

## **PARTICIPATORY PLANNING OF SOCIAL AND SPATIAL ORGANIZATION IN AGRARIAN REFORM POLICY IN BRAZIL: AN ASSESSMENT OF THE IMPLEMENTATION CHALLENGES**

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### **Abstract**

The social endeavors for Agrarian Reform in Brazil have a history of at least sixty years. Throughout this time, distinct political regimes, increased land concentration, disordered urbanization and the development of a dynamic agribusiness sector inserted in global economy led to both the aggravation of social conflicts over land in Northern and Southern Brazil as well as new inquiries on the features necessary for an efficient Agrarian Reform Plan in our country.

As embodied in the second National Plan of Agrarian Reform (II PNRA), the current assessment admits that corrective measures should encompass not only land issues (regulations, expropriations and settlements), but also marketing infrastructure, social support and targeted technical assistance and credit. The II PNRA cooperates with the efforts to reconstruct the National Policy of Technical Assistance and Rural Extension (PNATER), reoriented to strengthen general family farming. A renovated National Program of Technical Assistance and Rural Extension in the Agrarian Reform and Family Farming (PRONATER) reflects this perspective and calls for a participatory governance system anchored in a complex institutional structure, connecting governmental and non-governmental organizations in multiple levels.

Focused on the agrarian reform projects in the Brazilian Amazon, this work discusses on the philosophical and methodological perspectives drawn in the II PNRA. Framing our account mostly along the theoretical scaffolding provided by the Bloomington School of Institutional Analysis, we analyze the multiple challenges facing the organization and the maintenance of the institutional structure designed to facilitate participatory planning and governance of collective resources in highly complex socio-ecological systems wherein socioeconomic asymmetries, cultural diversity and poor social capital and education promote political and ideological disputes that jeopardize safeguarding global commons.

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## 1. Introduction

As a direct intervention on the access to one of the most important factors of production – land – agrarian reform has always been a sensitive issue wherever the matter is raised. Due to its strong relations with sources of wealth and power, land expropriation and redistribution was ahead most revolutionary processes, as those in Russia, Mexico, China, Cuba, Vietnam, Nicaragua and Portugal.

In Brazil, the social endeavors for agrarian reform have a history of at least sixty years. By the fifties, the theme was adopted as a common language and focus, joining different forms of conflicts present in Brazilian rural areas (Medeiros, 2003). In the early sixties, agrarian reform became one of the main themes on the public debate concerning the definition of a national project of socioeconomic development.

Embedded in an international geopolitical environment marked by the Cold War and the dissemination of communist ideologies among rural areas, the revolutionary facet of the agrarian reform project in Brazil was aborted by the military breakdown that overthrew President João Goulart, in March 31, 1964. With a discourse that sought to harmonize ideas of social justice with agricultural productivity, the military regime subsumed the issue of the agrarian reform under the Land Act (Law 4.504) of November 30 of the same year.

Throughout the authoritarian period, which lasted 21 years (1964 – 1985), the Land Act was primarily an instrument of agricultural policy, designed to foster the advancement of capitalism in rural areas and the industrialization of the country. Increased land concentration and significant rural exodus led to the aggravation of social problems and conflicts over land in both Northern and Southern Brazil.

Pushed by growing social organization, the first National Plan of Agrarian Reform (I PNRA), predicted in the Land Act, was created about twenty-five years later, during the government of President José Sarney (1985-1990). Despite ambitious goals, the I PNRA progressed timidly along the decade, counting the governments of Fernando Collor (1990-1992) and Itamar Franco (1992-1995).

Throughout this period, major changes in the technical and economic basis of the Brazilian agriculture led to new concepts of the requirements for an effective agrarian reform in Brazil. The leading views about the issue in both Fernando Henrique Cardoso (1995-2003) and Luis Inácio Lula da Silva (2003-2011) administrations admitted that the PNRA should be renewed and extended beyond land distribution programs to encompass marketing infrastructure (roads, warehouses), social support (education and health in rural areas) and targeted technical assistance and credit.

