

Working Paper IMRI  
2007/04

# RI-SOUTH



**UNDERSTANDING THE STRUCTURES AND DYNAMICS OF  
SOCIO-TECHNICAL REGIMES BETTER IN ORDER TO  
IMPROVE PUBLIC POLICIES SUPPORTING INNOVATION**

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November, 2007

In this paper, the author proposes to address the problem of development via the performance of innovation systems. He thus calls for a better understanding of the structures and dynamics of socio-technical regimes in order to improve public policies supporting innovation. These clarifications lead him to set the premises of an ambitious research program (RI-SOUTH).

## I – PLACING THE IMPROVEMENT OF INNOVATION SYSTEMS AT THE CENTRE OF DEVELOPMENT

Favouring the development of particular geographical areas or societies, whether they are classified as poor or not, requires appropriate support policies based on clear guidelines. Many approaches have been proposed by practitioners and researchers to establish these guidelines.

This multiplicity seems to be a factor of dilution and confusion, as the absence of dominant paradigms makes collective action difficult to achieve. But, paradoxically, it also seems to be a necessity, especially in view of the challenges involved in combating poverty. It has been recognized that the fight against poverty necessitates strategies of "clustered" change, with diversified approaches on several fronts, at various levels and on more than one scale (Sen, 1999; Bockel, 2003).

The following list of four key factors of development is an indication of the breadth of the challenge:

- *access to capital (Lucas, 1988; Romer, 1990)*
- *assurances/guarantees (risk management)*
- *innovation (Romer, 1986)*
- *access to the market.*

The impact of these factors on positive externalities and development trends are synthesized by Bockel (2003). Guellec and Ralle (1995) cited by Bockel insist on the interdependency of such development sources.

In this paper, our reflection takes innovation as the starting point, although its complex inter-relations with the other three dimensions are also taken into account.

We propose to address the problem of development via the performance of innovation systems. In Section II we define in detail what we mean by an innovation system (or a Socio-Technical Regime – STR) and by its performance, and in so doing draw up a sort of synthetic state of the art. But before we get there, consider these innovation systems as sets of interacting actors who formulate and strive to solve problems posed by a specific type of economic activity. These actors may be farmers or, more generally, the managers of small businesses, cooperatives, policy-makers, R&D departments in large firms, government extension officers, international or national researchers working on problems in the sector under consideration, consultants, and so on.

Intuitively, and almost "tautologically" one could say, we consider that an innovation system which functions well will solve its problems more effectively, and that this will make it possible to avoid the deterioration of the system or, better still, allow for its development. Behind this apparently obvious fact there are of course conceptual approximations (what do we mean by "deterioration" and by "development"?) and controversial elements, considered in Section II (is it enough for a system to solve the questions it formulates itself in order to develop? Do solutions to problems contribute towards the development of all the actors or only some?).

For the moment, consider as our central paradigm the synthesis of many studies undertaken in this field yet which still has to be tested in real life and which could justify an ambitious research-action programme: the fact that it is crucial to make the performance of innovation systems a key focus of development policies. "Problem-solving" is moreover a generic concept, easily articulated to the other three key factor of development: capital, risk management, and access to markets.

This performance needs to be sustainable; its improvement should not be a "flash in the pan". Therefore we need to consider the actions undertaken to improve the performance of an innovation system as operating at two levels concomitantly:

- aid for solving a problem or a set of problems, through precise projects,
- improvement of the structure of the IS and of the processes of its functioning, through comprehensive governance.

We note that development (or research for development) programmes relative to the first level often overlook the effect induced at the second level (which for them would be an artifact of the financed projects). Some studies nevertheless show that projects focused on a specific innovation objective can have a strong indirect impact on the structure and dynamics of an innovation system<sup>1</sup>. Conversely, efforts at the second level (Smith et al., 2005; Geels et Schot, 2007) seldom use actions at the first level as a lever.

The openness of a research programme towards the improvement of innovation systems (the terms of reference of which are proposed in Section III of this report) is, in our opinion, necessary because of: i) the current insufficiency of results obtained by research on IS, and ii) the fact that policies supporting innovation do not focus enough on the performance of innovation systems. Consider each of these two reasons briefly.

