

Chapter 12

Governance and the Role of Institutions in Sustainable Development in the Central Asian Region

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Abstract The central purpose of this chapter is to demonstrate that adaptable, flexible, and appropriate institutions are central to sustainable development. The paradigm of agent-based social systems underlines the importance of better frameworks to support the role of institutions in sustainable development. The identified sustainable development strategies may be adapted to local conditions by countries and communities. Each of these strategies relies on judicious modification of preexisting institutions. A brief case study of the legal and institutional framework in Tajikistan is presented. This chapter shows *inter alia* why and how institutions—the glue of society that defines community—are critical to sustainability. Without them, sustainable development would remain in the domain of rhetoric.

Keywords Agent-based social systems • Development • Quality of life • Property rights • Human capital • Social self-governance • Environmental change • Trade regimes • Biogeophysical perspective • Interplay • Uncertainty • Mass communications • Ecosystem capacity • NGO • CBO • Tax • Enabling environment • Ethics • Social mores • *Khashar* • Donors • Foreign aid

Key Points

- Today in the western world, governance ideals and many practices support facilitation of collective actions through diverse institutional frameworks. This is in contrast to the ideology in the Central Asian countries which favors big, controlling

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government. Most governments determined, performed, and/or controlled many (if not most) collective actions, routinely dominating people, communities, organizations, and markets.

- Governance is not just a theoretical consideration. Coordination between systems at different levels of aggregation is aided by having fewer levels of governance and by clearly defining the responsibilities of each. Community sustainability can be choked off by inappropriate regional, national, or international institutions, or by a deficiency in technical and financial resources.
- Development is about social change with a strong implication of improvement. Thus, development may be understood as the process of making collective life more human. Development is the process of creating effective institutions to organize and regularize interactions so that risk is reduced and daily life made more predictable.
- Ultimately, development is a matter of changing minds, how people think and what they expect, changing legal and political systems, and developing new social practices.
- Social adaptation is the changes in instruments, ideas, and institutions that reduce community dependence on the affected part of the environment or to cope with external environmental stress.
- Unsustainability and sustainability are both a matter of how individuals and communities think about and their perception of the value of the world around them.
- At the most general level, institutions are constellations of rules, decision-making procedures, and programs that define social practices, assign roles to the participants in such practices, and govern the interactions among the occupants of those roles. Defined in this way, institutions constitute an important feature of the landscape in all areas of human endeavor.
- Although institutions are by their nature conservative, resisting change and supporting consistent practices, they should not be ungainly but should be ready to adapt for change. Institutional development is the conscious change wrought by policies following strategies, usually through the formal institutions of government, administrative regulations, and laws that assign the exercise of decision-making power in economics and politics.
- When institutions deal explicitly with human/environment relations, it is normal to refer to them as environmental or resource regimes. In thinking about large-scale environmental changes that have significant anthropogenic components, it is natural to focus first and foremost on the roles that these environmental and resource regimes play both in causing environmental problems and in constituting the principal components of solutions to such problems.
- Those seeking to understand the effectiveness of institutions are unlikely to make progress if they approach the problem like chefs, assuming that relatively simple recipes will work well, in the sense of producing similar results under a wide range of circumstances. Rather, they will need to adopt the perspective of physicians who know that a wide range of conditions may affect the health of specific individuals and that diagnosing particular cases necessarily requires skill in identifying the particular combination of conditions at work in each case.

- In solving environmental problems, we face a double problem: to date unknown dimensions of uncertainty and at the same time lost possibilities of solutions. The first aspect focuses on specific patterns of risk perception and the problem of an increasing lack of knowledge in terms of what we should know in order to make decisions. The second aspect focuses on what follows from basic features of modern society.
- Sustainable development demands at least a partial return to the traditional adaptation of social institutions to ecosystem needs. Every community, however, faces a distinct task in developing adaptive institutions, due to the uniqueness of each community's natural and socioeconomic environment. Natural environments and their importance to the community vary with ecosystem, the community's dependence on its environment, its resources, and so on.
- There is no development without change; sustainable development is continuous, long-term change. The only appropriate assumption is that development is more sustainable if environmental stresses are reduced and the ability to cope with them continually increased. Fewer stresses permit a more purposeful development strategy, and increased coping ability allows the community to pursue its strategy without distraction.

1 The Development Process

The term “development” is used to mean variously the following: economic growth, increasing human rights, more education, better quality of life, and much more (Chap. 12). As suggested by one critic of a narrow economic interpretation, development is about making life “more human” for as many as possible. Development is about social change with a strong implication of improvement. Economic wealth may help, as will political participation. Technology plays a part, and the rule of law has it uses. But if we have learned anything from an examination of more than 50 years’ practice of development, it is that development is a complex process that we poorly understand, that occurs for myriad reasons and fails for as many reasons; it is fragile and unpredictable (World Bank: World Development Reports). We also know that it involves change in social institutions from religion to education to economy.

Ultimately, development is a matter of changing minds, how people think and what they expect, changing legal and political systems, and replacing cultural common beliefs with new social practices. We now realize that land tenure systems, property rights, ideas about individualism and collective behavior, enforcement of contractual obligations, among many other factors, influence whether development occurs and what effect it has.

In addition to the complexity of dynamic interaction between dynamic ecological and social systems, the subjective collective understanding of “development” and “environment” continues to change. The concept of development reflects the evolution of collective ideas. An acceptable level of economic inequality at one time may be unacceptable a few years later. Economic growth has become less important,

and human rights have become more important aspects of development in many western societies. As scientific knowledge about the sensitivity of ecosystems to human incursions accumulates, individual and collective ideas about their usage will change.

1.1 Adaptation of Institutions

Development may be conceived of as the adaptation of institutions in response to such changes as (1) concepts of what is possible and desirable in human existence and (2) in ecological and socioeconomic environments that are changing in often unpredictable ways. Institutional changes produce physical, financial, and human capital resulting in greater social adaptation (see below).

Individuals experience development through their community. This is where life chances are formed from strategies, policies, and projects, and where human rights become real. The community forms the person and determines their livelihood and lifestyles. Thus, it is at the community level that human rights can be most effectively made a part of sustainable development. It is at the local level that abstract concepts become facts of life, where policies have direct effect on personal existence, and where the “humanness” of development becomes a part of personal life.

Sustainable development comes from a process of *social adaptation* designed to permit the greatest possible local adaptability and flexibility within flexible national and international institutions. Social adaptation focuses on the internal processes by which a community can adapt to environmental stress without changing its basic structure. It extends the concept of vulnerability by assuming that communities are dynamic and can use multiple strategies, including internal changes, to respond to environmental stresses.

1.2 Social Adaptation

Social adaptation extends the concept of vulnerability by using ideas from agent-based models.¹ It assumes, *inter alia*, that social systems are dynamic; that their behaviors and their responses to external stress, internal strategies, and policies are unpredictable; and that the appropriate unit of analysis is the community. In social adaptation, communities display the following attributes:

- Are unpredictable.
- Are, in their ideas and institutions, products of their history.

¹ Agent-based models also called individual-based models. Agent-based models could help to evaluate policies. The search for general principles underlying the internal organization of such systems often uses bottom-up simulation models such as agent-based models. Agent-based models could help to evaluate policies.

- Are limited in their responses by organizational inflexibility.
- May use physical capital assets to protect themselves from the effects of environmental stress. These are instruments.
- May change its institutions, formal or informal, to allow them to adapt to external stress.
- May not change the essential character or structure of those institutions that constitutes them as a community.
- Are affected by changes in individual and collective ideas through their effect on institutions.
- May use strategies to improve the process of sustainable development and policies to set measurable short-term goals. The effects of strategies and policies are unpredictable.

