Learning about policy learning: designing a global forest governance learning architecture

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**Prepared for Workshop 3, Learning in Politics and Public Policy
ECPR Joints Sessions of Workshops, St. Gallen, April 12-16, 2011**

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Abstract

This paper draws on and develops existing studies of policy learning to offer a design for a new learning architecture. As Radaelli has noted, efforts to understand policy learning are hampered by incomplete theoretical foundations and by poor research designs that conflate distinct learning processes. As a result, efforts to promote policy learning amongst practitioners based on this literature often fail to live up to their promise. While acknowledging the efforts to understand the connection between learning and governance on the part of the international forest policy community, we note that the community generally fails to take power and interest into consideration and to consider the incentives to learn. We describe a combination of instrumental and political learning that we call "cross-coalition learning" and show that this kind of learning is currently emerging at regional levels. We argue that cross coalition learning needs to be institutionalized and describe the creation of a promising learning architecture amongst the ASEAN countries that could perform this architectural function in the larger governance arrangements.

1. Introduction[1]

The state of the world's forests has been high on the global environmental agenda for more than two decades. Forests were discussed extensively at the sustainable development summit in Rio and an entire chapter of "Agenda 21" is devoted to outlining their importance and the threats that they face. Nonetheless, international states (joined by an increasing number and variety of non-state actors) have failed on at least three separate occasions to negotiate the kind of binding international convention for the protection of forests that could form the centrepiece of a conventional international regime within the United Nations system. Instead, global efforts to reverse forest loss and to improve forest conditions and livelihoods are now coordinated by an extensive but fragmented "regime complex" composed of a wide variety of loosely-coupled instruments, institutions and actors (Keohane and Victor 2011; McDermott et al. 2007, 2011). Some of the most important elements of the regime complex - notably the UN Conventions on the Conservation of Biological Diversity (CBD) and on Climate Change (CC) - have a significant interest in the fate of forests without having the improvement of forest extent or condition as their primary goals.

A regime complex is not necessarily a suboptimal governance arrangement. However, there is a general consensus that the forest regime complex is failing (Rayner et al. 2011).. Performance, as measured by continuing deforestation, ecosystem degradation and biodiversity loss, is poor (Pfaff et al 2010). While net deforestation has slowed over the last decade, the area lost each year, estimated at 13 million hectares, remains alarmingly high (FAO 2010). Moreover, the aggregate figure masks a growing gap between North America and Europe (excluding Russia) where forest extent is stable or even increasing and Africa, South America and parts of Asia where tropical forests, often biodiversity hotspots and sources of livelihoods for forest-dependent communities, continue to be lost to agricultural conversion and to other incompatible land use changes. How can the regime complex be made to work more effectively?

All international environmental regimes raise the question of motivation – why should nation states and other independent actors cooperate or agree on and abide by a framework of rules that punishes defection? Regime complexes raise this question even more urgently because the motivation for cooperating in the context of their component parts – the conservation of biodiversity or the mitigation of climate change, for example – may be quite different from motivation to cooperate towards achieving the goals of the complex as a whole – protecting forests and forest-dependent livelihoods in this case. This problem has been recognized in the forests case in a number of assessments of the regime complex, where "poor coordination" has been identified as a key challenge (Tarasofsky 1995, Glueck et al 1997; Chaytor 2001; Dimitrov 2004; Hoogeveen and Verkooijen 2010).

In this paper, we depart from both the prevailing realist account of the solution to coordination problems in international regimes and that of its main competitor, the neo-Gramscian account. Instead, we draw upon and expand neo-institutionalist and cognitivist orientations to identify the kinds of interventions that could improve coordination . Like most problems of multi-level governance, these coordination problems involve both vertical and horizontal components. That is, coordination is required not just amongst the actors at the global or national levels (where most of the attention has been focused) but is also required to connect global initiatives with the regional, national and local policies and programs that are needed to implement them. Rather than make a sharp distinction between vertical and horizontal coordination, we draw attention to the hybrid nature of contemporary governance challenges, where the activities of state-based

international organizations and national and subnational state entities may intersect with the programs of global and local private actors (Okereke et al. 2009; Porter 2009). We call these hybrid coordination challenges the problem of "institutional intersection" (Cashore and Galloway 2010).

We argue that unresolved problems of institutional intersection are one of the main reasons for the widespread sense of a "missing middle" in the global forest governance architecture that has been filled neither by prescription (on which the international community cannot agree) nor financial incentives (which have not been forthcoming to anywhere close to the extent that would make a difference). If neither of these kinds of policy instruments is available to an appropriate degree, the spotlight falls on information and procedural instruments. The latter are, of course, used extensively in international environmental regimes on the assumption, now contested as a false analogy from international security regimes, that mutual discussion provides better outcomes than unilateral efforts at a solution (O'Neill 2009). Information instruments are also very common but seem equally ineffective. Quite apart from the obvious self interest of the scientific community, the endless calls for "more research" while deforestation continues apace appear to be little more than a variant of the "talk and log" strategy that is prolonging the life of apparently pointless international negotiations.