- (i) Despite substantial development of research and practical know-how in the field (see section II), one has to recognize, with the authors themselves, that the concepts, methods and tools are not yet stabilized. "Scholar existing approaches tend to be too descriptive and structural" (Smith et al., 2005). Efforts need to be maintained to establish a sound theoretical and practical corpus. "There is a need for more explicit and detailed conceptual tools" (Smith et al., 2005). In particular, we would emphasize:
  - process-centered approaches (innovation processes as solutions to problems within innovation systems; cognitive processes rather than the use of knowledge);
  - an interpretation in terms of the two levels cited above (projects and governance);
  - the will to define and measure the performances of IS,
  - the analysis of IS's reactions to crises,
  - IS performances evaluation methods
  - etc.
- (ii) While the existence of innovation systems is known, and the necessity to take their reality into account is recognized, the fact remains that public policies supporting innovation generally lose sight of their centrality. We consider that this

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<sup>1</sup> Mazure et Onzere (2006), for example, show in a study undertaken in Uganda that the adoption of innovations by farmers affected how they made decisions on subsequent adoption of innovations.

is the risk of policies focused on technology transfer or innovation (cf. IFAD, NARS, etc.). In these cases it is "the transfer" which is the focus, not "the performance of the IS". This poses two types of problem: first, policies centered on technology transfer tend to favour the "project" level, to the detriment of the "effect on the structure of the IS" level; and, second, the goal becomes the improvement of the transfer, whereas it is simply a means at the service of the IS. Focusing on improving the performance of the IS should make it possible to render policies supporting technology transfer more coherent and effective. Another example of a negative effect induced by disregard for the IS concerns relations between research and innovation. We think that in-depth reflection based on the centrality of IS would make it possible to define better the terms of reference of research programmes for development, at a time when we are witnessing a separation of research policies for South Countries Development on the one hand, from innovation support on the other.

« The policy challenge is to transform the socio technical regime into more sustainable configurations » (Berkhout, 2002). To allow for the emergence of a sound theoretical and practical corpus and to enable it to influence policy-makers' actions, we propose, based on existing results (Section II), a research programme deployed according to the draft terms of reference set out in Section III.

## II – STRUCTURE AND DYNAMICS OF SOCIO-TECHNICAL REGIMES

### 1. What is a Socio-Technical Regime (STR)?

To define a STR we use a mix of theories of what could be called the "Dutch School" (Twente and Wageningen Universities, Vrije Universiteit Amsterdam) and approaches proposed by the Centre for Management Science (CGS) at the Ecole des Mines de Paris.

We would describe STRs as "relatively stable configurations of institutions, techniques and artifacts, as well as rules, practices and networks that determine the 'normal' development and use of technologies" (Rip and Kemp, 1998). Regimes fulfill socially valued functions, which they also help to constitute (Geels, 2002 a and b).

An STR is a system comprising, *inter alia*, "actor-designers of technologies" and "users-rearrangers", as well as technology experts, scientists, policy-makers

The rules are relatively stable, and the object (the field) of an STR is generally defined. For instance, it may be the production of Roquefort (France) or of sugar cane in the Gharb (Morocco) or of cocoa in Côte d'Ivoire, but also the fight against Aids in Africa or a national "electricity-generating regime [...] dominated by rules and practices relating to centralized, large scale (usually thermal) power technology and high voltage alternating current grid infrastructures" (example given by Smith and al., 2005). The field is defined by a complex set of elements, some of which are physical (natural or artificial) and others social, economic, cultural and cognitive (Rip and Kemp, 1998).

In large and open systems, the genesis of these fields reveals more or less convergent individual and collective strategies to delimit the object of the STR and the boundary of the system. Thus, in an extreme form, we witness in the case of Appellations d'Origine Contrôlée (AOC) in France, the erection of strict standards and barriers to entry, materialized in particular by precise territorial attributes. From the origins of an STR, individual and collective strategies concerning the rules, objects and limits of the system exist. These enable a particular collective or certain types of actor to achieve dominant positions and/or a uniformity of characteristics pertaining to their functioning, so that a certain level of performance can be expected. The construction of an STR also serves to polarize research efforts in and outside the system itself, in forms that Aggeri and Hatchuel (2003) have described in a typology. Finally, an STR is structured by means of rules and explicit and legal boundaries, as well as by any other means for legitimizing it, in the sense of Laufer (1993).