The response strategies of social adaptation groups fall into three categories: instruments, ideas, and institutions:

1. *Instruments* are the technical and physical means that a community uses to choose its way of life in the face of environmental change.
2. *Ideas* are the values and beliefs that drive the community and define collective long-term strategies and the related short-term policies, the local meaning of development, and how the community should relate to ecological and socio-economic environments.
3. *Institutions* embody ideas and define the practical daily relationships between individuals that constitute the community and implement strategies and policies (see below).

Social adaptation refers to the changes in instruments, ideas, and institutions that reduce community dependence on the affected part of the environment or to cope with external environmental stress.

Instruments. These include the technical and practical means of resource extraction and conversion into products and community defense against environmental stress. They include physical capital like farming equipment, factories, roads, flood levees, food storage, and water treatment, which may contribute to community sustainability. They also include financial capital that can acquire the necessary physical capital and human capital in the form of technological and technical ability. Many Central Asian countries, especially after the collapse of the Soviet Union, have long suffered from an inability to operate, maintain, and repair imported plant and equipment. Modern physical equipment is of no use without the infrastructure (parts and supplies depositories) and the capability to keep the equipment operating (requiring technology transfer) and to adapt it to local needs (technological mastery).

Technological innovation is commonly, and mistakenly, presumed to be a preserve of the developed countries. Economists have long recognized that the advanced technology of developed countries is produced in response to the production and market conditions of those countries. Aimed at product differentiation in a crowded market in a production environment with high labor and low capital costs, they usually are incremental, labor saving, and capital intensive. Instruments

offer some measure of protection against environmental stresses, but they are no panacea.

Ideas. Beyond mere survival instincts, ideas are the basis of individual human action. Ideas are the beliefs and values that make us social animals; the concepts of right and wrong, good and bad; the beliefs in abstract symbols that hold meaning for us and become our goals; and the source of judgment and selection between alternative strategies and actions. Ideas govern how we perceive and understand the world and choose our behavior.

1.3 Different Views of Sustainability

Unsustainability and sustainability are both a matter of how individuals and communities think about and value the world around them (Emadi, Chap. 5). Traditional communities in developing countries have usually developed in harmony with local ecosystems. The idea of a separation between people and their environment makes little sense for them. In those communities, the idea of people as “part of” a larger whole that contains all of life and the systems that support it, is lived and expressed in their cultures. Before the Soviet era, the culture of Central Asian farmers and herders accepted that people were embedded in “nature” (Rahimon, Chap. 3).

There is an extensive literature that argues that the only way to reduce consumption of natural goods over the long term is to change the ways that people value nonhuman life. There is a belief that only a change in the ideas that people hold will change their behaviors sufficiently to make sustainable development possible. A new consciousness could assign greater importance to abstract concepts like “environment” and “equity,” and less to material accumulation. It would place humanity within the system of natural life not outside it or above it. This is the basic concept embodied in land stewardship (Squires, Chap. 2). In developing countries, the self-actualization that is fundamental to many of these ideas is an impossible dream for all but the very few, buried as they are under the realities of a daily struggle to survive.

Ideas about human rights, equity, and justice also are critical to sustainable development. For development to be worth sustaining, it must be founded on human rights, but not to the exclusion of value in other forms of life. Protection and enhancement of rights for everyone is the essence of development, and preserving ecosystems cannot be at the cost of humanity for humans.

Changes in ideas are more problematic. Cultural practices that may be central to community cohesion and even to its material health can clash with the ideas embodied in products, services, and work practices imported into the community. Traditional culture may oppose many aspects of development as defined in the west. For example, in many countries, women are not allowed to participate fully in society or to participate in decision-making, and traditional culture may privilege an elite that opposes transparency and full participation in decision-making (Kurbanova, Chap. 7). Where traditional practices inhibit the sustainability of community, the community must make the ultimate decision to abandon or modify traditional ideas

and practices. In some cases, this may threaten ideas that are fundamental to the community. In part, this is the problem in Islamic countries such as those in Central Asia, especially Afghanistan where traditional interpretations of the Koran reject modern institutions (Rahimon, Chap. 3).

The common weakness of current concepts is the belief that a community is a fixed entity and that response to external stress should ideally avoid internal change. Such static thinking has no place in achieving sustainable development. There is no development without change; sustainable development is continuous, long-term change. The only appropriate assumption is that *development is more sustainable if environmental stresses are reduced and the ability to cope with them continually increased*. Fewer stresses permit a more purposeful development strategy, and increased coping ability allows the community to pursue its strategy without distraction.

Instruments, institutions, and ideas interact. As ideas evolve, for example, as a result of the environmental movement, institutions change. Institutions that embody and reinforce beliefs and values direct individual beliefs and behaviors. As institutions come to reflect a growing environmental ethic, technology is progressively directed to solving environmental problems. But as institutions change, reflecting ideas that may still be only marginally accepted, they become more embedded in society, guiding individual and public behavior. Institutions influence the quantity and quality of technological innovation, and ideas embodied in technology may influence the dissemination of other ideas and the construction of institutions.

As the prime tool-wielding animal, humans have always preferred the technological fix to more social solutions. In part, this has driven development and encouraged technological innovation. Advances in agriculture countered food shortages by managing and working in greater harmony with the environment. From that grew settlements, then villages, towns, and cities in which capital could be accumulated and from which blossomed “civilization” in all its art and industry. Technology has continued to be the tool of choice in mastering the environment and adapting it to human needs and wants. Technology is best used to fix technological problems; as a solution to social problems, it may have enormous unintended consequences. To fix social problems directly requires massive coercion or enormous persuasion to change individual motivations, neither of which is practical or effective.

Although social problems are rarely clearly defined, technology may reduce or change a problem to manageable proportions. For example, hunger could be eliminated by more equitably distributing the available global production. Because this requires subversion of food markets and massive aid inputs, this social solution has not been attempted. Instead technology has been used to increase global production. Despite continued maldistribution, the expansion of production has reduced hunger but often with serious unintended consequences. The green revolution and biotechnology have neatly avoided the social fix but have created ecological and social problems out of the technical solution. The consequences of this technological fix for a social problem include exhausted soil, pollution of water resources, increased crop vulnerability to disease, deforestation, industrialization of food production, increased demand for fossil-fuel fertilizers, and loss of rural livelihoods.

This technology-driven “fix” was a special feature of Soviet-style economies, and the legacy of that approach persists in many Central Asian countries.

The agent-based paradigm² focuses on the role of rules in ordering social interactions and creating the thing that we call “community,” the sense of belonging to a collective entity that benefits all. There is, however, a strong correlation between the strength of social institutions and the level and rate of development (as measured through the human quality of life index and gross domestic product). Development is the process of creating effective institutions to organize and regularize interactions so that risk is reduced and daily life made more predictable.

2 Nature and Role of Institutions

At the most general level, institutions are constellations of rules, decision-making procedures, and programs that define social practices; assign roles to the participants in such practices; and govern the interactions among the occupants of those roles. Defined in this way, institutions constitute an important feature of the landscape in all areas of human endeavor. Thus, marriage is a social institution governing relations among members of family units; markets are economic institutions dealing with interactions between buyers and sellers of goods and services; electoral systems are political institutions guiding the interactions of voters and elected officials. As these examples suggest, institutions can and do vary greatly along numerous dimensions, including the nature and number of their members or subjects, the character and scope of the social practices they initiate, the degree to which they are formalized in legally binding or other official formulations, their location on a spectrum running from newly formed to long-established arrangements, the extent of the organizational apparatus established to administer them, and the degree to which they are embedded in larger systems involving both other institutions and culturally determined behavior.