In this paper, we assess the prospects for a more focused use of information as a policy instrument: coordinating and improving outcomes in an international regime-complex by policy learning. A learning architecture is defined as the institutionalization of information instruments as part of governance arrangements intentionally designed to coordinate actors by promoting incremental convergence on policies and practices that achieve policy goals. In the next section, we follow the connection between learning, complexity and policy change in the global forest governance context where coordination is attempted by a relatively fragmented regime complex. In section 3, we address the problem posed by Radaelli and others, that policy learning theory is hampered by unrealistic and overly-rationalistic assumptions about policy processes themselves (a particular problem in the resource management literature on learning), suggesting a shift of emphasis towards a focus on the incentives that various actors have to participate in learning. The kinds of learning required here will instrumental and political, with the aim of bringing about incremental changes that follow a progressive pathway (Cashore and Howlett 2007).

Finally, we argue that significant progress along these lines is already being made, especially in regional level public-private networks that have emerged to tackle illegal logging, and we provide an example in the ASEAN knowledge network on the forest legality and enforcement process. We conclude that these networks are critical components of a new learning architecture for complex governance arrangements.

2. The Challenge of Global Forest Governance

In the 20 years since Rio, a succession of approaches to deal with the problems of forest loss and degradation has captured the attention of policymakers and a range of international institutions have been created. None has been able to deal effectively with the complexity of the issues involved. Competing interests and divergence over key ideas have effectively stalled international negotiations on global forest governance during this time. Efforts to bypass the stalemate by moving forest concerns into biodiversity or climate change fora and to create parallel civil society-led processes have created a correspondingly complex set of institutions. These complex arrangements are difficult to navigate and have, in practice, produced further conflict and suboptimal outcomes.

However, as Keohane and Victor (2011) have argued, the appearance of a regime complex is usually evidence that there is no single, easily understood problem to which an international regime can present itself as the obvious governance solution. This is certainly the case with forests. Multiple and competing problem definitions; multiple drivers of undesirable change, varying over time and space; and the identification of a range of related but distinct trans-boundary forest problems (rather than a single problem of the global commons) are all reasons why forest governance exhibits the loose architecture of a regime complex. This state of affairs has generally been regarded as one of the main causes of poor outcomes, a second best solution, creating gaps, duplication and overlap between competing instruments and setting coordination challenges that the regime complex has proved incapable of meeting (Howlett and Rayner 2011; Dimitrov et al. 2007)

There is much to be said for this negative picture. For many years, the challenge of managing complexity combined with the continuing problems of regional deforestation resulted in a serious case of "instrument envy" and much diplomatic energy was expended in the ultimately futile

effort to negotiate an international convention. While states and international organizations eventually reached consensus in 2007 on a statement of voluntary goals and principles, the Non-Legally Binding Instrument on All Types of Forests (NLBI), most civil society actors had long since left the process in favour of alternative approaches, notably the certification of forest products as deriving from sustainably managed forests and efforts to address the considerable problem of the trade in illegally harvested lumber. At the same time, civil society actors tended to view the NLBI's underlying paradigm of Sustainable Forest Management (SFM) with increasing suspicion as a justification of "business as usual" and developed their own, conservation-inspired set of goals and principles known as ecosystem –based management (EBM). The professional forestry community set about creating criteria and indicators of SFM through a series of regional processes, generally supported by states and international organizations, while EBM became the basis for the regional standards developed for certification by the Forest Stewardship Council (FSC). Complexity is in considerable danger of becoming mere fragmentation (Biermann et al. 2009)

Nonetheless, the situation is not entirely bleak. A recent assessment of the broad global forest governance arrangements shows that, in spite of some overlap and duplication, there is generally good coverage of the key themes and issues facing forests (McDermott, 2011). As already emphasized, the issues are complex and global forest governance arrangements need to reflect that complexity. The most important challenge is not how to simplify these arrangements but how to coordinate them in ways that build more authoritative, effective and enduring global governance. In the forestry context, this will mean building bridges between the now thoroughly entrenched and mutually suspicious coalitions of interests and ideas. It is very unlikely that bridge-building will be achieved by continuing to put time and resources into multi-stakeholder processes in which deliberation is fostered in the absence of purposeful agreements. We are dealing with exactly the kind of case analysed by Sabatier and his colleagues in which "deep core beliefs" or conflicting values about nature and its anthropogenic uses are at stake (Sabatier et al. 1999). An alternative approach requires more support for problem-focused learning about institutional interactions and outcomes. This approach to learning is currently overshadowed, in both the scholarly literature and among practitioners, in favour of "win win" multi-stakeholder negotiations that tend to privilege compromise over problem solving.

