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PROPERTY RIGHTS, COLLECTIVE ACTION, AND POVERTY

The Role of Institutions for Poverty Reduction

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ABSTRACT

This paper presents a conceptual framework on how institutions of property rights and collective action can contribute to poverty reduction, including through external interventions and action by poor people themselves. The first part of the paper examines the initial conditions of poverty, highlighting the role of assets, risks and vulnerability, legal structures and power relations. The latter part investigates the decision-making dynamics of actors—both poor and non-poor—and how they can use the tangible and intangible resources they have to shape their livelihoods and the institutions that govern their lives. The paper concludes with a discussion of how attention to property rights and collective action can improve the understanding of outcomes in terms of changes in wellbeing.

Keywords: collective action, property rights, poverty reduction, conceptual framework, vulnerability, power, institutions, wellbeing

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Monica Di Gregorio,¹ Konrad Hagedorn, Michael Kirk, Benedikt Korf, Nancy McCarthy, Ruth Meinzen-Dick, and Brent Swallow

1. INTRODUCTION

The fact that growth alone is not sufficient to reduce poverty has been recognized since the mid 1960s in the development discourse. Benefits from economic growth have often bypassed specific groups, generally the poorer sections of society. In some cases, growth has been accompanied by increasing internal inequality and a widening gap between rich and poor. This evidence indicates that changes in social and economic processes are necessary to reduce poverty (Wolfensohn and Bourguignon, 2004) and that not only growth, but the attention to the distribution of benefits from growth is crucial to combat poverty.

Still, in the last decades reduction of poverty has been only modest in many areas of the world, and poverty has actually increased in a number of countries in Sub-Saharan Africa, Eastern Europe, and Central Asia. Although, overall, the proportion of the poor seems to have diminished, their absolute numbers continue to rise (World Bank, 2001; Hoddinott et al., 2003). The failure of both strict state control and unregulated market policies to reduce poverty brought a new focus on the role of governance institutions as well as on more micro-oriented targeted approaches. As growth and poverty reduction started to be considered complementary goals, approaches to poverty focused more directly on expanding participation of the poor in growth. Similarly, developmental aims of governments, NGOs, and donor organizations moved towards bringing voice and participation to the poor (Narayan and Petesh, 2002).

While most attention on institutional factors affecting poverty concentrated on state institutions and good governance approaches advocating transparency and accountability as well as public participation, in this paper we want to bring to the center stage the institutions of property rights and collective action and their role with respect to other institutional factors often neglected in poverty research: the importance of governance factors that do not only pertain to state institutions, but also include forms of self-governance, the underlying role of power and social relations, and ideological factors in constraining choices as well as in creating opportunities. The key role played by property rights, the scope for collective action in generating wealth and well-being, and how to enable the poor to benefit from these institutions are the common threads that are investigated in the rest of this paper with regard to different factors affecting poverty.

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Learning from institutional analysis of natural resource management

While the importance of institutions has not always been central to the poverty literature,² the past two decades have witnessed an increased understanding of the role of institutions of property rights and collective action in natural resource management (Ostrom et al., 2001; Baland and Platteau, 1996; Bromley, 1992). The insights gained on the role of formal and informal property rights and collective action institutions in improving natural resource management can help us understand their broader effects on wellbeing and can assist both research and policies for poverty reduction. An institutional approach to the study of poverty can shed light on the same issues of governance and power relations as well as on ideological factors that keep people in poverty.

Security of property rights provides not only an income stream today, but also incentives to invest in productive technologies and sustainable practices. The rural poor are usually those with weakest property rights, and security of rights over land, water, trees, livestock, fish, and genetic resources are fundamental mechanisms for reducing poverty. However, many government programs are implemented without an understanding of the complexity of property rights and have sometimes led to reduced tenure security for poor and marginalized groups, for example, by weakening customary rights or allowing elite capture of property. Better understanding of how the poor can protect and expand their access to and control over resources can make a powerful contribution to poverty reduction.

There is also growing recognition of the importance of social capital as an asset for poverty reduction (Moser, 1996). Social capital creates the capacity for collective action that allows even smallholders to work together to overcome limitations of wealth, farm size, and bargaining power. Collective action is also needed to adopt many technologies and natural resource management practices that operate at the landscape level (Meinzen-Dick et al., 2002). As with property rights, the poor and women are often at a disadvantage when it comes to collective action because of social exclusion, lack of time to participate in meetings and activities, lack of education and confidence to speak in meetings, and domination by local elites.

Research gaps

Demand for research on the links between poverty and the institutions governing property rights and collective action is widespread and growing (ActionAid, 2003; Braden, 2003; Datta and Hossain, 2003). A wide range of policymakers require relevant research findings that can inform policies on property rights and collective action to improve the livelihoods of the poor. This includes helping the poor gain a voice in debates on poverty (Narayan and Pritchett, 2000).

Despite the importance of property rights and collective action for poverty reduction, there is still a knowledge gap regarding the ways that the poor are affected by changes in the property rights regime. For example, de Soto (2000) has

² Where institutions can be defined as, "The rules of the game in a society or, more formally, the humanly devised constraints that shape human interaction."(North, 1990: 73)

made a strong case for formalization of property rights, based on experience in urban settings of Egypt, Haiti, Peru, and the Philippines. However this work has been challenged for not considering the political economy of property institutions and whether the findings from these urban case studies have broader applicability. The outcomes of other reforms aimed at providing titles to individuals and groups to improve tenure security and encourage investment and productivity have not achieved these goals (Home and Lim, 2004; Okoth-Ogendo, 2000).

Further research is required to directly address the question of how poverty shapes men's and women's incentives and abilities to engage in collective action (Thorp et al., 2003) and maintain claims to resources on the one hand, and how different property rights and collective action institutions affect the poor, women, and marginalized groups on the other hand. Distributional and equity consequences of alternative property rights systems and collective action interventions need to be evaluated. At the same time, it is critical to assess factors that condition the impact of these interventions, including the asset base of households and the community, the risks they face, the prevailing power relations, and social and legal structures.

Aims and outline of the paper

This paper presents a conceptual framework for examining how property rights and collective action can contribute to poverty reduction, including both external interventions and action by poor people themselves. We also try to provide some examples and refer to both empirical and theoretical literature, although a comprehensive review of the literature on such broad issues is outside the scope of the paper. We hope that this framework can provide a guide for future empirical research. For scholars and practitioners of natural resource management studies this framework can provide a way to increase their focus on poverty reduction outcomes. For those involved in poverty research it provides an introduction to the concepts of property rights and collective action and an institutional lens on the causes of poverty and the potential roles of institutions in reducing poverty.

In the next sections we present some definitions of the key concepts. We then turn to the examination of how property rights and collective action are related to poverty outcomes, building upon the Institutional Analysis and Development (IAD) framework. We begin with the more static contextual factors affecting poverty and then move to the more dynamic aspects focusing on the action arena. We conclude with a discussion of how this framework can improve our understanding of the outcomes in terms of changes in poverty status.

2. POVERTY

Concepts of poverty

Poverty is globally acknowledged as a serious debilitation of human welfare and potential. Despite this general agreement, definitions and measures of poverty vary widely. Monetary measures of poverty (one of the most used international indicator of poverty is US \$1/ capita)³ are subject to widespread critique for being too narrow. Thus, while the World Bank uses income measures overall, some of its publications made a compelling case for the need to consider poverty in broader terms (Narayan and Petesh, 2002; World Bank, 2001).⁴

The United Nations defines poverty as "a human condition characterized by the sustained or chronic deprivation of the resources, capabilities, choices, security and power necessary for the enjoyment of an adequate standard of living and other civil, cultural, economic, political and social rights," (United Nations, 2001) which refers to Sen's (1999: 85) definition of poverty as "capability deprivation."⁵ This broader focus on choice and freedoms brings to the fore social relations, constraints, and opportunities which can be affected by property rights and collective action institutions.

Research and policy orientation on poverty issues have undergone a shift in conceptualization of "the poor" from passive recipients of development efforts to those who can contribute to their own livelihood improvements if state institutions provided the conditions for them to do so (Chambers, 1996). The concept of poverty itself is characteristic of developmentalist approaches, which favor a Western conception of poverty.⁶ In this respect, the terms "poor" and "non-poor" can be perceived as externally imposed categories and do not reflect locally-perceived differences, as well as possibly being derogative. Subjective valuation of well-being can provide a different and more contextually-specific perspective on livelihood conditions.

Because poverty is embedded in a socio-economic system, it is always relative to a socially defined threshold. A person with a given level of income, food, shelter, or clothing may be considered poor in one society, but not in another. Therefore, the distinction between absolute and relative poverty can be important. While the concept of absolute poverty highlights universal thresholds (basic needs, for example) and allows for cross-country comparisons (Lok-Dessallien, 1998),

³ The dollar per day indicator is used by the United Nations Development Fund (UNDP) and World Bank to monitor progress toward the UN Millenium Development Goal (United Nations, 2000) of cutting by half the percentage of people living on less than US\$1 per day between the year 1990 and 2015.

⁴ Such as lack of material well being (food, housing), physical deprivation (health, education), social exclusion, little power and voice, and high vulnerability to social, economic and ecological shocks.

⁵ Capabilities are considered in relation to people's freedom "to lead the kind of lives they value and have reason to value" (Sen 1999: 18).

⁶ These have been criticized by post-developmentalists as possibly stigmatizing and referring to conditions that are alien to local realities (Rahnema with Bawtree, 1997).

relative poverty stresses conditions and consequences of inequality within societies and within units in society (Townsend, 1979; Sen, 1985). In addition, moderately poor and extremely poor are often distinguished, and those poor who do not have a fair chance to escape poverty are often termed chronic poor (Hulme and Shepherd, 2003). Another often cited distinction is between situational and generational poverty (Payne et al., 2001), the former being related to a specific event (often divorce, death, or illness), while the latter reflects poverty experienced for more than two generations, where welfare of offspring is mainly dependent on their parents' welfare.

Dimensions of poverty

Whatever the precise definition used,⁷ poor people share several key attributes, which are both a result and a cause of poverty:⁸

- inability to secure *basic needs* (shelter, food, health)
- lack of *income* (or control over assets that can provide income)
- *social exclusion* (from social networks or more formal organizations)
- *political exclusion* (inability to participate in the political process)
- *vulnerability* (to such things as natural disasters, socio-political instability, market/price risks)
- lack of *sustainability* (of resource base—livelihood strategies—and institutions)

All of these factors ultimately affect people's choice set and translate into *lack of opportunities* to improve one's own conditions.

The last two conditions, in particular, indicate that poverty is not a static condition, but rather must be examined as a dynamic process. Much research has investigated vulnerability, sustainability, chronic versus transient poverty, and poverty traps (Vosti and Reardon, 1997; Hulme and Shepherd, 2003; Barrett and Swallow, 2004). Such analyses often focus on the individual or household, without taking into account the role of complex social interactions in determining vulnerability. One aspect often neglected is the role of power relations between the poor and other actors in society. In many cases, overcoming poverty requires overcoming relationships that keep people poor.