Institutions guide economic processes and scientific and technological developments. They also embody and reflect, and then form and develop, ideas about what is socially and individually beneficial and appropriate. Institutions are the key to social adaptation and sustainable development. By governing social interactions, institutions largely define the direction of development of instruments and ideas. This section describes the critical central role of institutions in sustainable development. Social institutions are central to sustainability: they reflect and influence ideas and direct the production of instruments. They embody ideas and frame social interaction—scientific research and economic competition—from which new technology and new ideas originate. Institutions are the rules that mediate agent interaction in the agent-based social paradigm. These rules may be informal or formal.

² Agents in this context are the various elements in society who are capable of making individual and independent decisions that can impact on systems. See also earlier footnote.

But in either case, they should be dynamic, changing as governments prescribe or in response to social and environmental pressures. A more detailed case study of legal and institutional aspects in Tajikistan is provided below. It focuses on the role of institutional and legislative reforms in facilitating land stewardship.

2.1 The Role of Institutions in Sustainable Development

Institutions loom large both in causing and confronting large-scale environmental changes. Much of the interest in this regard focuses on environmental/resource regimes or institutions that deal explicitly with human/environment relations. But the interaction of these regimes with other institutional arrangements must be considered as well. Major challenges in this field involve (a) evaluating the proportion of the variance in ecological conditions attributable to institutions, (b) pinpointing the determinants of the effectiveness of institutions, and (c) framing guidelines for the design of institutions to deal with specific problems.

This chapter shows *inter alia* why and how institutions—the glue of society that defines community—are critical to sustainability. Without them, sustainable development would remain the stuff of rhetoric. It is only in myriad communities that the abstractions of sustainable development take on a meaning related to the practicalities of life. But human and natural systems also must be taken into account. Institutions that guide local decision-making operate within local and national contexts. Communities of all sizes can increase their adaptive capacity by increasing technological innovation and ecological efficiency, by changing the commonly accepted beliefs about the value and uses of natural goods, and by increasing social equity and political participation. Sustainable development is a matter of changing many processes simultaneously, which requires continuous institutional development.

For two reasons, this chapter does not analyze in detail the state of knowledge about national and regional institutions in every Central Asian country. First, the variety of institutional forms and social and cultural contexts would make any formal analysis impractical and, as far as the author is aware, none has been successfully attempted. Second, it is more important to think about the nature of the concept of sustainable development and how institutions are central to its achievement. As sustainable development is an abstraction that describes no current community form or process, it is important to realize that sustainable development will be a process of trial and error, continuous reevaluation, and adjustment that is quite unlike present society. Sustainable development is a conscious process that involves individuals, communities, and local, regional, and national government organizations. This process, however, will be driven by uncertainty and evolving ideas and beliefs about the nature of development and the appropriate use of and relations to environment.

It is essential to recognize at the outset the existence of limitations on the roles institutions play in this realm and of complexities that make it dangerous to generalize from one setting to another, regarding the design of institutions intended to

govern human/environment interactions. Institutions constitute a crosscutting force in this realm. They determine a portion, sometimes a large portion, of the course that human/environment relations take in a wide range of settings. But in every case, institutions operate in conjunction with other driving forces (e.g., demographic, economic, and technological forces) that affect large-scale environmental processes independently or interact with institutions to create a complex web of drivers.

Moreover, institutions themselves operate at many levels of social organization and vary greatly in terms of the consequences they produce (see case study below). What works perfectly well in one social setting (e.g., local common-property systems) may be inoperable or lead to unsustainable uses of ecosystems in other settings (e.g., global arrangements dealing with climate change). Institutions that yield acceptable results during some stages of their existence may contribute to the occurrence of significant environmental problems during other stages. The challenge is to develop procedures that will allow us, at one and the same time, to separate out the effects of institutions from the impacts of other driving forces and to enhance our understanding of the ways in which institutions interact with other drivers to cause large-scale environmental changes in some instances and to contribute to preventing or ameliorating such changes in other instances.

Ideally, sustainable development should recognize the uniqueness of local ecosystems and human societies, make use of local abilities, and avoid what is not available locally: in developing countries, the most advanced technology and financial capital. In traditional societies, community institutions have developed in response to the immediate environment. Institutions governing the access to grazing land, the sharing of water resources for agriculture, and so on are adaptations of social systems to ecosystems that permit sustainability (Jacobs, Chap. 6). Traditional communities have developed institutional arrangements appropriate to their survival.

3 Institutions and Environmental Change

Although institutions are by their nature conservative, resisting change, and supporting consistent practices, they should not be immune to change. Institutional development is the conscious change wrought by policies following strategies, usually through the formal institutions of government, administrative regulations, and laws that assign the exercise of decision-making power in economics and politics. Unexpected effects are common, even for commonly visited issues, such as poverty and income taxes. Policies are more likely to change problems than solve them and are frequently revisited. Implementation is a further variable, the effects of which are unpredictable.

If competition and extremes of both wealth and poverty encourage excessive consumption, institutional modification to reduce inequality and social competition would be beneficial both socially and ecologically. Such formal institutions common in developed countries as progressive income taxes are intended, in part, to reduce economic inequality. Institutions also evolve with no conscious social effort from changes in technology or ideas.

In the language of economics, sustainability has to recognize and reflect the relative scarcity of human and physical capital in the locality. At the same time, nations are abstract constructs of diplomacy, war, and commerce that usually cover multiple ecosystems and often encompass multiple cultures. Thus, the institutional structures that organize ideas and activities in local regions within countries become critical to sustainability. As adaptability and flexibility are the essence of sustainability, those institutions must support flexible decision-making that is responsive to learning. Institutional change may be effective in directly responding to environmental stress, though this is rare. Governments may only indirectly influence the informal institutions that are the warp and weft of daily life. Informal institutions evolve in response to environmental changes, including changes in formal institutions.

Most accounts of the causes of large-scale environmental changes invoke a major role for the nation's institutions. Emissions of ozone-depleting substances such as chlorofluorocarbons, or CFCs, and greenhouse gases such as carbon dioxide, for instance, are commonly regarded as unintended by-products or, in the language of economics, externalities of the operation of structures of property rights that do not compel owners/users to take these environmental side effects into account in their private calculations of benefits and costs. Much the same is true of the clear-cutting of forests on the part of harvesters who operate under systems of land tenure that do not force them to pay attention to collateral damages inflicted on local people and on ecosystems or long-term costs (e.g., the consequences of releasing carbon stored in trees) arising from consumptive uses of forest products. For their part, depletion of the rangeland forage base and associated disruptions of ecosystems are regularly interpreted as consequences of rules governing the harvesting of living resources (e.g., open access rules) that do not give individual harvesters effective incentives to limit their activities in the interests of conserving stocks for the future (Squires, Chap. 2).

Yet institutions also figure prominently in most accounts of strategies for preventing large-scale environmental changes or coming to terms with them once they have occurred. Proposals for the protection of forest ecosystems frequently highlight adjustments in prevailing systems of land tenure designed to strengthen the rights of nonconsumptive users of forest products in relation to the rights of timber harvesters. Many recent efforts to break the vicious circle leading to accelerated land degradation—often described in terms of the metaphor of the tragedy of the commons—center on changes in the rules of the game that are being enshrined in law (see Halimova, Chap. 13) that are designed to affect outcomes by allowing individual users to reap the benefits of actions aimed at ensuring sustainable use now and in the future (Squires, Chap. 2).

When institutions deal explicitly with human/environment relations, it is normal to refer to them as environmental or resource regimes. The traditional arrangements dealing with the management of irrigation systems in small-scale societies, the more elaborate arrangements governing the uses of public lands at the national level, and the international regimes designed to protect the ozone layer and the Earth's climate system are all examples of environmental or resource regimes. In thinking about large-scale environmental changes that have significant anthropogenic components, it is natural to focus first and foremost on the roles that these environmental and

resource regimes play both in causing environmental problems and in constituting the principal components of solutions to such problems. Yet it is essential to recognize from the outset that institutions dealing with other human activities can and often do produce significant environmental consequences. But any number of other arrangements may have far-reaching environmental consequences as well. It follows that considerations of the institutional dimensions of environmental change cannot deal *exclusively* with studies of environmental or resource regimes.

