AGRO-ENVIRONMENTAL GOVERNANCE AND THE STATE: LESSONS FROM CENTRAL AND EASTERN EUROPE

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1 Introduction

Agriculture produces not only food and fiber but also a particular rural environment. This rural environment includes a variety of elements, such as wildlife habitats and cultural landscapes, which have been labeled "countryside and community attributes" (BROMLEY and HODGE, 1990), "countryside goods" (WHITBY, 1990), and "non-commodity outputs" (OECD, 2001). Many of these elements share the feature that it is technically difficult or costly to exclude potential beneficiaries from their use or enjoyment (WHITBY, 1990, OECD, 2001). Their production suffers from the free-rider problem: as farmers cannot fully capture the benefits from their production, they will not supply them at socially desirable levels (OSTROM, 1990).

The literature on institutions for natural resource management suggests three broad types of property regimes to overcome the free-rider problem: private property, state property, and self-governance (OSTROM, 1990; BROMLEY, 1991; BALAND and PLATTEAU, 1996). Resource governance typically combines elements from all three types, the concrete mix depending on a variety of factors related to the features of the resource and the characteristics of involved actors (OSTROM et al., 1994; AGRAWAL, 2001; HAGEDORN et al., 2002). These factors, by extension, determine the role of the state in governance.

This paper presents an institutional analysis of agro-environmental governance in Central and Eastern Europe. The region offers a particularly interesting setting to study governance because the postsocialist states, including national and local structures, have undergone radical transformations (ELSTER et al., 1998). These transformations have followed different trajectories at national and local levels. Political systems today differ by the degree of democratic consolidation, i.e., the role assumed by state structures in the creation and implementation of policy (GRZYMALA-BUSSE and LUONG, 2002). Many state authorities have not routinized their control over property and resources (STURGEON and SIKOR, 2004). The variation in political systems, therefore, offers a special opportunity to study the conditions that influence governance and the associated role of the state. The paper takes advantage of this opportunity to analyze the institutional causes of current environmental problems in Central and Eastern European agriculture and examine options for promoting governance that increases the production of environmental amenities. The analysis proceeds through a comparison of three coordinated case studies on agro-environmental problems.

2 Agro-Environmental Governance

Agriculture produces a variety of goods (WHITBY, 1990; OECD, 2001: 80-83).1 A key difference between the various goods is the difficulty of exclusion (ibid.). For some goods, particularly for goods with significant existence and bequest values such as endangered biological species, it is technically difficult, very costly, or politically infeasible to exclude potential beneficiaries. A further distinction is the degree to which goods are subtractable in consumption (OECD, 2001: 80-83). Some goods, for example groundwater, can be depleted if extrac-

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1 In this paper, the goods of interest are confined to agricultural crops and environmental amenities.
tion exceeds regeneration. Other goods, such as biodiversity and flood control, can be enjoyed by people without foreclosing potential enjoyment by others. Agriculture, therefore, can be characterized as a complex of multiple functions with attributes of private, common-pool and public goods (OSTROM and OSTROM, 1977). The relative significance of the diverse functions varies between places and over time (BROMLEY and HODGE, 1990: 201).

Agriculture produces the various goods jointly. Joint production is a matter in practice, though there may be theoretical ways and long-term technical possibilities to divide their production (BROMLEY and HODGE, 1990: 202; WHITBY, 1990; OECD, 2001: 38-49). The production of most goods requires agricultural production, though exceptions exist. This is not to say that the different goods are produced in fixed proportions or that there is a direct relationship between the production level of food and the production of other goods. Yet the production of most goods requires farmers, in many cases even the use of certain farming practices.

Farmers produce common-pool and public goods located at multiple scales (OECD, 2001: 49-52, 80-83). Some goods are appropriated by a geographically concentrated group of individuals. For example, many villagers draw on small-scale irrigation systems to water their agricultural crops and care for their livestock. In this case, farmers are producers and beneficiaries of the same good. In other cases, demand for environmental goods originates from far away. For example, people in some part of the world enjoy the knowledge that farmers in another part of the world protect certain endangered fauna or flora. Thus, agriculture tends to affect a diverse set of interests located at the local, regional, national and international levels.