3. DEFINING PROPERTY RIGHTS AND COLLECTIVE ACTION

Property rights as bundles of rights

Though there are many definitions of property rights, here we use the definition of property rights as "the capacity to call upon the collective to stand behind one's claim to a benefit stream" (Bromley, 1991:15). Thus, property rights involve a relationship between the right holder and other members of the group as well as an

⁷ See Baulch (1996) for a review of the different definitions of poverty.

⁸ See Alkire (2002) for a discussion of the human development dimensions in the literature.

institution that backs up the claim by placing a corresponding duty on others to uphold the right.

Rights do not necessarily imply sole authority to use and dispose of a resource (or full ownership). The claim to a benefit stream can refer to a number of different bundles of rights, which do not require complete control over a resource. Following the concept of property rights as developed under Roman law, these bundles of rights can be grouped as:

- the rights to use the asset (*usus*), including access and withdrawal;
- the right to appropriate the return from the asset (*usus fructus*), including earning income from it;
- the right to change its form, substance, and location (*abusus*), including decision-making rights such as management and exclusion.

To these can be added alienation—the right to transfer rights to others, either by inheritance, sale, or gift. Complete title is generally interpreted as holding all four sets of rights—*usus*, *usus fructus*, *abusus*, and alienation (Pejovich, 1990; Cooter and Ulen, 1997).

If we look at property rights in terms of bundles we realize that different individuals, families, groups, or even the state often hold overlapping use and decision-making rights over specific resources. It is important to keep in mind that assigning an exclusive right automatically implies that others cannot receive the same benefit stream. In this sense the initial distribution of rights counts in terms of who benefits and will benefit in the future. Both situations of enforcement problems and disputed rights show that property rights systems affect resource distribution and, as such, any perceived intervention geared toward changing the property rights system becomes a highly politically charged issue. This partly explains why, for example, land reform programs are prone to stir reactions from civil society and polarize factions.

Supporting institutions

To be effective, property rights need recognition and legitimacy. This, in turn, implies the need for governance structures that enforce rights and the corresponding duties of others to respect those rights. The functions of these governance structures include supervision, sanctioning in case of non-compliance, and provision of forums for resolving disputes over property rights. The institutions that provide legitimacy can be diverse and are based on some, more or less formal, form of collective action. Rights can be backed by state law, with police and courts at different levels to enforce and sanction. However, customary laws can also provide legitimacy to property rights claims, which may be enforced by village chiefs and local observances through social exclusion. Religious laws or other normative principles may also provide a basis for claiming rights; how effective these claims backed by different legal systems are depends on the extent to which others recognize those rights,⁹ either because of a sense of internalized legitimacy or external enforcement.

⁹ On legal pluralism see Griffiths, 1986.

Collective action

Collective action can be understood as an action taken by a group of individuals to achieve common interests (Marshall, 1998). Collective action can be voluntary or obligatory for specific persons, such as in water users associations where all land owners in an irrigation scheme are obliged to join an association for collective action.¹⁰ Members can act directly on their own or through an organization.

Collective action is often considered narrowly in terms of activities undertaken through formal organizations, but many formal organizations exist on paper only and do not foster any real collective action, whereas much collective action occurs informally through social networks or even through people coming together temporarily for specific short-term purposes (Bruns, 1992; Badstue et al., 2002). Thus, as with property rights, it is essential to look at both formal and informal institutions that govern collective action. The exact role of these governance structures depends on the nature of the collective action or good(s) involved, but, in general, they play a key role in coordinating the actions and contributions of members. Collective action as any form of cooperation is costly. Where benefits from collective activities (such as planting of vegetation along riverbanks to reduce runoff and erosion) cannot be withheld from people that do not participate in the collective effort, free riding can break down cooperative effort: some people will be tempted not to help with the planting, but will nonetheless enjoy the benefits from others people's work. Collective rules can help reduce the likelihood of free riding. These can include rules of use, monitoring, and sanctioning, which all reduce the incentives to free ride as well as provide assurance to other members that their peers will also be contributing (McCarthy, 2004).

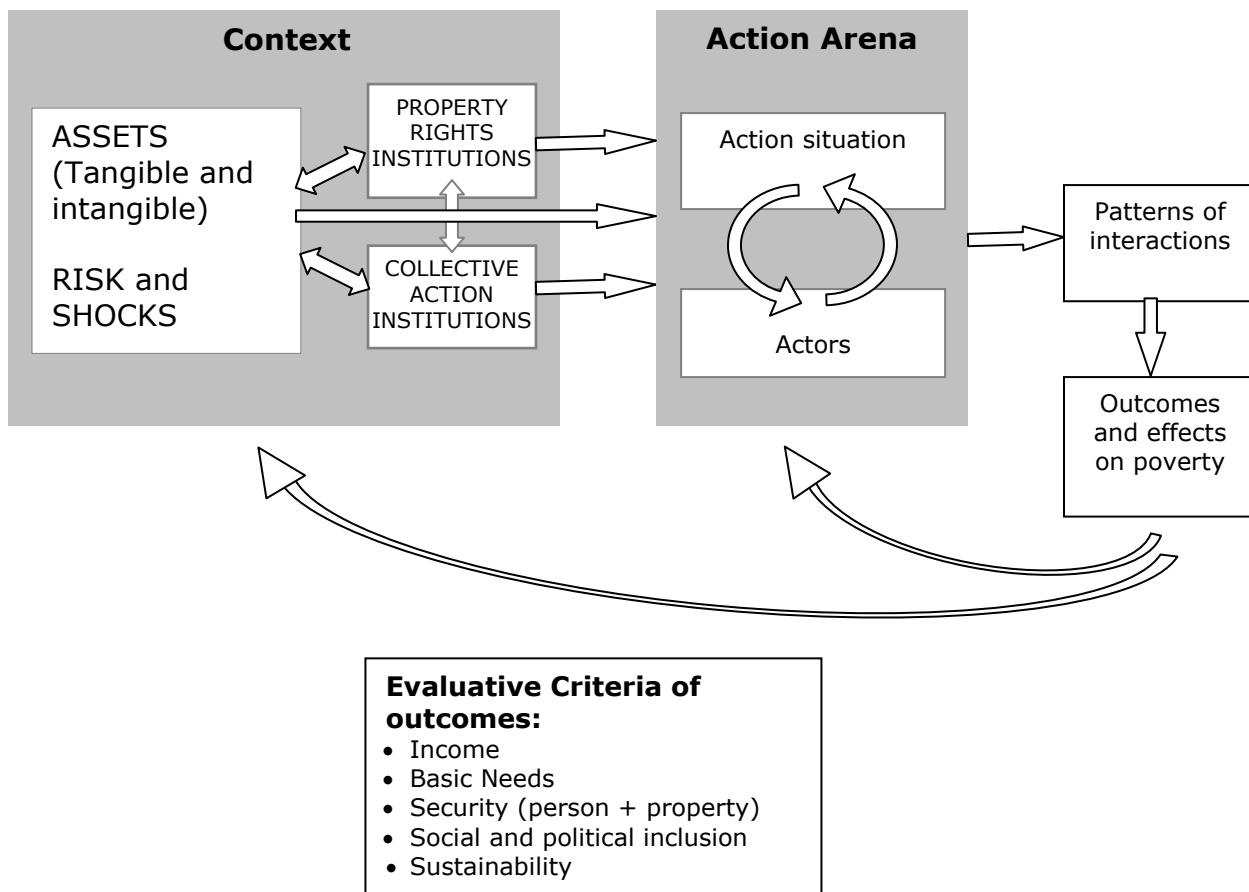
4. PROPERTY RIGHTS, COLLECTIVE ACTION, AND POVERTY: A CONCEPTUAL FRAMEWORK

If we are to move from definitions of poverty to strategies for poverty reduction, then we need a conceptual framework to improve our understanding of how attention to property rights and collective action can contribute.

Our framework builds upon the Institutional Analysis and Development (IAD) framework (Ostrom, 2005, Oakerson, 1992), which provides a general set of variables, and their relationships that are crucial in any type of institutional analysis. It is thus useful for organizing diagnostic and prescriptive inquiry. We adapt this framework to a more specialized institutional analysis of poverty and highlight why and how institutions of property rights and collective action may mediate against initial conditions and poverty outcomes. The framework (Figure 1) is separated into a "context" section and an "action arena" section.

¹⁰ However, we exclude hired labor and *corvee*, or forced labor, from our analysis of collective action, because the incentive structure is very different. A group deciding to hire laborers and raising the resources to hire them would be considered collective action, but the hired laborers themselves would not necessarily be participating in collective action.

Figure 1. Conceptual framework on property rights, collective action, and poverty



The context represents the initial socio-economic and political conditions shaping the opportunity set of people for possible actions. It illustrates the status people find themselves in and that determines, for example, if they are born in poor or rich families, if they can afford education, if they are subject to social exclusion, and so forth. Within the context we highlight three conditions that are most relevant to the poor. The first condition is the asset base. Income has been the main focus of the poverty literature for a long time, while the role of assets in reducing poverty has often been neglected (Sherraden, 1991). The intrinsic problem of lack of assets and obstacles to assets accumulation for the poor highlights the importance of property rights arrangements and needs serious consideration. The second condition refers to shocks, risks, and the vulnerability of people to fall into poverty. Understanding the uncertainties that the poor in particular face can help devise mitigating and coping mechanisms. The third condition, which affects both asset endowment and vulnerability to shocks, is the political structure of a society—represented by its existing legal structure and power relations between actors, which generally disadvantages the poor. In turn, these three factors affect institutions of property rights and institutions of collective action (such as the existing distribution of property rights in a society, criteria used to assign property rights, and rules that regulate collective decision-making and

collective activities in the society and in sub-groups), which are themselves part of the initial context.

Property rights are determined, in the first instance, by the legal and political structure of society. They are at least partly reflected in the assets people control and can be affected by people's ability to mitigate and cope with diverse shocks. At the same time, property rights themselves affect future accumulation of assets and vulnerability to future shocks and possible loss of assets. Moreover, property rights over valuable assets do not only provide wealth but also status, both of which in turn influence the power that people have in their society.

Collective action institutions, or the rules affecting cooperative behavior of people and groups of people, including social norms, sanctions for non-compliance, and enforcement mechanisms, are also part of the contextual conditions that people face. The legal and political structure of a society affects rules regarding cooperation in society and single groups; for example, the guarantee of freedom of association facilitates formal collective action. Social norms might include reciprocity rules that discourage free-riding or, on the other hand, might favor distrust which makes cooperation more costly. Exposure to risk and shocks can affect incentives to cooperate, and collective action institutions can be used to spread risk. Finally, property rights arrangements providing assets also affect cooperation through their effects on incentives and by providing the means to invest in (costly) cooperation.

The second section of the framework, the action arena, helps us to illustrate how people themselves, the state and other entities, and different actors together can make use of institutions of property rights and collective action as well as change institutions to reduce poverty. While the context portrays the initial conditions that affect people's actions, people's agency (the actions themselves), and their interactions with other people or actors shape their future. The action arena represents possible action situations, for example a decision about investing resources, or a negotiation situation between different interest groups, or the collective efforts to maintain a local irrigation system.