This work discusses our views on the implementation challenges faced by the second National Plan of Agrarian Reform (II PNRA), launched in November, 2003. While we mention results from literature occupied in evaluating the agrarian reform

movement all around the country over time, our focus rests on our own recent experiences with limited reformed areas in the eastern Amazon.

The framework developed by the Bloomington School of Institutional Analysis, whose outline we present in the following section, provides us orientation. Next, we expand our view on the II PNRA as State Policy embedded in a polycentric political system (Polanyi, 1952; V. Ostrom, 1972) open to social control. Then, we address the substantive discussion on the challenges perceived in the implementation of participatory planning in agrarian reform projects, and how unsatisfactory results may jeopardize safeguarding natural resources that function as global commons. The final session concludes the work with a short reference to the role of values systems and moral choices of the individuals occupied in the social and spatial organization in the agrarian reform.

## **2. An outline on the IAD framework**

The conceptual scaffoldings supplied by the Institutional Analysis and Development (IAD) framework went through a series of transformations since the *Governing the Commons* (E. Ostrom, 1990). Figure 1 is one of the latest attempts to portray the structure of complex governance problems involving integrated social-ecological systems (SESs). It represents a response to the challenge presented to SES scholars, in search for a proper language “to map and explore the institutional, praxeological and normative complexity of polycentric systems of human governance” (Aligica; Boettke, 2009, p. 29).

The map starts from the prior recognition that many variables affect the patterns of interactions and outcomes in those systems. It was conceived to help SES scholars “to examine the nested attributes of a resource system and the resource units generated by that system that jointly affect the incentives of users within a set of rules crafted by local, distal, or nested governance systems to affect interactions and outcomes over time” (E. Ostrom, 2007).

Figure 1 shows only the most abstract level of analysis of a generic SESs. To investigate real problems in focal SESs, scholars are required to “unpack” each one of the compound units shown in the figure in as much tiers as necessary to reach the relevant data for the particular question under study. Table 1 presents a first list of second tier variables in each category. The variables marked with an asterisk (\*) are thought to affect self-organization (E. Ostrom, 2009).

Based on extensive empirical research, Ostrom and her associates on many fronts suggest that self-organization is facilitated when the resource is sufficiently small (RS3) to be monitored (GS8) and to generate reliable information (knowledge) about its general condition (U7) at reasonable costs. The likelihood of successful self-organization also depends on both the productivity of the system (RS5) and the predictability of its dynamics. The productivity of deteriorated systems should allow for feasible improvements at reasonable time schedule. These conditions are better

fulfilled when the system has clear boundaries (RS2) and the resource units are set within them (RU1). They also interact with the technology (U9) used both to harvest and recover the resource units.

The technology at the reach of users that are too distinct in their economic resources (U2) also affects the likelihood of successful self-organization. The ability to craft locally sustainable collective-choice rules is generally improved when economic asymmetries are limited and do not lead to large differences in the harvesting levels of diverse users (I1).

The economic value of the resource units (RU4) also interacts with user attributes to determine their dependence on resource (U8). According to E. Ostrom (1999), self-organization is more likely to occur when users depend on the resource for a major portion of their livelihood or other variables of importance to them. In agreement with Olson (1965) contribution, self-organization proved to be facilitated when the number of users (U1) is not too large and leadership is present (U5). In connection with property right systems and collective-choice rules, informal norms and social capital (Coleman, 1988; Putnam, 2000) also contribute to self-organization.