Agro-environmental governance needs to solve the free-rider problem for common-pool and public goods. Because it is difficult or costly to exclude potential beneficiaries, farmers cannot fully capture the benefits from producing non-excludable goods and will not produce them at desirable levels. For example, farmers may be reluctant to protect wildlife habitats, as they cannot recoup the costs of protection from its beneficiaries. They are unlikely under these circumstances to protect wildlife habitats at the socially desirable level.

Three broad types of property regimes have been proposed for overcoming the free-rider problem in natural resource management: private property, state property, and self-governance (OSTROM, 1990; BROMLEY, 1991; BALAND and PLATTEAU, 1996). Each property regime combines a certain assignment of property rights with governance structures for provision, enforcement of property rights, and knowledge dissemination. Privatization involves the assignment of extensive property rights to private entities, which are presumed to engage in market transactions and direct negotiations to produce the resource at desirable levels. State property regimes rest property rights with the state and rely on the state's administrative capacity to manage the resource. Self-governance, also referred to as common property, is a decentralized approach that gives property rights to local collective bodies and expects them to coordinate resource management. The type of governance affects not only the distribution of benefits but also the level of production, as transaction costs are significant in agriculture (BROMLEY and HODGE, 1990; WHITBY, 1990).

Agro-environmental governance typically combines elements from at least two of these property regimes. For example, the agro-environmental schemes promoted by the European Union implicitly acknowledge farmers' rights to land and seek to motivate production of desirable goods through a combination of state administration and market (LOWE and BALDOCK, 2000). Agricultural agencies decide upon eligible areas, eligible farmers, and required practices. Yet

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2 One should add club goods for the sake of completeness. They are neglected in the further discussion.
3 For example, specialized organizations can perform landscape management practices.
4 The discussion focuses on the free-rider problem in the production of common-pool and public goods. The discussion therefore considers only part of the provision problem for common-pool and public goods. The difference is that providers include those who arrange for the production of a good (OSTROM, 1990: 31).
5 The treatment of property rights is crude here for reasons of space and simplicity. A more detailed analysis would consider different types of rights.
farmers' participation in the schemes is voluntary. Hybrid governance structures are common in agro-environmental governance. The question is not which type of property regime is best for agro-environmental governance, but what combination of private, state, and cooperative elements serves the production of common-pool and public goods by agriculture.

What roles does the state, including national and local authorities, assume in natural resource governance? The roles attributed to the state differ widely, not only between the three broad types of property regimes but also among governance hybrids in practice. Private property regimes tend to reduce state involvement to a minimum, the state being solely the ultimate guarantor of property rights (Barzel, 1997). The state assumes a more extensive role in self-governance, supporting local collective bodies by providing expert information, enforcing property rights against outsiders, offering supplementary financial incentives, and facilitating cooperation (Baland and Platteau, 1996: 349-9; Grafton, 2000: 506-7; Agrawal, 2001: 1656-7). Its intervention into resource management is most direct under state property, where the state enjoys legal rights on the resource and assumes direct responsibility for its management. But even here the state may not manage the resource directly but allocate use rights to private managers. The roles assumed by the state, therefore, demonstrate great variation, with respect to both property rights and governance structures.

The specific form of resource governance has been shown to be the outcome of multiple factors related to resource features and actor characteristics (Ostrom et al., 1994; Baland and Platteau, 1996; Agrawal, 2001; Hagedorn et al., 2002). Relevant features of the resource include excludability of potential users, subtractability in consumption, and geographical distribution. Factors related to the involved actors take account of their political-economic resources, social networks, moral norms, and relations with larger political-economic forces. These factors, by extension, determine the role of the state in resource governance. The following analysis seeks to understand critical conditions that influence the role of the state in agro-environmental governance. The analysis proceeds by way of three case studies from Central and Eastern Europe that examine current forms of governance and options for promoting improved governance.

