depend on natural resource use to improve their quality of life, avoid conflict, and conserve resources for future generations.*

Source: FAO. 2002. *Land and Agriculture. From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002* Rome.

It is difficult to evaluate current or potential conflicts because of their complexity: their causes may be historical, cultural or even psychological. Recent conflict management techniques are well adapted to these situations. They approach conflict from three different angles:

- ✓ **People:** Their perception of the conflict, and their relationship to it; their feelings, emotions, and perception of the problems and people involved in it; their interpersonal relationships as well as their relationship with the natural resources that they depend on.
- ✓ **Process:** The ways in which decisions are made, and what different people think of them. In many cases, the decision-making process itself is a source of conflict, although it is rarely identified as such. It may make certain stakeholders feel powerless, or contribute to a sense of injustice.
- ✓ **Problems:** Specific issues, and the differences between the individuals, groups, and institutions that are involved. Problems can be caused by incompatible values, interests, and needs; or by more concrete differences in natural resource access, distribution, or use. It is frequently said that this variety of issue are the root or main cause of conflict, and those that are associated with the most intransigent feelings and opinions.

This approach may lead to new viewpoints, and methods, for dealing with difficulties related to natural resource use. It creates interdisciplinary diagnostics that borrow methods and concepts from the human sciences, the sociology of the actor, and behavioral analysis. It is a step in the right direction, though it remains highly complex from a methodological and technical standpoint. It also mobilizes current actor-centered methods that are more focused on understanding relationships between people than on resolving the purely technical aspects of natural resource management.

Another issue that affects everyone, but in particular natural resource users, is the consumption of natural resources. Over the last few decades, growing pressure on natural resources has gone hand in hand with lower regeneration rates. This means that natural resources are currently being over-exploited, and that our natural heritage is progressively deteriorating. Recent limitations on natural resource use have lead natural resource users and developers to change the way they see, classify, and use land and water resources that were previously viewed as unlimited. Scientists have had to adapt their work in agro-ecological areas to new external and internal constraints.

Natural resources users have adapted to increasing pressure on resources in a variety of different ways: by submitting to them, by adapting to them, or in some cases, by successfully putting an end to the environmental degradation. Our assessment of the negative (or in certain cases positive) dynamics at play in rural areas will influence the ways in which these areas are seen, and acted upon, and the ways in which rural populations manage risk. This is why it is necessary to review the limitations discussed above, not in a vacuum, but by viewing them in the context of local resource use.

Pressure on natural resources has traditionally been blamed on demographic growth and the resulting increase in demand for land and resources. While we acknowledge that the availability of the world's natural resources is out of step with current demographic trends, the problem is more complex than it seems, and it cannot be solved using a purely quantitative approach. For example, current analyses demonstrate that the deterioration and consumption of natural resources is largely linked to inadequate and/or harmful use and waste. This information provides a glimmer of hope: modifying resource use can reduce the pressures described above. Moreover, there is more and more international and national support for scientific research that aims to help rural people use resources more productively. While it remains challenging to adapt administrative methods to rural contexts, national policies and development projects are increasingly focused on making these measures operational on the ground.

Another reason why this issue is so complex, is because problems of use and availability vary widely from location to location and resource to resource. This point needs to be taken into consideration when attempting to adapt research and policy or project proposals to the natural conditions (and technical, socio-cultural, and economic capacities of local populations) of a particular place.



### ***Zoom 2: Payments for Environmental Services***

*Agriculture provides 24 different eco-systemic services, which are classified as either productive or environmental services. The preservation of biodiversity is a transversal service that falls into both of these categories. Unlike productive services, environmental services have not, traditionally, been compensated: they are generally considered to be public goods, and no one entity in particular is responsible for their management.*

*While some eco-systemic services and in particular productive services, have improved over the last 50 years, the vast majority of environmental services have deteriorated. This is one reason why environmental conservation has attracted more attention in recent years. It can contribute to:*

- a. Environmental protection and the maintenance of biodiversity and the natural heritage*
- b. Increased productivity*
- c. Limiting climate change.*

*Payments for environmental services (PES) are a new way of protecting natural resources (other than environmental legislation or taxes on pollution). They are publicly funded or supported by NGOs, international organizations, and/or other private entities. They may also be compensated through fiscal exemptions, usage rights (water rights, land usage rights, and/or the right to use timber resources), or training and extension programs.*

*There has been an impressive increase in spending on PES throughout the world: in 2008, carbon sequestration alone was worth 22 billion USD. Rural communities, and entities responsible for the management of watersheds and aquifers, received 5 billion USD; efforts to preserve biodiversity earned 3 billion USD in 2009 and agricultural certification programs related to local knowledge and territorial specificities are worth more than 42 billion USD worldwide.*