E. Ostrom (1999) suggests that successful governance systems addressing the core problem of how to restrict the appropriation from a common-pool resource (GS4) allocate benefits proportional to the required inputs (GS6) and are crafted to take local conditions into account. Since rule infringement (I4) is hardly ever eradicated,

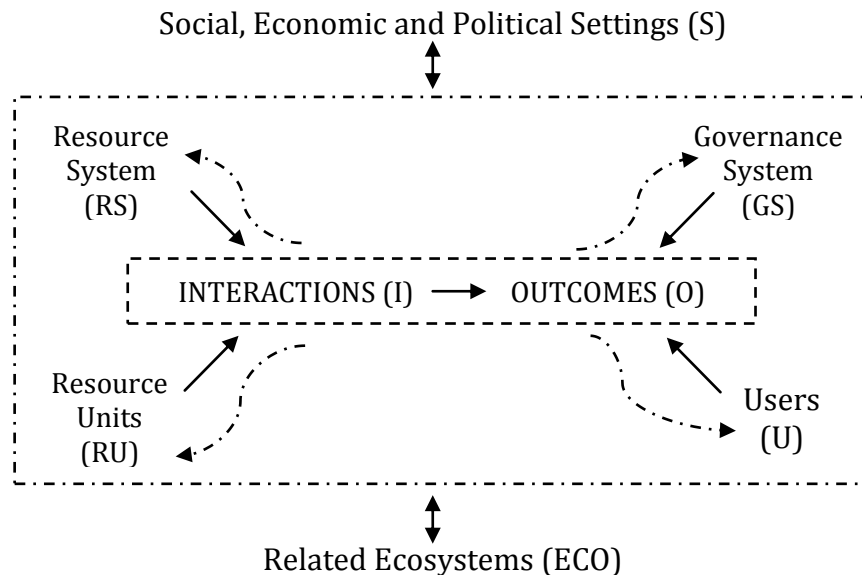


Figure 1: A multitier framework for analyzing interactions and outcomes in a linked social-ecological system (straight arrows refer to direct causal links; curved arrows refer to feedbacks)

Source: Adapted from Ostrom (2007).

sanctioning mechanisms (GS8) classified according to the seriousness and context of the offence seem to work better to reinforce the appropriation rule than disproportionate punishment.

When collective-choice rules are designed, participation emerges as a key principle underpinning the social capacity to sustain both the governance and the resource systems. E. Ostrom (1999) suggests that most individuals affected by the resource regime should participate in making and modifying their rules (I3, I7). Also, successful social agreements usually rely on monitors selected by the community of users, either individuals accountable to users or the users themselves.

Table 1: Second-tier variables in framework for analyzing an SES

<b>Social, Economic and Political Settings (S)</b>	
S1- Economic development. S2- Demographic trends. S3- Political stability. S4- Government settlement policies. S5- Market incentives. S6- Media organization.	
<b>Resource System (RS)</b>	<b>Governance System (GS)</b>
RS1- Sector (water, forests, pasture, fish) RS2- Clarity of system boundaries* RS3- Size of resource system* RS4- Human-constructed facilities RS5- Productivity of system* RS6- Equilibrium properties RS7- Predictability of system dynamics* RS8- Storage characteristics RS9- Location	GS1- Government organizations GS2- Non-government organizations GS3- Network structure GS4- Property-rights systems* GS5- Operational rules GS6- Collective-choice rules* GS7- Constitutional rules GS8- Monitoring & sanctioning processes*
<b>Resource Units (RU)</b>	<b>Users (U)</b>
RU1- Resource unit mobility* RU2- Growth or replacement rate* RU3- Interaction among resource units RU4- Economic value* RU5- Size RU6- Distinctive markings RU7- Spatial & temporal distribution	U1- Number of users* U2- Socioeconomic attributes of users U3- History of use U4- Location U5- Leadership/entrepreneurship* U6- Norms/social capital* U7- Knowledge of SES/mental models* U8- Dependence on resource* U9- Technology used*
<b>Interactions (I) → Outcomes (O)</b>	
I1- Harvesting levels of diverse users* I2- Information sharing among users I3- Deliberation processes I4- Conflicts among users* I5- Investment activities I6- Lobbying activities I7-Self-organization of U*	O1- Social performance measures (e.g., efficiency, equity, accountability) O2- Ecological performance measures* (e.g., overharvested, resilience, diversity) O3- Externalities to other SESs
<b>Related Ecosystems (ECO)</b>	
ECO1- Climate patterns. ECO2- Pollution patterns. ECO3- Flows into and out of focal SES.	