3.1 Effectiveness of Institutions

There is great variance in the effectiveness of institutions or, in other words, the extent to which they determine the course of human/environment relations. Some institutions are largely ignored by all those nominally subject to their rules and decision-making procedures. Others prove far more effective during some stages of their existence than other stages. Still others appear to yield decisive solutions to the problems that give rise to their creation. As a result, those interested in large-scale environmental changes have a strong interest both in explaining apparent successes, such as the ozone regime, and in determining whether these successes offer lessons of interest to those concerned with other large-scale environmental issues, such as climate change or the loss of biological diversity.

In every case, however, there are major analytical and methodological problems facing those seeking to prove conclusions about the effectiveness or ineffectiveness of specific institutional arrangements. Central to this challenge is the danger of arriving at conclusions that are based on spurious correlations. To illustrate, suppose a problem like oil pollution at sea arises, an explicit regime is created to solve the problem, and the problem subsequently subsides. Can we conclude with confidence from this evidence that the regime has proved effective? Not necessarily. Despite the correlation between regime creation and problem-solving, the forces responsible for alleviating the problem may lie elsewhere. Even more likely is the prospect that institutional responses will constitute just one of a suite of interacting forces, including technological advances, demographic processes, economic incentives, and political pressures, that together determine the behavior of relevant actors with regard to particular issues. It may make sense in such cases to single out institutional forces for special attention, especially when there are good reasons to believe that institutional reform constitutes a necessary condition for solving the problems at hand. But the more basic challenge is to improve our understanding of systems of interacting forces and the roles institutions play as elements in these systems.

Where there is consensus on the proposition that an institution makes a difference, we come next to the issue of formulating criteria to be used in evaluating the performance of the relevant institutional arrangement. Those interested in large-scale environmental systems will find it natural to approach this issue initially from the perspective of sustainable development or ecosystems management. Do regimes governing access to grazing lands or arrangements dealing with international trade

in endangered species, for instance, contribute not only to the maintenance of sustainable harvests of the resources in question but also to the avoidance of nonlinear or chaotic changes in the broader ecosystems to which these resources belong? This biogeophysical perspective on effectiveness is obviously essential. But, at the same time, it is important to ask questions about the degree to which institutional arrangements produce results that are efficient and that conform to various standards of equity (Jackson, Chap. 15). In fact, sustainability, efficiency, and equity are likely to be closely linked under real-world conditions.

Given the costs of dealing with large-scale environmental problems, success in the pursuit of sustainability will be determined, in considerable measure, by the extent to which we succeed in finding ways to achieve the desired results as inexpensively as possible. Given the difficulty of coercing key actors, into adjusting their behavior to avoid or minimize environmental problems, more attention needs to be paid to the structure and functions of institutions. Moreover, the search for solutions that all concerned can accept as fair or just and therefore deserving of respect, looms large as a condition governing success in the pursuit of sustainability.

3.2 Institutional Dimensions of Widespread Environmental Change

Among those interested in the institutional dimensions of widespread environmental change, three analytic themes have surfaced recently as matters deserving particular attention. These themes are often described as the problems of (i) fit, (ii) interplay, and (iii) scale. The problem of *fit* revolves around the proposition that the performance of institutions in environmental terms is determined, in large measure, by the congruence or compatibility between the attributes of the relevant institutions on the one hand and the principal properties of the ecosystems in question on the other. Sensitive monitoring mechanisms and a capacity to adapt institutional arrangements quickly to ecological changes, for instance, are important in dealing with ecosystems prone to sudden, nonlinear changes. Similarly, the priority attached to the operation of compliance mechanisms should be a function of the capacity of the ecosystems in question to tolerate violations of the rules governing human uses of the relevant goods and services (Squires 2012, Chaps. 2 and Leake, 18). The problem of *interplay*, by contrast, centers on the proposition that institutional arrangements regularly interact with one another, even though it may seem convenient to treat them as self-contained entities for purposes of analysis. Understanding institutional interplay, therefore, is clearly a challenge that looms large for those concerned with the institutional dimensions of widespread environmental change.

The problem of *scale* arises from the fact that institutions affecting large environmental systems operate at a number of levels of social organization ranging from traditional practices governing the harvesting of local stocks of forage and woody species for fuelwood through national arrangements dealing with human uses of

natural resources located on public lands to international regimes addressing global problems such as climate change and the loss of biological diversity. Under the circumstances, it is natural to ask whether we can scale up and scale down in the dimensions of space and time in our efforts to understand the operation of institutions. Can we apply lessons drawn from the study of small-scale, local systems to the analysis of environmental regimes operating at the national level? Or do differences in the character of the actors involved or the nature of the relationships among them make it doubtful whether propositions developed at one level can be applied with suitable adjustments at other levels? Because anthropogenic forces affecting ecosystems occur at all levels of social organization, any comprehensive account of the institutional dimensions of environmental change must deal with processes at work at each of these levels. But this does not validate the conclusion that knowledge of the role of institutions developed at one level can be applied in any straightforward manner to processes at work on other levels.

The fact that institutions generally constitute one, among a suite of driving forces, which interact with one another in complex ways gives rise to a second major complication. The impacts of institutions may be substantial under a variety of circumstances. Yet the same institutional arrangements (e.g., common-property regimes) may generate different consequences depending on the character of the constellations of driving forces within which they are embedded. Under the circumstances, the facts that the universe of cases of distinct institutions is virtually always limited and that there is considerable heterogeneity among the members of this universe produce a third complication for those seeking to demonstrate causal links in this realm. Crafting appropriate financial mechanisms and systems of implementation review is obviously important in many, perhaps most, instances. Institutionalizing the rules of the game in the sense of embedding them in social practices that actors engage in as a matter of course is an important means of maximizing the behavioral effects of institutional arrangements. It would be hard for individual actors to escape from many long-standing local regimes dealing with common-pool resources, even in the unlikely event that they thought to make a conscious effort to do so. The interplay of regimes with one another is unquestionably a factor of considerable importance in determining the effectiveness of environmental regimes. It is always a mistake, therefore, to concentrate exclusively on the creation of specific arrangements without paying attention to the surrounding institutions with which these arrangements are likely to interact. The larger ecological and socioeconomic settings within which institutions operate are major determinants of effectiveness. The incidence of mismatches between regimes and their settings makes it clear that those responsible for creating institutional arrangements need to pay much more attention to this factor than they have in the past. It also highlights the importance of avoiding any tendencies to assume that "one size fits all."

We already know a number of useful things about the institutional dimensions of environmental change. It is clear, for instance, that systems of private property, public property, and common property all lead to sustainable human/environment relations under some conditions but to large-scale environmental problems under other conditions. The task ahead, therefore, involves refining our understanding of the

conditions under which one structure of property rights or another can be used to alleviate specific problems rather than engaging in sterile debates about the overall superiority of one system of property rights or land tenure over the others (Robinson, Chap. 11). Similarly, there is little doubt that the importance of issues relating to compliance varies dramatically from one institutional arrangement to another and that there are a number of paths leading to compliant or noncompliant behavior on the part of various groups of subjects. While the arguments of those who stress the importance of enforcement are valid under some conditions, enforcement in the ordinary sense of imposing sanctions on violators is not the key to achieving high levels of compliance in every situation. These insights do not lend themselves to packaging in the form of simple and invariant design principles. But taken together, they constitute a significant body of knowledge that is relevant to the efforts of those seeking to avoid or ameliorate large-scale environmental changes.

