The contribution of network governance to sustainability impact assessment

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Introduction

Network governance has been extensively studied in the literature.[2] It can be characterized by an attempt to take into account the increasing importance of non-government organizations (NGOs), the private sector, scientific networks and international institutions in the performance of various functions of governance. From a functional point of view, the aim of network governance is to create a synergy between different competences and sources of knowledge in order to deal with complex and interlinked problems. From this functional perspective, governance is accomplished through decentralized networks of private and public actors associated with international, national and regional institutions. As the study by Reinicke and Deng states, 'a typical network (if there is such a thing) combines the voluntary energy and legitimacy of the civil society sector with the financial muscle and interest of businesses and the enforcement and rule-making power and coordination and capacity-building skills of states and international organisations' (Reinicke and Deng 2000: 29). Prominent examples of such networks that have been instrumental in forging

[2] For an overview, see for example Diani and McAdam 2003; P.M. Haas 2004b; Ostrom 2001; Reinicke and Deng 2000; Hajer and Wagenaar 2003: 33–59. Cambridge, Cambridge University Press.

successful working arrangements are the World Commission on Dams, the Global Environment Facility and the flexible mechanisms of the Kyoto Protocol (Streck 2002). Another ongoing initiative is the United Nations Global Compact, which combines multiple stakeholders within a trilateral structure that includes representatives from governments, the private sector and the NGO community (Haas 2004b: 6).

From a theoretical point of view, the concept of network governance is characterized by a profound ambiguity. According to the analysis of the concept of network governance by Schout and Jordan, there are two models of network governance: one that focuses on networks as self-organizing systems, and one involving active steering (Schout and Jordan 2003: 9).

The network governance approach adopted in the European Commission's White Paper on governance (Commission of the European Communities 2001) relies on self-organization. This approach does in fact aim to reform our modes of governance, by delegating a number of tasks to networks of self-regulated actors who negotiate their own collective coordination agreements.[3]

However, to some extent, this approach presupposes what it wants to achieve: the existence of a set of actors linked by sufficiently strong interdependences that allow for the emergence of decentralized solutions to coordination problems. Moreover, in the specific case of European governance, the institutional context is made up of heterogeneous actors and a complex hierarchy composed of different levels of interaction.

The absence of any reflexivity on the institutional conditions for the emergence of collective action by self-organization has condemned the policy of environmental policy integration through network governance to go unheeded. For instance, in spite of the high-level support for environmental policy integration

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[3]   Generally speaking, a network is made up of a set of interconnected units (agents, organizations, computers, etc.) – the nodes – and a set of connections transmitting a signal (information, energy, etc.) from one node to another, with a certain connection strength. The network concept has been studied both as a form of collective organization and as an information processing device:

1   as an information-processing device its main property is to be able to decentralize problem-solving and information acquisition to the different individual information processing units or nodes of the network. For example, in the Water Sacramento forum, different stakeholders were able to enhance their knowledge – and thus their problem-solving capacity – through network interaction, without, however, having recourse to a centralized water governance agency (Innes and Booher 2003).
2   as a form of collective organization the focus is on the self-organizing capacities of a highly interconnected network. In this case, through the interaction dynamics between the different nodes, a form of coordination emerges that is an overall property of the network. For instance, in the so-called e-economy, a heterogeneous set of actors – both private and public – are interconnected in a new form of economic coordination through the Internet (Brousseau and Curien 2001: 28–9).

through self-regulation,[4] no supplementary capacity has been created for building a common information base, or for common agenda setting between different sectoral officials (Schout and Jordan 2003: 16–19). As a consequence, very little horizontal articulation has been created between sectoral Directorates General of the Commission or between national experts. Ultimately, the policy of integration through self-regulation has remained limited to some temporary bursts of coordination activity by the Council of Ministers, driven by short-term crises or intense lobbying by pressure groups (Lenschow 1999).

Nevertheless, as Schout and Jordan (2003) demonstrate, another perspective is possible, which is not based on the assumption of an automatic institutionalization of self-regulated networks of activity, but which explicitly addresses the question of the appropriate institutional framework for network operation. Accordingly, in his analysis, Jordan proposes that networks should be supplemented with institutions that help to steer the network design, carry out audits, adopt a critical stance and formulate management alternatives (ibid.: 12). Such institutions could also monitor the creation of coordination capacities between the different nodes in the network, in order to permit the integration of common objectives into the network as a whole (ibid.: 18–19).