Source: Adapted from Ostrom (2007:15183)

Finally, since the authority of users to devise appropriation rules over economic resources of global interest is set by larger governance and political systems (S4), their rights to organize and formulate their own rules have to be minimally legitimated by official governmental agencies (GS1). The access to rapid, low-cost, local arenas to resolve conflict among users or between users and officials is likewise referred to as an important requirement for successful self-organization (E. Ostrom, 1999).

With this broad framework in sight, we can better approach, first, the complex institutional structure drawn in the II PNRA, and then the implementation challenges brought about by different sorts of structural limitations and conjunctures.

### **3. The II PNRA: a polycentric political system open to social control**

In November 2003, the second National Plan of Agrarian Reform (II PNRA) was launched as a comprehensive endeavour resting on an amplified conception of agrarian reform – which considers it as a State policy, open to social control and designed to foster the sustainable development of rural areas and overcome poverty and inequalities.

Hosted in the Ministry of Agrarian Development (MDA) and managed by the National Institute of Colonization and Agrarian Reform (INCRA), the implementation of the II PNRA requires strong institutional cooperation of various ministries and federal agencies, plus the committed involvement of state and local governments. Resting on a *territorial approach*, the Plan integrates different policies, plans and programs aimed at boosting the economy and the social and cultural life of the areas wherein land reform projects concentrate.

The achievement of the PNRA objectives depends largely on the efforts to reconstruct the Brazilian System of Technical Assistance and Rural Extension (SIBRATER), reoriented by the National Policy of Technical Assistance and Rural Extension (PNATER), to strengthen and empower family farming.

Based on an apt criticism of the model of technology transfer adopted in the seventies, the PNATER definitely calls for participatory planning of social and spatial organizations both in the agrarian reform settlements and the surrounding areas (as targeted territories).

### **4. Participatory planning in agrarian reform settlements in eastern Amazon: reflecting on our experience with the IAD framework**

In this section, we organize our reflections regarding a series of implementation hindrances experienced in our work with agrarian reform projects in the eastern Amazon.

#### 4.1 Social, economic and political settings (S)

Following the 2003 democratic elections, which brought Luis Inácio Lula da Silva to the Presidency for the first time, the political scenario was marked by popular fervor and unhampered expectations regarding historical social demands, such as the agrarian reform.

Tempered by the violent repressions happened in Corumbiara (RO), 1995, and Eldorado dos Carajás (PA), 1996, the social movements intensified occupations of target properties, believed to be potentially expropriated. The media coverage of these deeds broadcasted the issue nationally and overseas, pressing for action.

Also, based on data on economic and democratic trends, and the expectations associated to social programs of income distribution, the II PNRA document (MDA, 2004) predicted increasing demand for food and other agricultural products, and highlighted the positive impacts that the agrarian reform plan should have on food supply, employment, migrations and urban problems, inequalities and social exclusion in Brazilian society.

In many aspects, the socioeconomic and political settings outlined in the II PNRA remain applicable today. Yet, the new President, Dilma Rousseff, refuses to commit her administration with quantitative goals for agrarian reform. With a discourse that prioritizes the quality of existing settlements, the number of new families settled during the first year of her administration (22.021, according to data from INCRA) is the lowest in sixteen years (including the first years of both Cardoso's and Lula's administrations). These numbers have deeply dissatisfied the social movements, which are pressing the government.