At the same time, it is apparent that we need to learn a lot more about the roles institutions play in causing and confronting environmental changes. In part, this is a matter of enhancing our understanding of institutions as such. Why are some environmental and resource regimes more successful than others? How can we pin down the causal roles of specific environmental arrangements? Partly, it is a matter of illuminating the interactions among institutions and other driving forces that together determine the course of human/environment relations. How do rules and decision-making procedures interact with demographic, economic, and technological forces? Do institutional arrangements that work perfectly well in some settings lead to outcomes that are unsustainable in other settings? In some respects, the challenge of understanding the interactions among driving forces that determine the course of human-dominated systems is daunting. But progress in meeting this challenge may yield particularly large payoffs for those seeking to illuminate the institutional dimensions of environmental change.

3.3 Problems of Uncertainty

In solving environmental problems, we face a double problem: so far unknown dimensions of uncertainty and at the same time lost possibilities of solution. The first aspect focuses on specific patterns of risk perception and the problem of an increasing lack of knowledge in terms of what we should know in order to make decisions. The second aspect focuses on what follows from basic features of modern society. The crucial point is that these features constitute systematic limits to individual problem-solving by means of strengthening individual morals and responsibilities (land stewardship). As a result, there are systematic limits in the prevailing efforts to integrate ecological and sustainability criteria into decision-making by means of information and moralizing. One answer to that is a change of the institutional framework and resulting incentive structures, so that it becomes easier to respond to changing ecological scarcities. But the crucial question remains: how to narrow the gap between prevailing short-run rationalities of the economic

and the political decisions, on the one hand, and the requirements of long-run sustainability, on the other. Institutionalizing new platforms of communication and participation may be a suitable option to tackle this problem.

Whenever we face problems in modern societies, we observe a tendency in mass communication to explain them as a result of inadequate behavior due to inadequate values or lack of awareness. Consequently, strategies of problem-solving under discussion are, in public opinion, usually based on information, enlightenment, and appeals to morals in order to generate the desired behavior voluntarily, for example, by instilling land stewardship (Squires, Chap. 2). And if this strategy fails, political regulations are usually expected to be an appropriate substitute.

We can also observe these patterns as far as environmental and sustainability problems are concerned. Strengthening environmental awareness and environmental regulations are the preferred strategies. These strategies are basically familiar to western political culture. But we have to go beyond them if we really want to approximate sustainability in Central Asian societies. In western societies, behavior and overall results are more and more determined by the (moral) quality of institutions and resulting incentive structures, and less by the (moral) quality of motives and individual morals. In contrast to the size of the task, and compared to the knowledge needed in order to solve these problems, our available knowledge is rather poor. Moreover, problem-solving mechanisms, which were effective in the past, like influencing behavior by norms commonly shared, fail more and more. The crucial point is that, nowadays, appealing to morals in order to strengthen those norms will be successful only under certain conditions and rather by exception than as a rule. Because of certain characteristics of modern societies, we tend to focus on the moral quality of institutions and their resulting incentive structures. But implementing an ecologically favorable institutional change into the market and political system demands new platforms of communication and participation to bring about and also to make use of an intensified environmental awareness, which is more sensitive to questions of suitable institutions.

Sustainable development demands at least a partial return to the traditional adaptation of social institutions to ecosystem needs. But every community faces a distinct task in developing adaptive institutions, for each community's natural and socioeconomic environment is unique. Natural environments and their importance to the community vary with ecosystem, the community's dependence on its environment, its resources, and so on. Each community also occupies a unique location in socioeconomic space. Communities at different levels of development face unique challenges in constructing adaptive institutions. Communities are able to partially protect social institutions through technological innovation, financial power, and centralized policies. But in the context of the substantial uncertainty about ecosystem capacity and social needs, adaptability and flexibility remain the essence of sustainability. Community institutions must support flexible decision-making that is responsive to learning, and those communities that are most successful in building such institutions will be the least vulnerable to the natural and socioeconomic change around them. For every community, the overarching strategy is to increase its adaptive capacity. What is possible and appropriate for each community can best

be determined within the community, where necessary with appropriate technical assistance. The basic objective should be to increase the stock of instruments, reconsider ideas, and develop flexible institutions that are more responsive to changes in the socioeconomic and ecological environments.

Less developed communities, poorer in human and physical resources and less resilient to environmental change, may develop institutions to increase social capital,³ whereas more developed communities are able to partially protect social institutions through technological innovation, financial power, and centralized policies. For example, Tajikistan and several other neighbors were assessed as the least adapted to impending climate change impacts (Fay et al. 2009; Oxfam 2009).

But in the context of pandemic change in globalization and the substantial uncertainty about ecosystem capacity and social needs, adaptability and flexibility remain the essence of sustainability. Community institutions must support flexible decision-making that is responsive to learning and those communities that are most successful in building such institutions will be the least vulnerable to the natural and socioeconomic change around them.

Many traditional communities have collapsed because their institutions—developed in response to their environment—have failed to respond to changes in that environment. Ideally, communities should increase physical, financial, and human capital while not depleting social capital. The emphasis on community-based strategies and political participation responds to the need to maintain and build social capital in the face of institutional changes that arise from changed markets and production technologies. Each community needs to increase its social adaptive capacity⁴ within its ecological and socioeconomic environment.

The first to recognize damage may be those who live by and depend on the ecosystem, though the “tragedy of the commons” warns otherwise. The commons is a social arrangement that permits public or open use of a limited resource. The tragedy is that the absence of governance (regulation) of resource use leads to exploitation by rational individuals that will destroy the resource for all. It is individually rational to maximize resource use even if that leads to a total collective loss. Diminishing production from a resource may actually encourage more rapid exploitation as each producer seeks to maximize its gains before the resource is eliminated. Too often, as seen in fisheries, ecological damage is only apparent when collapse is imminent.

Effective sustainable development policies will require scientific support. Orthodox science may not be able to define sustainable development or predict the behavior of ecosystems or social systems, but it still has a large role to play in identifying alternate policies to implement chosen strategies and to measure the effectiveness of policies.

³ Features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit.

⁴ The capacity of a system to adapt if the environment where the system exists is changing.

4 Facilitating Land Stewardship: The Role of Institutional and Legislative Reforms: A Case Study from Tajikistan

4.1 Legal Situation

The Republic of Tajikistan has a relatively well-formed body of law that establishes governance, management, and rights of access and use frameworks directly related to pasture, arable, and forest lands in the country. The existing framework includes the Constitution, various legal codes (Land Code, Forestry Code, Civil Code, etc.), laws (Law on Dehkan Farms,⁵ Land Use Planning Law, Law on Public Associations, etc.), presidential decrees, government resolutions, and various subsidiary regulations or guidelines issued by ministries or other government bodies within their realm of authority. Within this framework, the most common areas of concern are that:

- (a) The provisions are often vague.
- (b) They fail to clearly map lines of authority of the different government institutions responsible for implementation that do not overlap (roles and responsibilities of good governance frameworks).
- (c) They lack clear procedures that if followed would assist in implementation.

Naturally such issues are not conducive to economic development of any country. Fortunately, the GoT has shown that it is committed to reforms aimed at strengthening and improving the legal framework related to the agriculture sector in Tajikistan.

While there are many relevant legal instruments, the most important existing within the current legal framework that relate to pastureland management, and the agriculture sector more generally, include the following:

Land Code (2008). This is probably the most important piece of legislation, as it maps out the current system of land use rights that an individual or legal entity may possibly acquire⁶ and the framework for how they might be acquired. It covers all the categories of agricultural and nonagricultural as well as the State Reserve and Water and Forest Funds. This important law has gone through a number of amendments in order to strengthen it over recent years, with more changes already approved by the GoT that will be considered for adoption by the legislature in 2012.