Keohane and Victor argue that a regime complex is the product of the interaction of three sets of forces. The first is the distribution of power that creates the challenge of coordinating a variety of more or less powerful actors with mutually conflicting interests. While the international regime literature usually presents this problem in terms of the disruptive role of "hegemonic actors" taking deliberate decisions, Keohane and Victor emphasize the likelihood that regime complexes have emerged over time through multiple rounds of bargaining that create path dependencies. They note that once multiple institutions have appeared, with their many veto points, gate keeping behaviours and opportunities for venue shopping, it may be hard to reverse at least some degree of fragmentation if actors are receiving benefits from the status quo. The second is the problem of uncertainty. Cooperation is easier when the distribution of gains and losses can be predicted with relative certainty. Resource and environmental problems are accompanied by considerable uncertainties around causation and the effectiveness of different policy options and the behaviour of the principal actors is to a large degree governed by a desire not to arrive at a premature convergence on an institutional structure and instrument mix with uncertain outcomes and payoffs (Lemos and Agarwal 2006). A regime complex not only allows for the hedging of bets in this respect but also encourages the formation of smaller groups of states or "clubs" where the costs and benefits of cooperation are clearer or, at least, can be worked out without having to reach compromises with actors who have very different interests or are likely to be free riders.

Finally, there is the problem of finding linkages between issues that can encourage integration rather than fragmentation, extending the benefits of cooperation across linked issue areas with a broad mix of policy instruments. Weak linkages, on the other hand, make the issue area hard to define and encourage a fragmented approach to smaller and more easy to manage problems. In Keohane and Victor's example, the trade regime began with a focus on border tariffs but subsequently broadened the issue area of "trade" to include subsidies, food safety standards, environmental regulation and more. The conservation of biological diversity, on the other hand, has failed to create linkages of this kind and has fragmented into a number of more easily manageable fora.

These three challenges interact to produce the forest regime complex and its characteristic challenges. There are strong divergences of power and interest, notably between developed and

developing countries but also between those with higher and lower forest cover, creating at least four potential coalitions (Hoogeveen et al. 2010). These divergences have promoted tendencies for actors to form clubs that can cooperate around more easily manageable issue areas. Second, there is a great deal of uncertainty, exacerbated by the different scientific approaches of SFM and EBM to such fundamental issues as forest condition or even forest extent, that has made actors wary of cooperating with each other because the payoffs are so hard to calculate. And, until recently, linkages have tended to fragment rather than integrate the regime complex. Deforestation has been linked to development, biodiversity conservation, trade, human security and climate change but opportunities for cooperation at a global level have not been created, in part because of the diversity of problem definitions at different times and places. As already noted, many forest problems are actually regional trans-boundary problems and, as we shall see in the case of ASEAN, regional organizations have become a natural focus for this "clubbing" activity.

The argument of this paper is that, while the nature of forest problems means that there will probably never be tightly integrated global forest governance arrangements, the regime complex can be made to work more effectively by creating an appropriate policy learning architecture. By this, we mean an institutionalized approach to learning that is built in to the governance arrangements in the form of information instruments. This requires some attention to the general conceptual problems of policy learning. The proposal is not simply a call for "more research", which, like the compromise-focused multi-stakeholder negotiations, cannot overcome the current obstacles to building better global governance arrangements. However, there are both conceptual and practical challenges to creating the learning architecture. The conceptual difficulties are caused by the confusions that still surround the notion of policy learning, in large part because "learning" itself is such a slippery, multi-dimensional term. There is already a distinctive approach to learning within the professional forestry community that is not an especially helpful guide to an appropriate learning architecture We discuss this approach in the next section.

The kind of learning that will help overcome the challenges of a regime complex is, first, problem-focused learning that improves the coordination of institutions and the effectiveness of interventions, stressing knowledge mobilisation and knowledge translation over knowledge

production. It will have a problem-based approach to learning to generate good practices in addressing forest problems. It seeks to diffuse these practices through the international community as rapidly as possible and is directed towards authoritative, effective and purposeful efforts that result in measurable behavioural change. Many of the component parts of learning as coordination are already in place at the regional level where Keohane and Victor's "clubs" have been formed, although there is still a tendency to restrict club membership to states and their regional organizations. As a result, the many examples of good practices that exist at a variety of scales have not been broadly diffused through the international policy community because these components of policy learning have not been assembled into a comprehensive supporting mechanism for global forest governance.

Reducing the uncertainty that makes international cooperation to reduce deforestation so difficult requires greatly improved understanding of the complex interconnections and interdependencies between environmental and socio-economic factors. In this respect, at least, the professional forestry community is, as we shall see, correct in its approach to learning. However, for successful policy intervention, analysis of the specific causal relationships that operate in particular cases needs to be accompanied by a much clearer recognition of the operation of power and interest that is also frustrating efforts at cooperation. Once these relationships are brought to light they reveal the existence of perverse incentives to engage in destructive – and often self-destructive – actions. Where such incentives persist, and whether they promote deforestation by powerful interests from outside the forest sector or by local communities, the political and economic costs of traditional, top-down government action alone is often too high to be seriously contemplated. Pathways from the global to the local are blocked and international agreements, however sincerely undertaken, prove powerless to affect outcomes on the ground.

