

**Can Policy Learning Help Ameliorate Global Environmental Problems?  
Lessons from Multi-level Forest Governance for  
Designing an Effective Learning Architecture**

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**Introduction and outline**

**Abstract**

Two scholarly literatures have spent over a generation attempting to address two seemingly distinct questions: 1) How does policy learning occur and shape policy outputs? 2) How and why do international institutions emerge to address enduring environmental challenges? The former has consumed the attention of comparative public policy scholars (Bennett & Howlett, 1992; Dobbin, Simmons, & Garrett, 2007; Dunlop & Radaelli, 2011; Oliver & Lodge, 2003; Radaelli, 2007); while the latter has been largely the purview of the global environmental politics community within international relations (Bernstein, 2001; Delmas & Young, 2009; P. M. Haas, 2000; P.M. Haas, Keohane, & Levy, 1993; O. Young, 2001; O. R. Young, 1989; O. R. Young, 1994; O. R. Young, 1999; O. R. Young, 2002). Following recognition by members of both these communities that we need to better understand how policy integration across multiple levels (O. Young, 2001) and sectors (Rayner, Buck, & Katila, 2011; Rayner & Howlett, 2009) occur, this paper reflects on what type of architecture might help foster problem focused, multi-level policy learning.

We make two arguments. First, scholars of policy learning have defined the territory so broadly, and practitioners have applied it so loosely, that the potential of learning to help ameliorate global environmental challenges has yet to be fully realized. There are simply too many concepts, phenomenon, definitions, and ideas running through this literature to be able to develop cumulative knowledge (Dunlop & Radaelli, 2011). Likewise a plethora of multi-stakeholder practitioner efforts justified for creating learning have few guideposts or expectations about what types of knowledge generation they will trigger, and what types of effects might occur. As a result, dialogues and deliberations established in on the name of stakeholder “learning” at best focus on compromise over problems, and at worst, are arguably more likely to reinforce the dominance of powerful interest and maintain the status quo. Accordingly, and in order to gain analytic traction we narrow our lens to focus on understanding how “causal knowledge” regarding policy interventions might be generated within and across multiple levels of governance. Hence we define “policy learning” as “the phenomenon in which policy makers and relevant stakeholders devote attention to understanding, assessing, and hypothesizing about, the cause and effect of policy interventions across multiple levels for ameliorating specified problems.” Second, we argue that this narrower conception of learning may lead to larger impacts than more comprehensive approaches. This is because, similar to Ostrom’s focus on a particular type of resource scarcity challenge, a more modest approach allows us to look for, and identify, practical tools for unlocking specific “causal mechanisms” (Dobbin et al., 2007; Gehring & Oberthür, 2009) capable of generating, and promoting, collective knowledge.

## I. Introduction

Two scholarly literatures have spent over a generation attempting to address two seemingly distinct questions: 1) How does policy learning occur and shape policy outputs? 2) How and why do international institutions emerge to address enduring environmental challenges? The former has consumed the attention of comparative public policy scholars (Bennett & Howlett, 1992; Dobbin et al., 2007; Dunlop & Radaelli, 2011; Oliver & Lodge, 2003; Radaelli, 2007); while the latter has been largely the purview of the global environmental politics community within international relations (Bernstein, 2001; Delmas & Young, 2009; P. M. Haas, 2000; P.M. Haas et al., 1993; O. Young, 2001; O. R. Young, 1989; O. R. Young, 1994; O. R. Young, 1999; O. R. Young, 2002). Following recognition by members of both these communities that we need to better understand how policy integration across multiple levels (O. Young, 2001) and sectors (Rayner et al., 2011; Rayner & Howlett, 2009) occur, this paper reflects on what type of architecture might help foster problem focused, multi-level policy learning.

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The theme running through our paper is that while the nature of global environmental and resource challenges means that there will probably never be tightly integrated governance arrangements, a focus on learning reorients attention on “regime complexes”, market-driven instruments or other modes of governance to understanding how a variety of stakeholders, with competing and complementary interests, might be able to collectively puzzle through, and develop analytical knowledge about, the cause and (potential) effects of policy integration configurations in addressing enduring environmental challenges (Radaelli, 2007). Such a problem focused collective learning process, might, we hypothesize, help identify synergistic solutions that, to date, have been largely bypassed by multi-stakeholder initiatives that emphasize compromise among competing goals, rather than identifying integrative and synergistic efforts that almost always unfold through multiple, and often non-linear steps. To be sure, we are not arguing that all problems can be address through such learning initiatives. We are arguing

however that a properly developed learning architecture may help policy makers to distinguish which class of problems are capable of being address through such processes, and to target other governance mechanisms for those that are not.