In this paper we focus on actions that interest more than one actor and thus require people to interact. Many outcomes cannot be achieved individually, and cooperation is often necessary to achieve collective goals. In the action arena we have a set of actors facing a specific action situation. Different *actors* have different preferences, information-processing capabilities, mental maps, assets, and power resources. These are part of the action resources that individual or collective actors have at their disposal and are determined by the context that an actor faces, as well as by which other actors are part of the specific action situation. Each action situation is also shaped by social rules about behavior, use of resources, and decision-making mechanisms, which are also determined by contextual conditions.

Decision-making rules are particularly important in the action arena, as they represent the "authority relationships that specify *who* decides *what* in relation to *whom*" (Oakerson, 1992, emphasis in the original). The actors, their action resources, and the applicable rules all delimit the space within which actors make choices and take action in a specific *action situation*. Different actors will have different limits and opportunities within any single action situation according not only to their contextual conditions, but also to the contextual position of the other actors involved. In the action arena parties act independently, wait for actions of

counterparts, cooperate, discuss, negotiate, challenge each other, and so on. They exchange resources, devise new rules, and demand action from other parties. Our interest in the rest of this paper is to highlight how action, and specifically cooperation between the poor, can bring about change.

Over time specific actions create patterns of interaction, which may, in turn, affect the initial conditions of the next round. Patterns of interactions refer to the regularized and observable behavioral outcomes of actors acting within a specified set of rules. In these interaction processes, actors reinforce existing institutions or create new institutions. Existing (*a priori*) institutions delineate the socio-economic space and the rule-boundedness within which actors make their choices and take action. For example, often rules and norms constrain women's voice and their ability to assert claims. On the other hand, while institutions constrain, allow, and affect actions *a priori*, actions may alter institutions *a posteriori* (Giddens, 1984), thus changing the initial conditions (See feedback arrows in Figure 1). One example is when concerted and sustained action over time increases women's rights. Figure 1 places patterns of interaction deliberately outside of the action arena, not because these interactions do not occur within the action arena, but because we want to make explicit a behavioral outcome that is conditioned by certain features of actors interacting within a defined set of rules that are of interest to the researcher or policy maker. In an example from Nepal (Box 1), successful collective action resulted in material outcomes of enhanced performance of the irrigation system and increased agricultural productivity.

Finally, actions and patterns of interactions lead to *outcomes*. Outcomes are as varied as the action situations; they can refer to direct effects on wellbeing, such as an increase in income due to a good harvest, or they can refer to changes in institutions themselves, such as strengthening of collective action capacity and redesigning of property rights arrangements. Actions geared toward social and political structural changes (as opposed to more immediate outcomes) generally require a longer time frame to realize and thus necessitate a long-term analysis. A number of feedback loops from patterns of interaction and intermediate outcomes back to the action arena and the context might be needed before institutional changes will affect the lives of the poor, such as through improved social and political inclusion, income, health, security, sustainability, and reduced vulnerability. These last indicators can serve as final evaluative criteria to assess outcomes in terms of poverty reduction.

Box 1. Institutions, Actors, Interactions, and Outcomes in Nepal's Irrigation Systems

In Nepal, the incentives facing farmers and irrigation officials in agency managed irrigation systems (AMIS) and farmer managed irrigation systems (FMIS) structure their actions and interactions and ultimately determine the relative performance of these irrigation systems. Irrigation performance, measured by physical condition of irrigation structures, water delivery effectiveness, and agricultural productivity of the systems, is on average higher in FMIS than AMIS.

The difference in performance of FMIS and AMIS in Nepal can be understood by the extent to which their respective governance structures are conducive to the development of cooperation. The governance structure of FMIS tends to emphasize patterns of interaction that are characterized by problem-solving, a high degree of mutual trust, reciprocity, and active participation in rule-crafting and monitoring, and a high rule conformance. Such a governance structure enables farmers to evolve rules to coordinate their activities and the cumulating of social capital. These patterns of interaction are the basis upon which high levels of irrigation performance are attained.

By contrast, the governance structure of AMIS is based upon and reinforces a dominance-dependence relationship between irrigation officials and farmers, which creates a situation in which neither officials nor farmers have positive incentives to contribute. Farmers are discouraged from taking initiatives to deal with problems. Irrigation officials bear the burden of managing a system that they have little expertise, resources, and incentives to handle. They are also unable to monitor and enforce all the rules all the time. When irrigation officials have little incentive to ensure that systems are well-managed, low levels of performance result.

Source: Lam 1998

5. THE CONTEXT: INITIAL CONDITIONS AND POVERTY

In the next three sections we investigate the three main aspects of the context and the relationship to both property rights and collective action. First we discuss people's assets endowments, next their vulnerability to shocks, and finally, the basic institutional structure of the legal and political system that regulates and governs basic interactions among people within a specific society and how these affect people's livelihood strategies.

Asset Endowments, Poverty, Property Rights, and Collective Action

The link between available resources and ability to choose is universally recognized. While many economists restrict the choice concept to the individual choice of allocation of assets between different uses, other approaches, such as Sen's capability approach (1999), view assets only as a minor component determining freedom of choice. It is, nonetheless, an important starting point to assess poverty because it affects the constraints that people face and the opportunities they have in choosing their livelihood strategies.

We can distinguish physical, financial, social, natural, and human capital assets as all being part of the initial endowment of a person or household (Ellis, 2000; Carney, 1998). Assets endowments (or the pool of resources or assets available to an individual or household) include not only the well-recognized physical assets, but also rights to access, use, and manage resources (such as

collecting firewood from the forest or renting a piece of land), personal skills gained through education or other learning experiences, and social networks based on trust and reciprocity. All these assets, both tangible and intangible, are fundamental in determining the starting point for the choice of livelihood strategy of an individual or household and in determining their well-being. Control over tangible assets often implies some form of formal or informal property rights arrangement. Current asset endowments generally depend on intergenerational transmission of assets, past investments in health and education, and past policies (Hoddinott et al., 2003).

Individually or household-held endowments

Often the abilities to work and acquire skills are the main resources poor people have. Poor people generally own few assets and often have to rely on contractual arrangements. For example, sharecropping can provide access to land and even access to credit if combined with a credit contract. When actors merge resources in this way to produce output, institutions determine how the output is shared, according to market prices, distorted markets, social rules, state regulations, or a combination of all of the above. These institutions often cause disadvantages to the poor, resulting, for example, in high interest rates and rental prices.

Access to natural resources and their conditions also become important especially for the rural poor. Access to state owned pasture or to a small fishing ground can provide an important addition to household income. Natural resource conditions will clearly affect the level of income derived from the resource. Poor people often have access to marginal resources of low quality only, whose productive potential is very limited.

Although many studies assume that household-level assets are pooled and used for the benefit of all members, research indicates that this assumption does not hold (Alderman et al., 1995; Quisumbing, 2003). In particular, assets held by women and men within the household may be used for different purposes; hence it is important to consider how assets are distributed within, as well as between, households, particularly for their impact on poverty.

Communal and public assets

Apart from people's personal assets, people's livelihoods can benefit from access to assets held in common, by a group, a community, or the state, such as access to public goods and services. Common goods, such as community forests or pastures, or access to public health facilities or water delivery systems provide a benefit stream that improves people's livelihoods. Other public services affect people's asset holdings through their effect on vulnerability. Access to health care, social safety net provision such as unemployment allowances, access to hardship loans, or relief programs in the case of natural disasters can not only satisfy some basic needs, but can also prevent asset losses that may result due to distress sales, livestock deaths, or inability to work due to poor health and nutrition.

As much as security of rights to a private asset is a prerequisite to consider it part of person's asset endowment, so must public goods and services be accessible to affect people's livelihoods. Thus, the presence of a public well, forest, school, or health facility in a village does not automatically imply access for all. Sometimes

additional resources are needed (such as financial assets), or some people are simply excluded from access. In poor regions public services might not be available at all, while poor people in well-serviced areas might still lack access to certain public services.

Complementary and substitute assets

Certain assets may be leveraged to gain access to yet more assets; and combining assets, individually or as group, can increase their overall value. For example, human capital in the form of agricultural knowledge greatly improves returns to land. Many land reform programs did not have anticipated effects on poverty because they did not put enough emphasis on the human capital needed to make a piece of land productive and often ignored access to other complementary inputs such as access to credit, input and output markets, transportation, storage, and so on. Assets can also partly substitute for each other, as, for example, wild forest products in case of crop failure. Complementarity and substitutability indicate that holding a diversity of assets is advantageous, increases livelihood choices, and reduces vulnerability.

Similarly, access to certain public goods and services can also dramatically increase the productivity of individually-held assets. The construction of a road reduces transportation costs and likely increases information flows, making items produced for the market more competitive and increasing land prices.¹¹ Similarly, access to literacy programs and public education improves human capital, leading to higher potential earnings. Although both poor as well as non-poor benefit in general, public education and public health should have at least mildly progressive impacts on the poor. These examples show that there are many ways in which to directly and indirectly increase the asset base of the poor and to revalue the asset base they possess.

Assets thresholds and poverty traps

The poverty trap literature indicates that there are thresholds in transforming assets in income, which constrain the ability to accumulate capital goods that would allow higher returns (Dercon and Krishnan, 1996; Dasgupta, 2003; Barrett et al., 2001). Poverty traps are inherently linked to asset poverty, as one of the characteristics of poverty traps is the existence of critical wealth thresholds that are difficult to cross (Barrett and McPeak, 2003). Individuals and households may be constrained to a specific pathway (Pender et al., 2001; Hoddinott et al., 2003) and often end up in a pattern of persistent poverty and with a constant depletion of the resource base they depend upon (Coomes et al., 2000; Barrett et al., 2002). Barrett and Swallow (2004) indicate the following factors as sufficient conditions for the existence of poverty traps at the household level: incomplete access to financial markets, minimum efficient scale of production yielding high return which are beyond the means of the credit-constrained poor, or risk and subsistence constraints that discourage long-term investment in high-return assets (Zimmerman and Carter, 2003).

¹¹ Although higher land prices in turn gives an advantage to land owners compared to tenants.

A first threshold, the inability to satisfy completely basic needs, affects the capacity of the individual to work and constrains accumulation of human capital which dramatically affects future earning (Dasgupta, 1997; Strauss and Thomas, 1998). It is largely recognized that basic needs have to be met first since they provide adequate health conditions that allow an individual to become more productive. Nutritional status affects both physical and mental development, and thus an individual's ability to work (Dasgupta, 2003:1). This most extreme case of poverty trap at the micro level is also responsible for intergenerational transmission of poverty where the household-scale financial constraints also result in underinvestment in the education of children and transmit poverty across generations (Loury, 1981).

Another major threshold that keeps households and individuals in chronic poverty is the inability to undertake lumpy investments that would allow them to acquire physical or natural assets to move to a more productive livelihood strategy. Lack of access to financial assets because of imperfect financial markets is the major constraint in this case. The poor generally have to self-finance as they often cannot access these markets. Because many investments are not incremental but lumpy (livestock or land), the poor often cannot reach more productive livelihood strategies. Collective action can provide a way to pool resources together.