3. Learning architectures for forests: the conceptual problems

Although there are plenty of dissenting voices, mainstream professional forest management forms a distinct community organized around the idea of Sustainable Forest Management (SFM). While the larger goals of SFM are agreeably vague (certainly no handicap at all to the adoption of SFM language in international agreements, including the NLBI), many of its practitioners

have travelled a considerable distance from early concerns with implementing highly prescriptive forest laws aimed at protecting forests and enhancing their ability to produce commercial forest products. The European definition of SFM captures its paradigmatic scope:

The stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity and regenerative capacity, vitality and their potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, regional and global levels, and that does not cause damage to other ecosystems

Meeting the ecological and the social goals of SFM requires consideration of a broader range of desired future forest conditions and of the complex ecological interactions that may support or frustrate managers' efforts to reach them than has traditionally been the case in production-oriented forestry (Davenport 2011). Moreover, the emphasis on management creates a different kind of community than the classic epistemic community of the policy learning literature, one where professional qualifications play an equally prominent role in boundary drawing to adherence to the paradigm.

In consequence, the academic literature on resource management practices (the "RM literature") has become heavily influenced by the systems ecology movement in environmental and natural resource management. This literature is characterized by efforts to understand and manage connected "social-ecological systems", which are assumed to be self-organizing in a biological sense, their dynamics created by complex feedback mechanisms both within and between the social and biophysical parts of the system (Walters 1986; Gunderson and Holling 2001; Berkes 2003). While the scientific efforts have been directed towards identifying and filling information gaps on the biophysical side and constructing ever more complex ecosystem models, the community has come, somewhat belatedly, to the realization that the real challenge lies in creating the "flexible social arrangements [that] are necessary to develop the rules, institutions, and incentives ... that influence ecosystem management outcomes in a complex and uncertain world" (Armitage et al. 2008: 95).

These "flexible social arrangements" are usually referred to as "governance arrangements". From here, connections run to the "government to governance" literature (often via the work of Ostrom or Ostrom's collaborators, e.g. Ostrom 2009; Dietz et al. 2003), stressing a shift from hierarchical control to shared decision making between public and private actors (Holling and Meffe 1996; Armitage and Plummer 2010). In spite of, or perhaps because of, the tendency to

run together governance and management, the emphasis on partnership in turns leads to a strong interest in network governance and an appreciation of networks as flexible arrangements that can match the complexity and uncertainty of the issue area with appropriate flexibility in governance arrangements (Henry 2009; Primmer 2010).

Although there is a difference of opinion (and sometimes a simple confusion) between promoting networks as an organizational design versus the idea that networks are the self-organizing analogues of complex emergent biophysical systems, the focus in both cases is on the capacity of governance arrangements to promote learning:

Responding to non-linear social–ecological feedback and cross-scale interplay requires multi-level governance arrangements that link social actors (vertically and horizontally) in the pursuit of shared learning. Effective linkages will establish the basis for regularized flows of information, shared understanding, and problem articulation, and will move governance beyond simplified network perspectives (Armitage et al 2008).

combining biodiversity conservation with forest management is a multilevel governance challenge that requires exchange of information, expertise and learning among those designing policy as well as those who implement it and those who adapt to it (Primmer 2011: 133)

Mutatis mutandis, all this is very familiar territory for political scientists, especially the connection between governance, networks and learning. However, the standard references in the political science literature (Hall on paradigms and instruments, Bennett and Howlett on what is learned by whom and to what effect, and Haas and Haas on learning in international epistemic communities) are conspicuously absent. Instead, both the microfoundations and the distinctive learning architectures (co-management, adaptive management) are drawn from the literatures on business management, organization theory and adult education and remain anchored in the connection between learning and feedback in complex systems (Knight 2002; Carlsson 2002). Again, while some of this literature is familiar to political scientists (for example, that on interorganizational networks and on the distinction between single and double loop learning in theories of administration) there is also much here that remains relatively unexplored in the political science and policy literature.

Nonetheless, the RM literature suffers from a number of familiar drawbacks. Although it often poses the question of "who learns?", the answer tends to be framed as a choice between individual learning and social learning, with the all important middle ground of organizational