We elaborate these points in the following steps. Following this introduction section two identifies four key challenges that a learning architecture focused paper must address, and which justifies and distinguishes our approach. Section three provides a reinterpretation of global forest governance by reviewing how the forest regime complex focusing on addressing deforestation, forest degradation, and livelihoods, has either explicitly or implicitly, fostered stakeholder deliberations in general, and some degree of policy learning in particular. Section four provides a deeper dive into actual cases in which conscious interventions were made to foster cross-coalition learning within ASEAN. Section Five draws inductively from this review, but also deductively on the literature on policy learning, to offer initial propositions about the form and function a problem focused policy learning architecture might take.

## **II. Key challenges for Building Causal Knowledge Relevant for a Problem-focused Policy Learning Architecture<sup>1</sup>**

If the potential of a learning architecture for addressing enduring global forest governance challenges is to be realized, we argue that explanations and prescriptions must be consistent with four challenges.

First, **multiple levels of governance are always at play**. The issues we choose to study pose significant challenges for individuals, firms, communities, nation-states and the world as a whole. This means that unlike students of local institutions, national policy, or even federalism, students of global environmental governance and public policy must ultimately assess and understand how choices made at one level affect and influence, interactions and choices across and within governance arenas This is of course always the question for international relations since agreements or international organizations only have an effect to the extent they shape policies and preferences elsewhere (Bernstein and Cashore 2012), but it is more acute and pronounced for global environmental governance scholarship since, as a problem focused endeavor, we must be cognizant of the possibility we are witnessing a game of “whack-a-mole” in which an apparently positive development globally, such as biosafety trade agreement, might work to take pressure off domestic regulatory reforms.

This means that at its core, any effort to develop lessons from policy learning regarding architectural design must incorporate, rather than black box, these multilevel interactions (Andonova and Mitchell 2010). This is important since the vast majority of research on policy learning focuses on its role in shaping single issues and or single sectors in understanding policy development. To be sure a variety of efforts are now underway to expand these narrower treatments, but much more conceptual attention needs to be placed on precisely how causal mechanisms might function and/or be unleashed

Second, and related, **governance institutions continue to evolve**. This means that any empirical work explaining past choices must reflect on what their data means for continued evolution, rather than assuming that past explanations will also apply to future pathways. This directly contravenes the advice of such renowned public policy scholars such Sabatier and Baumgartner and Jones, to argue that it is impossible to understand a policy processes and its trajectory without studying it for a decade or more. This advice, while potentially sounds for those we seek some degree of predictable or at least, “postdicatable” explanations, is useless, indeed dangerous, for those who seek to undertake scholarship that might be useful and practical

for helping ameliorate current and future environmental problems. The belief that scholars can only know trends with confidence by looking at policy change over a decade may have some merit, but the strong implication is to throw up the “white flag” for any problem focused, practical, suggestions for improving and promoting learning forward.

As we review below, such advice, while reasonable for backward looking research, is inconsistent with environmental governance project in which we hope to shed light on a range of “real time” cross sectoral and multi level policy interventions, such as, understanding the role and potential of “reduced emissions from deforestation and forest degradation” (REDD+) and “forest law enforcement and governance” (FLEG) efforts designed to reduce illegal logging in the tropics through multi level governance. This means that scholars must be sensitive to theorizing upon which evolutionary track their data is located, and in what direction it might be headed. Recognition that we are always on an evolutionary trajectory means developing a policy learning architecture that incorporates concept building and theory building, not simply empirics, in generating causal knowledge among multi-stakeholder interests. In other words, policy learning aimed primarily at “empirical” knowledge about past events that fails to incorporate careful concept building and theories of future pathways, is almost certainly, and somewhat ironically, doomed to failure.