3 The Cases

The selection of the case studies satisfies two criteria. First, they examine important environmental problems in Central and Eastern Europe (World Bank, 2000; Sikor 2004): irrigation in the Plovdiv region of Bulgaria, the conservation of cultural landscapes and biodiversity in the White Carpathians of the Czech Republic, and the protection of open space around Warsaw, Poland. Second, the environmental goods of interest in each case are located at different scales: local in the case of surface water, regional in the case of open space, and (inter)national for cultural landscape and biodiversity.

Comparative assessment of three cases does obviously not yield definitive answers. The nature of the following analysis should therefore be considered exploratory. The analysis is intended to provide insights on critical factors influencing agro-environmental governance and the role of the state, insights that should be examined in further research (Grafton, 2000; Agrawal, 2001).

The analysis proceeds in three steps. The first step consists of single-case analyses identifying the causal factors that underlie current levels of production. The analysis centers on four sets of factors (Ostrom, 1990; Hagedorn et al., 2002; Sikor, 2004): (1) actors and their characteristics; (2) the features of the good(s) produced by agriculture; (3) legal and de facto property rights on the goods; and (4), the governance structures in place for provision, property rights enforcement, and knowledge dissemination. The relevant data were collected by way of semi-structured interviews, informal conversations, document review, and direct observation in the course of 2001 and 2002.
The second step involves single-case analyses identifying and assessing institutional options for improved agro-environmental governance. In each case, options are chosen to satisfy two criteria. First, they need to cover a wide range of institutional possibilities, including elements of private, state and common property regimes. Second, the options have to be feasible in the sense that they are discussed by actors involved in the cases or have proven their suitability in comparable situations. Once identified, the options are assessed in terms of (1) political feasibility, referring to stated and expected reactions by involved actors; (2) expected effects on the environmental good(s) of interest; and (3), estimated transition and transaction costs. Anticipated effects and costs originate from the match between the institutional option, on the one side, and its political feasibility and the features of the good(s), on the other. Effects and costs are based on estimations by the researchers, are informed by interviews and conversations with relevant actors, and are intended to serve the objective of qualitative comparison between options.

The third step consists of the comparative assessment. This is the only step documented in this paper for reasons of space. The single-case analyses are discussed in Penov (2003, 2004), Ratinger and Krumalova (2002), Ratinger et al. (2003), Wasilewski and Sikor (2003), and Wasilewski and Krukowski (2004).

4 Comparative Assessment

All three cases report that legal property rights have shifted from the state and agricultural collectives towards private entities. Property reforms have restituted or redistributed legal titles on agricultural land to private owners. At the same time, privatization laws, land use regulations, water laws, etc. assert state property on key natural resources and environmental amenities. They reserve legal rights to common-pool and public goods associated with land to the state and impose legal obligations on the recipients of the new land titles to protect the state rights.

Table 1: The cases in comparison

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Note: This characterization refers to the nature of the political system in the specific case. It does not imply any judgments about the political systems of Bulgaria, the Czech Republic, and Poland.

The capacity of the state to exert control over property and resources varies between the cases, however (see Table 1). The Bulgarian case study reports a wide gap between state structures and the arenas in which authority is negotiated and exercised. The location of authority and power is rather fragmented and diffuse in all but some villages, leading to a mismatch between the state agencies formally in charge and the fora in which policies are actually negotiated, created, and implemented. As a consequence, the state has lost credibility in the eyes of rural people with respect to its enforcement capacity. In contrast, the Czech and Polish cases characterize the local political systems as consolidated, in the sense that state structures are the primary venues through which policy is created and implemented. Thus, the nature of the local political system varies from fragmented to consolidated, depending on the location of authority within or outside the state.