Subsistence needs and lack of access to external insurance also restrict the ability of the poor to undertake long-term and risky high-yielding investments. The inability to undertake long-term investment does not only reduce current income flows, but can foster unsustainable management practices that deplete natural resources (soil, forest, and so on), again affecting sustainability of future income flows of the household and reducing the asset base for the future, thus increasing the likelihood to transmit poverty to the next generation.

Links to property rights and collective action

As discussed previously, assets provide the basis for choices. Investments are critical choices since they affect both current and future outcomes. For the sustainable productive use of agricultural and natural resources, property rights are crucial. For instance, there is little incentive to invest in soil conservation measures for a squatter occupying public land without permission because of the uncertainty of tenure. Uncertain tenure often implies that the risk that benefits from the investment will be lost (or appropriated by someone else) is extremely high. Thus, the security of the property right is indispensable to provide incentives to invest.¹²

Property rights held by poor people are often insecure. Insecure rights have overall less value compared to secure rights, as the likelihood to capture future benefits stream is reduced. Moreover, insecure rights contribute to shorten the time horizons over which a person considers return to investment. Together with subsistence requirements, which also put more value on the present compared to

¹² Note that in some cases, investing in land provides a basis for strengthening one's claim to the property, and this can provide an incentive for investment. For example, in some cases planting trees may provide a basis for claiming land (Fortmann and Bruce; 1988, Otsuka and Place, 2001), or building a canal provide a claim on water resources. What matters in these cases is the security of those claims.

the future, insecurity of property rights also contributes to hold the poor in low yielding and unsustainable livelihood strategies. This is particularly relevant when returns from investments do not accrue until long after the investment is made. Also, insecure rights might force suboptimal choices, as in the case of renewable natural resource use where it fosters unsustainable resource management practices.

Poverty and poverty traps can be exacerbated by lack of access to public services such as safe water and health facilities. Where collective action is present, it is often crucial for local public goods provision. Many communities around the world mobilize resources with own contributions and work, while others do not. The likelihood that this happens depends on the capacity to undertake collective action as well as on the specific incentive structure, which depends on the expected benefits from the good provision and the expectations about the behavior of others (Sandler, 1992; Ostrom et al., 1994; McCarthy, 2004). Here social cohesion, the history of cooperation, and trust—some of the building block of social capital—play an important role in determining the capacity of a group to work together and avoid free-rider behavior and in allowing to pool together resources and overcome credit constraints for provision of public goods and services.

Collective action is also a means for the poor to secure access to benefit streams derived from resources. Property rights are only as strong as the institutions that back them up, and collective action can provide the collective support to secure claims (Meinzen-Dick and Pradhan, 2002). Recognition of indigenous rights to resources and request for improvement in public service provision are two recurring examples. Especially in the case of common property resources, when individuals feel that their rights are threatened by outsiders or are neglected by official state authority, the ability to organize around a common goal to stake a claim to a resource can make a difference between neglect and acknowledgment of rights. Collective action through organizations such as farmers' associations or even widespread social movements can provide a stronger voice in negotiations with government officials, NGOs, and others. Studies have shown that leadership is another important ingredient, apart from the capacity to cooperate, for successful acknowledgment of rights (Krishna, 2002).

Risk and Uncertainty

Poverty or well-being is determined not only by the assets and income of a household, but also by its degree of vulnerability. People have two options for confronting risk and uncertainty: mitigate exposure to risks (*ex ante* risk management) or act after a negative shock has occurred (*ex post* risk-coping). Clearly, most people undertake both. The vulnerability of a household to shocks is thus comprised of three components: 1) the exogenous characteristics of the risks and uncertainties (such as the distribution of rainfall); 2) the extent to which they engage in *ex ante* risk management strategies; and 3) the extent to which they can engage in *ex post* risk coping strategies.

Though the potential impact of risk and uncertainty on subsistence farmers in developing countries has long been recognized (Roumasset et al., 1973; Hazell et al., 1986), empirically it remains a difficult issue to study because of heavy data requirements. Also, it is difficult and costly to capture farmers' attitudes towards risk and uncertainty, though some methods have been developed (Moscardi and de

Janvry, 1977; Dillon and Scandizzo, 1978; Binswanger, 1980; Antle, 1987). The renewed emphasis on vulnerability is motivated by the knowledge that increased globalization introduces new uncertainties, and that—although the effects of global climate change remain uncertain—the occurrence of extreme weather events are predicted to become much more severe predominantly in tropical and semi-tropical countries (IPCC, 2001).

Our purpose here is not to be exhaustive, but rather to point out the key links between different types of risks, poverty and vulnerability, and property rights and collective action. We first consider three broad classes of risks: natural, economic, and socio-political.

Natural, economic, and socio-political risks

In all three categories of risks, some of the risks will occur frequently, implying that people’s subjective assessment of the probability of having a relatively poor (or relatively good) outcome is likely to be well-formed. Other risks will occur only sporadically; people will generally have more difficulty in developing a good idea about the probability of these risks occurring. Finally, certain events might have some probability of occurring, but occur with such infrequency that there simply is no basis on which to assess that probability. We use these categories as illustrative; for instance, hail may occur regularly in some regions but only infrequently in others. Nonetheless, Table 1 below gives examples of these different types of risks acknowledging that certain risks and uncertainties might change categories, depending on the specific location under study.

Table 1. Risks and Occurrence

	Frequent, Well-Known Probability	Less Frequent, Imprecise Knowledge of Probability	Rare Events, Probability Unknown
Natural	Seasonal rainfall	Drought	Earthquakes
	Hail	Floods	Forest fires
	Endemic pest infestations	Morbidity/ Mortality	Epidemic disease outbreaks
	Frost		Global climate change
Economic	Seasonal prices	Formal sector interest rates	Asset bubbles/ Stock market crashes
	Input availability	Inflation	“Revolutionary” technologies (computers)
	Informal loan rates	Real estate values	
Socio-Political	Elections	Personal security	Changing regulatory frameworks
		Property security	Warfare, Revolutions
		Ethnic discrimination	Genocide

Implications for poverty and vulnerability

For well-defined and frequently-occurring events, wealthier people can often self-insure or purchase formal insurance. Poor farmers, who are not able to buy insurance, often choose less risky subsistence crops (Fafchamps, 1992; Sadoulet and de Janvry, 1996), refrain from adopting new technologies (Feder et al., 1985; Antle and Crissman, 1990), lower investments (Skees et al., 1999), and diversify (Walker and Ryan, 1990). Thus, in the absence of viable insurance mechanisms, poor farmers have lower current incomes and are more likely to remain trapped in poverty because of low technology adoption, innovation, and investment levels.

With respect to rare events, the poor as well as the others will find it difficult to plan ahead. However, savings and assets which the less poor possess can be used to insure against many unforeseen occurrences. In both developed and developing countries, citizens rely on the government to provide relief in the face of rare events such as natural disasters. Where effective, these policies should favor the poor relatively more though there is a great deal of evidence to suggest that aid in crises situations (such as famine or floods) does not arrive on time and is neither efficiently nor fairly distributed (Keen, 1994). In fact, today with the increasing uncertainty of climate change, many people remain exposed to large covariate climate shocks, and disaster prevention and long-term development plans remain ineffective, especially for the poor.

With respect to large negative economic shocks, it is less clear that the poor will suffer relatively more. However, even asset market crashes, high inflation, or large swings in primary market products (such as coffee and cocoa) can lead to both temporary and chronic poverty (through distress sales, for example). Governments may also have safety net programs that protect the poor against economic shocks, but these are likely to be more limited than responses to natural disasters. It is difficult to tie safety net responses to specific economic shocks,¹³ and more generic safety-net program benefits tend to get locked into the political system and be captured by powerful interest groups.

As with natural and economic risks, socio-political risks may be well-understood (such as election cycles) or may include infrequent or rare events. A major social risk and often a major concern of people in developing countries (Smith et al., 2001) is personal and property insecurity. The rich often enjoy a higher level of public police service and can afford to pay for private guards. In addition to the direct effect on well-being, people who are subject to high risk of attacks on their person or property may be more restricted in what they can do and may thus be unable to allocate their asset endowments towards activities that otherwise would increase their well-being.

Implications for property rights and collective action

Property Rights

One potential option for reducing vulnerability is to increase the security of access to various resources for the poor. Even secondary or tertiary rights can play an

¹³ Even if the exact nature and extent of the shock is known (not likely), it may be more difficult to assess who is suffering than is the case with natural disasters.

important role in reducing vulnerability. Oftentimes, use of common (or state-controlled) resources provides a safety net in times of extreme need. Such access functions as an ex-post mechanism to smooth consumption or maintain the asset base (such as livestock). Flexible access can help to absorb many shocks, including climatic, economic and, in certain cases, socio-political upheavals that affect local livelihoods. In fact, such access may be conditioned on the households' having suffered a shock; access rights may fluctuate specifically to reduce a household's exposure to risk. For example, pastoralists may be allowed to graze their herds on the land of another pastoral group during years when their home rangelands are affected by severe droughts (often with the expectation of a reciprocal arrangement).

On the other hand, flexible access rights can also be quite costly. In times of generalized shocks—such as widespread and prolonged drought affecting large areas—flexible, informal property rights systems may lead to conflicts, increasing insecurity and risk of loss of property or person. That is, such rights may function best as safety-nets where idiosyncratic shocks affect only a small portion of the relevant population. Secondly, flexibility and informality may (though not necessarily) imply a relatively low degree of tenure security; claimants may not have the incentives, then, to manage and invest in the resource for sustainability.

Thus, any attempts to increase tenure security must consider all of those that have pre-existing claims to the resource. If overlapping claims are not an issue, then moving to more formalized, individual claims to improve tenure security may increase security for the poor, enabling them to make sure that others (elites) will not grab the land in the future. But then, it goes without saying that any process to increase land tenure security, through formal titling for instance, must function in such a way that poor and marginalized members of society do not lose pre-existing claims to local elites through a process of land-grabbing. Legal aid and information on the process of titling must focus on educating the population about their rights and responsibilities in the process. In cases where there exists a complicated structure of overlapping claims, recognition of flexible access rights and multiple overlapping claims can increase tenure security and also acknowledge access rights of the poor and marginalized; however, developing methods to legitimize such systems and thus increase tenure security is quite difficult. A process of negotiating of who is included in the group, the respective strengths of claims, conflict resolution mechanisms, and then developing a legal framework that simultaneously recognizes local overlapping rights can be quite arduous, but it is still necessary if such systems are to be sustainable and accessible to the poor and marginalized.

To summarize, increased tenure security in particular can be very valuable in reducing vulnerability to nearly any type of risk—be it natural, economic, or socio-political, or be it frequently occurring or rare events. Mechanisms to improve security may be relatively straightforward in areas with relatively low climatic variability where most land-based resources are under private tenure. Increasing tenure security in highly variable environments with flexible tenure systems is likely to be more costly. If it is determined that greater tenure security would improve continued access by the poor (and others) novel tenure arrangements need to be developed. Unfortunately, very little is really known about the optimal design and

implementation of such tenure arrangements, and this remains a very important understudied research issue.