Notwithstanding, Rousseff's focus on qualifying the existing settlements encounters support in the broad Brazilian society and is in line with the principles stated in the II PNRA. To achieve this goal, Rousseff carried out an administrative restructuring of the National Institute of Colonization and Agrarian Reform (INCRA), which included the change of its president<sup>4</sup>. Also, the nomination of the new Minister of the Agrarian Development Ministry (MDA), Gilberto Vargas, was welcomed by the social movements.

On the other hand, a recent decree announcing the curtailment of R\$ 36 billion in the Union budget for 2012 compromised the MDA/INCRA ability to implement the necessary measures, tumbling directly their capacity to finance rural extension services and education programs in agrarian reform.

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<sup>4</sup> INCRA current president is Celso Lisboa de Lacerda, who substituted Rolf Hackbart.

## **4.2 Resource systems (SR), resource units (U) and related ecosystems (ECO)**

As a countrywide plan, the II PNRA encompasses a variety of integrated social-ecological systems (SEs) with different degrees of complexity and histories of use, involving different sorts of resources. Even within the geographic area under the jurisdiction of INCRA regional superintendency in Belém (SR-01/PA), the diversity of situations concerning only the physical aspects of different agrarian reform settlements poses a significant challenge to INCRA staff in charge of evaluating the ability of technical assistance suppliers to provide appropriate services in different circumstances.

The formal processes for creating new agrarian reform projects require the clear demarcation of settlement boundaries and detailed inventories of existing physical resources (both natural and human-constructed facilities). This should facilitate the social organization demanded to carry out further planning activities. However, regarding the periurban settlements we have been working with, both the system productivity and the suitability of the area for organic agriculture, which is incentivized, are possibly impaired due to prior history of land use.

Located in a region considered of high biological importance and a priority for corrective measures (MMA, 2007), these settlements are marked by large changes in the primary forest cover and many social and environmental problems. The alternatives to cope with these limitations should emerge from detailed studies accomplished in partnership with the settlers, carried out by multidisciplinary teams, using participatory planning methodologies (CONAMA, 2006). Yet, the very application of participatory planning is hindered by limitations related to the governance systems and the attribute of users themselves.

## **4.3 Governance systems (GS)**

In Section 3, we suggested that the success of the II PNRA depends on the ability to make a complex polycentric governance system work. We shall now develop this idea by exploring selected relationships, linked more directly with our field work.

Besides the Ministry of Agrarian Development (MDA), where the II PNRA was elaborated, five other Ministries are mentioned in the document (MDA, 2004, p. 16) due to their important role in the support of the Plan: the Ministry of Social Development (MDS), Ministry of Environment (MMA), Ministry of Health (MS), Ministry of Education (MEC) and Ministry of Culture (MinC). Several Programs with both complementary and overlapping purposes are developed in these Ministries and are carried out by complex bureaucratic structures that further fragment authority and accountability.

The territorial development model adopted in the II PNRA, for example, is carried out by the MDS (Ministry of Social Development). The model encompasses five categories of territories, including one that targets areas of landless encampments and

agrarian reform pre-settlements. The target territories work as priority areas to where programs developed by different Ministries converge.

Family farmers located within the so-called Territories of Citizenship, including agrarian reform beneficiaries, are entitled to benefit from the Food Acquisition Program (PAA). The PAA allows local government services, such as popular restaurants and public schools, to acquire food from those farmers, free from bidding, at regional market prices. The PAA is implemented in five modalities in cooperation with the National Supply Company (Conab), state and local governments. It is coordinated by a Management Committee chaired by the MDS and composed by other five Ministries: Ministry of Agrarian Development (MDA), Ministry of Agriculture, Livestock and Supply (MAPA), Ministry of Planning, Budget and Management (Mpog), Ministry of Finance (MF) and Ministry of Education (MEC). Social control over the PAA is provided by the National Council of Food and Nutritional Security (Consea).