*Implementing PES requires financial resources (a public or private buyer). It also requires that the cost of these services be evaluated. They can be evaluated using a variety of different methods. It is necessary that they be implemented with reference to a legal framework (that defines, for example, what a polluter is), and that services to be compensated (as well as the ways in which they are measured, and monitored over time) be clearly defined. Finally, participating stakeholders must be given the resources and tools that they need to implement them efficiently. Organizing PES requires preparation, good quality information, and stakeholders who are able and willing to take an active role throughout the preparation and implementation process.*

To conduct a comprehensive, nuanced analysis of each situation: they can be used to evaluate the existence, and availability, of different resources in different places. It is possible to assess the natural diversity of each rural zone by evaluating the particular ways in which water and land are distributed there. This is important insofar as uneven distributions of water and land within ecosystems has a larger impact on their equilibrium than the overall amount of water and land that are available. It is therefore essential not only to examine the quantity and quality of natural resources in each place, but the ways in which they are distributed. This

realization will have a considerable impact on the ways in which territorial problems are perceived and dealt with.

Working at the local level reveals that resource distribution and access must both be taken into consideration.

***Zoom 3: Diverse solutions for diverse regions***

*Even the least densely populated regions are affected by pressure on land and water resources, environmental degradation, and climate change. We are increasingly aware of the need to more productively conserve and manage natural resources. We expect that in the future, there will be growing public support for sustainable resource management and environmental protection. It is possible to improve land management by promoting environmentally beneficial practices that have an immediate and tangible impact on the local environment. The international community has identified 4 main objectives concerning sustainable, productive natural resources use and slow climate change:*

- *Improve the sustainability of natural resource use.*
- *Recapitalize soil resources.*
- *Improve the management of water resources.*
- *Build public and private sector capacities to deal with climate change.*

*Water shortages and management issues are a feature of many agricultural production systems that are used in developing regions, in particular in arid and infertile areas of Latin America and in sub-Saharan regions that rely on agro-pastoral systems. In most of these areas, urbanization and industrialization is making competition over limited water resources even worse. Rainy areas could benefit from improved collection methods, and more effectively take advantage of soil humidity. Inefficient water use is frequently due to the general perception that water is a public good that is freely available to everyone. In areas that rely on irrigation systems, water pricing and energy policies are changing, and local irrigation and infrastructure management is becoming more prevalent. These two policy areas are fundamentally associated with the efficiency of water use.*

*Source: FAO/WB. 2001. Farming Systems and Poverty: Improving farmers' livelihoods in a changing world. Rome.*

The nature of these problems is affected by the type of agricultural producers and the agricultural and non agricultural resource users, that operate there (city, industrial sector, tourist sector...). There are considerable variations among regions with regard to natural resource use. In general, agriculture is correctly viewed as the largest consumer of land and water resources. While it is true that agriculture generally consumes the largest quantity of land and water, the agricultural profession also protects and maintains landscapes. Moreover, while resource access differs between sectors, it may also vary widely between individual users. Sociological factors make it easier for some rural families to access land and water than others.

***Zoom 4: Vulnerable Mountain Populations and Resource Access***

*At high altitudes, water is abundant. It originates from mountain streams and melted snow. Water harvesting is nevertheless an important issue for mountain populations, who must compete with demand coming from surrounding lowlands. Mountain water is frequently used for electricity and other industrial uses, for irrigation, and sold as bottled mineral water. Thus far, public policy has been incapable of resolving growing conflict over water usage rights, which pits mountain populations against populations living in surrounding areas.*

*Moreover, while mountainous areas rarely experience water shortages, mountain soil can rapidly become arid when there is insufficient rain. In many mountainous regions, farmers have developed sophisticated water management and irrigation techniques. When soil quality is intact, or can be efficiently improved, mountain agriculture is a viable option. In addition to furnishing the local food supply chain with high quality, protein rich products, livestock farming and aquaculture diversify income sources.*

*The beauty and biodiversity of many mountainous areas makes them good candidates for the development of eco and ethno tourism programs, which can provide additional employment. To work, these programs first require investment in infrastructure and educational programs that provide support for the tourist industry. In many mountainous areas, forestry could be developed. However, attempts to do so have met with resistance from local populations, who depend on the sale of firewood and timber, or use trees to clear pastures. If industrial forestry initiatives are to succeed, they must employ management practices that do not threaten local income and force people to use trees at an un sustainable rate.*

*Certain mountainous regions have recently witnessed spontaneous urban growth. Encouraging the growth of cities elsewhere is a way of creating employment. They can create an equilibrium between local resources and needs. If investments are made in transportation infrastructure and industries that maximize the value of local resources -by privileging local sales over exportation- urbanization will not threaten local ecosystems or economies.*

Source: FAO. 2002. *The State of Food Insecurity in the World, 4<sup>th</sup> Edition*. Rome.