Third, and as a result of the first two challenges, and arguably the most difficult for those who have been critiqued for championing precision over accuracy, is that most required changes in governance and behavior are **unpredictable**. The unpredictable feature as years of work by constructivists (Bernstein, Wendt), organization sociologists (DiMaggio & Powell, 1991; Suchman, 1995) and institutional theorists (March & Olsen, 1998) have elaborated, necessitate careful attention to concept building, theory, and a range of methods including historical process tracing and scenarios development.<sup>2</sup> As 25 years of research on the politics of climate have revealed, we must develop approaches and models that capture adapt over time and space owing to feedbacks and underlying complexities of the problems at hand (Levin, Cashore, Bernstein, & Auld, 2012). Similarly as Schwaab (2012) has noted, policy making needs to work to reduce, not bypass, uncertainty.<sup>3</sup> This means incorporates ‘blindspots’ understood as “knowledge which, despite its relevance to decision situations, is [often] not taken into account in practical management action” (Schwaab, 2012, p. 76) due to its complex, overwhelming nature.

Recognition of this has profound consequences for many critics of learning literature who argue that the next generation of policy learning must focus on “testing” arguments through large N “empirical” observations. While such efforts in and of themselves could be interesting, they inadvertently lead scholars increasingly to a backward “rear view” approach, in which some degree of explanatory traction might be developed, but which is of little help for designing policies forward where such prediction is impossible. Instead, we argue, drawing on Bernstein et al and Levin et al, that a focus on generating “plausible logics” about cause and effect that project, rather than predict, offers more promise for creating collective knowledge and the generation of innovative solutions. In other words, a learning architecture must shed light on existing and historical impacts, but it must do so by giving primacy to developing theoretical and conceptual efforts about potential future impacts, rather than assuming, quite incorrectly, that past preferences can be extrapolated directly to future choices. Put in concrete terms empirical research 20 years ago would have shown deep hostility towards third party certification. An evidence-based approach would have said not worth pursuing. But today vast majority of industrial companies third party certified because practitioners and activists identified strategies for shaping and changing decisions that, while drawing on past experience, did not assume fixed

preferences or fixed results based on historical and current research.

Fourth, environmental governance scholarship and many practitioner efforts often conflate, or masks, as their identified problems, quite distinct **“dependent” variables**. There is an uneasy, often implicit tension, within environmental governance focused scholarly and practitioner communities. One group emphasizes human welfare and livelihoods and who tend to be trained within rational choice economics and apply largely quantitative modeling techniques and/or anthropology that apply ethnographic research within particular field sites. The second group treats humans as “independent” variables, who cause, but also address, ecological challenges. To be sure, discussions of the “three pillars” of sustainable development are well developed, but the implication of focusing on one over the other for research design and methods are poorly developed. For example, Ostrom’s path breaking work on sustainability, which has attracted a great deal of attention from rational choice inspired scholars and anthropologists, only focuses on developing institutions to foster long term sustainability of resources in which humans that have an explicit or implicit economic reason to maintain them. For policy learning processes focused on generating causal knowledge, such conflation is sure to hamper efforts at both understand just what proposed interventions might do, but worse, head off the generation of innovative, synergistic, interventions.

These four challenges for environmental governance in general, and our review of the broader context of forest governance in particular, illustrate the inability, in the era of multilevel governance, of single instrument choices to address, by themselves, enduring challenges. This means that for policy learning to be potentially effective, it must have some role in developing knowledge about policy integration and instrument choice towards the effects that policy makers are attempting to address.

### **III. Learning to Address Problems**

Our proposal is not simply a call for “more research”, which, like the compromise-focused multi-stakeholder negotiations, cannot overcome the current obstacles to building effective global governance arrangements. Instead, it is a call for an institutionalization of “cause and effect” learning over compromise and to which most practitioner and scholarly efforts devote most of their attention. 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. Among the practical challenges is that 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

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 in order to be ‘decision-useful’ 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 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.

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, the perspectives of local communities with REDD+ negotiators, and FLEG measures with national forest programmes 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 micro-foundations 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).