Several questions are raised by the network governance approach: to what extent are networks self-organizing? Under what conditions can the iterative process of institution-building lead to effective governance systems? And when, and to what extent, is there a need for institutional regulation of self-regulation? In order to study these questions, we shall start from concrete examples where self-organized networks were mobilized to perform various functions of governance, and analyse the conditions under which concrete examples of self-organized networks were able to function effectively.

We first argue for the incompleteness of forms of network governance that rely only on self-organization. In order to do this, we shall focus on extensive research on self-organization in the context of the management of common pool resources. Second, we analyse the possible contribution of organizational learning to a more complete approach of network governance. Lastly, we shall apply our analysis to the case of sustainability impact assessment.

The Limits of Network Governance

In the current literature on theories of governance (Black 2001; Steward 2001), there is a growing interest in self-regulatory solutions to the problem of collective management of our natural resources. Recourse to self-organized collective

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[4]   Environmental policy integration is the only integration requirement to be explicitly mentioned in the founding Treaties (initially the 1987 Single European Act; more recently in Article 6 of the 1997 Amsterdam Treaty). It has also been the subject of numerous European Council Resolutions over the last decade (cf. Schout and Jordan 2003).

action is not, however, limited to community self-regulation, but also occurs in forms of market self-regulation such as labelling practices addressed at user communities, or technical self-regulation through standardization agencies. The term self-regulation thus stands for a diverse set of arrangements, including forms of spontaneous self-regulation in particular communities, as well as forms of self-regulation by delegation, which are based on a delegation of power by government to a self-regulatory agency (Gunningham and Grabosky 1998). Accordingly, the prefix 'self' in self-regulation should not be understood literally, but points to a certain degree of collective constraint, other than that emanating directly from government, and making it possible to realize objectives that cannot be attained through individual market behaviour alone. The current use of the term also implies that collective constraint includes a series of well-established rules, be it in the form of customs, or of written rules, through which activities are regulated (Ogus 2000).

In order to analyse the limitation of recourse to self-organizing collective action in governance networks, we shall first study the question of the emergence of collective action in relation to the well-documented case of self-regulatory solutions to the *in situ* conservation of biological diversity.

Self-Regulation and Polycentric Governance

Current field research on self-regulation in the area of biodiversity governance highlights the emergence of collective action through experimentation with local rules, enabling the sustainable management of the ecosystem on which a community relies.

An example of such mechanisms is the collective management of *refugia* such as sacred ponds and groves as prevalent elements in indigenous resource-management systems (Gadgil, Berkes and Folke 1993). These systems might have evolved through a process involving an implicit trade-off between the benefits of the use of the natural resource and the necessity to minimize the risk of its depletion or extinction (Joshi and Gadgil 1991).

In another important case study, the emergence of such self-regulatory mechanisms results from the accumulation of information about the important role that species play in generating ecological services and natural resources. In his long-term field research in the Amazon basin, Posey discovered the role of *apete* or forest islands in producing a range of useful products while enhancing biodiversity. During the life span of the *apete*, management rules evolve from maintenance of a diverse productive zone, lasting a couple of years, to its transformation into a savannah-like open clearing, managed for its fruit and nut trees, and 'game farms' that attract wildlife (Posey 1985). This type of management is in sharp contrast with the slash-and-burn practices that merely result in temporary clearings within the forest landscape.

The evolution of such self-regulatory mechanisms is not, however, limited to indigenous people or communities of subsistence farmers. For example, a

case study on coastal fisheries in Sweden shows how different local communities have developed dynamic, self-regulating patterns in order to adapt to natural fluctuations in fish resources (Hammer, Jansson and Jansson 1993).

This first type of field research shows the importance of experimentation with rules and the accumulation of local knowledge about effective rules that enable cooperative solutions to emerge. However, this mechanism does not consider the appropriate institutional conditions for the sustainable operation of these cooperative processes, such as effective monitoring and the use of graduated sanctions to ensure compliance with the rules.

A second type of field research aims at going beyond this insufficiency. This second kind of research has shown that sustainable self-organized management can only be successful in a context where efficient communication and social control is possible, allowing clear mechanisms for monitoring conformance with rules, and graduated sanctions for enforcing compliance (Ostrom 1998: 8). This can be the case both in small-scale communities where direct communication enhances the possibility of the emergence of norms of reciprocity, reputation and trust (Ostrom 1998: 13–14), and in larger communities, such as certain Internet-user communities, where the possibilities of coordination and control are increased by modern technology (E. Ostrom et al. 1999: 279).[5]

However, in spite of social control, the self-regulatory institutions remain subject to takeover by opportunistic individuals, and to potentially perverse dynamics. In particular, self-organized governance systems can be dominated by a local leader, or by a power elite, only accepting changes that are to their advantage. Some appropriators will not organize because of the presence of low-cost alternative sources of income and thus a reduced dependency on the resource (Ostrom 1999: 527).