Law on Dehkan Farms (2009). Another important law for the sector, the Law on Dehkan Farm, establishes the rights and procedures of Dehkan farmers that have

⁵ Dehkan (literally peasant) farms arose after the collapse of the Soviet Union and land previously in collective or State farms was allocated to former employees (see fuller explanation in Halimova, Chap. 13, this volume).

⁶ Both the Constitution and Land Code clearly indicate that the State owns all land in Tajikistan, but that individuals and legal entities may acquire, use, manage, and transfer the land use rights listed in the Land Code, which are rights “*in rem*” to the land under the law.

acquired land use rights existing within a joint Dehkan farm,⁷ a family Dehkan farm, or an individual Dehkan farm. It includes many important procedures which establish the relationship between farm shareholders and a farm chairman acting as the manager, the farm's dissolution, and a provision that clearly states the government cannot interfere in the operation of Dehkan farms except as provided in existing legislation.

Forestry Code (1993). The Forestry Code provides the governance framework for all forest resources in Tajikistan, particularly those located in areas that are classified under the Land Code as State Forest Reserve land. This legislation is particularly important because many areas that are considered by the GoT as pastureland exist within areas categorized as State Forest Reserve. A new Forestry Code, drafted with technical assistance provided by GIZ, was adopted by parliament in 2011. Many provisions of the now previous code were simply unworkable and did not support mechanisms for the sustainable management of the remaining limited forest resources in the country.

Civil Code (1998): The Civil Code provides the framework for a number of legal norms in the Republic of Tajikistan that relate to commercial law transactions, such as the ownership and transfer of property, entering into contracts, and other matters that can have either a direct or indirect impact on agricultural land management issues.

Land Use Planning Law (2008). Provides a framework for local government authorities to conduct land use planning within their areas of geographical authority. This is important in any future role they may play in any system of local pastureland management planning.

*Law on Self-Governance of the Local Mahalla Councils*⁸ (2008). This legislation lays out discretionary powers of the local communities and provides them with mandates relating to their roles in running social and economic activity. This includes the formation of sustainable natural resources management groups and committees, establishment of commercial structures, maintaining cooperation with international organizations, and setting up coordination bodies incorporating members of the mahalla councils located on other territories.

*Law on Self-Governance of Jamoats*⁹ (2009). This important legislation lays out the powers and authority of the lowest level of government currently recognized in Tajikistan and provides these authorities with important mandates relating to their roles in the land use rights allocation and management process, collection of

⁷ Joint Dehkan farms are commonly referred to as collective Dehkan farms. This terminology was changed during the most recent amendments to the law in 2009 in order to reflect better the actual land use rights of the shareholders in such a farm, which are joint and severable (a member of a joint Dehkan farm may have his interest in the land separated in order to establish a family Dehkan or individual Dehkan farm).

⁸ Mahalla is the local governing group see Glossary

⁹ Commonly referred to as the Law on Self-Governance of Town and Township.

taxes, and other matters that impact on agricultural land management. There is a requirement to draft new detailed terms of reference for individual jamoats based on local realities.

GoT Resolution 111 (2007). This resolution reiterates what is already stated in the Law on Dehkan Farms, meaning that farmers have the right to grow what they want and to market their products where they wish.

GoT Resolution 481 (2008). This resolution formalizes the program of improvement and rational utilization of the rangelands of Tajikistan in 2009–2015.

GoT Resolution 406 (2009). This resolution formalized the procedure for addressing needs and challenges in the agriculture sector of Tajikistan through the establishment of six high-level working groups in the areas of agriculture, water, land, alternative financing, local governance, and social protection.

4.2 Institutional Structures and Support Services

This section describes the institutions involved in sustainable land management in Tajikistan. These may be generally grouped into the following categories: (i) public, (ii) private, and (iii) donor. The section also identifies the problems of these institutions, while measures to reform them are highlighted below.

4.2.1 Government Institutions

The main GoT institutions serving agriculture include the Ministry of Agriculture (MoA), Ministry of Water Resources and Land Reclamation (MWRLR), Committee for Land Management, Geodesy and Cartography (CLMGC), and Committee for Environmental Protection (CEP). These are supported by local government counterparts at oblast and raion level plus several research institutions of the National Academy of Agricultural Sciences. Policy and strategy are formulated by the president's office and the parliament of the country, while GoT policy is regulated and implemented by the line ministries.

The key ministries/committees and agencies dealing with rangelands are briefly described below.

The MoA is the primary institution responsible for planning and management of agricultural development with oblast and raion departments of agriculture implementing policies and program and delivering other functions in rural areas. The ministry has several subdivisions and agencies such as Crop and Livestock Management Department, Department of Planning and Finance, Mechanization Department, Construction Department, State Veterinary Inspection, and Pasture Trust. They provide farmers with technical and extension services such as pasture-condition monitoring and rational pasture utilization and rehabilitation (under the Pasture Trust).

The Ministry of Land Reclamation and Water Resources (MLRWR) is a key state executive body of power in the sphere of water resources and land reclamation for policy management and implementation. MLRWR has broad powers in the sphere of pasturelands sector as follows:

- Makes decisions for the proper utilization and protection of water resources, construction of waterworks, rural water supply, and pasturelands irrigation
- Develops and implements short- and long-term state programs
- Streamlines a proper combination of state-centralized capital investments and business funds into the sector
- Supports and maintains the state-run irrigation systems
- Coordinates activities centralized and decentralized rural water supply systems and pasturelands irrigation

The Committee for Land Management Geodesy and Cartography (CLMGC) has many detailed functions. For instance, it (i) issues and keeps a register of land use right certificates, (ii) demarcates farm boundaries, (iii) provides maps, (iv) monitors pasture use, and (v) evaluates land ensuring the articles of the Land Code are upheld.

The Committee for Environmental Protection (CEP) is responsible for environmental protection of forestry resources and there are two departments:

- i. Forestry and specially protected territories consisting of the state enterprise on (a) forestry and hunting and (b) specially protected territories (national parks and reserves)
- ii. Hydrometeorology

The CEP is headed by a chairman who is appointed by the president. The chairman has two deputies each responsible for one department. The main functions of the CEP include:

1. Monitor use and condition of forestry and wildlife resources including forestry enterprises and nurseries, forestry-hunting enterprises, and forestry reserves.
2. Protect and preserve special territories such as national parks and reserves including wildlife and biodiversity.
3. Ensure that forestry and wildlife resources are used in an environmentally friendly manner and well preserved.
4. Develop policy and legislative framework and set norms and standards for environmental protection and monitoring.
5. Carry out environmental appraisal of various projects and other proposed interventions in the forestry and other sectors.
6. Carry out regular hydrometeorological observations of climatic conditions, including temperature and precipitation.

The oblast and, hukumats, and jamoats, at their respective level, have responsibility to (i) implement government policies and program and enforce laws, (ii) ensure that socioeconomic targets set by the central government are achieved, (iii) ensure timely tax collection and payment of wage and pension, and (iv) verify and

approve applications for Dehkan farm establishment (see Table 9.10 Description of legal responsibilities for pasture management in Tajikistan and Kyrgyzstan in Sedik, Chap. 9).

4.2.2 The Main Institutional Problems

- (a) Lack of institutional capacity to deliver effectively mandates and services with assigned functions are often nominal and not delivered.
- (b) Lack of funds to implement development programs and provide technical services to farmers.
- (c) Salaries since September 2011 have been raised significantly (minimum salaries now equivalent to US\$500); it is now hoped that government can be more selective in staff recruitment and now encourage more opportunities for professional growth.
- (d) Lack of opportunity for staff to upgrade their skills and knowledge.
- (e) Lack of ownership of donor-funded projects due to lack of capacity to absorb effectively project outputs and associated capacity building/institutional strengthening activities.