For all the above reasons then we focus on a learning architecture that can generate forward looking causal knowledge that develops and builds “plausible logics” about instrument and or policy baskets that cut across multiple levels and work to inform actual policy decisions. This makes our approach close to Dunlop and Radaelli (2011) distinction of a subset of learning literature as focusing on “reflexivity” in which scholarly attention is “concerned with communities or networks of officers, elected politicians and civil society organizations that contribute collectively to the learning experience by exploring an issue, its meanings, and its political relevance.” However, our definition also incorporates knowledge from experts as individuals or as epistemic communities in so far as this knowledge may assist collective “puzzling through” while Dunlop and Radaelli’s approach classifies epistemic knowledge as promoting a more rational, technocratic orientation. Similarly, while our approach is similar to Rose’s notion of “lesson drawing” (Oliver & Lodge, 2003) in which techniques are identified for policy makers to improve the policy making process through “evidence” based techniques, reflexive learning expands beyond a technocratic “rationalist” approach to identify the processes through which collective puzzling itself might have some causal effect. This is important because in an era of multilevel governance even in those cases where policy makers were isolated from societal actors to be able to engage in “lesson drawing” and impose decisions, there would need to be some mechanisms for learning among other policy makers in other jurisdictions. Hence lesson drawing approaches “present the risk of being little more than exhortations that policy-makers should take all relevant information from their own experience and the experience of

others into account in reaching a policy decision.” (Oliver and Lodge, 2003). Such an orientation we argue risks truncating a learning architecture ‘s possible contribution to future challenges and possibilities by emphasizing current impacts and approaches. For instance, while similar to lesson drawing a key difference is that we do not argue the need to rely solely on specific methods or “empirical research” but to ponder future pathways as well.

Likewise our approach seeks to assess, rather than assume, that the inclusion of experiments will foster learning. While the literature is increasingly focused on important work on “policy experiments” as a way to get around limited intergovernmental agreements (Hoffmann, Forthcoming), it does not necessarily follow that they will create broad based learning for two reasons. First, many such “experiments” do not actually follow established experimental approaching, those most egregious of which is having no fully developed set of expectations behind their initiating, rendering the “running” of such an experiment difficult learn from. In fact, in many cases the adage “let’s run the experiment” is often used a justification for not developing any coherent set of causal expectations. Second, and related, it may very well indeed be the case that the vast majority of policy interventions being considered or initiated at local, national, and international scales for addressing problems never had any serious hope of addressing the problems for which they were created. In these cases “running the experiment” can be viewed as power devise to support the status quo, rather than ameliorating problems. Put another way, our approach to learning would focus stakeholders and policy makers on “running experiments” only on those initiatives where there were “plausible logics” for having some type of impact, and not running “experiments” on those that had no plausible pathway for ameliorating challenges.

#### **IV. A Second Look at Multi-Level Forest Governance: Giving Learning Its Place**

So given our focus on policy learning as generating causal knowledge, what can we say about the past 20 years of global forest governance efforts and the problems policy makers and practitioners have attempted to address? 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 a global forest convention 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. While fragmentation is not bad per se (O. R. Young, Leslie, & Schroeder, 2008), these complex arrangements are difficult to navigate and have, in practice, produced further conflict and suboptimal outcomes.

However, as Raustiala and Victor (2004) and 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 NonLegally 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. Recent assessments of the broad global forest governance arrangements show that, in spite of some overlap and duplication, there is generally good coverage of the key themes and issues facing forests (McDermott, 2011) and that greater attention is needed on 'institutional intersection' and processes of policy learning (Göhler, Cashore, & Blom, forthcoming). 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 (Agrawal & Lemos, 2007). 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 forces interact to produce the forest regime complex and its characteristic challenges. First, 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 third, 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.

While these three forces departing from the perspective of regime theory help to better understand the emergence of today’s forest governance landscape since the Earth Summit in Rio, in the next section we turn our attention to key challenges for the design of policy learning architectures.

#### *Evidence of cross-coalition learning*<sup>4</sup>

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. To recall our argument, cross-coalition learning does not always result from a multi-stakeholder network to promote finding compromises and building consensus. Instead, our interest is understanding better what types of processes and approaches by lead to policy makers and stakeholders puzzling through analysis on how the mechanisms to generate and promote the use of causal knowledge towards enduring forest challenges.

We depart from the most general level, where processes to develop the criteria and indicators of SFM dominated much international cooperative efforts in the 1990s. The learning process among NGOs, governments and industry organisations focused on “how things work”,

which led to a general consensus supporting instrumental learning about the techniques of forest policy and forest management. In this case, although organized across coalitions, the learning was oriented mainly towards compromise, mostly at regional level but also globally, on a common standard to define SFM. The connection between this kind of policy learning and practical management has been obscured rather than clarified by the prevailing approaches to learning in the literature on natural resources management which is characterized by identifying and filling information gaps on the biophysical side and constructing ever more complex ecosystem models rather than 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).