Formed in this way, an STR is the locus of processes of explanation, prioritization and resolution of problems facing the collective in which it is embedded, but also of identification, construction and exploitation of opportunities<sup>2</sup>. It is a "rule-set or grammar embedded in a complex of engineering practices, production process technologies, product persons, ways of defining problems" (Hebinck, 2001).

Even though the innovation referred to by the researchers of the Dutch School is essentially technological, it is clearly part of a much larger system in which it interlinks with organizational innovations, governance innovations, etc. (Nelson et al., 2004). The Dutch authors (Van Der Ploeg et al., 2004) often mix, especially in what they call a "transition", the appearance of a new mode of functioning of the STR and the appearance of a new activity (a "niche" in the marketing sense of the term).

## 2. Some characteristics of the Socio-Technical Regime concept

### 2.1. A "socially embedded" innovation

In his book published in 2001, Paul Hebinck situates the emergence of the STR concept in relation to the various intellectual currents that have historically marked theories on technological innovation.

This highlights its radical difference from neo-classical approaches, which consider technology as neutral compared to culture, and as "self-generating" and universally applicable. Its approach also contrasts with those that see technological innovation as endogenous, but above all as dependent on the importance of factors of production (Hayami and Ruttan, 1985) and thus determined by predefined paths.

The innovation produced in STR is "embedded within wider social and economic systems" (Rip and Kemp, 1998); it is '*socially embedded*' (Hebinck and Van der Ploeg, 2001). It is also multi-actor (Long, 2001), fluid and dynamic, and often adopts unexpected whirlwind trajectories (an idea which is consistent with the comments of Spielman, 2005, cited by Berdegué, 2005).

<sup>2</sup> This particular definition is moreover consistent with the IFAD's definition of innovation: "development of improved and cost-effective ways to address problems and opportunities faced by rural poor" (IFAD, 2004).

## 22. *The drivers of change in STRs: selection pressure and actors' adaptation*

As Smith et al. (2005) point out, the dynamic balances within an STR can be modeled by means of two complementary phenomena. The first is selection pressure, which causes certain types of solution to types of "pressure" and certain types of problem to be ecologically selected, and actors to be selected in relation to other actors, depending on whether they innovate in a certain way. The second phenomenon is the adaptation of the actors who generally do not disappear without reacting, who adjust, and who even try to change the rules of the game.

## 23. *Innovation as the product of a dialectics between the conceptualization and the mobilization of knowledge*

The definition of innovation underlying that of STRs emphasizes problem-solving and exploitation of opportunities. Knowledge is of course necessary, but its articulation with the birth of ideas (or concepts) within processes of designing solutions is complex. The theories proposed by the CGS to account for design regimes ('CK theories'), stress this dynamic articulation between concepts and knowledge (the 'C' and the 'K'). Thus, the value of a particular knowledge is subordinate only to the nature of the concepts mobilized to solve design problems. Knowledge is relative, embedded in design action.

The classical innovation system concept (Clark, 1990, 1995, 2002; Edquist, 1997; Hall et al., 1998, 2001; Hall and Clark, 1995; OECD, 1997) is in certain respects very similar to that of STR. But it focuses primarily on knowledge: its acquisition, management, diffusion, etc. Berdegué (2005)<sup>3</sup> shows that apart from the diversity of the definitions proposed by scholars, "it is agreed that an important element in an innovation process is: putting knowledge into use". Even though the innovation system framework is an attempt to depart from that, it is still close to another framework, Agricultural Knowledge and Information Systems (AKIS), which emerged as a response to the challenges of the theory of adoption and diffusion of innovations. This theory was preoccupied with studying why and how people come to adopt or not to adopt new agricultural innovations and practices (Leeuwis 2004). The National Agricultural Research System (NARS) perspective was founded on the theory of transfer, adoption and diffusion of technologies (Assefa and al., 2006).