The PAA in the Territories of Citizenship relate to the National Policy of Technical Assistance and Rural Extension (PNATER), which focuses on family farming and defends an *agroecological transition* in the production technology. The provision of Technical Assistance and Rural Extension (ATER) services also relies on the cooperation of multiple actors with overlapping jurisdictions that often create duplication of services or functions. Under the guidelines established in the PNATER, the Brazilian ATER System (SIBRATER) aims to organize the ATER services in a decentralized fashion, covering a number of committees, councils and other representative entities, gathering government and non-government organizations in multiple levels.

The SIBRATER social management structure includes a National Committee of Technical Assistance and Rural Extension and a National Council for Sustainable Rural Development (CONDRAF). Besides, there are also the State Councils for Sustainable Rural Development (CEDRS) and their Boards of Technical Assistance and Rural Extension (Bords of ATER) and a number of so-called “social webs” of ATER, formed by government and non-government suppliers of ATER services.

Similarly, in order to cope with the environmental issues legitimately and comply with the principles and standards laid down in the Federal Constitution, the National System of Environment (SISAMA) brings environmental organizations and institutions of the Union, States and Municipalities together with civil society. At least eight collegiate bodies with overlapping compositions and tasks interact with the structure of the Ministry of Environment (MMA): a National Chamber of Environmental Compensation (CFCA), two National Councils (CONAMA – National Council of Environment, and the CNRH – National Council of Water Resources), a special Council for Genetic Resources Management (CGEN), three National Commissions (CONABIO – Biodiversity, CONAFOR – Rain Forest, and CONACER – Savannah), and a special Commission for the Management of Public Forests (CGFLOP).

The National Council of Environment (CONAMA) issued a resolution (RN 387/2006) defining the requirements for environmental licensing in agrarian reform projects. Among other studies to be produced in different phases and circumstances of the licensing process, the Settlement Development Plan (PDA) stands as a key instrument to devise the social and the spatial organization of the projects “in strict compliance with the diversity of cases” (CONAMA, 2006). The PDAs call for detailed information highlighting the particular physiographic, social, economic, cultural and environmental aspects of settlements. They must work as basic instrument to formulate technical projects and all activities to be planned and executed in settlement areas, and as reference in monitoring and sanctioning these actions.

In agreement with the guidelines established in the National Policy of ATER (PNATER), CONAMA Resolution 387 explicitly requires that the PDAs be accomplished by multidisciplinary teams together with the settled people, using participatory planning and action research methodologies (CONAMA, 2006).

Although soundly articulated and compelling, the apparently ordered relationships comprising the governance systems under the II PNRA face a series of practical obstacles that impact the interactions of the agents and their outcomes (see Figure 1).

A great hindrance facing the implementation of II PNRA is the patently disordered definition of property rights. While the legal framework allows for unambiguous designation of “who have rights to have rights on land” (Benatti, 2011, p. 203), serious flaws in the Brazilian real estate registration contribute to what can be qualified as true “property chaos”. Particularly in the Northern region, the situation reveals a “large discrepancy between the lands that are formally registered and what is actually on the ground” (Silva, 2011, p. 188). As an example of an extreme case, in the Municipality of Moju (PA), the total area registered in the notary offices is almost *twelve times* (!) bigger than the Municipality area itself (Treccani, 2012). In the State of Pará, the registered area is more than four times bigger than the total area of the state (ibid). Efforts for land title regularization, especially in the Amazon areas, face uncertainties even regarding the property rights of different public sectors. Federal, State and local governments dispute the property right on supposedly inhabited land, which is, in fact, irregularly occupied.