These differences tend to compound sociological distinctions, hence creating a vicious cycle in which vulnerable families' limited access to land and water resources contributes to other forms of vulnerability such as poverty and food insecurity. These sociological distinctions also need to be viewed within the broader context of geopolitical conflicts between countries competing for shared resources (shared river basins, control over rangelands, forests, or potential irrigation resources, etc.).

To fully understand the sides of natural resource management, it is essential to take social dynamics into account. Actor-based approaches are an interesting way to do this because they provide information about the behavior of resource-users. However, these approaches must respect certain methodological guidelines. They begin by identifying different actors or groups of actors, and, after evaluating how they are positioned regarding resource management and use, examines their degree of involvement as well as the different strategies that they deploy. It is important to be able to communicate the difference between stakeholders that are directly involved, and stakeholders whose interests are only occasionally taken into account.

Examining these differences can offer new perspectives on resource availability and distribution.

***Zoom 5: Three examples of partnerships in favor of regional nature parks from France***

*Most regional nature parks try to reconcile economic development with environmental conservation. Doing so requires a joint decision-making and a shared platform that creates honest relationships and clear communication between a wide range of actors. Moreover, it requires that agricultural contracts be optional, farmers should be involved in an open, participative, and progressive process that does not force them into anything.*

*The high stubble fields of the Vosges mountains have been used as agricultural land for a long time. They are currently subject to two different pressures. Agriculture has intensified in certain areas, leading to a reduction in biodiversity. In other areas farmland is being abandoned and forests are spreading. Park authorities have recruited technical committees for defining a common land management policy (with input from other stakeholders). Research was conducted in collaboration with farmers, because the park is divided between two different regions, and falls under the aegis of multiple authorities, it was extremely important to involve everyone. Farmers agreed to sign contracts that require them to farm more sustainably, for example by reducing the size of their herds, avoiding the use of fertilizers and stopping burning activities.*

*The swamps on the Cherbourg peninsula (Swamps of Cotentin and Bessin) are internationally recognized for their ecological importance. Habitat destruction is nonetheless widespread in this area. Abandoned moist pastures have transformed into saturated peatland, the soil is becoming acidic, plant biodiversity is declining, and the area is less and less agriculturally viable. This has lead farmers to use large amounts of fertilizers to increase the productivity of remaining pasture-lands. A working-group made up of farmers, ecologists, hunters, fishers and local and national authorities was formed to address these issues, which lead to a series of studies and experiments testing alternative practices. This process compelled local farmers to sign contracts agreeing to employ more sustainable agricultural practices in an effort to preserve their area's unique landscape.*

Source: FAO. 2002. *Land and Agriculture. From UNCED, Rio de Janeiro 1992 to WSSD, Johannesburg 2002.* Rome.

Including a wide range of actors (and their wide diversity of interests and needs) in local ecosystem management makes the analysis of rural development richer and the resource management (including use and regeneration) more complex. Asking all stakeholders to take responsibility for local and global environmental damage is a new approach that offers new opportunities: actors with different interests, but similar strategies, may find that it is easy for them to work together to improve resource use, management and regeneration.

The challenges described in this document influence the ways in which development agents, professionals, scientists and technicians relate to the problems, and people, that they are attempting to respond to. Evolutions of this kind lead people to change the way they understand

rural development issues, as well as the tools and methods used to analyse and address them. However, until local populations and land and water resource users are viewed as stakeholders that actively influence, and are influenced by, these dynamics, we cannot truly say that radical change has occurred. An epistemological shift of this kind would not necessarily minimize the importance of “expertise” but would rather give experts more specific responsibilities, such as providing guidance and technical and scientific support during the diagnostic and planning process. Participative approaches to rural development do not view geographical space purely as an object of study, but as an experienced space. Moreover, they promote responsible development initiatives that fully involve local actors and their partners in natural resource management.

## **2. Taking advantage of shared methodologies/appropriating shared methodologies.**

Negotiated land and water planning uses a range of different approaches to progressively deepen the understanding of ecosystems: an integrated approach, a local approach, and a participative approach. While the complexity of negotiated planning makes it more difficult to implement, it provides new insight into rural areas and solutions to local populations to overcome new limitations on land and water use. We will demonstrate this looking at the dynamic relationship between the new challenges that experts are confronting, and the solutions that are emerging, which are leading to new methods that are easier for local populations and other non-academic stakeholders to understand and use. These methodologies do not work unless a certain number of conditions are fulfilled. These conditions may be technical, institutional, legal, or financial (for example, the condition that positive externalities be compensated). Furthermore, capacity building must prepare all stakeholders to fully participate in an integrated, decentralized, participative, and negotiated process.