The particular and very relative role of knowledge management is a strong singularity of the STR concept, to which the CGS's design theories are articulated. It is consistent with Engel (1997, cited by Berdegué, 2005) when he notes that "it is cognition, the process of knowing, rather than knowledge *per se* that is truly important".

## 24. *Different scales of STR*

We have seen, with regard to the objects and boundaries of STR, that they are influenced by individual and collective strategies. It is important to add that these strategies also concern nested structures on different scales, for "regimes exist across different empirical scales" (Smith and al., 2005). Thus, in the example of energy systems cited above, "at the lower level of aggregation of individual power technologies, the electricity generating regime as a whole spans a variety of nested subordinate regimes, such as that based on the coal-fired

<sup>3</sup> Berdegué (2005) prefers the following definition: an *innovation system* is comprised of the agents involved in the innovation process, their actions and interactions, and the formal and informal rules that regulate this system (Ekboir and Parallada, 2002: 138).

steam turbine, the nuclear fuel cycle, large-scale hydroelectricity or gas-fired combined cycle turbine systems. At this level, even within the emerging niche for renewable generated electricity, we may identify an embryonic regime dominated by three-bladed, horizontal axis megawatt-scale wind turbines operating in grid-connected clusters and supported through public policy" (Gipe, 1995, cited by Smith and al., 2005).

In some cases it is in certain actors' interests to develop an STR coherence on a particular scale, for instance for marketing considerations. We have shown in the French context of traditional local products, that the actors of an STR define the limits of the area concerned in relation to the radius of the markets that they are targeting (Fort and Fort, 2006a). In this respect we have shown (Fort, 2000) that the area in which an actor is anchored can change. A firm situated in one place is always also situated within several increasingly large areas, like concentric circles (e.g. Corbières, in the Languedoc region, in the Mediterranean basin). It therefore has the choice of selling products associated with Corbières, with the Languedoc, or with the Mediterranean. It can for instance sell a Corbières product to a customer nearby, and at the same time sell it as a Mediterranean product to an American customer. In fact, the choice of the area with which the product is associated depends on the location of competition outside the STR, cooperative phenomena within the STR, the location of commercial targets, the products' reputation, and the perceived specialization of the area.

### *25. Niches, competing STRs, dominant STRs, landscapes*

Recent authors and especially the Dutch school emphasize the fact that rival STRs can exist, in the same area or in overlapping areas, concerning the same economic object. Hence, there are often dominant STRs (in the sense of Fort, 2000) and niches (Hebinck, 2001).

In general, a dominant STR is based on a "policy landscape" (Rip and Kemp, 1998), which structures a discourse that is both managerial and symbolic. It thus enables the actors authorized to pronounce it to maintain their dominant positions within the system (Fort, 2000).

The domination of a sector by an STR, the landscape and the related discourse has virtuous aspects (Fort and Fort, 2006), for it makes collective action possible. Yet it can hinder change in STRs, which will often take place in niches in a competitive context. Moreover, in some cases the dominant system may maintain what Berdegué (2005) calls "institutional failure by design". For the authors, there is an articulation and even a conceptual overlap between the creation of a niche as an emergent STR and a niche in the marketing sense (marketing variant, new product, etc.).

### *26. Actors participating in several STRs, marginal secants*

Within a community formed within a geographic area, and/or an economic entity such as an agricultural branch or a health network, a given actor (e.g. a farmer) generally participates in the life of several STRs.

These may be:

- within the same geographical area but with different economic objects;
- STRs with similar economic objects in different geographic areas (generally neighboring ones);
- within the same geographic area, STRs with the same economic objects, but in competition or at least "coopetition".

Desplobins (2001) cites an example of cooperative STRs in his study of viticulture in the Rio Grande in Brazil.

We think that the structures and dynamics of STRs can partially be explained through the observation of such cooperation between STRs, and in particular the role of marginal sectors.