The described “land chaos” complicates the obtainment of land for agrarian reform settlements. Yet, when the land is obtained via expropriation, typically, the property is occupied for a long time by landless people led by social movements, particularly the MST (Landless Worker Movement). In one that we dealt with, people dwelled in the area for five years, before the formal creation of the settlement project. When the settlement was formally established, in November 2009, the people there had already implemented their own social and spatial organization in absentia of any planning. In addition to the problems relating to the definition of legal reservation areas, this sort of spatial organization also produced resource asymmetries, since some people

occupied areas previously cultivated with economic species – especially Paricá (*Phyllachora schizolobiicola*) and Guinea's Palma (*Elaeis guineensis*) – while others settled in uncultivated or degraded areas.

Apart from these challenges, Caporal (2005) mentions four groups of problems hindering the apt implementation of the PNATER, with negative impacts on the participatory planning of the social and spatial organizations in agrarian reform projects. He considers that the public ATER service institutions are still unprepared to supply and evaluate the results from actions intended for promoting the agroecologic transition recommended in the Policy. He extends this criticism toward most non-government ATER suppliers, and suggests that the development of the said social web of ATER services is stalled due to the competition for limited public funds. The author blames, at least in part, the education system for this situation. He suggests that the professional formation in most rural universities is still tied to the “green revolution” technology transference model, resting on didactic methods that are adequate neither to the attitudinal nor to the cognitive requirements requested by the new PNATER.

The agrarian reform governance system is also hindered by lacking operational performance of the public entities responsible for the policy at different levels. These problems negatively affect credit authorization, provision of infrastructure, recruiting and funding the ATER services, monitoring and sanctioning the performance of the ATER suppliers. Operational failures are often linked to structural deficiencies, including insufficient human resources.

#### **4.4 Users (U) and interactions (I)**

The broadened conception of agrarian reform drawn in the II PNRA entails a similarly extended target public. Amounting to about 50 million people, according to the document (MDA, 2004), this public also includes small family farmers, people living in traditional rural and riverside communities, those affected by dams and other major infrastructure works, the non-indigenous inhabitants of indigenous areas, rural female workers and rural youth, and other segments of a population linked to agricultural activities living in rural counties.

To some extent, the existing modalities of land access contribute to reduce the heterogeneity of beneficiaries, especially in ethnic settlements (indigenous and afro-descendents). The said agroecological forms of land access favors symmetry in the level of user dependence on resource, technology and harvesting. Among the traditional forms of land access, land title regularization presumably favors knowledge of SES.

On the other hand, the dilemmas associated with the attributes and interactions of users are increasingly important for beneficiaries of expropriated land. As previously mentioned, land expropriation processes are typically forced by occupations of rural properties led by social movements. Socioeconomic and cultural heterogeneity of the

people living in camps and occupied areas increases as these movements recruit all kinds of people on the outskirts of cities to strengthen the pressure groups and draw public attention.

Considering the settlements we have been working with, which are located in the vicinities of the metropolitan area of Belém, social organization is troubled by unequal dependence on common resources and mutual aid. On one hand, this disproportion results from unplanned forms of spatial organization that occur even prior to the settlement formal constitution, as said before. On the other hand, the proximity of urban centers opens alternative income sources for those settlers less inclined to farming work. This situation greatly complicates the participatory planning, since conflicts among users or between users and officials from INCRA often end up in either threats or effective aggressions.

The political struggle to expropriate land owned by political figures and multinational companies also leads this class of settlers to disagreements as soon as their primary motive to work together is achieved. At this point, different social movements and organizations start disputing ascendancy upon split groups clustered around competing leaderships. In one of our focal settlements, nine associations with no overlapping members were instituted after the settlement was formalized, with 370 families. The occasion clearly reveals a dispute to control the distribution of the supporting funds. In cases like his, while the development of subgroups helps both information charging and deliberation processes (Ostrom, 2002), it may not reveal or favor the development of shared norms.

#### **4.5 Outcomes (O)**

The philosophical foundation and guidelines of both the II PNRA and the new PNATER call for profound changes in the conventional evaluation criteria used to measure the performance of the Policy.