More recently, direct access to domestic policy processes through development cooperation agencies provides an entry point to direct learning more towards better understanding the causes and (potential) effects of policy integration and instrument choice. The FLEG processes provide an example of learning among apparently irreconcilable stakeholders with competing interests but collectively puzzling through the same acute forest governance problems. In order to help identify synergistic solutions to address them, one important step is the development of analytical capacity and, thus, generation of decision-useful knowledge. The German Government’s Development Agency, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)<sup>5</sup>, for instance, provides 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 the forest administration and forest enterprises 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 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 knowledge on the potential effects of 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 Voluntary Partnership Agreements (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 and, thus, help analyze whether the expected impacts of forest policy decisions occurred or not. 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).

These examples demonstrate that the involvement of multiple stakeholders does not only promote transparency as a key feature of “good forest governance”. More importantly, instruments such as independent forest monitoring or roundtables to discuss a new forest law have also supported learning processes and knowledge exchange about the actual or expected effects of, often well-intended but sometimes poorly implemented, policy instruments to address defined problems.

Similar to direct access at domestic level, 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, GIZ 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 understanding and agreement by all ten ASEAN member states on a regional guideline for a phased approach to forest certification and on the ASEAN criteria & indicators for timber legality (Hinrichs 2009). The EU, GTZ and USAID supported the working group with technical expertise and financial resources. While these formal networks can be said to be within the organization’s comfort zone of government-dominated policy-making, in 2008 ASEAN established informal regional knowledge networks on FLEG and forests & climate change, with the primary motive of better informing decision-makers 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 network provided analytical knowledge 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 this kind of learning is still mainly about “cause-effect” learning to guide instrument

choice to address environmental and social problems, we turn our attention now to another outcome of learning as occurred in the ASEAN network. The starting point is that the network also produced a regional evaluative tool to assess the outcomes of domestic FLEG efforts. Evaluation does not take place here, as is usually the case, as integral part of the policy cycle (Howlett, Ramesh, & Perl, 2009). Instead, the phenomenon is that evaluation resulted from the learning process organized by the network. First, the network initiated a normative discourse and guided the development of collective wisdom on FLEG and, as a result, a defined standard (the evaluative tool) against which the implementation of FLEG measures would be assessed. The standard accommodates, among others, principles such as transparency, public disclosure policies, equitable participation, fair tenure rights and the recognition of customary rights. It respects international benchmarks and good practices while taking into consideration the specific realities of Southeast Asia at the same time.

Second, the network extended the learning process beyond abstract policy goals to more practical, ‘on the ground’ specifications by facilitating a first evaluation round or 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 to achieve the intended policy impacts were identified, for instance, by the use of a peer review mechanism to assess FLEG in the Philippines (Thang 2010).. 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. We argue that such problem-focused learning and better understanding of each others’ motivations and interests might help identify synergistic solutions supported by a wider range of stakeholders.

Even more interesting is that the networks’ activities finally lead ASEAN policy-makers to formally adopt the assessment tool. It is assumed that it will be used for systematic evaluations in the future. This, in turn, may help bridge the implementation gap of regional policies and gain support of stakeholders for synergistic solutions with a mix of policy instruments. While instrumental learning could be observed through the FLEG network, 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 and fair tenure rights in the regional assessment standard. The example demonstrates the potential of causal knowledge about standardized evaluation techniques (as a result of learning) to overcome obstacles to effective forest governance.

The ASEAN case provides the clearest example of cross-coalition learning being supported and institutionalized through an explicit learning architecture. The agreements noted in the previous paragraphs, especially the guidelines and evaluation tool, created considerable pressure to deliver on public commitments. The organizational form eventually adopted was a learning network integrated in the ASEAN organization, 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. Further features relevant for an integrated learning architecture are that the networks’ findings are available for public discussion through the internet-based ASEAN Forest Clearing House Mechanism administered by the ASEAN Secretariat. While looser than the traditional peer review and other reputational mechanisms used in epistemic communities, the FLEG network also set up a review panel similar to an editorial board for quality control of the materials available on the website. These features correspond with our definition of a learning architecture characterized by

procedures and approaches that help orient stakeholders towards analytical assessments about the potential of policy baskets towards ameliorating problems.

