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Institutionalized Management of Scarce Resources
Introduction and Overview

Thomas BERNAUER, Ingrid KISSLING-NÄF,
and Peter KNOEPFEL

In the footsteps of the 1972 United Nations conference on the environment in Stockholm, the World Commission on Environment and Development's report "Our Common Future" in 1987, and the UN's 1992 Earth Summit in Rio questions of sustainable development have acquired a firm place on research and teaching agendas in political science. With reference to the policy-relevance of the issue as well as to the more broadly relevant theoretical insights that can be gained by its scientific study, the editorial committee of the SPSR, acting upon a suggestion by the board of the Swiss Political Science Association, asked the three authors of this introduction to issue a call for papers on theoretical and empirical questions associated with the institutional management of scarce resources. By the latter terminology, we signaled that problems of scarcity calling for political action occur not only in the areas of natural resources and the environment, but also with regard to scarce resources more generally, including for example public infrastructure and services such as education, culture, health-care and public transportation. We also assumed that effectiveness and efficiency of institutions designed to manage a broad range of scarce resources were essential to achieving sustainable development in economic, ecological and social terms.

We were particularly interested in answers to the following four questions: (1) Why and how does a particular scarcity issue become a political problem? (2) When and how are which regulations established to manage access to, as well as reproduction, maintenance and consumption of scarce resources? (3) How do various actors judge the performance of such institutions in terms of equity, allocative efficiency or the effectiveness of public policies in terms to be defined? (4) Are the insights derived from studying natural resources and the environment applicable to other types of scarcity problems and vice versa?

Six contributions "survived" the SPSR's review process and are published in this issue of the Review. Two authors (Gebhard Kirchgässner, Elinor Ostrom) focus predominantly on theoretical issues. One contribution

(by Emmanuel Reynard) examines local water resources management in the Swiss Alps. Two articles (by Clark C. Gibson and by Stéphane Nahrath) concentrate on national wildlife policies in Kenya and Switzerland. The final article (by Walter Schenkel) compares clean air, climate change, and transportation policies in the Netherlands and Switzerland.

Gebhard Kirchgässner examines allocational and distributional aspects of public goods provision. He starts out with a review of basic functions of government. Drawing on examples from national and international environmental policy, he discusses ways and means of providing public goods and internalizing external costs. He then concentrates on questions associated with the redistribution of welfare through public policies, in particular with regard to merit goods in culture and education as well as public provision of goods in the health sector. He argues that in some cases even private goods might, for economic reasons, be supplied more efficiently by a public monopoly than through private competition.

Whereas Kirchgässner's essay is representative of the ways in which economists usually approach questions of scarcity, the contribution by *Elinor Ostrom* stands for a prominent school of research in political science. Empirically, Ostrom is interested in understanding the complex local and national institutional arrangements that govern natural resource systems in the Western hemisphere, particularly in Mexico. However, by explaining why some communities have been highly successful in governing local resources over long periods of time, whereas others have not been able to prevent overuse and degradation of forests, inshore fisheries, and other natural resources, Ostrom's contribution generates theoretical insights that extend far beyond local resource management. She challenges conventional theory, which predicts that resource users themselves are, without externally imposed regulations, usually incapable of reformulating the rules they face and escaping from the tragedy of the commons. Based on empirical evidence, she claims that, under specific conditions, local actors can self-organize and be successful in managing their scarce resources.

Emmanuel Reynard's analysis of water resource management in mountain tourist resorts builds on extant theorizing on common pool resources, of which Elinor Ostrom is a key representative. The author presents the results of two case studies (Crans-Montana-Aminona and Nendaz, Valais) in which he examines whether water management has been integrated and sustainable, and whether the institutional framework established for that purpose has influenced the integration and sustainability of water management. He finds that water management in the two cases examined has not been integrated and sustainable, but has been characterized by low integration, insufficient information flows, and waste. The author claims that these deficiencies stem from what he calls sectoral problems (problems associated with

one particular type of water use); intersectoral problems (conflicts between different kinds of water use); and territorial problems (natural, administrative and economic limits of management do not coincide). To remove these deficiencies, Reynard proposes an integrated management approach.

Clark C. Gibson challenges the proposition that democratic political institutions, because they are plagued by competing interest groups and rival political parties, perform worse in generating and implementing effective conservation policies than pro conservation dictatorships. Empirically, Gibson‘s argument rests on an analysis of conservation policies under Zambia’s president Kaunda, an ardent conservationist. Under Kaunda‘s autocratic rule, Zambia’s government pursued an aggressive agenda of wildlife conservation, including resort to Zambia’s armed forces to fight wildlife poaching. Kaunda’s policy was unsuccessful: poaching remained endemic throughout the 1970s and 1980s. Gibson claims that Zambia’s one-party state, the fall in the price of Zambia’s principal export (copper), and an increase in the value of many wildlife products generated incentives for politicians, bureaucrats, and citizens to disregard Kaunda, despite his dictatorial powers. Gibson’s theoretical message is of relevance to other countries and contexts as well: "Green" dictatorships, besides the many other undesirable aspects associated with them, do not perform better in managing scarce resources than democratic systems. In particular, even in cases of one-party government, the structure of political institutions (e.g. interest groups in parliament and their constituencies, elections) shapes the extent of a dictator’s control and may in fact reduce the latter. At the most general level, Gibson argues that the incentives generated by specific political institutions must be taken into account when explaining policy adoption and policy outcomes.