Collective Action

Collective action can be undertaken to address each of the three types of risks under each of the three categories. First, people often rely on social networks that function as insurance networks. Funeral societies are found in quite a number of countries and cultures and use a variety of mechanisms to provide an insurance function. Empirical work also bears out the capacity of local networks to smooth consumption (see the review of this literature in Hoddinott et al., 2003; Deaton, 1992; Lim and Townsend, 1994; Kurosaki and Fafchamps, 2002). When one person suffers a shock, he or she can rely on family or friends to provide resources at least to smooth consumption and possibly to provide labor, or redistribute assets such as livestock. But, similar to flexible property rights, local insurance mechanisms are often unable to buffer households from large-scale shocks, particularly if the event is also long in duration, such as prolonged droughts or disability (Paxson, 1992; Udry, 1994; Fafchamps et al., 1998; Skoufias and Quisumbing, 2003). Collective action then needs to operate at higher levels in order that the group would have access to a sufficiently large resource base over which to spread risks.

Additionally, a group dependent on non-private resources (common pool resources, for example) may act collectively to undertake risk management strategies that directly reduce exposure to a shock. For instance, a group may improve water supplies through various investment and maintenance activities, or the group members may jointly undertake soil erosion control measures that mitigate the impact of droughts or floods on the productivity of the natural resource base. The latter are activities that affect a wide cross-section of community members or perhaps all; in these cases, collective action will benefit all. However, the distribution of benefits and costs might either be income-neutral, progressive, or regressive depending on the distribution of costs and benefits between the poor and non-poor.

Alternatively, a smaller sub-group may form to take advantage of economies of scale; for instance, relatively poor farmers might group together to bring produce to market and/or to gather and share market-information. Such activities can specifically reduce market risks; particularly where markets are imperfect and local traders otherwise enjoy a degree of bargaining power.

Collective action may also be called upon to increase personal or property security (as in neighborhood watch programs). It can also enhance the political voice of local, often isolated, communities in order to increase tenure security of these groups, to make sure that government disaster-relief programs provide safety-nets in times of crises that are locally appropriate and available on time, and to provide information flows that reduce uncertainty over potential government policy changes.

Nonetheless, as discussed earlier, it must be recognized that groups acting collectively are often co-opted by wealthier members who may find their own best interests somewhat at odds with group welfare. In many cases, it is precisely the very poor who are actively shunned by other community members and who are often excluded from joining or actively participating in local collective action, either by social exclusion or because they lack the time or other resources to participate. It is thus important not to romanticize the concept of collective action, but rather to

understand group formation, group dynamics and power relations, and to examine how decisions are made as to participation, making, monitoring, and enforcing agreements, and the resulting distribution of benefits and costs from collective action.

Summarizing, collective action has been shown to be very effective in insuring against frequent and, to some extent, less frequent events, particularly when such events affect households differentially. Local collective action is much less effective in reducing exposure to generalized shocks—either natural or economic—simply because, by definition, such shocks affect a large portion of households. These shocks require tapping into external resources, such as from government, market, or international NGO assistance. However, collective action can be used to assert political voice, and could potentially ensure that local peoples are receiving the appropriate type of assistance at the right time. It is also possible that local collective action can feed into the process of designing disaster relief programs.

Norms, Legal Structures, and Power Relations

Legal, political, and power structures have a strong impact on the assignment of property rights and their change, the kind of collective action pursued, resulting livelihood strategies and, thus, on poverty reduction. They determine how property rights are negotiated in public arenas and if property rights to assets are accessible to the poor. They also affect collective action and its contribution to income generation as well as to participation and democratization. However, legal and power structures do not only differ considerably between countries but as also between governance levels.

Legal and political structures

Citizens in most developing countries are still confronted with the remnants of colonial legal legacies and their path dependencies on constitutional or institutional choices—having a strong impact on access to and use of resources and capacities for collective action. These legacies have contributed to control-and-command economies, dominant public sectors, and only limited willingness to give up concentrated power for more decentralized governance. Legal and political structures are blamed for inadequately addressing the livelihood needs of the poor, their marginalization, and withstanding attempts to raise their voice.

However, since 1989 far-reaching institutional reforms took place, particularly of legal systems, power relations, and governance. Today some countries are in a dual transition to more democratic systems and market based economies (Gordon, 1996). Others concentrate on economic transition only (Ethiopia, PR China, Vietnam); some started from a difficult post-war situation (El Salvador, Nicaragua, Cambodia). Driving forces for these transitions have been: 1) the integration into world markets; 2) economic and institutional reforms through privatization, strengthening the price mechanism, and an enabling framework for contracts; 3) policy reforms for democratization and inclusion; and 4) a transparency-enhancing revolution in information technology (Srinivan, 2003; Bardhan and Mookherjee, 2006; Gray, 1997; Posner, 1998; Pradhan, 1998; Shah, 1998). Most ideas are intended to be inclusive by integrating the poor, protecting

human rights, breaking up monopolies, making politics more accountable, reducing income differences, and giving greater voice to people based on the idea of subsidiarity (Hay et al., 1996, Ngaido and Kirk, 2001).

In some countries, these processes are driven forward half-heartedly, concentrating on economic reforms only while leaving out democratization. Governments hesitate to strengthen private law and to subsume, for example, all economic transactions into one civil code encompassing sale, rental, and mortgage contracts, including those on natural resources. Even countries that are pursuing reforms often underestimate and misinterpret the problems of adequately transforming legal and political structures and power relations and fail to create a comprehensive institutional environment that does not disadvantage the poor.

A major source of misunderstanding arises from assumptions that property rights can be transformed merely by changing national laws. Bundles of property rights and multiple claims are deeply rooted in villages, communities, or ethnic groups (Meinzen-Dick and Pradhan, 2002). Various legal mechanisms coexist: statutory, religious, customary, organizational law, and even donor law. Legal pluralism is, thus, more often the rule than the exception (Benda-Beckmann and Benda-Beckmann, 2001). Any rigid conception of statutory law, such as giving land security exclusively by individual titling, does not necessarily capture secondary or temporary access and use rights.

In other circumstances, the statutory framework is not adequately enforced at lower levels. The state still competes with other informal mechanisms to deliver goods and services such as reputation and trust to enforce agreements and to resolve conflicts (Hay et al., 1996). In transition and post-conflict countries where mutual trust and social capital have been severely undermined, informal legal processes still fill gaps as screening devices in selecting reliable partners. In this context, complex and long-term contracts such as rental or inheritable leaseholds are rare, resulting in high economic costs, low innovation, and inaccessibility to the poor.

Federalism and decentralization: role of the state and its performance

There is strong evidence that enforcing contracts, limiting power of oligarchies, taming the leviathan, and including the marginalized requires multi-level governance. The idea behind federalism is a more efficient allocation of resources, local participation, and a sense of democratic community (Inman and Rubinfeld, 1997). For a long time, fiscal federalism (Tiebout, 1956; Oates, 1972) was used as a yardstick even for developing countries (Bardhan and Mookherjee, 2006). The competition between jurisdictions in supplying rival combinations of public goods would lead to their efficient supply—based on the assumption that citizens practice voice by electing local representatives or exit by moving to other jurisdictions. Federal structures ideally also reduce local information costs (Srinivan, 2003). Whereas uniformity and standardization are key drawbacks of centralized provision, the inability to exploit scale economies is the main one for decentralization (Bardhan and Mookherjee, 2000a, 2003; Seabright, 1996).

Decentralization assigns fiscal, political, and administrative responsibilities to the lower levels of government (Litvack et al., 1998; Meinzen-Dick et al., 2001). As Bardhan (2002) has discussed intensively, decentralization can help to change existing power structures and to improve participation by engaging the

disenfranchised in the political process. However, enthusiasm about (fiscal) federalism and decentralization has given way to a more critical perception where some results are being questioned (Dorn, 1990). Functioning decentralization implies a functioning administrative apparatus at lower jurisdictions and efficient control over it enabled by participatory democratic processes (Srinivan, 2003).

With limited access to education, the poor can neither be part of this administration nor efficiently control it. Poor villagers, women, or tenants neither use their voice option to vote out incapable politicians (being their landlords) nor can they easily exit by moving to other jurisdictions (Litvack et al., 1998; Bardhan and Mookherjee, 2000b). Under these circumstances, corruption and lack of accountability remain endemic. There are even opposing opinions on decentralization as a means to reduce corruption, to secure property rights, and to enhance collective action (Seabright, 1996); decentralization will not necessarily defuse ethnic, religious, or other conflicts (Srinivan, 2003), as it may encourage state erosion and dissolution. In this case, it may even be misused by the central state to get rid of past obligations in times of tight budgets, as examples in rangeland management have shown (Ngaido and Kirk, 2001).

Any successful decentralized delivery of public services critically depends on the accountability of decision makers. Those in power in a village need not share the center's objectives for poverty reduction and may be less accountable to the poor (Galasso and Ravallion, 2005). Accountability implies not only informing about what local administrators are doing, but also the capacity to impose sanctions on those who have violated their public duties (Ackerman, 2004). This does not necessarily hold at local level (Litvack et al., 1998). Local information on under-performance or corruption is difficult to get bundled and be used as a strategic resource. Thus, no uniform conclusions about relative vulnerability to special interest capture can be drawn. There is no simple relationship between the type of political system and poverty (Galasso and Ravallion, 2005). However, there seems to be an indication that decentralization is likely to benefit the poor if they have the ability to organize (Devas et al., 2004).

Power, political voice, and poverty

Decentralized governance may be necessary but not sufficient to implement and enforce the legal and regulatory framework at the local level and to support the poor. As we have seen, it very much depends on power relationship between claimants (Meinzen-Dick and Pradhan, 2002). Power, by classical definition, is "the probability that one actor within a social relationship will be in a position to carry out his own will even against resistance, regardless of the basis on which this probability rests" (Weber, 1947:152). Those in power do not necessarily have the same interests with regard to road infrastructure, clean water, and secure property rights as other citizens have.

Homogeneous communities are rather an exception. Heterogeneity may be a consequence of religious, ethnic or caste affiliation, occupational status, wealth differences, in-migration, or others. In these localities, decentralized programs aimed at the poor are in danger of capture, in particular, of public spending on private goods (Galasso and Ravallion, 2005). Inequality in asset holdings within villages affects the ability to devote time and money to participatory processes to make elites more accountable. Empirical studies have shown that the more unequal

the villages are in terms of land distribution, the worse the outcome of poorly targeted policies through public programs can be (Galasso and Ravallion, 2005).

Participation through self-help is often regarded as a silver-bullet to break the vicious cycle of power, marginalization, and poverty. A regularity in cross-country data shows that participatory political regimes are associated with significantly lower levels of aggregate economic instability and that participation contributes to moderate social conflicts and induces compromise (Hadenius and Ugglå, 1996; Rodrik, 2000). However, participation is difficult to foster among the poorest. The very poor are generally excluded from participation due to their very high opportunity costs for meetings and coordination; others, who are able to attend, remain hesitant as effective participation requires a critical mass of activists.

Besides free rider problems, participation may be weak as long as the right to form coalitions cannot be enforced. On the other hand, unless there is meaningful political participation by all groups, the mere existence of a democratic political system is insufficient, as in the example of India where a long democratic tradition did not widen the inclusion of low castes (Litvack et al., 1998). Similarly, democratization and political reform in Africa may not result in economic growth as elected governments can fail to implement unpopular economic policy reforms, impeding economic growth (Bates, 2006). Thus, the relationship between the type of political system and poverty are not straightforward (Kraay, 2004). The developmental states of early Europe and US and the recent East Asian experience suggest a positive role for the state in economic growth and development, where it is capable of formulating and implementing pro-poor policies, but is sufficiently embedded in society (Chang, 2002; Evans, 1995).