This problem of network opportunism can be addressed in 'larger, general-purpose units that are responsible for protecting the rights of all citizens and for the oversight of appropriate exercises of authority within smaller units of government' (Ostrom 1999: 528). Indeed, according to research on self-organization in common pool resource management, a polycentric governance system involving higher levels of government as well as local self-regulatory units is more likely to provide incentives leading to self-organized, self-corrective institutional change (Ostrom 2000: 42).

Self-Regulated Systems as Complex Adaptive Systems

The behaviour model that emerges from empirical research on self-organization has received broad confirmation within the more general theoretical framework of complex adaptive systems (Holland 1995). Such systems are characterized by

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[5]   The opportunistic appropriation of some 'common good' by certain Internet users can be sanctioned through management of the mailing lists and the means of access to the network (Brousseau 2001: 358).

a large number of active elements, which produce emergent collective properties that do not exist at the level of the elements, but only exist at the level of the combined effects of their interaction.

A much-discussed example of such emergent collective properties within a decentralized organization is the analysis by Hutchins (1995) of the navigation of a sailing ship. It shows that successful navigation does not require a specified centralized scenario for all situations. Instead, when a member of the crew detects a failure in the organization, he communicates this to the closest competent person. This person executes a corrective task, which has consequences in the further chain of interactions. In that manner, collective behaviour emerges through a history of local adaptations to a common environment (ibid.).[6] In this example, we find the mechanisms that are also mentioned in research on self-regulation, that is, experimentation with a decentralized set of rules through a process of trial and error on the one hand, and accumulation of knowledge about effective rules on the other.

Moreover, research on complex adaptive systems identifies some more specific mechanisms that also play a prominent part in the study of self-organization (Ostrom 1999: 521–3). These are:

1   the role of tags[7] in the categorization of the relevant properties of the environment;
2   internal models, including scenarios adapted to particular situations and partial cognitive maps of the environment;
3   clusters of distributed rules allowing a progressive adaptation to changing conditions in the environment through what have been called context-transforming generalizations (Clark 1993).

Modelling collective action in terms of complex adaptive systems has epistemological consequences (Dedeurwaerdere 2001). First of all, the effect of the rules and mechanisms will vary according to the way the system itself constructs an interpretation of its operational context through tagging and internal modelling. Second, we also have to reconsider the role of the environment in a different way. In fact, stabilization of the dynamics of self-organized systems depends on the asymmetrical evolution of the autonomous environment of the system. Even simple adaptationist models have to acknowledge this fact (Suppe 1989: 165). Stabilization of the competition between species in an ecosystem depends on the sources of nutrition in the environment. If a disturbance modifies those sources, then the system will evolve to another state of equilibrium. The

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[6]   This is also the principle of 'loose coupled systems', as it is developed in the organizational literature (cf. Weick and Roberts 1993).

[7]   Tags are used to mark agents or objects that would otherwise be indistinguishable. For example, uniform, country of residence or personal characteristics can be used as a tag for identifying different crew members in the example of the sailing ship.

consequence of this interaction with the dynamics of the environment is that the collective behaviour resulting from a certain set of rules should be evaluated, not only in terms of its short-term consequences as a solution to a particular problem, but also in terms of its capacity to penetrate the self-organization of its environment. In that sense, a certain type of behaviour also has an explorative function, in provoking and processing adequate feedback information from the environment.

Combining these two limits, it can be said that the same type of behaviour has a reversible and an asymmetrical effect: it is a behaviour adapted to a particular problem in the environment, framed in a certain manner, and it is information provoking adequate feedback from the environment (Maesschalck 2001: 185). An example of this effect in cognitive ethology is the way fishes explore the autonomous flow dynamics of the stream through which they are navigating, and, in particular, the way they generate whirlpools and use the autonomous feedback of these whirlpools to swim faster (Triantafyllou and Triantafyllou 1995). This kind of modelling was only made possible as a result of rethinking the broader epistemological framework through which we approach dynamic systems in general.