The MoA, for example, is small with most of its resources taken up in regulatory affairs dealing with animal health, seed, and support for improved plant varieties/hybrids and animal breeds. The ministry therefore lacks the financial and human resources required to deliver effectively all of its intended functions. This often prevents proper implementation of long-term development policies and programs especially when they are ambitious, which is often the case.

The MWRLR also has inadequate financial resources for operation and maintenance and combined with weak enforcement of water-use fee regulation has resulted in deterioration of physical infrastructure and reduced water delivery efficiency. The MWRLR is therefore unable to maintain its infrastructure especially given that a large percentage of it is pump irrigation is often nonoperational and costly to maintain.

4.3 NGOs/Private Sector Institutions

These include village and informal community institutions, local NGOs, and private sector service providers. Formal and informal grassroots organizations as well as service providers would comprise some of the stakeholders for projects since they would be demand-driven and community-based.

The NGO sector is widely represented internationally and locally. International NGOs (INGOs) currently involved in agriculture include the Aga Khan Foundation (AKF), Mission East, ACTED, Oxfam, GAA, and Helvetas. Local NGOs engaged in agriculture include the Agriculture Training and Advisory Centre (ATAC), *Chorvodori va Baitori*, and Center of Biotechnology. These NGOs are mainly sub-contracted by donors such as the World Bank, IFAD, USAID, EU, UNDP, and FAO

to implement projects and program and often compete with specialized (technical) agencies such as FAO and UNDP. They act like commercial consulting companies.

Several agencies have been assisting the GoT since 1997 to undertake initiatives to encourage the sustainable management of upland resources and to assist the mobilization of upland rural communities to identify and address their problems. These include (i) AKF in Gorno-Badakhshan (GBAO), (ii) ADB support for afforestation around Lake Sarez, and (iii) World Bank, UNDP, FAO, and NGOs such as German Agro Action (GAA).

Many of the international and local NGOs who operate throughout Tajikistan are appropriate to be selected as implementing partners owing to (i) strong presence, long-term, and solid experience of working at grassroot level with communities, (ii) experienced and qualified staff, (iii) flexibility and mobility in delivering project activities, and (iv) low cost and efficiency. The disadvantages, however, include (i) low quality of technical and financial reports, (ii) delay in submission of technical and financial reports, and (iii) overexpansion of areas of specialization to cover all agriculture's subsectors.

Private sector institutions in agriculture are represented by several input¹⁰ suppliers, processors, and service providers.¹¹ Private sector institutions, however, are underdeveloped due to the lack of an enabling environment, and this is especially true for those involved in agriculture. Many of the institutions¹² are treated like any other commercial enterprise and are subject to heavy taxation and government regulation and control.

The slow pace of reform, demanding licensing and inspection requirements, weak infrastructure, and high business risk continue to be barriers to greater participation by the private sector especially in rural areas. Agriculture however is a high-risk industry due, for example, to unpredictable weather conditions and the volatility of world market prices such as those for cotton (particularly 2011).

4.4 Donors/Foreign Aid Organizations

Tajikistan relies heavily on donor aid in the form of loans and grants to develop agriculture since the GoT allocates limited resources to develop agriculture including implementing its reform and maintaining its infrastructure. The main donors include the ADB, EU, FAO, GIZ, IFAD, ICARDA, UNDP, USAID, and WB.

Problems faced by donor programs include:

- Donor-funded projects are often implemented as stand-alone ones, and little if any cooperation between donor projects is observed even between those funded by the same donor. There are consequently few opportunities to (i) draw on

¹⁰ Such as seed and fertilizer.

¹¹ Including private veterinarians, animal breeding, and advisory.

¹² Such as input suppliers, processors, and service providers.

lessons learned, (ii) take advantage of synergy, (iii) jointly utilize resources, and (iv) avoid duplication.

- Donor-funded projects often provide minimal ownership by local communities and government of project activities. Government implementing partners often lack capacity, staff, commitment, and resources to ensure that project activity continues well after the end of donor funding.

4.5 *Community-Based Organizations*

The GoT together with the international donor community recently contributed to development using community-based organizations. Examples of this may be seen in certain projects funded by the ADB, EU, UN, and WB and implemented by NGOs such as German Agro Action, Mercy Corps, and Save the Children. These projects helped to strengthen traditional social institutions such as mahalla committees as well as the management capacity of district and jamoat-level development committees.

Community mobilization in Tajikistan has two forms:

- (a) The traditional natural informal grouping when community leaders, aware of a particular issue, help to unite the community around resolving a problem. This does not, however, lend itself beyond small self-help initiatives.¹³
- (b) More institutionalized which is normally instigated by donor-inspired programs and projects where problems and solutions need to be reviewed in a more structured and democratic way. Structured community groups are required to make decisions and importantly to manage funds.

Mahalla is a form of local self-governance at the village level but is rather informal. The main law guiding formation and functioning of mahallas is the law of the Republic of Tajikistan on “Local self-initiative bodies” (last revised 2008). The main purpose of establishing mahallas is to enable local communities to address urgent social and economic issues faced by the communities such as resolution of land disputes, fixing infrastructure (irrigation canals, water supply schemes, bridges, schools, etc.), and joint grazing of livestock.

The mahalla still retains an ancient custom called the *khashar* which is the peoples’ assembly that identifies problems and their solutions. *Khashar* is voluntary, and community members never refuse to participate in social work. It is “helping people by the people” as opposed to “helping people by the GoT.” *Khashar* is for the practical implementation of post-emergency or development activities such as the construction of destroyed homes, post-disaster road rehabilitation, and bank and shore protection work.

¹³ These would, for example, deal with a broken bridge or road and the current grazing/herding arrangements.

Most of the national and international NGOs¹⁴ have been involved in capacity building through community mobilization and group formation. This helps to strengthen traditional social institutions like the mahalla committees as well as strengthening the management capacity of the district and jamoat rural development committees. The latter played an important role during the recovery phase after the civil war when the country was in a critical situation, and it was necessary to instill into people faith and hope for a peaceful future.

Some of the positive aspects resulting from recent community mobilization activities include:

1. Creation of new social institutions such as pasture-user associations, forest-user committees, and meat and milk producers associations
2. Continued development and support for associations like water-user associations, associations of Dehkan farmers, and parents and teachers associations
3. Improvement of existing public institutions
4. Capacity building through local initiatives
5. Strengthening of the capacity of traditional community institutions such as mahalla committees
6. Creation and development of different types of new community organizations including NGOs

Experience of mobilization activities in Tajikistan and elsewhere suggests the following conclusions:

- (a) The effectiveness of project-inspired community institutions wanes or ceases after projects are completed.
- (b) The dominance of influential members in committees tends to suppress the enthusiasm of other members.
- (c) Participating communities may not realize sufficient benefits to make participation and project investment worthwhile. Communities may also not wish to wait a long time from planning to implementation given prior experience with donors of promising funding once a plan is completed and then funding only one project rather than the entire plan.
- (d) Institutional and policy development activities would include the creation of working groups, capacity building of implementing partners, provision of support services/inputs, supply of rural finance, and development or strengthening of CBOs. Proposed activities include the following: creation of working groups, capacity building of implementing partners, provision of support services, and strengthening of CBOs.

For example, a functional analysis of the Ministry of Agriculture (MoA) was carried out by an international consultant recruited by the World Bank to produce recommendations for institutional reform. The report suggested the reform of key agricultural institutions to define their role as policy and strategy makers rather

¹⁴ Such as GAA, AKF, Mercy Corps, Save the Children, CAMP Kuhiston, Azal, and Latif.

than development activity implementers. The MoA, for example, could become responsible for developing national policies and strategies and creating an enabling environment for private sector and farmers.