### **A. How should the integrated approach be managed?**

Increasingly complex diagnostic and zoning criteria have influenced zoning and diagnostic methodologies. These criteria were created to respond to new environmental, economic, and social challenges and to compensate for project difficulties and/or failures. Research has improved thanks to technological, scientific, and IT advances. Regrettably, the complexity of new methods has created a growing gap between academic outputs and development policy, re-orienting research away from the needs and expectations of the populations that it is supposed to help.

The best way to overcome contradictions between science and development -understanding the variety of different dynamics, the connections between them and grasping the underlying logic of evolving rural systems- is systematically analyzing the overlapping historical dynamics that positively and negatively influence rural systems. Approaches of this kind were very popular during the 1980s: “Theoretically, systems can be defined as a series of interdependent elements or components that are constantly influencing each other. Agricultural systems are hence the result of a complex series of interactions between interdependent factors. Farmers are a central component of these systems; and a key figure within “Farming System Research”. Farming System Research should also explore small farmers’ productive activities and family-based decision making. Farmers and/or families have specific objectives, which they meet by making rational decisions (based on available information) about land quality and land distribution,

labor, capital, cultivation and livestock, and other activities. These decisions, and the practices associated with them, form a specific system”<sup>2</sup>.

Holistic analyses explore the ways in which systems interact, influence and are influenced by the other systems with which they overlap, or are a part of. This approach makes it possible for researchers and other stakeholders working on development-related questions to navigate a variety of overlapping geographic scales and systems without abandoning specific academic concerns. Local practices are at the heart of these considerations: systems-based research begins with farmers (by identifying the limitations that they face) and ends with them (by coming up with practical solutions to overcome limitations). From a methodological point of view, the greater advantage of this approach is to be close to the real life of local populations, since they are in a system perspective in their daily work. Production systems cannot be separated from systemic approaches: in addition to being viewed as an object of study within broader micro or macroeconomic contexts, they must now be associated with new scientific problem-solving approaches. This approach is well adapted to the study of agricultural issues in the developing world for the following reasons:

- Holistic approaches make it easier to understand farming systems (the coherence and logic of existing productive systems);
- Agricultural production is seen as a system (who are the actors in this system? What is its definition?);
- It is possible to analyse these systems and to make their inner workings and logical coherence comprehensible (by identifying practices and technical sequences);
- This research is therefore solidly interdisciplinary.

### **B. How should the decentralized approach be managed?**

Over time, generalized technical expertise focused on broad challenges has been rejected in favor of targeted local approaches focused on resolving urgent, immediate issues. New perspectives on the importance of local issues have required a change of scale, from the global level to a system composed of specific zones. These systems are organized according to two different criteria: on one hand they transform larger geographical entities into smaller sub-sections and on the other they classify these sub-sections according to common characteristics. A desire to work with local populations has also led planners to adapt zoning to their land uses. When exploring the interactions between different scales, the biggest challenge is balancing local and global concerns. A system that is too universal will be incomprehensible to local partners. A system that is too disjointed will obscure parallels between local, regional, and national phenomena. Well-balanced institutional decentralization gives the responsibility of aggregating local expectations and balancing them with national and international concerns to intermediary levels of government. This should be used as a point of reference when resolving zoning imbalances.

Promoting decentralization policies is one of most effective ways to support rural development. In its most basic form, decentralization is a power transfer from central to regional and/or local bodies. It is valuable because it makes national institutions more efficient and responsible by allowing local governments and civil society organizations to manage their own affairs. This observation has led many governments to adopt a decentralized approach.

---

<sup>2</sup> Norman, D. 1980. The farming system approach: relevancy for the small farmer. *Rural Development Papers MSU*, 29 p. 9. (Available at <http://archive.lib.msu.edu/DMC/African%20Working%20Papers/RDP/RDP5/RDP5.pdf>).

The growing strength of democratic movements has also made this approach appealing, because it allows new civil society organizations to participate more actively in decision making. In a decentralized system, local areas are no longer on the receiving end of development policies or projects decided at the national or international levels. They are a place where local actors actively contribute to development policy. New support for decentralization is reflected in a greater balance between centrism and decentralization. If one believes that effective public action is dependent on national unity and coherence, then centralization is the answer. On the other side, if one wishes to address a variety of local contexts, decentralization is the best option. Importantly, these two models may coexist within the same political system. This idea was the object of a wide reaching consensus during the 1980s and 1990s, according to which decentralization should seek to establish balanced collaboration between national, regional, and local decision-making arenas, rather than too heavily concentrating power in the hands of local (or central) bodies. This approach is fueled by the idea of a partnership between different levels.