The three political systems also differ by the degree to which power is centralized or decentralized (see Table 1). The Czech case depicts a political system that is consolidated and more

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6 Transition costs are the costs of shifting to the new governance system. Transaction costs are those occurred in operating the new governance system (Challen 2000).
centralized than the one in the Polish case. The authority to create and implement policy primarily rests with state actors at the central level. The Agricultural Agency and Local Administration of the Protected Landscape Area directly report to the central-level Ministries of Agriculture and Environment. The Polish case demonstrates a political system that is more decentralized. Local governments are the primary arenas in which actors negotiate policy design and implementation. The Bulgarian case, in turn, discusses a political system that is fragmented and decentralized. Much authority over policy design and implementation remains outside the state at the local level.

The nature of the local political system shapes the capacity of the state to enforce its legal rights on natural resources and environmental amenities. The state is unable to translate legal rights into de facto rights in every case equally. The discrepancy between legal and de facto rights is modest in the Czech case. Farmers comply with regulations on appropriate land use, but they only do so because of financial compensations. They are in the process of building up claims for "presumptive entitlements in the policy arena" (BROMLEY and HODGE, 1990) as a reward for their compliance with land use restrictions. The gap between legal and de facto rights is significant in the Polish case, because the decentralized nature of the political system prevents the enforcement of central restrictions on land conversion. Local actors ignore the legal procedures and land use regulations applicable to land conversion, circumventing legal restrictions on private land rights and extending the powers of the local state beyond the level foreseen in central legislation. The gap between legal texts and the actual situation is most pronounced in the Bulgarian case, as the fragmented nature of the political system prevents the enforcement of state property not only on surface water but also irrigation infrastructure.

The nature of the political system consequently affects the production of common-pool and public goods by agriculture. If the political system is fragmented, agriculture is unlikely to supply those goods. The farmers in the Bulgarian case ignore state property in irrigation infrastructure, because the political system is too fragmented to protect state property. Irrational water use and infrastructure decline are the consequences. If the political system is consolidated, agriculture is more likely to produce common-pool and public goods. The farmers investigated in the White Carpathians supply public goods because the state possesses the capacity to create and implement appropriate policy. But this is not necessarily the case, as the Polish case illustrates. The farmers in the Polish case do not preserve open space at socially desirable levels. Though the state possesses democratic authority, the decentralized nature of the political system leads to a situation in which dominant local interests drive land conversion.

More broadly, the comparative analysis suggests the influence of four factors on agro-environmental governance. The match between excludability, scale, consolidation of political system, and degree of centralization conditions the specific form of agro-environmental governance. As a result, the less consolidated the political system, the more agriculture tends to focus on the production of private goods. Vice versa, the more consolidated the political system, the higher is the likelihood that agriculture also supplies common-pool and public goods. In addition, the stronger the degree of centralization, the better are the chances that (inter)national public goods are produced by agriculture. Agriculture in decentralized political systems is more likely to concentrate on producing local public and common-pool goods.

5 Conclusions and Policy Recommendations

The tentative framework contributes two important innovations to theory on natural resource governance. First, it integrates the state into the analysis, stressing its embeddedness in political systems. The framework therefore builds on the increasing recognition that the state plays an important role in natural resource governance (BALAND and PLATTEAU, 1996; GRAFTON, 2000). It goes beyond previous analyses by linking the role of the state not only to features of
the good but also to the nature of the political system. The specific roles of the state in resource governance vary depending on the question if the political system is consolidated or fragmented, and if it is centralized or decentralized.

Second, the framework offers an approach to analyzing complex 'resource systems' including multiple uses by multiple users. Agriculture is conceived of as a 'resource system' that provides a variety of functions in varying combinations. This notion matches recent work on forests, which stresses the multiple products and services derived from forests (GIBSON et al., 2000). It is different from the focus on single-use resources with homogeneous features commonly found in the literature (e.g., OSTROM, 1990). That single-use approach does not do justice to more complex resource systems, such as agricultural landscapes and forests, as those cannot be classified as one type of resource with correspondingly uniform consequences for the choice of governance. Instead, research on governance in complex resource systems has to consider the presence of various types of goods and recognize the variation in their relative importance over space and time.