Implications for property rights, and collective action

Property Rights

Securing property rights of productive resources and enabling their transfer or redistribution can significantly help the poor in escaping poverty traps. In particular, this is very relevant for land ownership in rural areas, as land is a major asset and also an important source of power. The assignment of legally secure, marketable rights to individuals and groups enhances efficiency and gives access to additional assets via rental and sales markets (Deininger and Kirk, 2003; Carter, 2004). In addition, redistribution of land rights may be necessary to reduce inequality in asset ownership, break the power of oligarchies, and bring scarce resource into the hands of the most productive. Whether the land market alone can accomplish this redistribution or an active role of the state is needed, remains contested (Deininger, 2003).

Any establishment of formal property rights through statutory law, however, may improve the situation of some of the poor partly while excluding others; formalizing ownership rights means weakening secondary, often temporary rights such as access options (Meinzen-Dick and Pradhan, 2002). Besides ownership rights, there is a renewed focus on the functioning of the land rental market. The lifting of legal restrictions on tenancy in Asia (India, China) and Africa has given poor households new chances for self-employment. However, land owners are only willing to sign rental contracts if they are assured that no ownership claims will be brought forward by tenants (Deininger, 2003).

Simply redistributing land to the poor is one step, while giving beneficiaries an economic perspective on their farms is entirely another one (Deininger and Kirk, 2003). Training and extension are required as well as management practice and access to credit and marketing. The ability to activate land sales and rental markets depends on the functioning of complementary rural financial markets (Carter, 2004; Deininger, 2003). If poor households are excluded from credit for farm inputs due to high transaction costs, owned or rented plots cannot be used productively. In addition, if tenure reforms are not well implemented (transparent titling) due to lack of information or capture strategies, the use of land as collateral remains costly. Land reforms will not work if beneficiaries do not organize themselves through collective action either as pressure groups or by forming joint marketing or credit. Thus, the poverty reduction impact of land reforms critically depends on complementary measures. In addition to the economic impacts on poverty, property rights reforms may have positive spillover effect in terms of enlarging the stake of the poor in the political system by strengthening local democracy (Bardhan, 2002). In India, for example, local democracy and institutions of decentralization work better in those states where land reforms and mass movements have been more active. Land redistribution can change the political structure in a village by integrating the poor into self-governing institutions. Land reforms stimulate competition for farm inputs in local markets and make it more difficult for established oligarchies to dominate these markets further. Strengthening the position of the poor ideally feeds back to the contextual factors: capture strategies of elites are weakened if land can be mortgaged after titling and new credit sources are opened, or if land improvements will be compensated in the case of contract for closure (Bardhan, 2002).

Collective Action

Collective action may work in two directions to address legal and power structures. First, it is an important lobbying instrument to shape norms and values as a guiding principle for institutional reforms. Collective action can influence the state to change the existing political balance into a more pro-poor direction. Through collective action, groups can more easily protect their interests vis-à-vis the state and when competing for their share of limited resources (Hadenius and Ugglå, 1996). In case of implementation failure, collective action can substitute for missing state institutions. Secondly, collective action can lead to economic cooperation through saving clubs, farmers, herders or water associations, and service cooperatives. However, collective action at the local level often remains limited in its impact if it is not backed at the beginning by external support (such as international NGOs, donors, apex organizations).

Since the 1990s, experiences have shown that policy changes have been influenced by local stakeholders through collective action. For example, in rural land registration in Cambodia village groups identify eligible beneficiaries, decide on plot boundaries, or settle conflicts (Zimmerman and Kruk, 2003). Collective action by pastoralists' lobby groups has contributed to include their indigenous access rights during tenure reforms in Sahelian countries (Ngaido and Kirk, 2001). At higher levels, social movements such as the *reformasi* movement in Indonesia has created pressure for recognition of local rights over forest resources (Fay and Sirait, 2002), and peasant movements have been influential in pushing for land reform in Mexico, Russia, China, Japan, Bolivia, Cuba, Indonesia, and Zimbabwe (and less

successfully, in the Philippines, Brazil, and India). In reviewing these experiences, Huizer (1999) found indications that the involvement of peasant organizations in the struggle for land and its distribution led to more effective post-reform measures such as the formation of co-operatives or credit societies.

Collective action also helps to disseminate information and publicize drawbacks of policy reforms (Litvack et al., 1998). Agrarian Reform Communities in the Philippines use mass media to inform the public about deadlocks in the implementation of land reforms (Poletico et al., 1998). In addition, pressure groups emerge spontaneously if conflicts arise from the resistance of land owners to hand over land. There are numerous examples where groups being dependent on common pool resources get stronger incentives to push for collective action if the national legislation acknowledges their group rights (Otsuka and Place, 2001; Meinen-Dick et al., 2001). In addition, collective action is important if credit markets remain biased towards the more affluent, bad roads make marketing costly, or if lack of access to telecommunication leads to information asymmetries. In these cases, collective action can help to create hybrid organizations, either through informal arrangements for a single purpose (joint truck rental for marketing) or through formalized cooperation contracts (regular joint use of machinery), or even service cooperatives.

These formalized organizations gain momentum through market liberalization and privatization. Their establishment through collective action delivers public goods (competition, lower prices) as well as club goods (extension, information) and private goods. However, their success is questioned if cooperative values have been discredited in the past, either through forced collectivization in socialist countries (Binswanger et al., 1995), appropriation by state agencies (Dülfer, 1994), or in case of excessive heterogeneity in local communities.

Still, heterogeneity does not necessarily have a bad influence on collective action (Hadenius and Ugglå, 1996): when people from different strata do cooperate, the effect in terms of overcoming problems of mistrust is probably greater than when people who already have much in common cooperate. Experiences of the first credit cooperatives in Prussia underline the role of affluent promoters contributing their human capital (Dülfer, 1994). To be sustainable, collective action often needs supplementary impulses from outside and generally has to be linked to other (apex) organizations of civil society to get national or international reach and to represent a forceful countervailing power.

6. THE ACTION ARENA

We now turn from an examination of the initial conditions in our framework to a more detailed analysis of the dynamics of the action arena. As noted in the preceding section, there are many ways in which collective action or changes in property rights institutions can address the conditions that keep people in poverty. But these changes often do not come about. To understand why or why not, an analysis of the action arena is helpful. This encompasses the actors, action resources that they draw upon, and the action situation. Analyzing the action arena allows us to understand how poor people are involved in contributing to collective action and in deriving benefits from its outcomes.

Actors

Actors may be individuals, such as citizens of a state or of a community, or they may be collective entities, such as organizations acting as a coherent agent, e.g. a specific government department, a private company, the state, or an NGO. While collective actors such as organizations may, in principle, be able to act as coherent agents, they may often send ambiguous signals when there are internal contradictions within these.

We first have to distinguish between internal and external actors and then sort out specific change agents among these actors. We define internal actors as those who are to follow the specific rule system, which emerges from institutional bargaining. External actors may influence the bargaining processes of institutions that define rule systems for *other* actors. These external actors may act as benevolent agents or as opportunistic rent-seekers.

Change agents are those actors that can influence other actors towards a specific path of institutional change. Change agents can have a positive as well as a negative influence, and this influence may be intentional or unintentional. For example, a rent-seeking elite—or other interest group—may deliberately seek to bend institutional arrangements that favor their specific interests at the expense of others (Krueger, 1974). On the other hand, some development interventions, even though carried out with good intentions, have also yielded ambivalent impacts and thus may have created some unintentional negative side-effects.

In neo-classical economics, rational actors are assumed to be perfectly informed, forward-looking utility maximizing agents with a coherent set of preference orderings. The insights from New Institutional Economics and recent findings from experimental economics show that behavior is often not forward-looking and does not follow what rational choice would predict. Rather, we find ex-post rationalizing behavior which is rule-bound (Gigerenzer and Todd, 1999), cognitively restricted by mental models (North, 1990), acknowledges norms of fairness (Bolton and Ockenfels, 2000), and satisfying rather than maximizing (Selten 1989). Knowledge of the rules and mental models is therefore important to understand behavior.

To assess the effects of institutional change on poverty alleviation, we have to take a closer look at who the poor are, what characterizes them (see section 2), and which specific processes of institutional change affect them specifically and differently than the non-poor. In this, the distinction between moderately and very poor is essential because, while moderately poor may have some assets and be well embedded in social relations, the very poor are often chronically poor *because* they lack these assets and are not integrated into existing local social networks.

In order to assess how the role of agency may be different for the poor than for other actors, we have to distinguish between different categories of action resources an actor possesses as well as the type of interactions—the action situations—where actors bring their action resources into play.

Action resources

As noted by Oliver and Shapiro (1995), “income feeds your stomach, but assets change your head.” That is, having secure assets provides security, which allows one to take a longer-term perspective and hence take advantage of opportunities.

Indeed, so fundamental are assets to the ability to make choices, that Alsop and Heinsohn (2005) use psychological, informational, organizational, material, social, financial, or human assets as indicators of agency. Both tangible and intangible assets play a major role in shaping the action resources of individuals, households, and even communities. Action resources are those intangible and tangible assets that give actors the capability for agency. Agency includes the capabilities to exercise livelihood choices, to participate in collective action on various levels, to influence other actors' agency choice as well as to involve in political processes. Many of the potential effects of assets were discussed above in section 5; in this section we focus on less tangible action resources and how they influence social bargaining

Information and the ability to process it

Information and knowledge are key power resources (Schlüter, 2001; Theesfeld, 2004) and enable the powerful actor to change the perceived values of the different alternatives for action (Young, 1995). If no market exists, information considered valuable will often be slowly distributed for fear of reducing its value (Bouquet and Colin, 1999). Since information often spreads through networks and relationships, the access to or the cost of acquiring information is often unequally distributed. Hence, it is the social nature of information flows which may place the poor in a particular disadvantage, because they may not be part of networks through which information spreads. Knowledge is the coupling of information with the skills to use it. Skills can be classified into expert power (hard skills) and personal power (soft skills). Expert power originates from both education and experience (Alston et al., 1996) and enables one to use information more efficiently. Personal power is linked to charisma, to communication, or to agitation capabilities. These personal characteristics appear to be of major importance when dealing with informal institutions emerging from interaction at the local level (Schlüter, 2001).

Knowledge is further differentiated according to geographical scale because having knowledge about one's own community and the social functioning of it is a different sort of thing than knowing about global phenomena, modern technology, etc. Tacit knowledge is based on experiences while academic knowledge is based on structured learning. Which of the two is more important in a specific power contest depends on the particular social bargain. Krishna (2002) found that where local agents had a good understanding of outside processes, they were able to direct collective action toward positive development outcomes.