Once we understand collective action from the point of view of the asymmetry of the evolution of its environment, we have to take into account some specific limitations on the modelling of self-regulation (Dedeurwaerdere 2001). Indeed, because of the necessity of taking into account the asymmetry of the evolution of the context, and in order to account for the stabilization of a particular system, the models have to include a hypothesis on the long-term behaviour of the environment.

In the context of research on common pool resources, it is the notion of polycentric political systems that accounts for the role of the broader environment. This notion was introduced by Vincent Ostrom in the context of his study of metropolitan governance, and connotes a system of 'many centres of decision-making which are formally independent of each other' (V. Ostrom, Tiebout and Warren 1961: 831). This environment composed of interacting units can be said to function as a whole to the extent that these 'take each other into account in competitive relationships, enter into various contractual and cooperative undertakings or have recourse to central mechanisms to resolve conflicts' (ibid.). According to the analysis of Elinor Ostrom, this research demonstrates that 'the study of the performance of a local public economy should be addressed at an interorganisational level of analysis rather than at the level of a single unit' (E. Ostrom 2000: 35). It is this 'modified form of competition' that can be viewed as a 'method for reducing opportunistic behaviour'. An example in the context of metropolitan governance is the creation of a larger consumption unit, making it possible to curb the strategic behaviour of the wealthy or to control the distribution of the costs of urban goods and services that do have large-scale effects (ibid.). In the context of global governance, examples that spring to mind are the United Nations Global Compact and the Forestry Stewardship council, both of which

combine multiple stakeholders within a constructive tension, so that information is shared and each holds the other accountable for their public commitments in implementing sustainable development policies (Haas 2004b: 6).

The evolution of this polycentric system depends, however, on broader background beliefs, such as a certain conception of democracy. In particular, Vincent Ostrom's research on metropolitan systems points to the important role of civic education, which enables the intrinsic motivations of those motivated to solve problems on a conditional cooperative base. It thus seems that the contextual gain in cooperative behaviour through the multiplication of interactions between local experiments on self-regulation in a polycentric system depends in the long run on a broader theory of moral development. In particular, the experimental work on moral development by Kohlberg has shown, through numerous comparative studies on a longitudinal basis, that one cannot juxtapose the moral evolution of individuals and the evolution of a group as a practical space for experimentation on normativity (Kohlberg 1981). According to Lenoble and Maesschalck (2003: 155–68), an asymmetric relationship between two processes of moral development can be shown. The group constitutes a kind of intermediary culture, with its own references, its own codes. It enables experimentation with different types of behaviour without having to reassess them on the basis of already acquired attitudes or cultural codes in force. It is this incentive-reflexive role of the group that explains its enabling effect on the evolution of individual skills. Accordingly, evolution of the polycentric system will depend on the learning effects of these intermediary cultures on the different self-regulated sets of activity. These learning effects depend on collective experimentation with new norms of cooperation in the broader institutional environment.

The Contribution of Organizational Learning to Network Governance

The first model of network governance is based on the emergence of collective action through self-organization. However, it does not automatically imply the improved integration of a perspective of sustainable development into the network institutions in question. The network approach creates a self-adjustment process for the strategies used by the actors in different self-regulated sectors of activity; however, it does not develop initiatives geared towards a change in the larger background of legitimization that determines the overall normative orientation of the interaction between the different nodes in the network. In the specific case of sustainable development, this background is far from being stabilized. As Godard's analysis shows, the sustainable development criterion is open to several interpretations, and stabilization is, in turn, dependent on a series of legitimacy 'tests' that take a variety of forms according to the different orders of legitimization (Godard, Chapter 2 in this volume). Stabilization will therefore depend on a learning process enabling the different actors that make up this context to modify their background of normative beliefs in order to take into account the viewpoints of the largest possible community.

One example is the ambivalence of the environmental self-regulation policies of the European Commission's Fifth Environmental Action Programme (1993–2000). The aim was to organize environmental self-regulation through a set of incentive mechanisms such as eco-labels, voluntary agreements and environmental management systems. As it turned out, however, this incentive mechanism did not lead to the institutionalization of ecology in the social practices of production and consumption, but instead led to technocratic management by the main actors. In order to put forward an interpretation in the policy networks in terms of a democratic, ecological approach, there is a need for practical guarantees that environmental groups will be included in the evaluation and adaptation of the goals of self-regulatory arrangements (Neale 1997).