The processes of problem-solving and opportunities exploitation within an STR can also be analyzed through the particular contributions of agents who serve as interfaces, in one of the three ways cited above, between the different STRs.

### 3. Performance of an STR

Very few studies have been carried out on the STR performance. Most of the studies related to Innovation Assessment focus on such outputs:

- knowledge production level and/or Research outputs,
- new technology production level (Zabala-Iturriagagoitia et al., 2007),
- new products and process production level.

These studies are

- micro (firm scale)
- macro (sometimes regional, often national scale)

They are often based on old understanding of an innovative process (Foray, 1998). That is on the measure of the knowledge produced by the system. Consequently, the main criteria used in such approaches are bibliometric and patent-based ones.

Scholars who tend to measure the new products and process production level propose other criteria. Deshpande et al. (1993), Avlonitis et al. (1994), Miller and Friesen (1982), Subramanian and Nilakanta (1996) and Prajogo and al. (2006) propose criteria that are, if we summarize, the number of innovations, the speed of innovation, the level of innovativeness (novelty or newness of the technological aspect), and being the 'first' in the market. According to them, product innovation is concerned with generating ideas or the creation of something entirely new that is reflected in changes in the end product or service offered by the organization, while process innovation represents changes in the way firms produce end-products or services through the diffusion or adoption of an innovation developed elsewhere (Zhuang et al., 1999) or new practices developed internally. These two areas of innovation has been integrated by Gobeli and Brown (1994), Yamin et al. (1997).

At this initial stage of our research programme, according to our particular definition of the innovation as a problem solving and/or exploitation process, we are obliged to define by ourselves the performance of an STR in terms of four criteria:

- (i) overall intensity of innovation flows (number and success of the innovations produce by the STR to cope with the problems and opportunities);
- (ii) intensity (relative share of the segments in a value chain of an STR producing innovation)<sup>4</sup>;

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<sup>4</sup> May be compared to Carter (1994) criteria proposal

- (iii) pertinence (% of STR problems solved)
- (iv) sustainability (with, in particular, resistance to crises).

This definition of the STR performance

- insists on the innovation function of the STR, which has also a routinized use of technology role,
- only takes account of output criteria, with no mention to input criteria (resources invested in the STR to produce or dynamize the innovation process,
- is dramatically conceptual, and needs to be “challenged” by methodological issues.

## 4. Some questions on the improvement of the performance of an STR

### 4.1. *The limits of endogenous innovation*

#### *A weak overall performance*

An endogenous system (that is, hardly open to research, with weak interaction with other STRs, under pressure due to immediate problems, and/or directly oriented by market processes) generally has a weak performance.

In particular, Dosi (1988), emphasizing the effect of a "market" orientation and the importance of breakthrough innovations, noted that: "[M]arket processes are generally weak in directing the emergence and selection of radical technological discontinuities. When the process of innovation is highly exploratory, its direct responsiveness to economic signals is looser ... [and its] linkages with strictly scientific knowledge greater ... [I]nstitutional factors play a direct role, providing the necessary conditions for new scientific developments and performing as ex ante selectors of the explored technological paradigms from within a much wider set of potential ones".