Cognitive schemata

Cognitive schemata, or mental models, define the borders of what is imaginable to an actor in both his/her understanding (knowledge) and normative perspective and thus provide the limits of what an actor can perceive as feasible in his/her life. Douglas North uses the term "ideology" in describing these two aspects. First, ideology offers us a reality, a mental model, or a cognitive map. Second, it proposes a guideline of how the world should be structured, i.e. the normative aspect of ideology (North, 1990). Cognitive dissonance—the difference between mental models and the way the world works—affects whether an actor can think and process what is going on. This may be a challenge particularly for those who

have never been exposed to the outside and/or to things that challenge their thinking. Risk aversion, which is often attributed to the poor, may not only result from the poor asset stock, but equally from limited exposure to the outside world that may restrict their capability to think beyond specific boundaries.

Furthermore, ideologies in the normative sense—sharing an imagination of how the world *ought* to be—are essential for legitimizing group solidarity. This principle is frequently applied by those who have ruling power in sub-groups, who use social conflict in society for cementing and fostering patron-client relations along kinship lines, with the result that the poor become even more dependent on the rich.

Social prestige

The "habitus" an actor demonstrates in the public and private realm (Bourdieu and Accardo, 1993) is essential to how he or she can gain recognition as a leader in public discourse and collective action. How does an actor behave, what clothes does he/she wear, what cultural knowledge can he/she show in public? How can he/she speak in public? This habitus may become an important power resource to influence the perceived choices available to other actors. For example, in deeply hierarchical societies, such as the Indian caste system, actors from low caste origin may not be used to speak in public, and their habitus may signal subordinate behavior, which cannot be easily overcome, whereas the high caste elite has grown up in the repeated exercising of social superiority. Such schemata of social habitus cannot be easily overcome. They are often rooted in cognitive schemata, which are constantly reconstructed in social interaction.

Social standing is also influenced by the embeddedness of an actor in social networks in a community—both informal and formal. Social networks may be essential when they provide space for actors to combine forces and to increase their relative leverage power in order to reinforce their own identities and self-confidence. Women's savings groups around the world, for example, when successful, often increase the bargaining power and the confidence of women to also use this bargaining power in the public realm.

Recognized membership in specific organizations may be a necessary entry-point to the public arena where collective action is negotiated. For example, many irrigation associations allow only landowners or heads of households to be members. Wives or landless households are not included and hence do not participate in public discourses over collective action for managing the irrigation, although they are affected by the decisions of the group (Meinzen-Dick and Zwarteveen, 1998). At the same time, formal membership may not be sufficient to have a say because relative bargaining power also depends on other action resources.

Both the habitus of an actor and the ability to draw upon social networks influence what recognition local actors receive from outside the immediate community. Hence, they provide the space for networks with powerful actors on a higher spatial level than the village. In many clientele societies, these political assets are an important source of benefit streams, for example in the form of employment, welfare benefits, etc. These may affect not only the capabilities of individuals, but also of groups, as noted by Krishna (2002).

Time

The poor cannot easily allocate time for purposes other than income earning and livelihood activities. For example, poor women in many regions have to work hard throughout the day and can hardly afford to participate in public meetings because they are busy with fetching firewood, collecting water, preparing food, and so on. Similarly, contributing labor to collective activities may prevent poor wage laborers from earning their daily income. Opportunity costs of time may, however, change over the year; wage laborers may be able to participate in collective action when there are no work opportunities available to them in specific time periods of the cultivation cycle. Thus, timing and location of meetings and other collective activities will affect the extent to which poor people can attend and influence decisions.

Tangible assets

As noted above, a defining characteristic of poverty is paucity in tangible household assets. In addition to time or labor contributions, participation in collective action or even membership in social networks often requires some financial contribution, gifts, or hospitality. If poor households are not able to contribute or reciprocate due to lack of assets, they may gradually fall out of social networks and institutions that govern resource access and property rights, in particular if membership depends on contributions.

Asset-poor people often face a trade-off between short-term requirements and long-term needs: while it may be quite costly to participate (due to required contributions or foregone opportunities to earn), not participating may, in the long term, undermine the social embeddedness of the actor in the social network. In the Bangladesh participatory poverty assessments, such social relations were a defining characteristic of different categories of the poor. The social poor may not always be able to feed their families but could still provide some hospitality and are trusted in the community. Among other deprivations, the helpless poor cannot entertain guests. The bottom poor have very little social interaction, are not even invited for hospitality by others, and are therefore screened out of NGO groups which provide loans or other assistance (Nabi et al., 1999).

Those with more assets have more options to pursue their livelihoods or other objectives, both individually and collectively. Someone with a large farm, rich soils, and reliable water supplies may be able to choose which crops to grow. If, in addition, they have education, a vehicle, and live near good roads, they have more options for off-farm activities. Those with surplus time and abilities may also choose to lead collective activities. Those with fewer assets may still participate in collective endeavors to overcome the limitations of their individual assets. But the very poor with meager assets may be limited in both the individual and collective activities in which they can participate.

In most societies tangible assets also convey status. The wealthiest households with most land occupy a higher place in many agrarian societies, while the landless may not even be considered full community members. This has repercussions also for access to information and other collective resources. In many agrarian societies, extension agents are most likely to visit wealthier landowners than landless tenants. Even within the household, control over assets influences the

bargaining power of individuals. Fathers who control the household land may exercise authority over their sons. Research has shown that women with control over assets have more decision-making power in intrahousehold decisions (Quisumbing et al., 2004).

Action resource, power endowments, and the social bargain

Generally, an actor exercises power if he or she can affect someone's freedom of action: the more powerful actors can change, distort, and/or restrict the (perceived) choices available to the other actor(s) (Weber, 1947:152). This includes the ability to change the other players' preferences, cognitive schemata, and constraints they face. If we use a game theory conceptualization, an actor's power resources are the player's capabilities to change the payoff structure of the other player(s). The analysis of power resources makes sense only in a comparison of various actors and their power asymmetries relative to each other (Schlüter, 2001).

Social bargaining and action resources

In social bargaining, we need to distinguish between the actors, their action resource endowments, and the specific action situation. Action resources may have different leverage power in different (inter)action situations. For example, an action resource that may be highly valuable in situation A may not be of much use in situation B. In other words, the type of interaction determines the transformation of potential into *effective* action resources. Rules governing the interaction therefore play a critical role in how action resources are translated into bargaining power.

In considering the relative bargaining power, we can distinguish between (1) positional power and (2) sanctioning power. Positional power stems from an actor's office or structural position, which may allow this actor to access specific information or to hold information away from other actors, to access specific political networks, or to execute power on other actors, for example in distributing welfare benefits. Unevenly distributed sanctioning power, on the other hand, offers specific actors the ability to impose their choice on other actors, for example, through the use of resources to credibly commit in a bargaining situation or to credibly retaliate in case of non-compliance.

Collective action, social bargaining and the action arena

Social bargaining affects collective action in two ways: first, in defining the contribution the participants have to make, and second, in distributing the benefits that they may derive—individually—from collective action. Social bargaining is governed through rules that specify which actions are required, permitted, and prohibited. These rules often represent the relative bargaining power of the participants involved (Knight, 1992).

Ostrom (1992) defines three different sets of rules for collective action: 1) *operational* rules that govern day-to-day decisions; 2) *collective choice* rules that affect how operational rules are to be changed and who can change them; and 3) *constitutional choice* rules that are used in crafting collective rules. Rules are generally nested. That is, it is typical for one set of rules to define how other sets of rules can be changed. Constitutional choice rules often govern how much agency and influence asset-poor group members can develop in collective action. For

example, asset-poor members of a group in hierarchical societies may be excluded from crafting collective choice rules because traditional constitutional choice rules confine such decisions to a few traditional leaders. Then, constitutional choice rules already embody the differentials in action resources of different group members, such as in the form of social prestige.

How constitutional rules define the principles of collective choice rules affects people's choice set: if deliberation of all users is the constitutional rule, then poor people may have a better say than if it is based on the decision of an elders' council. However, even deliberation, the uncoerced debate of all users, will be influenced by the action resources of the participants; their information and knowledge will determine if they can make an informed decision, their cognitive schemata may influence what they perceive as appropriate to say in public, their social prestige will influence whether they may dare to speak in public, and their time resources will determine whether or not they can afford to take part in such deliberation processes in the first instance. The process and outcomes of such deliberations will be influenced by actor's action resources and by how these are employed in the specific action arena.

Patterns of interaction

The *actors*, their *action resources*, and the applicable rules all delimit the space within which actors make choices and take action in a specific *action situation*. The action situation is shaped by the asset endowments and action resources of the actors, their relative positioning, and the *a priori* rules as defined by the initial condition. Accordingly, different actors will have different limits and opportunities within any single action situation. In the action arena, parties act independently, wait for actions of counterparts, cooperate, discuss, negotiate, challenge each other, and so on. They exchange resources, devise new rules, and demand action from other parties. Repetition of these bargaining processes leads to interaction as regularized and observable behavioral outcomes. In these interaction processes, actors reinforce existing institutions and create new institutions.

These patterns of interaction gradually form social relationships and structure, which can reduce or reinforce poverty, and lessen or increase social inequality and exclusion. As these patterns of interaction affect the constitutional level of rules, we find societies shaped by patron-client relations, neo-patrimonialism, ethnic antagonisms, caste differentials, or based on democratic decision-making. These patterns of interaction also transpire into the very nature of the state and how the state acts and develops its own administrative and political structures. In this sense, the institutional outcomes constitute the outcome of *prior* social bargaining that reflects the unequal action resources of different social actors.

One important choice actors may have to face is the choice between cooperation with others or non-cooperation. Let us assume that an individual contribution to a common irrigation system through participation in maintenance activities would allow the group to achieve better irrigation overall. A poor person has to decide in this case whether to cooperate or not. In this situation, a few factors will affect the choice of the poor. First, we can ask: what is the choice opportunity set of the poor? The opportunity set is clearly affected by the contextual conditions. In the specific situation we can ask: Do the constraints of

being very poor limit the ability to choose to contribute to maintaining the irrigation system? If that is the case, we should ask ourselves of what could be done to reduce or remove the obstacles to cooperation. Second, the choice to contribute to maintenance depends also on the expected outcome of cooperation. Thus, if the poor person feels that he or she might not benefit from improved irrigation flow because of discrimination in the allocation of water, he or she will decide not to cooperate. On the other hand, in a choice like this, to achieve joint benefits, all involved actors have to cooperate, producing a pattern of reciprocity (Oakerson, 1992). This is only one example of a possible choice in an action situation and resulting pattern of interaction; there are numerous different action situations.

In turn, patterns of interactions produce outcomes. If outcomes are positive for all those involved, actors will maintain the structure of the situation. When outcomes are not positive for all actors or for some of the actors, these will try to change their strategies. Negotiations in action situations often regard distributional aspects related to expected outcomes.

This framework can be used to analyze whether the types of collective action or property rights reforms discussed in the preceding section as being advantageous to the poor are likely to come about. In any particular situation, it leads us to ask: Who are the actors (who may be for or against the particular change)? What are their respective action resources? Given the rules governing this situation (operational, collective choice, or constitutional), which action resources are most important? Do the poor or disadvantaged have those resources?