Partnership can formally be defined as an agreement to work together. However, it has other important implications. Partnership also refers to a shared commitment to specific goals, or to a common project and to the complementary roles that different stakeholders play in order to reach them. When a group of people play a game, each individual participant takes on a different, indispensable role in pursuit of a shared objective. Similarly, horizontal, or territorial partnerships bring a variety of public and private territorial actors together in an agreement, which is usually represented by a legal entity representative of the group (an association, an agency, a cooperative, an irrigated perimeter, etc...). This agreement can be viewed as a partnership when every stakeholder recognized as important, is allowed to contribute equally to the conception and implementation of a shared territorial development project.

### ***Zoom 6: The requirements of integrated land planning***

*Integrated land planning is:*

- *An essential prerequisite of sustainable land planning, of which it views both production and conservation as fundamental parts. With the help of tools and incentives, it modifies land distribution and use in accordance with biophysical and socio-economic objectives. It provides appropriate management methods and facilitates land conservation;*
- *It is essentially a tool that facilitates decision-making by providing stakeholders with ways to sustainably manage land in accordance with their interests and needs. It is a participative approach that fully recognizes the rights of all stakeholders, including indigenous groups and women. In certain societies, tradition marginalizes these groups and excludes them from land management negotiations;*
- *It uses negotiation to resolve conflicts regarding land distribution and use and to help participants agree on shared objectives. It forms interactive partnerships between governments and local populations and encourages them to address their shared issues, and to sustainably manage land for the benefit of present and future generations, together.*

*The success of integrated land planning is based on seven key factors:*

- *Clearly defined objectives and/or problems that need to be resolved.*
- *A constructive political situation and legal environment.*
- *Efficient local, infra-national, and national institutions.*
- *Detailed information about local physical conditions, including information about possible alternative land uses, distribution plans, socio-economic conditions and legal frameworks.*
- *An accurate identification of stakeholders and their various (sometimes conflicting) objectives.*
- *A negotiating platform.*
- *An ensemble of planning procedures.*

Source: FAO. 2002. *The Future of Our Lands*. Rome.

### **C. How should the participative approach be managed?**

Involving natural resource users in land and water planning enriches methodology. This said, there is a large difference between superficially consulting them and encouraging them in playing an active role. There are different degrees of participation: consultation, dialogue, joint decision making and delegation. Moreover, if local populations are to fully understand and support the participation process, the different levels of involvement and the different methods that they employ must be adapted to the political, socio-economic, and cultural conditions of each place. The idea of participation has slowly emerged in a context characterized by large-scale rural development projects that privilege economic and technical concerns. Project planning has traditionally been conducted by teams of experts who use recognized technical solutions to reach solutions, to address problems that they themselves have identified and maximize the financial investments with which they have been provided. Although some highly specialized projects have attempted to grasp local contexts, they have not sought the



input of local populations, who only become aware of them upon implementation. Participation has gained popularity in part because it removes some of the obstacles encountered by the projects described above (which are bureaucratically onerous, costly, and which are not easily appropriated and absorbed by local populations or administrations). It has also been promoted by nongovernmental organizations, which are more flexible and closer to local populations. Over time, participative models provided by international institutions have been adapted to include local populations, to facilitate inclusive diagnostic processes and to provide adequate recognition to the important role played by local populations in finding solutions. In some rarer cases, participation has been used during project evaluation and reporting. Whatever the context, participation guarantees the commitment of all stakeholders and forces project administrators to take stock of the multi-dimensional nature of development issues and project planning.

Including populations in all stages of the development process will prevent “experts” from applying outside visions and technical choices concerning natural resource management without any prior consultation. Participation is first and foremost an exchange of information designed to help stakeholders understand, evaluate and make collective decisions about common issues. If it is to work, scientific and technical information must first be made accessible to local resource users. Moreover, before populations can assume a leading role in decision making, they must be provided with training that reinforces their organization and helps them to recognize themselves as members of a community of interests. This organization facilitates all the different procedures involved in an effective participative process: dialogue, decision-making, and arbitrage, and -in development projects focused on improving or restoring land and water resources- funding and project management. Indirect influences that nonetheless have large impact on actors’ strategies are revealed by the above discussed integrated analyses, which address dynamics that are not normally taken into account. Addressing constraints and taking advantage of possibilities pushes technicians and rural producers to explore different ways of managing improvements and makes projects more likely to succeed. We know that success is partially linked to the way that the diagnostic process is conducted (in particular in regards to the participation of local actors) and partially linked to said actors’ ability to continuously use improvements over time.