Another example, from the field of biodiversity governance, concerns the emerging regime of access and benefit-sharing in genetic resources. Indeed, in this field, in response to the lack of effectiveness of classical modes of regulation, the creation of collective norms of management by self-regulation can be seen (Ten Kate and Laird 2002: 300–89). For example, associations of biological resource users, such as botanical gardens or private corporations, have set up ethical codes of conduct or voluntary mechanisms of benefit sharing. This evolution has been especially important in sectors of greater homogeneity, as in the case of the international MOSAIC[8] code of conduct for the *ex situ* collections of microbial cultures, or the declaration of common principles on access and benefit sharing of the network of botanical gardens around Royal Kew Gardens in London.[9] In addition to these common initiatives, some companies have also created ethical codes on an individual basis, in the belief that this will improve their reputation as reliable suppliers of genetic material (ibid.: 302).

However, the level of compliance of the different initiatives of self-regulation with the requirements embodied in the different international regimes – Food and Agriculture Organization (FAO), United Nations Environment Programme (UNEP) and World Trade Organization (WTO) – actually depends only on reputation within a network of institutions or professionals in a certain sector. These strategies effectively increase the reliability of the member organizations, but it remains difficult to compare efficacy with regard to the goals of equitable access and fair benefit sharing as established in the Convention on Biological Diversity, or to evaluate the capacity of such institutional arrangements in order to guarantee a level of compliance in more heterogeneous sectors.

Thus, if one wishes to take into account the importance of the normative orientation of the governance networks from the point of view of the asymmetry of their contextual interpretation in the broader environment, a new question arises, which relates to experimentation in particular communities with normative background beliefs.

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[8]   Microorganism Sustainable Use and Access Regulation.

[9]   Common Policy Guidelines for Participating Gardens on Access to Genetic Resources and Benefit-Sharing, available at <www.rbg.ca/cbcn/cpg_index.html>.

Social Learning in Epistemic Communities

This is why a second model of network governance focuses on the role of institutional framing in enabling learning processes on the background of normative beliefs. We can analyse this second model in greater depth on the basis of the research conducted by Ernst and Peter Haas on the conditions for organizational learning in international organizations. In their work, they reveal the important role that can be played by communities with a specific knowledge, known as epistemic communities, which are geared towards the development of organizational concepts and common intersubjective meanings with respect to a certain problem (Haas and Haas 2002). In historical terms, these communities fulfilled an important role in the field of environmental governance. Well-discussed examples include the role of the scientists involved in the Villach Group in the field of climate change (Haas and McCabe 2001) and the ecological community monitoring pollution in the Mediterranean (Haas 1990). However, as their research clearly shows, the role of these communities with regard to the development of common intersubjective meanings can also be observed in other fields. For example, according to Peter and Ernst Haas, the United Nations Global Compact is also 'an effort to develop and apply within an institutional setting consensual knowledge about best corporate practices by trying to encourage participation from corporate actors, civil society and experts' (Haas and Haas 2002: 597).

With a view to clarifying the contribution of epistemic communities to international governance, Ernst Haas stresses the importance of two distinct learning processes. The first of these, learning as adaptation in its biological-cybernetic meaning, identifies learning as a form of 'error correction', whether through a process of 'trial and error', similar to natural selection, or a 'feedback' process from the environment. It is this form of learning that characterizes the self-regulated complex adaptive systems that we considered in the first section. The central idea of this first form is to enable an organization to maintain its principal functions within established limits, in order to guarantee survival under variable environmental conditions. In the context of learning theories, this first form comes up against the need to bring about a transformation process that makes it possible for an organization to meet the challenges posed by new demands, without having to reassess both the organization's programme in its entirety, and the justification that underlies its own legitimacy (Haas 1990: 34). However, organizations do not merely have a capacity for biological adaptation; they are also capable of reassessing their own fundamental principles. These self-programming abilities are the basis of a second learning process, allowing an organization to redefine its own organizational mission when confronted again and again with the unexpected or ineffective results of its own actions (Haas: 35–7). The important point about this second process is that it incorporates evaluation and monitoring processes that are not geared towards maintaining the stability of the organization, but rather towards changing the basic beliefs of institutions

and encouraging the emergence of new possibilities of action that are necessary to promote an ethos of sustainable development.

According to Haas and Haas (1995), unlike the incremental adjustment process that is typical of the interactionist visions of organizational learning, the learning process that is possible thanks to epistemic communities leads to changes in the work programme of organizations by confronting them with a shared vision of cause-and-effect relationships between complex phenomena.[10] It is the change in the work programme of organizations as a result of a learning process that they designate as 'organizational learning'.