From a practical perspective, the framework provides guidance on changes in agro-environmental governance and the role of the state which enhance the production of environmental amenities. In the cases discussed here, expanding legal state property is unlikely to increase the production of common-pool and public goods. The states already claim extensive legal control over these goods. The key problem is that the states are often not able to translate legal rights into de facto rights. The states may actually relax central state control over property in common-pool goods where political systems are consolidated. Transfer of property rights from the central to the local state may increase the supply of common-pool goods under these circumstances. The Bulgarian case suggests the possibility to transfer property in irrigation infrastructure and water to municipalities where those possess sufficient authority in the local political system.

Suitable changes in governance structures may help close the gap between the state's legal and de facto rights. This does not imply that the state should intervene directly into agricultural production. Any such proposal is likely to encounter fierce political resistance, as illustrated by the Czech case. Farmers frown at the idea that they work the land under labor contracts with the state. In addition, opportunistic behavior by land managers in combination with the heterogeneity and complexity of agricultural production would exceed the capacity of the state to control farming practices. Direct state intervention is only feasible and appropriate in very specific instances, for example the management of very valuable meadows and the most important elements of irrigation infrastructure.

States in consolidated political systems may couple the legal obligations imposed on land owners with "presumptive policy entitlements" as a way to support the production of public goods. Farmers in the Czech case have increased the supply of landscape and biodiversity since the Czech government has supplemented legal land use requirements with compensatory payments. Thus, combining legal state rights on public goods with private "presumptive policy entitlements" may facilitate an increase in environmental amenities supplied by agriculture, if the state has the capacity to create and implement suitable agricultural policy. This strategy may also improve the protection of open space in the Polish case, but it is likely to fail in the Bulgarian case, where the political system is too fragmented to enforce the legal obligations tied to payments.

States in fragmented political systems need to augment their capacity to enforce legal property rights. This need applies to both public and common-pool goods. In the Bulgarian case, strengthening the court system is an important step to implement legal rights and duties in practice. State enforcement is a necessary (though not sufficient) precondition for the possibil-

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7 This result reminds one of the observation in OSTROM et al. (1994: 328) that common-pool management requires the state in societies characterized by low trust relations.
ity of cooperative action in the production of common-pool goods in fragmented political systems. Building state enforcement capacity helps close the gap between legal and de facto rights. Nevertheless, the need to strengthen the state's enforcement capacity also arises for (inter)national public goods in consolidated and decentralized political systems. The Polish case, therefore, emphasizes the need to remove the information asymmetry between local and central authorities in the monitoring of land use changes.

In all cases, the state has a role to play in the generation and dissemination of expert information on biophysical, technological and organizational matters. The state needs to assist the dissemination of environmental and organizational knowledge as means to promote local awareness for public goods, as in the Polish case. The supply of organizational and technical expertise by the state increases the production of common-pool goods, as in the Bulgarian case. Exchange of relevant experience with cross-sectoral linkages and innovations in rural development organized by the state can enhance the production of public goods, as illustrated by the Czech case. Strengthening the role of the state as a "facilitator" (GRAFTON, 2000) is particularly important in fragmented political systems, where states do not possess the primary authority over the creation and implementation of policy.

In sum, the comparative assessment suggests that the state has important roles to play in agro-environmental governance. The concrete proposals for the roles of the state in governance depend on the nature of political systems and features of the desirable good. Democratic consolidation emerges as an important precondition for agro-environmental governance that solves the free-rider problem. The state needs to possess authority over the creation and implementation of legislation and policy. Consolidation is a crucial precondition for agriculture that produces public and common-pool goods together with private goods.

Acknowledgments
The paper has benefited from comments by Erling Berge, Volker Beckmann, Markus Hänisch, Lin Ostrom, and an anonymous referee. The research was conducted under the project 'Central and Eastern European Sustainable Agriculture' (CEESA), which was coordinated by the Division of Resource Economics (Prof. Dr. Konrad Hagedorn) at Humboldt University Berlin and funded by the European Commission under Contract No. QLK5-1999-01611.

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