Sparovek (2003) highlights the need to move beyond the usual information about number of settled families and total amount of the reformed area. The evaluation of *land reordering efficacy* should take into account the number of families actually living in the settlements, relatively to its total capacity, the numbers of abandoned and agglutinated parcels, plus the relations between the areas in Legal Reserve (RL), areas in Permanent Protection (APP), and areas that are not being used with the total area of the settlements (Sparovek, 2003).

To these indicators, the evaluation of the II PNRA performance should add a series of qualitative information. Sparovek's (ibid) estimation of the qualitative aspects of agrarian reform performance included three compound indicators. The first (living quality) characterizes the basic infrastructure (housing, electricity, roads, water supply), family access to health, education and transportation services in settlements, after government intervention. The second (social organization) refers to the relations between settlements and the external community (e.g. commercialization)

and the internal social organization (participation in associations and cooperatives, collective use of common areas). The third (operational efficiency) basically measures the liberation of predicted supporting funds and the provision of basic infrastructure.

The main instruments to enhance these qualitative dimensions are qualified ATER services and INCRA operational efficiency, including the monitoring and auditing of the contracted ATER service suppliers. New challenges emerge at this point given INCRA structural limitations to assess the effective quality of the participatory methods and the empowerment achieved through them in the field. Furthermore, the quality of INCRA (SR-01) monitoring activities is undermined by the weakness of the internal controls.

## 5. Conclusions

The Brazilian government official endorsement to action research and participatory planning as recommended methodologies to foster the sustainable development of rural territories has a profound philosophical significance, in terms of political superstructure (worldview). It stands as a paradigm shift when compared to the authoritarian planning-and-executing style that prevailed throughout the military period (1964 – 1985).

Concurrently, after the neoliberal policy that prevailed from 1990 to 2003, the II PNRA and the accompanying efforts to reconstruct the Brazilian System of Technical Assistance and Rural Extension (SIBRATER) reveal that the State resumed its leadership in socioeconomic development in a direction that counters the one guided by purely economic concerns and marked forces.

Rising above the conventional state *versus* market dichotomy, polycentric governance systems emerge as an adaptive rule order with potential for balancing the government exercise of command, while preventing it from becoming authoritarian and corrupt. In pursuing this performance – and central to the very existence of democratic societies – *participation* and *social control* become key elements. As Aligica and Boettke (2009) indicate, discussion on polycentricity is not only related to “legitimacy”, distribution of “power” and multiplicity of “decision centers,” entrenched in a general system of “rules,” but also a discussion about fundamental political values, leadership and formation of political coalitions.

However, the *authentic* participation required to engage in political activity to generate public-goods and sustain the polycentric order is difficult to achieve, since it hinges on *moral conscience*, rather than pure self-interest (Meyer, 2010). Consistent with regular classroom practice, observations produced both in the laboratory (Ostrom; Gardner; Walker, 1994; Meyer, 2010) and in recent experiences in the field suggest that no institutional engineering shall ever work as substitute for genuine interest and willingness to cooperate. Concepts of authority, justice and motivations framing the choices of the individuals and their expectations regarding

the behavior of others encompass cognitive structures and stage-like changing processes that cannot be altered by social reinforcement (Maslow, 1954; Graves, 1970; Kohlberg, 1981; Selman, 1980; Heiner, 1983; Habermas, 1990; Wilber, 2000).

Hence, an important aspect in the discussion of the principles that support polycentric orders is neglected if the role of cognition, value systems and moral choices is not properly considered. Failing that, the multiple deeds leading to the selection of political leaderships and the formation of political coalitions, wherein the entire governance system relies, are prone to degenerate in disgusting battles for power and undeserved prestige, relying on the offer of personal advantages. This sort of collapse of the principles of public interest that should guide the participatory planning of social and spatial organization in agrarian reform settlements jeopardizes not only the safeguarding of environmental resources that function as global commons but also the very spirit of democratic governance and social control drawn in the Brazilian II PNRA.

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