Stéphane Nahrath analyzes the organization of hunting in Switzerland. He shows that, in contrast to the many self-organized regimes for other natural resources, such as water and land, which are highlighted by Ostrom and others, the state plays an important role in the organization of hunting regimes (e.g. prohibitions of hunting, hunting based on licenses or leases). He claims that the importance of the state in this context can be explained by certain characteristics of the resource and its uses, and also by the biological logic of its relation to other parts of the larger ecosystem. Nahrath outlines four such characteristics: (a) The mobility of the resource renders local anchorage and delimitation uncertain; (b) interdependence between fauna subject to hunting and other parts of the ecosystem (e.g. forests) renders management complex; (c) more systematic monitoring of the resource incurs high transaction costs; (d) heterogeneity in utilization of the resource and its vital space makes it difficult to integrate all actors who have an impact on the resource into the same local and self-organized arrangement.

Walter Schenkel's contribution tells us how domestic actors in two small states, the Netherlands and Switzerland, have dealt with problems of air pollution, climate change, and transportation. In particular, Schenkel is interested in "Who can learn from whom?" He explains policy outcomes with reference to storylines, policy instruments, and actor networks, which in turn are framed by political traditions and the general "philosophy" in which each country's policy is embedded. Schenkel finds that, even though they pursue different strategies, both countries are strongly committed to solving the environmental problems at hand. The Netherlands' policy rests on a tradition of negotiation and voluntary agreements between ministries and polluter groups. Switzerland's policy focuses on binding legislation. Schenkel argues that the main challenge lies in introducing more normative debate into open policy-making systems, but that there is not much time left to experiment with different policy styles.

The editorial committee of the SPSR did not attempt to organize a collective volume in which empirical contributions are designed to test particular theoretical propositions. Nor did the committee or the authors of this introduction chose empirical cases so as to meet methodological criteria for case selection or some notion of empirical representativity. We simply asked prospective authors to outline their theoretical thinking and results of their empirical research on how societies deal with problems of resource scarcity most broadly conceived. Consequently, the theoretical and empirical insights generated by this collection of six essays cannot be captured in a few simple punchlines. Nonetheless, four conclusions at the most general level can be derived.

First, the study of societal solutions to problems of scarcity has led to mutually beneficial interaction between economists, political scientists, and other social scientists. Whereas economists have offered useful conceptual frameworks and propositions by which problems of resource scarcity can be captured in parsimonious ways, political scientists have contributed the bulk of empirical work, which has led to significant modifications of concepts and propositions initially outlined by political economists. For example, research in political science has generated more sophisticated insights into how different types of transaction costs influence policy processes and their outcomes, how efficiency and effectiveness can be measured and how the two concepts are related, how distributional conflicts associated with resource management are resolved in practice, and how differences in political structures shape policy responses (see also Ostrom 1990; Young 1994; Bedarff et al. 1995; Bernauer 1995). As a result of research in political science, we have also acquired an empirically much more robust understanding of how differences in policy outcomes (in particular the effectiveness of policies) can be accounted for in terms of differences in characteristics of

resources, the interests and power of actors, the input of science into the policy-process, political structures, etc.

Second, empirical research in particular has generated more knowledge about conditions under which horizontal (self-organized) solutions to problems posed by resource scarcity emerge and are successful, and under which conditions vertical solutions (solutions imposed by a centralized authority – usually the state – or by a third party) or combinations of horizontal and vertical approaches are efficient and/or effective in specific meanings of the latter two terms. In the same vein, we have learned more about the workings of voluntary versus legally binding solutions to problems of resource scarcity (Victor et al. 1998; Knoepfel 1995). Research on the latter issue has led to mutually beneficial exchanges between political scientists and students of domestic and international law.

Third, the results of social science research on local and national resource management suggest that at least some propositions are applicable across levels of political authority. Indeed, research on international resource issues (of which there is no example in this collection of essays) shows that many of the concepts and propositions found in research on local and national resource management are of relevance beyond the nation state (Marty 1999; Keohane and Ostrom 1995; Haas, Keohane, and Levy 1992; Keohane and Levy 1996; Young 1994). The articles in this volume should thus be of equal interest to those studying domestic resource policies and those interested in international resources and their management.

Finally, the articles in this volume show that policy responses to similar scarcity issues may vary across communities, domestic jurisdictions, and states. Significant variance also exists with regard to the degree of success communities or societies have in resolving particular scarcity problems. In many cases, policy-choices, and also the effectiveness or efficiency of policies, do not appear to be predetermined by the characteristics of resources or political systems. Policy-makers do have, for better or for worse, some room of maneuver within which they can opt for different institutional solutions. More and better knowledge about when and why which policies and institutions work better and when and why some policies and institutions fail will, therefore, satisfy not only academic curiosity and facilitate careers in the ivory tower, but also promises to contribute to the resolution of important societal problems. Political scientists have known for a long time what major international institutions, such as the World Bank and the OECD, have „discovered“ only in recent years: Success or failure in achieving socio-economic (or, for that matter, sustainable) development is contingent on the performance of institutions or, to use the new buzzword, "good governance"; in particular, it is contingent on the performance of institutions designed to manage scarce resources.

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Thomas BERNAUER, Center for International Studies CIS, Seilergraben 49, ETH Zurich, CH-8092 Zurich; E-Mail: bernauer@ir.gess.ethz.ch.

Ingrid KISSLING-NÄF, Department of Forest Sciences, Rämistr. 101, ETH Zurich, CH-8092 Zurich; E-Mail: kissling@waho.ethz.ch.

Peter KNOEPFEL, Institut de hautes études en administration publique IDHEAP, route de la Maladière 21, CH-1022 Chavannes-près-Renens; E-Mail: Peter.Knoepfel@idheap.unil.ch.