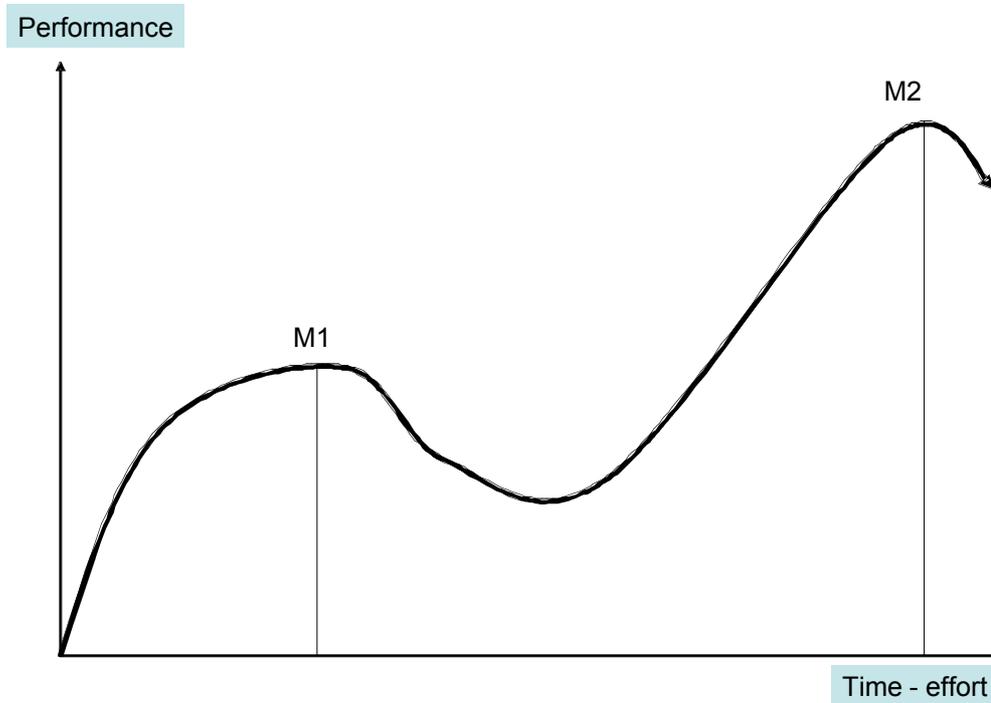
#### *The danger of a vicious circle*

Berdegú (2005) summarizes this point as follows: "the innovations of the poor are often driven by 'push' factors, that is, by responses to negative incentives such as depleted soil fertility, difficulty or inability to out-compete agricultural imports (often subsidized), HIV/AIDS, drought, overpopulation in relation to the natural resources, or lack of political power. In these cases, the objective is often not so much to establish how to enhance and expand the capabilities and opportunities of the rural poor, but rather how to ensure that they suffer the least damage."

Often these reactions concern a specific problem and do not lead to sustainable improvements. In fact they may even contribute towards a worsening of the situation relative to certain other problems.

#### *The "recruit simulé" effect*

This classical phenomenon, described in the following graph, corresponds to the fact of making an effort until a partial maximum (M1) is obtained, and then noting that any additional effort leads to a deterioration, since the relative maximum hides an absolute maximum (M2).



This graph shows the risks of incremental adjustments, which are often (but not always) dominant in endogenous situations.

#### *A rent sometimes captured by a single category of actors*

This question triggers controversy in many fields, especially economics and politics. At this stage it is probably in our interests not to consider every time that it is more efficient on the scale of an entire STR for each category of actor of that STR or each segment of a value chain to generate innovation. Certain types of innovation produced by certain actors can benefit all the actors of an STR. Conversely, certain innovations produced by certain actors can be "captured" by other actors to the detriment of innovators, or benefit the innovators to the detriment of other actors, or benefit the innovators without benefiting other actors, and so on. It may be in the interests of certain actors to maintain the status quo (no innovation in order to preserve their rents, or no change in the innovation regime which produces solutions and opportunities that benefit them, to the detriment of other actors). These particular situations generate political controversies and decisions (Woodhill, 2005, cited by Bergegué, 2005).

#### *42. Reactions to crises*

An STR's reaction to a crisis affecting its field of activity may differ considerably, depending on its structure. Research in France on the reactions of various local ovine STRs to the

appearance of scrapie clearly shows differences and the fact that they will impact on the STR's performance in terms of sustainability. This is especially so because not all STRs have the same ability to learn from their experience of a crisis, to critically examine themselves and improve their structure and their process.

#### *43. Policies to support an STR's innovation*

Based on our introduction and the discussion in this section, two fields of action can be defined, which:

- directly influence the structure of an STR;
- directly influencing the structure of an STR.
- indirectly influencing the structure of an STR via the management of a crisis or the effect of research and/or development projects.

To define the elements of a support policy, it seems relevant to undertake frontier research / action research in the spirit mentioned above, along the lines proposed in Section III.