Existing land legislation was amended several times in the last 10 years to advance land reform but with little success. The current land reform is incomplete, and law implementation and enforcement have been slow and ineffective. The following changes to the Land Code were proposed to the GoT in December 2010:¹⁴

- (a) Land use rights may be acquired and owned by individuals and legal entities of the Republic of Tajikistan.
- (b) Land use rights are subject to buying, selling, gifting, exchanging, pledging, and other transactions.
- (c) Holders of those rights can enter into land use transactions without government interference.
- (d) Individuals may not be deprived of their land use rights except for cases stipulated in the land legislation.
- (e) Owners of land use rights have the right to independently transfer their rights in favor of third persons.
- (f) There can be no discrimination regarding access to land use rights based on gender.
- (g) Only farmers and farm organizations can hold “ownership of land use rights” to agricultural land, and all currently issued land certificates remain valid.
- (h) The government cannot arbitrarily terminate land use rights that have already been issued to farmers and farms except for cases stipulated in the land legislation.

Other land legislation will need to be amended in line with changes proposed to the Land Code relating to the Laws on (1) Dehkan Farm, (2) Mortgages, (3) State Registration of Immovable Property, (4) Land Valuation, (5) Land Management (sometimes called Law on Land Planning), (6) Land Reform, and (7) Civil Code.

So, in the case of Tajikistan, and doubtless other Central Asian countries as they transition to a market economy, there will be much trial and error before the institutional framework evolves to a more workable solution. In the meantime, there is attempted reform, and, as the following section shows, greater transparency and accountability are features of good governance. Having a sound legal framework is also important (Hannam, Chap. 17 and Robinson, Chap. 11).

5 Governance

Today in the western world, governance ideals and many practices support facilitation of collective actions through diverse institutional frameworks. This is in contrast to the ideology in the Central Asian countries which favors big, controlling government (Rahimon 2012, Chap. 3). Most governments determined, performed,

¹⁵ The amendments to the Land Code were initiated by the DCC, and the process was led by USAID Land Reform Project.

and/or controlled many (if not most) collective actions, routinely dominating people, communities, organizations, and markets.

In the west, facilitation of public-values-oriented social self-governance and civil society is one principal concern of public administration today. Another is facilitation of responsible market economies. The third is governmental administration that is conducive to facilitative-state integrity, effectiveness, efficiency, and economy. Each of these three dimensions is briefly analyzed below, following a note of concepts that apply to all three. In both theory and practice, facilitation often means that public administration (and government generally) should leave people and markets and their interactions alone, but of course there is no perfect compliance with this ideal. Instead there is support of dispersed authority among governance rule systems and restructured public administration to facilitate their effectiveness.

Social self-governance and civil society involves balancing transparency and access with privacy and security, and this is a growing public administration challenge. Globally, public administration and the private sectors alike often function in contexts of crime, corruption, and terrorism that are both international and domestic. Governmental openness is increasingly one means supported in the west to combat these problems. Corruption reduces predictability, increasing the risk and uncertainty of investment. Transparency of formal governance institutions reduces transaction costs and increases the predictability of investment, thus lowering its costs. Lack of transparency is an especially effective block to inward foreign domestic investment.

Government under law and governance through law is the ideal that the western countries strive for. Administrative law standards as essential to assure legal certainty in public administration are the following: the rule of law, procedural fairness, timeliness, administrative discretion, proportionality, and professional integrity. A standard of rational bureaucracy is that authority should be commensurate with responsibility. That endures as a basic tenet.

Governance is not just a theoretical consideration. Coordination between systems at different levels of aggregation is aided by having fewer levels of governance and by clearly defining the responsibilities of each. The coordination of activities between many levels of aggregation is the most complex part of implementing the vision of nested systems of communities, regions, and nations. Community sustainability can be choked off by inappropriate regional, national, or international institutions or by a deficiency in technical and financial resources. There are also many opportunities for crosscutting conflict between overlapping jurisdictions. Regional authorities designed as the optimal unit of ecosystem management may conflict with local communities that make their livelihoods from the ecosystem.

6 Summary and Conclusions

Generally, management of rangelands has aimed at optimizing short-term benefits from the production of food, fiber, and fuel. However, we have compromised the ecological integrity of global ecosystems and caused negative impacts on our social

environment by not accounting fully for environmental and social costs. For humans to live sustainably, we must manage natural resources in a way that prevents their depletion and protects their potential for self-replenishment.

Natural systems are comprised of numerous complex interactions that are difficult to anticipate, predict, or control. An adaptive management framework is needed to respond flexibly to ever-changing circumstances in a manner that uses both our scientific knowledge and local experience to best achieve sustainable goals. The ecosystem service approach should not be viewed as a replacement of, but rather as a compliment to, adaptive resource management (Squires, Chap. 2.) A sound and structured decision-making process is essential so that logical decisions are made that best achieve a sustainable goal.

Managing to retain resilience is paramount to sustain social ecosystems. Support entities and policy makers must also adopt an adaptive management *modus operandi* and work with managers toward achieving sustainable management in a participatory manner to sustain livelihoods and our natural and social capital.

Institutions loom large both in causing and confronting large-scale environmental changes. Much of the interest in this regard focuses on environmental/resource regimes or institutions that deal explicitly with human/environment relations. But the interaction of these regimes with other institutional arrangements must be considered as well. Major challenges in this field involve (a) evaluating the proportion of the variance in ecological conditions attributable to institutions, (b) pinpointing the determinants of the effectiveness of institutions, and (c) framing guidelines for the design of institutions to deal with specific problems.

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References and Further Reading

- Emadi MH (2012) Better land stewardship to avert poverty and land degradation: a viewpoint from Afghanistan. In: Squires V (ed) Rangeland stewardship in Central Asia. Springer, Dordrecht, pp 91–108 (Chapter 5, this volume)
- Fay M, Block RI, Ebinger J (2009) Adapting to climate change in Eastern Europe and Central Asia. World Bank, Washington DC
- Halimova N (2012) Land tenure reform in Tajikistan: implications for land stewardship and social sustainability: a case study. In: Squires VR (ed) Rangeland stewardship in Central Asia. Springer, Dordrecht, pp 305–332 (Chapter 13, this volume)
- Hannam I (2012) International perspectives on legislative and administrative reforms as an aid to better land stewardship in Central Asia. In: Squires V (ed) Rangeland stewardship in Central Asia. Springer, Dordrecht, pp 407–430 (Chapter 17, this volume)
- Jackson R (2012) Attitudes toward endangered wildlife protection and barriers to implementation. In: Squires V (ed) Rangeland stewardship in Central Asia. Springer, Dordrecht, pp 357–380 (Chapter 15, this volume)

- Jacobs M, Schloeder C (2012) Afghanistan's extensive livestock producers. In: Squires V (ed) Rangeland stewardship in Central Asia. Springer, Dordrecht, pp 109–128 (Chapter 6, this volume)
- Kurbanova B (2012) Constraints and barriers to better land stewardship: analysis of PRAs in Tajikistan. In: Squires V (ed) Rangeland stewardship in Central Asia. Springer, Dordrecht, pp 129–164 (Chapter 7, this volume)
- Oxfam (2009) Reaching tipping point: climate change and poverty in Tajikistan. Oxfam International, Dushanbe, 22 p
- Rahimon RM (2012) Evolution of land use in nomadic culture in Central Asia with special reference to Kyrgyzstan and Kazakhstan. In: Squires V (ed) Rangeland stewardship in Central Asia. Springer, Dordrecht, pp 51–70 (Chapter 3, this volume)
- Squires V (2012) Better land stewardship: an economic and environmental imperative if there is to be sustainable development. In: Squires V (ed) Rangeland stewardship in Central Asia. Springer, Dordrecht, pp 31–50 (Chapter 2, this volume)
- World Bank (2006) World development reports. Equity and development Washinton, DC
- World Bank (2007) World development report. Development and the next generation Washinton, DC
- World Bank (2008) World development reports. Agriculture for development Washinton, DC