### ***Zoom 7: Multi-level planning***

*Land use planning occurs at the national, district, or local level. It does not necessarily take place in that sequence: rather different aspects of planning occur at different levels, depending on the roles, the responsibilities and the different planning methodologies of each. Regardless, it is extremely important that each administrative level develops a land use strategy consisting of a hierarchy of different policies and projects to achieve operational guidelines that will facilitate their implementation. The more these different levels interact, the more efficient the land planning will be. Information sharing between the different levels must be a two-way street. The more local the planning exercise is carried out, the greater the level of details needed, as well as direct involvement of the local population. At the national level, land planning is focused on national objectives and resource distribution. In many cases, these national objectives are highly complex. Political decisions, laws, and budgetary measures will influence a wide range of people and regions. This variety makes it impossible for decision-makers to fully comprehend all aspects of land management in different areas. Taking this into account, planners are required to provide decision-makers with a limited amount of relevant information on which base their decisions. When we use the word “district,” we are not exclusively referring to administrative districts, but to intermediary levels between the national and the local. This is where development projects become “integrated,” by taking account of a diversity of different situations and the extent to which they are compatible with development objectives. It is also at the intermediary level that the planning process begins to address conflicts of interest between the national and local levels, which may be associated with the following issues:*

- *The location of activities.*
- *Infrastructure improvements.*
- *Management directives that control how different kinds of land are used.*

*The “bottom up” level refers to planning that originates at the local level and actively involves the local community. Bottom up planning uses local knowledge and experience to identify development priorities, come up with development plans and apply them. Planning units at the local level can take a variety of forms. They may be a village, a group of villages, or a small watershed. It is easier to get local inputs and to adapt planning accordingly at this scale. When district-level planning begins, any modifications to land use and/or management will have to be executed locally. For this reason, it may be preferable for planning to begin at the local level, in order to allow local populations to actively influence land planning. Local planning is focused on the different ways in which different territory sectors should be used, on when different activities should begin, and who should be responsible for them. The following are examples of local land planning concerns:*

- *Irrigation, drainage, and soil conservation planning;*
- *Infrastructure location and/or conception: roads, agricultural points of sale; fertilizer distribution, veterinary services and/or milk markets;*
- *Locating specific crops on appropriate land.*

Technical support is frequently viewed as the best way to spread scientific and technical progress and transfer technologies. This is, to some extent, misguided. Knowledge sharing is not a one way street. Producers have agricultural knowledge that must be identified, evaluated, valorized and shared with a wide audience. Producers do not exclusively rely on technical information. It is extremely difficult to find solutions that address the technical, economic, commercial, social, and environmental aspects of natural resource use and management. Actors need access to information about the environment, the market, credit and consumer demand. Moreover, simply having access to this information will not guarantee that it is used correctly. Depending on the activity, actors must be able to identify limitations, test solution, and choose opportunities -either individually, or as a group when it is necessary- in a variety of different contexts and at a variety of different scales (farm, local community, sector, region, nation). Technicians should be responsible for facilitating interactions and encouraging synergy within a global information system that puts economic operators in contact with the development field and the research surrounding it. By providing local actors (both individually and as a group) with a greater capacity for initiative, this technical support will facilitate the application of technical solutions in the short term and make research more innovative over the long term.

#### **D. How should the negotiated approach be applied?**

The territory is an important entity because it includes a variety of different features that correspond to the zoning criteria. It provides a relevant forum for discussions and decision-making about development research and action because it can potentially involve a very large variety of natural resource users (if all stakeholders are truly allowed to participate, and no socio-cultural groups are excluded). However, it is important to note that this variety is also associated with differing points of view and/or interests, which may lead to conflict. Rural territories are not only natural environments with resources, but experienced spaces. Rural territorial management is at the center of our efforts to provide local initiatives with more autonomy, while at the same time linking them to broader issues like food security and climate change. It is not exclusively related to local governance; it is part of a broad, coherent vision that connects a variety of rural spaces through complementarity and cooperation. It is also important to remember that local areas are integrated into a variety of overlapping administrative, agro-ecological, historical, and socio-economic entities. In the middle of this variety of different spaces, scales and approaches, the territory is a privileged space that is particularly adapted to local and planning initiatives.

***Zoom 8: Local participation in planning: an example from Italy***

*Mountains cover two-thirds of Italy's surface area. In the 1990s, the Government approved a series of territorial pacts (national laws no.104, in 1995, and no. 662, in 1996) that made "social partnership" contracts an obligatory part of the planning process. These pacts are public and private contracts that require local development measures to promote an integrated approach to natural development management, industry, agriculture, fishing, public services, tourism, and infrastructure. While any area may benefit from a pact, marginal areas have priority. Today, territorial pacts affect 47 percent of the Italian population and cover 53 percent of the territory. They are particularly useful when it comes to issues related to watershed management, because they involve principal stakeholders in an integrated, inter-sectoral approach. These pacts promote dialogue between a wide variety of local actors without imposing outside conditions. Participation is voluntary and open to all sectors: administrative, business, research, financial, commercial, etc. The goal of these pacts is to make development initiatives (whether they are related to natural resource use, community development, or economic development) coherent. Each pact applies to specific activities, for example natural resource management, including water management; more than half of the pacts approved between 1995 and 2003 target these domains. Pacts may apply to a single watershed, or to the entire ridge of the Apennine mountain range.*