learning relatively undeveloped, in spite of the connection with business management. Even where the apparently innovative step of focusing on learning in networks is explored, networks are studied using the tools of social network analysis (SNA), an intrinsically individualistic methodology unlikely to explain how networks themselves can be said to learn anything (even when the object of study is something described as a "learning network"). This problem is often exemplified in the RM literature's focus on relatively small-scale interactions (something else that it has in common with Ostrom inspired approaches) and its characteristic interest in management rather than policy. Second, the systems orientation in all of these models reproduces the difficulties of all systems approaches in dealing with power, exacerbated by the naturalistic orientation deriving from the ecological models on which their understanding of social systems is based . RM theorists are often puzzled when their models fail to have an impact on policy (reduced to the actions of "decision makers") and occasionally seem to assume that the provision of better information on its own is sufficient to carry the day. Finally, there is a pervasive confusion (shared, it has to be said, with the broader policy learning literature) between learning practices and outcomes in different kinds of learning "communities". In particular, the kinds of learning practices supported by more or less powerful professional groups (of whom resource managers are an example) are quite different from those found in the "epistemic communities" often studied in the international regime literature. Attempts to translate from one to the other are fraught with difficulties (Amin and Roberts 2008). Thus, although space precludes a more detailed treatment of the RM learning literature, its utility for understanding policy learning is, at present, limited and its impact on the development of appropriate learning architectures decidedly equivocal.

4. Learning Architectures and the Incentives to Learn

The connection between learning and power has not always been especially evident in political science, either, and is susceptible of various kinds of treatment. Following the rational actor approach that underlies the Keohane and Victor analysis of regime complexes, we treat the problem as one of providing incentives to learn, on the assumption that powerful actors or coalitions will prefer the status quo in the absence of both such an incentive and the improved information about outcomes that is the object of learning. For the appropriate level of learning, we follow Cashore and Howlett (2007), who find that longstanding distinctions in the policy

literature between "paradigmatic" versus "incremental" change mask a different process of change in which small steps going in the same direction may eventually yield paradigmatic results but through a process termed "progressive incrementalism" (see also Geels and Schot 2007). Progressive incremental change is easier to manage, less likely to result in layering and drift, and much more capable of delivering viable new governance architecture than the adoption of whatever 'big idea' is currently capturing the imagination of the forest policy community . However, it is also closer to what the RM literature understands by learning as a continuous response to feedback in a complex system.

The challenge for institutions is thus how to ensure that these incremental steps are progressive and lead in a desired direction, rather than producing the aimless series of disjointed and counterproductive steps that is, all too often, the consequence of fragmentation. Policy learning in this context is close to Hall's famous statement - "a deliberate attempt to adjust the goals or techniques of policy in response to past experience and new information" (Hall 1993: 278) - and the emphasis on technique, or instrumental learning rather than the paradigmatic kind, is obviously critical. The policy learning required here is the kind in which evidence about the effectiveness of particular policy instruments is constantly monitored and updated, resulting in continuous incremental change in instrument mixes and settings. This kind of iterative updating is not fortuitous but "the result of analysis and/or social interaction" (Radaelli 2009: 1147). Where the context is one of complex problems and multiple institutional intersections, as in international forest governance, special emphasis will need to be put on learning about improved institutional configurations, intersections and instrument mixes (Cashore and Galloway 2010).

In this respect, Gunningham and his colleagues (Gunningham and Young 1997, Gunningham et al. 1998) have made two key observations. First, they note that policy is rarely conducted by single policy instrument acting isolation. Instrumental learning is thus complicated by the need for policy-makers to reflect on the types of interactions a proposed instrument might have with existing efforts and whether such an interaction enhances, or takes away from, policy goals and objectives. This is consistent with the forestry policy community's emphasis on the connection between learning and complexity. However, there is another kind of learning at work here, the one relatively neglected by the forest policy community. Gunningham argues that when two

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equally effective instruments are being considered, it is best to choose the one most likely to have the support of those whose behaviour it seeks to modify, reasoning that such considerations would yield longer-lasting support and hence create durable, adaptive institutions. The kind of learning needed to make such inferences is clearly political learning about the likely responses of different actors and interests. These two kinds of learning, instrumental and political, are thus the focus in what follows.

The current set of international forest governance arrangements is not well placed to promote either instrumental or political learning of this kind. There is a gap between the high-level, state-centred negotiations that have contributed to treaty congestion and the stalemate that has formed in recent years in key parts of the regime complex and the huge variety of local, national and regional efforts to improve forest conditions and livelihoods on the ground (Hoogeveen and Verkooijen 2010). High-level negotiations certainly have a central place in international forest governance, not least because they allow the development of the norms and values that provide the 'compass' for governance – that is, the direction in which the actors agree to move. However, the hopeless attempt to *compel* movement in a desired direction has absorbed the energy of negotiators and incited further demands for greater centralisation and top-down coordination at exactly the time when non-state actors of all kinds have become more prominent.

An unbalanced focus on state-centred negotiations alienates non-state actors. States are no less important today than they were in the past, but they are no longer the only group of actors that takes part in forest governance Now that issues have multiplied and the interconnections among them have grown more complex other actors, including international organisations, private sector corporations, civil-society organisations and consumers, are all central players in the design and implementation of forest policy. This heterogeneous group of actors has resisted top-down coordination by legally binding rules. Some actors have created parallel processes of standards-setting, stakeholder engagement and forest management from which important lessons can be learned. However, the prevailing atmosphere of competing governance modes, clashing values and alternative management systems makes it hard for anyone to admit to the inevitable mistakes and failures that are often the most important inputs into both adaptive management and policy learning (Armitage et al. 2007). If instrumental and political learning in this hybrid

context is to take place successfully, the governance arrangements need to include learning architectures based on understanding the incentives to learn.