The FLEG networks were established quite consciously to assess and identify solutions to improving forest governance so it was not surprising that collective knowledge would be generated among these communities. What is important for our discussion of a learning architecture below however, was that the learning was not just about understanding potential causal impacts of various policy options, but in coming to an understanding about a shared way to evaluate policy choices. In this sense, the causal knowledge helped also reinforce sovereignty, but may also work to create substantive policy convergence owing to similar evaluation tools. While such an approach may be one step removed from substantive outputs, it may provide more opportunities for uniting multi-level governance in ways that do not require formal agreement in substantive approaches.

To be sure the FLEG networks stand in contrast to another almost accidental, parallel, network that has emerged through the problem definition of illegal logging and the broad solution of “legality verification”. We review the emergence of this multi-level network as it points scholars and practitioners who find themselves engaged in these evolutionary processes to collectively learn about linking strategic choices to the “progressive incremental” logic that permeates their unfolding pathways.

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 collective learning among diverse industry, NGO, developing country and developed country agencies about the need to nurture “chicken” and “egg” supply and demand approaches that reward, not punish, participating firms and that focus both on what this means for “weeding

out the bottom” and “rewarding the top” as pathways unfold.

## **V. Conclusions: Implications for Learning Architecture**

This paper has proposed a definition of a learning architecture as the development of procedures and approaches that will help orient stakeholders and officials towards analytical assessments about the potential of instrument configurations and policy baskets towards ameliorating clearly identified environmental and social challenges. On this view, a learning architecture is to be seen as integral part 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.

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 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.

Likewise globally important coalitions can emerge from those whose interests are otherwise quite divergent, such as Vogel’s (1995) “bootleggers and Baptists” coalitions. 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. To be sure, while coalitions might look much like the multi-stakeholder compromise networks we dismissed above, they are different owing to the causes behind their interaction: each interest has some type of specified and distinctly desired outcome to gain, not compromise, to be developed by an agreed upon, and institutionalized approach. However, failure for the stakeholders to understand these distinctions may lead to strategic choices, that well intended, undermine institutional formation and ultimately, effectiveness.

There is already evidence that such coalitions have existed in forest policy (Cashore & Stone, 2012). 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.

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 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 in 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 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.

What we do know is that the current set of international forest governance arrangements, while showing signs of sporadic types of policy learning, much more careful and sustained attention must be given to promotion of the "reflexive" learning we identified above. Currently 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 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.

Such an approach, while well intended, can be seen as an unbalanced focus on state-centred negotiations, alienating non-state actors. This is problematic for collective learning efforts in an era where, while states are no less important today than they were in the past, 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 reflexive policy learning about causal mechanisms is to take place successfully, the governance arrangements need to include learning architectures based on understanding the incentives to learn.

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NOTE: TWO BIBLIOGRAPHIES BELOW STILL NEED TO BE INTEGRATED

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<sup>1</sup> This section draws on a paper for the Pardee center delivered fall 2012, which was also drawn on, and incorporated into a paper currently under review with with Weinthal, O'Neil, Bernstein, Cohn, Kimberly R Marion Suiseeya, Stone and Cashore on research methods for global environmental politics

<sup>2</sup> The unpredictable nature of such changes is especially troublesome for social science scholars whose faculty are dominated from natural sciences and trained to believe that the search for replicable hypotheses and theory development is the most important exercise. Failure to address these issues has led, some argue, to the dominance of neo-classical economics since their methods are most "legible" to their natural science colleagues compared to non-rational choice focused colleagues within political science, sociology, geography and international relations.

<sup>3</sup> He suggests three avenues to deal with knowledge gaps in the context of decision-making, namely individual responses to uncertainty (e.g. denial of risk, outsourcing of risk, exploration of risks), a

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methodological approach at project level (e.g. baseline studies, capacity assessments, evaluations), and an organizational approach (e.g. formal and informal exchange within networks, process-based learning).

<sup>4</sup> Much of the data in this review comes from {Cashore, 2011 #21315; Bernstein, 2010 #22071}

<sup>5</sup> Formerly Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) – German Technical Cooperation