*The territorial pact in Rieti province applies to 12 municipalities, three mountain communities, and 35 signatories. It has resulted in the creation of 277 new fulltime positions and 18 million Euros of funding for capacity building activities aimed at small businesses and investments in infrastructure, tourism, and environmental services (including agriculture and forestry).*

*The territorial pact provides a framework for development actions and promotes economies of scale. However, it is greatly influenced by cultural and human factors. It is not a normative tool, but rather a governance process.*

Source: FAO. 2008. *The new generation of watershed management programmes and projects*. Rome.

Negotiated territorial development can be justified in many ways. It reduces power imbalances related to unequal access and control over resources, information, and capacities. It can stimulate and/or initiate long-term evolutions and guarantee their assimilation. Finally, it results in socially legitimate development agreements that allow all stakeholders to freely commit to every step of the development process. Development methodologies, tools, and activities must adapt to new challenges brought about by current national social and economic trends, which are part of a broader political context marked by globalization. If we want to promote a new vision concerning territorial challenges, and provide new development options to rural populations, we must make it absolutely clear that rural development depends on their involvement. The Participatory and Negotiated Territorial Development (PNTD) approach<sup>3</sup> provides concrete ways to improve trust amongst social actors, consolidate social cohesion, and promote socially legitimate territorial development that is accepted by all stakeholders. It supports participative decision making that progressively addresses a wide variety of territorial issues and encourages social dialogue and partnerships between territorial actors. It focuses on

<sup>3</sup> FAO. 2005. *PNTD*: [http://www.fao.org/sd/dim\\_pe2/docs/pe2\\_050402d1\\_en.pdf](http://www.fao.org/sd/dim_pe2/docs/pe2_050402d1_en.pdf)

situating agricultural technical assistance, income generating activities, and natural resource access within a broader, multi-sectoral rural development process. Negotiation is therefore a tool that can be used to encourage social dialogue, social cohesion, and conflict management and facilitate local, regional, national, and international development activities. While it is sometimes used during the zoning process, it is frequently used superficially (for example, after a zoning plan has already been prepared and the approval or agreement of local populations is needed). In the territorial development approach, negotiation is the central, driving force behind land and water planning.

When responsibilities are transferred to local entities, the expectation is that different actors will participate. Involving them in a participative process makes it easier to take each of their positions into account and to evaluate the expectations and demands of local populations. In this way, rural territories are transformed into forums for discussion and exchange that provide communities involved in group diagnostic analyses and activity planning with a reinforced feeling of territorial belonging. When conflicts of interest arise, negotiation can be used to manage and resolve disputes. Dialogue is a tool that can continuously be used to resolve territorial conflicts of interest. It must be conducted according to appropriate guidelines that have been accepted by everyone involved and validated by a credible and legitimate third party. Eight specific components of the three approaches suggested above (integrated, participative, and negotiated) can be used to classify territories into different territorial profiles. These can be more or less detailed depending on the situation, or on particular expectations:

- ✓ Physical resources, and the management of physical resources (in particular: natural resources, amenities or facilities, infrastructure, historic and/or architectural heritage).
- ✓ Human resources (the men and women who inhabit and/or use the territory, who are immigrating or emigrating there, demographic characteristics and social structure of the population).
- ✓ Activities (businesses, their sector, their position within this sector, their size, their degree of geographical concentration, etc.) and employment (structure, stability, status, etc.).
- ✓ Knowledge and skills (implicit and explicit, technological mastery, research and development capacities, etc.).
- ✓ Territorial culture and identity (common values, interests, mentalities, attitudes, forms of recognition and customs, etc.).
- ✓ The level of “governance” (local institutions and administrations, the political ‘rules of the game,’ collective actors, relationships between different actors, autonomy in managing everything related to development, including financial resources), and democracy (forms of consultation and participation).
- ✓ Images and perceptions of the territory (that of inhabitants, and that of outsiders), territorial communication.
- ✓ External relations (the degree to which the territory is integrated into different markets, contact with other territories, exchange networks, etc.).