5. Understanding the incentives to learn across coalitions

What kind of architectures can promote this combination of instrumental and political learning? First, the architectures would need to encourage strategists to promote efforts that have, or may reasonably be expected to acquire, the support of domestic governments and key stakeholders. This would focus attention on developing knowledge, training, and expertise, especially in those developing countries where strong commitments to international norms have been made but in which compliance challenges are immense. Second, the architectures should focus attention on building mechanisms that would generate globally important coalitions of those whose interests are otherwise quite divergent, the "bootleggers and Baptists" described by David Vogel. Vogel's notion captures the phenomenon in which environmental groups and relatively highly regulated business interests sometimes coalesce in order to champion increased regulations on their competitors (Vogel 1995, 2005). Attention to the notion of championing wide-ranging coalitions that support institutions but for very different reasons is especially appealing, since we would expect these institutions to be much more durable than those in which a key constituency is vehemently opposed. We call this peculiar combination of instrumental and political learning "cross-coalition learning" and its institutionalization is the key to the learning architecture we propose.

There is already evidence that such coalitions have existed in forest policy. It is what occurred when US environmental groups and the US forest products industry jointly lobbied Congress to amend the Lacey Act to limit the importation of illegally harvested wood products. These amendments appealed to timber processing firms that seek to maximise profits, even while insisting on utilising wood from legal sources and a level regulatory playing field, and to environmental groups focused on reducing deforestation. The knowledge gained in efforts to certify forest products as sustainably produced will be a key part of the effort to ensure that imports come from legal sources. However, unlike the more celebrated efforts at forest certification efforts that pit the FSC against industry-initiated competitors, legality verification

tracking *unites* these otherwise competing interests around improving efforts to stem tropical forest degradation.

For the most part, developing countries with significant forest cover support such efforts to promote legality and good forest governance. They support them because without adherence to baseline "rule of law," the result can be extensive corruption, lost revenues, and political disorder. However, the reason why there is significant support for "good forest law enforcement and governance" is the same reason why building it will be so challenging. Even if and when widespread stakeholder and societal support for forest law and governance can be achieved, successful implementation requires that these countries have the resources, training, and technological assistance for monitoring on the ground responses and impacts. These challenges are well known and are the rationale for programs such as the EU Forest Law Enforcement, Governance and Trade program (FLEGT) that provide access to EU markets for countries that sign partnership agreements to develop forest laws and accept support to create capacity for implementation and enforcement.

When both conditions exist, the institutional environment is more likely to support and entrench further learning and the kind of adaptive management proposed by the forest policy community, in spite of the apparent conflict of interests between the various parties involved. However, whether or not the architecture will be able to create the kind of problem-solving institutions necessary for addressing the acute challenges facing the forest sector, will depend on whether, and how, progressive incremental changes will continue to occur. If these efforts stop at baseline legality, few in the forestry community are likely to see this as a successful outcome. Instead, the question is whether baseline legality might promote a series of other goals, including access to rights and resources, internationally acceptable environmental norms, and a governance system in which corruption is reduced for culturally ingrained, rather than coercive, incentives. Likewise, in the private realm, the question is whether private legality verification, which is now being used as the mechanism with which to meet US and EU legality policies and developing country "good governance" objectives, might evolve to embrace higher standards of sustainable forest management. Whether such progressive incremental efforts might occur in this case depends on rewarding the firms that practice at the highest level (and which usually do so

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largely, if not exclusively, because of their domestic government regulations) and to creating increased consumer demand and support for their products. The fact that many grassroots small and medium forest enterprises and producer groups have persisted in striving to manage their forests sustainably, even when the commercial, institutional, and political-legal framework is full of obstacles, is a testament to the resiliency of these efforts.

6. Evidence of cross-coalition learning

In spite of the conceptual confusions and practical difficulties, there is at least some evidence that cross-coalition learning is taking place in forest policy and that, in at least one case that we discuss below, there is an attempt to institutionalize this kind of learning through the creation of a learning architecture.[2] At the most general level, the processes to develop the criteria and indicators of SFM that dominated much international cooperative efforts in the 1990s focused NGOs, governments and industry organisations on 'how things work', which led, in turn, to a general consensus supporting instrumental learning about the techniques of forest policy and forest management. As already noted, however, the connection between this kind of policy learning and management has been obscured rather than clarified by the prevailing approaches to learning in the RM literature.

More recently, development assistance agencies that support FLEG processes have supported learning among apparently irreconcilable stakeholders. For example, German Technical Cooperation (GTZ) has started to provide funds to numerous local agencies, including the Indonesian Forest Agency, to carry out research on the impacts of conventional logging as well as trials on reduced impact logging. It also provides technical assistance to improve the standard of operations. Another international body, the Tropical Forest Foundation, helped to provide the Government of Indonesia with a scientifically sound foundation for reduced impact logging, leading to the development of guidelines for better forest practices (Klassen 2003).