For example, in social bargaining over the distribution of water resources in a government-managed irrigation system, connections to the officials or money for side payments may be important action resources. If management is transferred to water users' associations, others might have more influence on decisions, but if membership in the users' association is limited to owners of irrigated land, then land ownership becomes very important, and pastoralists or other water users may have no voice. Further, if meetings are held in the evening with public debate, then women may not have the critical action resources, especially time and habitus (Meinzen-Dick and Zwarteveen, 1998).

Based on this analysis, programs to help the poor can either attempt to build up the critical action resources of that group (such as numerous programs in South Asia to teach women to speak up in public) or to change the rules so that the action resources they do not possess are less important (for example, by changing rules for membership so that all households are included, not just those with irrigated land, or holding shorter meetings, closer to the homes, so that women can participate). In effect, many government or NGO programs, and actions and lobbying by disadvantages groups themselves have been working at one or another of these strategies. Examples include the Indian government's reforms of the *panchayati raj* (local government) system to include reserved seats for women and scheduled castes and tribes, or the efforts of many microfinance systems to build financial, social, and human capital among landless groups or women. This framework, however, allows for a more coherent assessment of different action situations to identify critical entry points for change.

7. OUTCOMES

Structural changes

When evaluating outcomes of action situations we can distinguish between structural outcomes, which affect the existing contextual factors, including property rights and collective action institutions (see feedback loops in figure 1), and outcomes that directly affect the conditions of the poor. For example, people working together to build an irrigation system may be able to increase the stability of water supply for their crops, thereby increasing the asset base. Structural outcomes will later affect direct outcomes for the poor. Thus, an increased asset base in turn will increase the productivity potential and in the end reduce vulnerability and raise incomes. In addition, people acting together can change political conditions and social institutions. Thus, the creation of an irrigation user group, which devises rules for managing and enforcing regulations, can improve irrigation management and performance. On a larger scale, forms of collective action and mobilization can affect policy decisions at the national level as well.

Institutions as well as political and social conditions are not unchanging. Property rights systems themselves are dynamic: the distribution of rights as well as how they are interpreted and enforced will change over time. Some of these changes are driven by changing material conditions including population pressure and resource scarcity (Demsetz, 1967). But mostly, changes in property rights are the outcomes of political processes, reflecting changed social preferences in relation to the patterns of interaction among members of society (Bromley, 1989). These result in reallocation of economic opportunities within society. Finally, changes in property rights do not need to be at the advantage of society as a whole, but can favor some groups over others. An interest group can try to change rules to its advantage and at the disadvantage of other groups and thus try to affect the "redistribution of economic advantage" (Bromley, 1989:249). Therefore, interactions in the action arena can lead to changes in institutions of property rights at the advantage or disadvantage of the poor.

Collective action is, by definition, dynamic. While the underlying institutions, including both organizations such as farmers' associations as well as social institutions like norms of mutual assistance, can provide some stability to repeated forms of collective action, even these institutions change over time. Poor people may be able to influence change in these institutions in their favor, but their lower levels of action resources makes such outcomes more difficult to achieve. Since poor people are at a disadvantage in terms of communication and resources to achieve social and institutions change, cooperation amongst them can provide them with a collective resource that can raise their voices (Kertzer, 1989:104-108) to demand changes. A wide range of peasant movements, indigenous people's movements, and women's groups such as SEWA (Self Employed Womens' Association) demonstrate the potential for this. Although organization and coordination of cooperation has its costs (Olson, 1965), it also has many benefits (Hirschmann, 1982: 82-91). According to Lipsky (1968), for example, forms of collective contention can be considered a resource in itself. Thus, for the poor to achieve structural changes in their society, often requires collective action to challenge existing institutions. Recent empirical evidence seems to support this,

indicating the one important determinant of the ability of the poor to help themselves is their ability to organize (Devas et al., 2004).

External change agents can assist in such processes by providing institutional openings, by forming alliances with the poor, and by negotiating cooperative platforms with policy level actors. They can help to transform contention into cooperation among various groups. However, the complexity of institutional change means that outcomes favorable to the poor are not automatic, even if external agents are genuinely interested in reducing poverty. For example, when the poor depend on clientele networks with the rich, empowerment of poor groups against the more powerful can also backfire and disempower the poor even more, if falling out of the earlier clientele network leaves them worse off than before.

From various examples in the paper we have seen that the distribution and strength of property rights are critical for maintaining, increasing, or reducing poverty. Collective action can, but need not necessarily, leverage the power between more powerful and weaker groups. However, in the case of property rights, it is not only the formal rights that matter, but how they are put into practice. Similarly, it is not collective action per se, but how it is institutionalized and organized that matters. This leads to complex issues of rent-seeking, horizontal inequalities, and power plays between actors that need to be considered in order to understand how property rights and collective action can affect the outcomes of specific action situations.

Poverty outcomes

In terms of more direct outcomes, or the outcomes originating from earlier structural changes on poverty itself, we suggest that these can be evaluated according to a number of poverty dimensions. In figure 1 we suggest six evaluative criteria to assess poverty reduction, which consist of improvements in the ability to cover basic needs, increases in income, in personal security and security of property, and improvements in social and political inclusion, and sustainability of livelihood strategies.

The traditional measure of increased income remains a crucial indicator. However, it is best to rely on multiple indicators to assess the degree on improvement in people's livelihood, if we believe that wellbeing is not determined by income alone. The improvement in the ability of the poor to secure basic needs such as shelter, clothing, and improved health are basic indicators to assess extreme poverty. Improvement in basic need provision can derive from increased incomes, but can also derive from increased access to public services, especially for the improvement in health conditions. Similarly, improved access to education has been recognized as an important indicator to reduce the risk of intergenerational transmission of poverty (Hoddinott et al., 2003).

It can also be important to determine if changes in income have had any effects on the ability of the poor to start building assets and if productive investments and increase returns have allowed them, for example, to acquire a plot of land, increase their livestock holdings, or send a child to school. These will affect longer-term paths out of poverty, influencing both vulnerability to future shocks as well as future incomes. Assets can also be increased by implementation of redistributive policies such as land reforms, which will in turn affect income opportunities.

Another important indicator of poverty relates to income distribution. Since poverty is also relatively determined, an increase in inequality, even if the income of the poorest has not declined, *de facto* leads to further disadvantage. If the majority is getting better off, staying behind means losing out in terms of purchasing capacity and often also in terms of social exclusion.

We have seen earlier that in order to escape poverty it is also important to reduce risk exposure and improve the mechanisms of the poor to cope with risks. It is therefore important to observe how income improvements, changes in assets, access to services, or improved cooperation capacity translate into reduced vulnerability of the poor to future shocks.

As with vulnerability, an investigation of sustainability of livelihood strategies can also give us important indications about impacts of changes on the poor and about their prospects for the future. Thus, the clear felling of a community woodlot can bring substantial increases in income over the short term but might not result in sustained improvement in livelihoods. It threatens the asset-base that sustains income activities, reducing the capacity to earn income in the future. Management practices that take into account long-term wellbeing, such as through felling tree practices and rules that take into account re-growth rates, retain certain areas for future use or are accompanied by replanting activities, are more sustainable and, even if short term income increases might be smaller, can provide more security and help reduce vulnerability to shocks.

In terms of security, changes in personal security and security of property are also important indicators affecting well-being. This is particularly important in conflict and post-conflict areas and often in the more degraded and crime prone areas of cities. Security concerns can literally stall a number of strategies geared at the improving livelihood and escaping poverty. In addition, personal security represents a direct improvement in wellbeing, as the absence of threat and fear is of direct benefit to people. We can recall that improved security of property can be achieved through institutional change and provides incentives to people to invest in productive activities. Field (2004) found that Peru's program to provide land titles to urban squatters who built houses on public lands increased the security in those homes as a result of higher recognition and police protection (since the residents had gone from the wrong to the right side of the law), and this, in turn, allowed more household members to go out for work or schooling because someone was not required to stay at home to guard the house.

Improvements in social and political inclusion are also important outcomes for poverty reduction. These are generally consequences of greater structural changes, when actions of people and groups through reforming pattern of interactions achieve fundamental changes in contextual conditions. Examples would include changing gender relations toward greater empowerment of women or greater voice and self-determination of indigenous peoples. Because they are often linked to long term developments, outcomes related to social and political inclusion are difficult to detect and need to be investigated in long-term analysis.

In sum, direct outcomes from the action arena and long terms contextual changes can be evaluated in terms of how the poor and non-poor fare on all the critical aspects of poverty: the ability to secure basic needs, the level and distribution of income, degree of personal security and security of property, degree of social and political inclusion, vulnerability, and sustainability. While the exact

outcomes will vary depending on human agency, the initial conditions and action resources available to various actors also shape these outcomes. However, understanding how to influence collective action and property rights institutions merits serious attention as part of poverty reduction strategies.

8. CONCLUSION

Property rights (or the lack thereof) over a range of assets constitute a defining characteristic of poverty. Proper understanding of how the poor can protect and expand their access to and control over resources can make a powerful contribution to poverty reduction. Many poverty reduction programs, from group-based microfinance to cooperatives to community-driven development initiatives, are premised upon collective action. A better understanding of the conditions that favor collective action by the poor themselves and of how external institutions can support it is also crucial for poverty reduction. However, much of the conceptual and empirical literature on property rights and collective action has dealt primarily with natural resource management rather than poverty reduction. Our attempt in this paper is to bridge these domains so that the understanding of the role of collective action and property rights institutions can lead to more effective poverty reduction by poor people themselves and by external agencies. At the same time, poverty studies offer key insights that can lead to better understanding and programs for natural resource management, by pointing to potential asset thresholds and poverty traps as well as the central importance of agency and capabilities of all people, including poor men and women.

Three characteristics of the initial conditions of the poor are particularly relevant for understanding the constraints and opportunities they face. These include their assets (including natural, physical, financial, human, and social capital), the sources of risk and uncertainty that cause vulnerability, and the power structures created by the legal and governance systems. Understanding the effects of existing property rights and collective action rules affect the conditions of the poor can go a long way to inform policymakers on how to better achieve poverty reduction goals. Equally importantly, identifying mechanisms that enable the poor to take advantage of the potential of these key institutions can enable them to make direct improvements in their wellbeing and even change the contextual factors which keep people in poverty.

Power plays an important role in the process of institutional change. In our framework, power comes in at two levels. On the one hand, the broader power structure of a society creates a specific context within which power struggles in the local action arena take place. This power context depends on who rules the country, who dominates the administration, and so on. On the level of the action arena, we find actors with different action resources and power endowments. The power endowments depend on the action resources an actor can put into play and the specific interaction situation. There is, though, a general trend: the poor have much less action resources at hand compared to the less poor, and this already places them in a relative disadvantage independently of the specific action situation. Social networks often are inclusive of their members and exclusive toward outsiders. Since the poor often lack the resources to invest in reciprocal social relationships

that go beyond their own spheres, they are often not part of those powerful networks.

The examples given in this paper illustrate the great variety of outcomes that are possible. While human agency certainly plays a major role in these outcomes, the options available to men and women are strongly conditioned by their material conditions and the institutional environment in which they live. But people's action and interactions can also shape both the physical and institutional environment in which they operate. Understanding these effects can provide insights into how policies and programs can improve the choices and capabilities of poor people to pursue their goals.

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