***Zoom 9: Negotiation and Payments for Environmental Services***

*The PNTD approach is especially suitable for PES-Payments for Environmental Services negotiating and implementing. PES is a complex process that must take sociological, biological, regulatory, fiscal, and economic factors into account.*

*It is best to use PES systemically. Combining multiple environmental services may make payments larger (sound land management can favor Carbon sequestration through the soil and regulate water flow).*

*PES systems also require a decentralized approach, insofar as environmental services are linked to local environmental specificities and depend on stakeholders' organization, capacities, knowledge, and/or degree of food security and poverty. Their social organization and their land tenure system are both important factors to consider. The means of payment depends on local needs, to the demand of "buyers" and on the ways in which the project is monitored.*

*Finally, PES requires participation. If stakeholders agree on the content of a particular service, on the nature and schedule of payments, on the consequences of non-implementation (recourse, arbitrage), on the applicability of "force majeure", they guarantee the sustainability of the system and its duration beyond the launch stage.*

"Territorial Capital" is made up of these eight specific components. It is an ensemble of relevant material and immaterial, factors. These factors may be advantageous or limiting. Territorial capital is based on territorial "wealth" (people, activities, landscapes, different kinds of heritage, knowledge, etc.), not so much in the quantifiable sense, but insofar as certain aspects of the territory can deliver positive results if properly taken advantage of. From this point of view, the territory is a multi-faceted, living entity that evolves over time. Each territory is the product of the temporal interactions. Far from being condemned by the past, territories thrive by contemplating it. They must compare present-day realities with what happened before, or what is happening elsewhere, explore successes and failures and use collective analyses and willpower to prepare for the future.

Rural development cannot succeed without high-quality territorial "diagnostics." A diagnostic is not a simple snapshot. It evaluates territorial strengths and weaknesses and identifies ways to initiate or reinforce local development processes. It clarifies current and future territorial evolutions and problems, chooses which can be used and/or dealt with and identifies how to do so. The diagnostic phase provides local populations with an initial opportunity to get involved, using participative methods to develop alternative scenarios. Evaluations of territorial capital inform (and are informed by) rural development planning.

This step should be conducted according to the following guidelines:

- Openly share the results of the diagnostic phase, which reveal which innovations are necessary within the territory (this will prolong local mobilization and involvement).
- Use an integrated approach (which will make everything more coherent, facilitate the identification of priorities and create a hierarchy of objectives and actions). This approach also helps identify existing geographic, economic, social, or cultural imbalances and possible collaborations, clarifying connections between planned development actions and making it easier to

come up with solutions over time. The integrated approach is the common thread that unites this entire process.

- Choose “key themes” that correspond well with needed innovations and provide future vision. Key themes (or the key theme) provide(s) structure for projects. A strong “key theme” should catalyze initiatives that correspond to identified needs.
- Promote a collective vision concerning the future of the territory (this vision should be based on “key themes”). It should be utopian without being unrealistic: it must not ignore concrete realities. Different territorial actors and even institutions may adhere to both sides of this vision. This is why it is so important to encourage broad discussions between a wide variety of territorial actors.

## References

- FAO. 1993.** *Guidelines for Land-Use Planning*. Rome.
- FAO/WB. 2001.** *Farming Systems and Poverty: Improving farmers' livelihoods in a changing world*. Rome.
- FAO. 2002.** *Land and Agriculture. From UNCED, Rio de Janeiro 1992 to WSSD*, Johannesburg. Rome.
- FAO. 2002.** *The Future of Our Lands*. Rome.
- FAO. 2002.** *The State of Food Insecurity in the World, 4<sup>th</sup> Edition*. Rome.
- FAO. 2005.** *An approach to rural development: Participatory and Negotiated Territorial Development-PNTD*. (Available at [http://www.fao.org/sd/dim\\_pe2/docs/pe2\\_050402d1\\_en.pdf](http://www.fao.org/sd/dim_pe2/docs/pe2_050402d1_en.pdf) ).
- FAO 2007.** *The State of Food and Agriculture-SOFA*, Rome. (Available at <http://www.fao.org/docrep/010/a1200e/a1200e00.htm>).
- FAO. 2008.** *The new generation of watershed management programmes and projects*. Rome.
- Lipper, L., Sakuyama, T., Stringer, R., Zilberman, D., eds. 2009.** *Payment for environmental services in agricultural landscapes*, Rome and New York, FAO and Springer.
- Norman, D. 1980.** The farming system approach: relevancy for the small farmer. *Rural Development Papers MSU*, 29 p. 9. (Available at <http://archive.lib.msu.edu/DMC/African%20Working%20Papers/RDP/RDP5/RDP5.pdf>).
- Porrás I., Grieg-gran M., Neves N, 2009.** *All that glitters: A review of payments for watershed services in developing countries*, Intl Inst for Environment IIED, London.

## Web sites

- Ecosystems Marketplace.** (Available at <http://www.ecosystemmarketplace.com/>).
- Mitigation of Climate Change in Agriculture. Micca Programme.** (Available at <http://www.fao.org/climatechange/micca/en>).
- Mountain Forum Bulletin January 2010.**(Available at <http://www.infoandina.org/sites/default/files/recursos/mf-bulletin-2010-01.pdf>).
- Paying farmers for environmental services** (<http://www.fao.org/es/esa/pesal/index.html>).