In Latin America, transnational actors and international institutions have influenced and in some cases directly accessed domestic forest policymaking processes, largely through the provision of

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[2] Much of the case study material in this chapter is drawn from Cashore and Galloway et al. 2010 and Cashore and Bernstein et al. 2011 – we gratefully acknowledge the contributions of the contributing authors in these chapters.

resources, knowledge, training and finance. In Costa Rica in the mid 1990s, for example, the United States Agency for International Development (USAID) strengthened the historically poorly organized private forestry sector with organizational capacity and funding, establishing the Costa Rican Forestry Chamber (CCF). The CCF became the main advocate for the timber industry and was a significant stakeholder in the development of the 1996 forest law (Law No. 7575) (ibid.). In Bolivia, one of the key factors in reform was the emergence of political conditions that were favourable to democratic participation. As a result, an intensive dialogue on forest-sector issues took place with the engagement of many stakeholder groups. International assistance agencies such as USAID, FAO and the World Bank, along with international environmental NGOs, contributed to the dialogue by providing funding, technical information and advice to decision-makers (Pavez and Bojanic 1998).

In Peru, the government's interest in improved forest practices shifted in 2002–03 with the implementation of the new forest law. With the support of (principally Dutch) development agencies, the then Minister of Agriculture brought together a coalition of government forest officials and non-government forest stakeholders (Smith et al. 2006). The combined weight of this coalition was able to counteract those opposed to the new law. The coalition built on and expanded a round-table of stakeholders to develop a consensus on the implementation of the new law, and presented its feedback and recommendations to the government (Smith et al. 2006).

The FLEGT process in Central Africa included substantial efforts at capacity building and coordination and illustrates the hybrid character of the interventions. In preparation for VPAs, for example, the Republic of the Congo, Cameroon, Central African Republic and Gabon all initiated efforts to permit independent observers to monitor their forest operations. Subsequently, NGOs working to promote transparency, such as Global Witness and Resource Extraction Monitoring, became involved in forest monitoring – a sovereign state activity – and their monitoring reports were disseminated widely. Cameroon and the Republic of the Congo have also worked with the World Resources Institute to develop interactive forest atlases showing forest concessions, which have been made available publicly. In the Democratic Republic of the Congo, the development of a legal framework for forest management and the conversion of former logging titles to concessions have been done with notable transparency. At each stage of the process the forest administration has worked consistently with national and international

NGOs, as well as with technical international donors and private-sector partners (Eba'a Atyi et al. 2008).

Regional-level strategies to foster learning, such as 'capacity development' for knowledge transfer and mutual learning processes among peer countries (e.g. Goehler et al. 2009; Goehler and Schwaab 2009), are also being promoted by development agencies (Ferroni 2001). In a seven-year regional program with ASEAN, for example, GTZ provided advisory services and financial resources to both formal intergovernmental bodies, such as the ASEAN Senior Officials on Forestry, and the more informal ASEAN regional knowledge networks. Focused discussions on specific policy interventions were led by the ASEAN Working Group on a Pan ASEAN Timber Certification Initiative. These helped to foster agreement by all ten ASEAN member states on a regional guideline for phased approaches to forest certification and on the ASEAN C&I for timber legality (Hinrichs 2009). The EU, GTZ and USAID supported the working group with technical expertise and financial resources. In 2008 ASEAN established regional knowledge networks on FLEG and forests and climate change, with the primary motive of better informing decisionmakers through policy-oriented research as a precondition for effective policy implementation. GTZ played an initiating role, advised on network management and, together with AusAID and the World Bank, provided financial resources for network activities. The regional knowledge network on FLEG organised a learning process in which countries shared their professional views, developed collective wisdom on FLEG, and shared experiences about the successes and failures of FLEG policies (Pescott et al. 2010).

The ASEAN case provides the clearest example of cross-coalition learning being supported and institutionalized through an explicit learning architecture. The Ministerial declarations and agreements noted in the previous paragraph, especially the regional FLEG workplan and guidelines, created considerable pressure to deliver on public commitments. The organizational form eventually adopted was a learning network, having features of both the epistemic community and a professional community. This combination provided a stronger focus on instrumental learning than a network based on a traditional epistemic community alone. The networks' findings are available for public discussion through the internet-based ASEAN Forest Clearing House Mechanism. While looser than the traditional peer review and other reputational mechanisms used in epistemic communities, the ARKN-FLEG has set up a review panel with

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some of the features of an editorial board for quality control of the materials available on the website.