In a recent article, Peter Haas develops the different aspects of this concept of organizational learning in more detail. As such, organizational learning includes both a substantial aspect – on the level of the learning of common knowledge and common norms – and a procedural aspect – on the level of the process of transmission of the results of the learning process to the relevant organizations (Haas 2004a: 573). Current research on social learning in epistemic communities shows that one of the most important dimensions, on the procedural level, is the isolation of the learning process from the political process. As has actually been shown in several empirical studies, the independent character of the epistemic community enhances the influence of the ideas, and thus their transmission to the policy process. On the substantial level, the research shows the importance of a mechanism to include the widest possible community of interests in the production of the new ideas and to mobilise the widest possible knowledge base. Indeed, according to the concept developed by Peter Haas, the aim of social learning is to produce 'usable knowledge', which can eventually be integrated into the working programme of political institutions. Such knowledge should be accurate and of use to politicians and policy-makers (ibid.: 574), and can be characterized by the criteria of credibility, legitimacy and saliency (Siebenhüner 2002, 2003). In this light, organizational learning depends on precise, accessible knowledge that contributes to the achievement of collective aims.

On the basis of this research, empirical studies have tried to determine conditions for improving our governance institutions in such a way as to satisfy both the need for social learning and the development of appropriate procedures for linking the new ideas to the policy process. One of the most widely discussed examples in the literature on organizational learning is the role of the Intergovernmental Panel on Climate Change (IPCC) in the issue of global warming. According to Haas and McCabe, the key characteristics that made organizational learning possible in the field of climate science are, first, the existence of a learning process within the group of independent experts that

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[10]   Indeed, as they state in their research on organizational learning, 'it is only a structured interpretation process, leading to the emergence of core beliefs around some operational models, that allows for knowledge production to be related to new policy programme proposals and to be integrated in the organisation's mission statement and activities' (Haas and Haas 1995: 266).

gathered for the Villach meetings between 1985 and 1988 (Haas and McCabe 2001) and, second, the establishment within UNEP, by its first Executive Director Maurice Strong, of an open policy process through which states were exposed to the consensual knowledge acquired by the Villach Group (Haas 2004a: 577). This group was able to propose new regulatory mechanisms in the field of climate change – introducing the concept of emission quotas – which were incorporated into the organizational activities of the United Nations Environment Programme. However, political control over climate science has increased in the years following the creation of the IPCC – which superseded the work of the Villach Group – and at present the IPCC reports suffer from a lack of legitimacy (ibid.: 582–3).

The learning process in the climate change community has served as a model for the organization of similar assessment processes in other fields. For example, in the field of biodiversity governance, in 1994 UNEP organized the Global Biodiversity Assessment, which aimed to gather relevant information on biodiversity and to structure it for policy makers. However, this assessment was not as successful as the climate change assessment, and the outcome was far less influential. In 2000, a second round of assessments in the biodiversity field got underway, via the Millennium Ecosystem Assessment. This second round presents major new initiatives, in that it aims to include contextual knowledge through local assessments, and starts from a broader conception of knowledge, making it possible to include traditional communities' perspectives on biodiversity.

Application to the Case of Sustainability Impact Assessment (SIA)

Impact assessment methods play an important role in improving European governance. They were originally conceived as a major step towards more transparent modes of governance, increasingly based on scientific evidence. Thus, according to Colin Kirkpatrick, who led the research into SIA methodology for the European Commission, impact assessment may be defined as 'a methodology for identifying the potential or actual impact of a development program' (Kirkpatrick 2003a: 32). As such, it may be regarded as an instrument for achieving 'better governance', making it possible to improve 'evidence-based decision-making and, by correlation, the quality of the decision-making process' (ibid.: 31).

In a Communication, the European Commission announced its intention to launch impact assessments as a tool to improve the policy development process (Commission of the European Communities 2002). In particular, all major policy initiatives would be subjected to the new sustainability impact assessment method ('phase III') elaborated by the Institute for Development Policy and Management (IDPM) of the University of Manchester. Below, we refer to this particular methodology as it has been applied and widely discussed in the sustainability impact assessment of trade liberalization policies by the DG Trade of the European Commission.

As stated in Chapter 13 of this volume (Knigge and Kranz), the specific aim of SIA of trade liberalization is to promptly identify and forestall potential negative

effects, or, alternatively, to set up adequate measures to mitigate such effects. This particular use of impact assessments, in close connection with the negotiation process, poses new challenges in terms of research, causal-chain analysis, timing and legitimacy. We shall not explore these issues in any further depth here, but instead shall evaluate the possible contribution of SIA to improving current means of network governance by enabling a process of social learning on the issue of trade and sustainable development.