#### *44. Policies to support innovation via multi-STR strategies*

These policies are very difficult to implement. They are often focused on the deployment of innovation transfer processes, as in the case of IFAD programmes. Without fundamentally challenging these approaches, we think that the fact of putting the functioning of STRs at the centre of reasoning can lead to the definition of innovative approaches.

For example, it could be interesting to test a concurrent approach to transfer, consisting in spotting as early as possible, in a given STR, a probably viable innovation that may prove to be important, and that we propose to call "an innovation with potential". This innovation, still in a gestation phase, is then characterized by an original mix of formulation of the problem, conceptualizations, mobilization of knowledge, strategies to complete the necessary knowledge, risk management, investments, market trials, etc.

During this early phase, those STRs likely to have the same problem and whose characteristics of functioning are similar to the "pilot STR" could also be identified. The idea would then be to involve them very early on in the co-construction of solutions, in interaction with the pilot STR.

These "concurrent transfer" approaches can prove to be less costly and faster than approaches oriented towards the "all co-constructed". Conversely, they may favor the take up of innovations, compared to approaches that rely on transfer ("replication and up-scaling of innovations" of IFAD processes, where only previously tested innovations are transferred). It would be interesting to compare these approaches in terms of the performance criteria of the innovation systems presented above, and in terms of the risk taken, since previously tested innovation transfer approaches are often presented, may be a bit rapidly, as the "safe innovation to minimize risk".

On the basis of these approaches, we suggest that, rather than trying to map knowledge and innovations available "on the shelf", or "success stories" or "best practices", we try to identify precisely the types of problem coupled with types of STR.



### III – SETTING UP ACTION – RESEARCH PROGRAMME

As a conclusion, we recommend to mobilize resources to undertake research-interventions of the frontier research type, with a view to:

- understanding and modeling the dynamics of STRs, obtaining a conceptual framework and a theory of action,
- revealing or improving the methods and tools available to STRs to improve their performance,
- ensuring that these models, methods and tools become shared by the actors, especially policy-makers,
- proposing improvements to the "multi-STR" innovation aid policies that enhance or complete transfer-based approaches.

In consistency with the previous considerations, we propose to prioritize as follow:

- *Objective 1 : Setting up an apparatus to observe changes in STRs*

This would consist in defining a panel of STRs (region x activity) based on an adequate sampling method. These STRs would be studied with local partners for a period of about six months, using an explicit and reproducible methodology. Finally, over a period of two and a half years of less intensive research the main factors of change (crises, new assisted projects, etc.) would be identified. That would end with a second study of STRs and a longitudinal comparison. The longitudinal study would continue each two years.

In this axis, we think necessary also to work on the STR performance evaluation methodologies.

- *Objective 2 : Creating an open-ended list of Problems and STRs, and organizing "concurrent transfers"*

This would consist in selecting some generic problems frequently confronting STRs, and in drawing up a (non-exhaustive) typology of the STRs concerned throughout the world. After an analysis, it would be proposed a concurrent transfer plan and a deployment process.

In this axis, it will be important to specify what the principles of an "adaptive project management" are. As Berdegué (2005) notes, "the routes, twists, surprises and outcomes of innovation cannot be predicted or mapped in advanced. Thus, one needs to be extremely careful in the use of tools such as logical frameworks and in performance monitoring systems, which can often reduce the flexibility and creativity that rural development projects require to be effective supporters of innovation processes. Innovation processes are supported best when projects are managed adaptively."

The principles of frontier research and research intervention mean that this particular type of work (concurrent innovation) can generate a set of new and fruitful approaches (e.g. early identification and protection of niches), of which a precise idea cannot be given today.

- *Objective 3 : Undertaking an ex ante / ex post evaluation of research and/or development projects in countries of the South, and drawing up Guidelines for project coordinators and evaluators*

This type of evaluation that would measure the real or potential, direct or indirect impact of a project on an STR requires a rapid analysis of the STR. The evaluation tool should therefore incorporate a simplified methodology of the structures and dynamics of STRs (a version of the methodology used in our “Objective 1” programme).

The work would consist in developing this tool, based on real cases (completed projects and projects under way and projects under preparation), with the cooperation of actors involved in the projects.

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