Network products have included building consensus on a regional evaluative tool to assess the outcomes of domestic FLEG efforts and facilitated a status quo analysis (using the assessment tool). The analysis comprised the preparation of country reports and a regional workshop where network members shared their professional views about appropriate FLEG practices and exchanged experiences about successes and failures of FLEG policies / instruments in ASEAN Member States (Pescott, Durst et al. 2010). Both traditional good practices and innovative instruments were identified, for instance, by the use of a peer review mechanism to assess FLEG in the Philippines (Thang 2010). Subsequently, ASEAN policy-makers adopted the assessment tool. It is assumed that it will be used for systematic evaluations in the future.

Evidence about FLEG policies summarized in the regional assessment report included, for instance, community-based forest management, decentralization efforts and participatory approaches like the "Multi-Sectoral Forest Protection Committees" in the Philippines. This organized learning processes can help to bridge the implementation gap of regional policies, support understanding on the appropriateness of policy instruments, and guide consensus-building on benchmarks and respective evaluation tools.

In addition, the network conducted research about intersecting forest policy instruments (Goehler, Liss et al. 2009), the implications of new market instruments such as the EU FLEGT Action Plan and the US Lacey Act (Koeng 2009; Koeng and Malessa 2009), the role of local institutions (Soriaga and Cashore 2009) and impacts on local livelihoods (Soriaga 2010). Research results were captured in policy briefs including recommendations of policy options. The network chair presented the results during formal meetings of the ASEAN Senior Officials in Forestry (ASOF) in order to better inform the policy-makers about evidence of policy and on-the-ground impacts. Nonetheless, while the senior officials have recognized the important role the network plays in this regard, it is, as always, hard to draw direct linkages between instrumental learning and policy choices.

While instrumental learning could be observed through the ARKN-FLEG, there is also a political learning dimension if one considers that agreement was reached to include principles such as

transparency, public disclosure policies, equitable participation of forest stakeholders, fair tenure rights and the recognition of customary rights in the regional assessment standard. Similarly, the FLEG network promoted a normative discourse on delineating principles of 'good forest governance' for ASEAN institutions. The consensus about criteria such as inclusiveness, transparency and accountability emerged from individual countries' experinces and is expected to contribute to political learning in which participants have a better understanding of each others' motivations for supporting FLEG.

7. Conclusions

This paper has proposed a definition of a learning architecture as the institutionalization of information instruments as means of coordinating actors with diverse interests and resources by promoting incremental convergence on policies and practices that achieve policy goals. On this view, a learning architecture is a specific kind of governance arrangement. Global forest governance provides a case of a learning architecture that has emerged in the absence of successful governance by the more familiar mechanisms of a binding international convention or financial incentives applied at a sufficient scale to induce a similar convergence. Though it may seem an outlier, forest governance is in many respects closer in practice to other, apparently more orthodox international regimes. As the climate change example shows, the pattern of multiple organizations and instruments and hybrid, multilevel governance arrangements is actually more common than was once supposed. If successful in the forestry case, learning architectures are likely to be more widely adopted in future.

From the forestry case we draw three lessons for learning architectures. First, learning architectures of the kind described in this paper have as their principal goal the identification and management of positive institutional intersections. In the forestry case, the learning took place at the intersection of state-centred efforts at linking legality and trade, civil society efforts at certification to improve forest practices, corporate efforts to create a level playing field for the trade in forest products (and, perhaps more dubiously, promote corporate social responsibility) and local NGO and development agency efforts to protect forest dependent livelihoods. Ironically, there are likely to be more opportunities for fostering institutional intersections of this kind in a regime complex than in a more conventional international regime. The learning that

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takes place at institutional intersections is a mix of instrumental and political learning rather than an attempt at norm generation that has been the focus of so much environmental diplomacy.

Second, successful learning architectures are built on a microfoundation of cross coalition cooperation. This will set important limits to the kinds of policy questions on which learning architectures can successfully achieve convergence. In the forestry case, direct influence on the domestic policy process resulted from international efforts to build cross-stakeholder learning about how policy interventions may yield better environmental, social and economic performance on the ground. Policy learning uncovered win–win opportunities that previous hostilities prevented from emerging (Sabatier 1999; Hall 1993). Thus cross coalition policy learning is also more likely to have a significant influence when it addresses specific questions that improve forest management practices rather than larger issues, such as economic demands to convert natural forests to plantations. This lesson has important implications for the application of learning institutions to REDD+ and other climate change initiatives where the temptation to go for "super linkages" is great.

Third, the hybrid character of the multilevel governance challenges that learning architectures are designed to address will likely produce quite distinctive learning networks that have features of both epistemic and professional communities. Given that, as Amin and Roberts convincingly argue, once we move beyond the "communities of practice" rhetoric, the process and objectives of learning in these communities are quite different, we need a much better characterization of the kinds of complex professional/managerial/academic communities that are so evident in the ASEAN case. In this respect, the forest governance materials draw attention to a whole literature and practice that may be unfamiliar to political scientists. Nonetheless, the basic lessons of the (political science) learning literature – the need for clarity on the multi-dimensional character of the learning concept itself – is never more evident than it is here.

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