In the proposed IDPM methodology, the production of 'usable knowledge' for policy makers relies on a diverse set of methodologies, including modelling methods, methods based on data (statistical estimation) methods, descriptive (case study) methods, expert opinions and consultation. The principle used in the aggregation of this diverse set of data is to elaborate significant cause-effect links between trade liberalization and its eventual economic, social and environmental impact, and to provide for an empirical estimation of these impacts. As such, impact assessments can thus be considered as a further elaboration of the concept of integrated models that has been developed mainly in the field of environmental impact assessment (Janssen and de Vries 1998; Kirkpatrick 2003a: 40).

Representative examples of integrated models include not only the EU's trade liberalization SIA, but also the environmental impact assessment tools used within the North Atlantic Free Trade Organization (NAFTA), the impact assessment models for climate change used by the IPCC, or, previously, the models of limits to growth used by the Club of Rome. The belief underlying the construction of these integrated models is that, by integrating the human and natural dimensions of the change in systems into the same modelling procedure, these models will be able to help to create a hierarchy of priorities for public policies and research activities, and to reveal uncertainties and gaps in our knowledge.

Naturally, the principle of sustainable development, which serves as an optimization principle in these assessments, does not enable them to be stabilized unequivocally. In fact, the criterion of 'sustainable development', used in impact assessment, allows for a great many interpretations. Godard, for example, identifies at least three interpretations of sustainability (Godard, Chapter 2 of this volume):

1   a biocentric interpretation, which maintains that all living beings have an intrinsic value and must therefore be protected, whilst taking into consideration complex interdependences between all living beings in the biosphere;
2   an anthropocentric interpretation, which emphasizes the importance of preserving the earth's ecosystems in order to maintain human development potential;
3   an economic interpretation of sustainable development, which balances the long-term costs of the destruction of ecosystems in relation to the short-term benefits.

As a result, the social legitimacy of the models will depend on the practical acceptance of the principle of sustainable development from the viewpoint of these different interpretations. The legitimacy of the models will therefore depend not only on scientific data, but also on the collective preferences of the populations affected by the policies evaluated in the impact assessments. In the context of SIA, for instance, one example of conflict with regard to collective preferences centred on the priority to be given in the models to protecting the environment while promoting economic development in developing countries (Borregaard and Bradley 1999). Another major area of tension concerned the different concepts of trade liberalization to be considered in the assessments, ranging from liberalization without mitigation measures to the integration of scenarios of limits to growth (WWF 2002).

Such lack of consensus has severely limited the actual use of the SIA models. However, various signs of gradual change indicate an attempt to address these issues. From the outset, SIA was conceived as a multi-stakeholder process, and several inclusive stakeholder consultation processes have been implemented. These include the dialogue between contractors for the assessments and stakeholders with interests in individual sectors, or the meetings with civil society organized by the European Commission to discuss project reports (DG Trade 2002). Furthermore, the European Commission has already begun to address criticisms that have been voiced by stakeholders and civil society (Zerbe and Dedeurwaerdere 2003). For instance, it has committed itself to improving the timing of SIA by commencing the process at an earlier stage in trade negotiations so that SIA can have a more effective impact. It has promoted greater coordination between researchers and negotiators, and has trained negotiators regarding the potential value and use of assessment reports. In addition, it has increased opportunities for stakeholder input in the SIA process by hosting workshops within the EU, and by requiring stakeholder consultations in third countries when they are the focus of examination.[11]

Nevertheless, no methodology is complete, and several important gaps remain in the institutional implementation of the SIA tool. In particular, as mentioned above, the approach suffers from a lack of tools that specifically address the social learning process between the different stakeholders, making it possible to integrate information coming from different types of actors and to combine a heterogeneous set of social values.

First of all, with regard to information gathering, there is a major difficulty in the actual design to integrate contextual information into the assessment process. For example, in one major assessment concerning the ACP countries, several tools

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[11]   The SIA of the ACP countries currently underway, for example, provides for four workshops to be held in Brussels, and two in West Africa and the Caribbean. Furthermore, it calls for the use of electronic communications and expert networks to provide additional opportunities for stakeholder and expert consultations during the whole assessment process (PriceWaterhouseCoopers 2003).

have been developed to address stakeholder participation, but in practice the major data used in the reports resulted from a compilation of existing World Bank data, because of the difficulty of obtaining direct information from the field in such a short time (Thirion 2003). Another example, also mentioned by one of the main contractors, concerns the restricted access of developing countries to electronic communication, which is one of the main tools used in current SIA for enhancing transparency and broad public involvement (Kirkpatrick 2003b).

Second, with regard to social values, there is real difficulty in developing contextual models in home countries that integrate local values more effectively, because of the lack of an institutional framework for producing local assessments. Therefore, there is no explicit construction of alternative ways of framing the problem of trade in sustainable development that is directly linked with *data* gathering and elaboration of models. Some NGOs have attempted to address this issue, such as in the long-term study of APRODEF on the impact of trade liberalization on the social status of women in Mozambique (Ulmer 2003). However, nothing is done to explicitly enable such local assessments to be carried out; nor are these initiatives connected with the overall assessment process.

It therefore seems that the institutional design of the social learning process on the trade and sustainable development *nexus* initiated by SIAs is still an important aspect to be addressed. SIA has been developed as a way of integrating sustainable development into the different policies of the European Commission, through improving the evidence base on which decisions are made, and hence the quality of decision-making. As such, the SIA experiment underway in the DG Trade has a broad-based ambition and can be considered as a potential extension of the Environmental Policy Integration (EPI) requirement mentioned in the EU founding treaties.[12] This requirement states that environmental considerations should be integrated into the design, adoption and implementation of policies in all policy sectors. With the methodology as it stands at the moment, this broad objective has been implemented through an institutional process that enables networking of independent experts, key negotiators and relevant stakeholders. As such, in a similar manner to the implementation of the EPI, it is a good example of the concept of network governance promoted by the European Commission. However, as we have argued throughout this chapter, long-term development of such networking can only be successful if it is simultaneously able to develop incentives for organizational learning in the broader institutional environment of the networks.

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[12]   Initially in the 1987 Single European Act; more recently in Article 6 of the 1997 Amsterdam Treaty.

Conclusion

The emerging networks of public-private partnerships and contracts aim to offer innovative answers, in the international context, to the present difficulties faced by the system of multilateral cooperation. Nevertheless, in most cases, these answers still remain confined to a functional adaptation to the new requirements for global regulation, and fail to take into account the reflexivity of the different actors in the construction of the networks. Indeed, the principle of these networks is to bring together, often by the use of contractual relationships, different areas of expertise and different types of actors around a common object, thereby attempting to bridge and articulate different levels of governance. However, there is no reflection on the mode of construction of a common perception or common norms in the networks, nor on the mode of organization of the rules for cooperation within the networks. It is this dimension that this chapter has developed, on the basis of case studies in the field of sustainable development, in order to enhance our understanding of the construction of such networks.

Our analysis has shown that it is possible to identify, through these network governance experiments, two phases in the improvement of our institutions for global governance. This improvement is particularly crucial in the case of sustainable development, where a plurality of principles of legitimation is put forward by different stakeholders. The first phase aims to mobilize the self-regulation capacity of the actors in order to improve the current governance arrangements. This first stage enables the construction of common perceptions or common norms among existing practitioners of sustainable development. The second phase tries to integrate the necessity for organizational learning into the institutional environment of the self-regulated sectors of network activity. This further phase considers the role of a polycentric set of institutions in enabling evolution of the background of normative beliefs, on which the successful implementation of sustainable development through self-regulation depends.

Following the critical analysis of Schout and Jordan of the concept of network governance in the European Commission's White Paper, this chapter has discussed the limits of a concept of network governance solely based on self-organization for implementing sustainable development policies. Indeed, as extensive research on self-organizing solutions to the management of common resources has shown, the sustainability of these initiatives depends on background beliefs in the broader institutional environment in which the networks are operating. That is why, relying on the work of Peter and Ernst Haas (1995, 2002), Godard (see Chapter 2) and Siebenhüner (2002), we have argued that the current network approach to sustainable development should be supplemented with initiatives that foster organizational learning in the institutional environment of the networks. In particular, the creation of appropriate institutions for social learning on the trade and sustainable development *nexus* should make it possible to enhance the credibility, legitimacy and saliency of the network institutions. As we have tried to show in our case study on Sustainability Impact Assessment, the further

development of hybrid tools, such as contextual models that integrate social values more effectively, and the introduction of measures to enable local assessment capacity that broadens the information base from the field could enhance both the legitimacy and the credibility of the models.

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