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# Nobody Knows Best: Alternative Perspectives on Forest Management and Governance in Southeast Asia

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Abstract. In this paper we propose a framework for understanding how dominant perspectives, or worldviews, influence the crafting of institutions, and how these, in turn, constrain the functions and goals of knowledge systems. Alternative perspectives carry their own set of assumptions and beliefs about who should be making the rules, where the best knowledge lies to guide decisions, and about where more knowledge is needed. Initially, four contrasting perspectives are elaborated: state-, market-, greens-, and locals-know-best. We illustrate the framework by exploring the recent history of forest governance in Southeast Asia, finding several examples of battles of perspectives leading to a new dominant perspective. In each case the dominant perspective itself, old or new, is shown to be defective in some critical way and was, or should be, replaced. The problem is that each of the perspectives considers the world as knowable, manageable, and relatively constant, or at most changing only slowly. Ecological and socio-political crises, however, are recurrent. Management plans and regulations or policies that aim to establish "the" land-use allocation, the best crop, the best forest management system or the best price or system of incentives, are doomed to failure. If uncertainties are accepted as fundamental, solutions as temporary, and scientific knowledge as useful but limited, then "Nobody Knows Best" is a modest, but effective heuristic for forest governance.

Key words: forest governance, international forest regime, institutions, knowledge systems, paradigm, pluralism, Southeast Asia, worldview conservation

## 1. Introduction

A perspective, as used in this paper, is a philosophical framework of goals, beliefs and methods to guide how society should be organized (Thompson et al. 1990). It recognizes that people in the face of complexity make use of simplified (and often prejudiced) stories about how the world works to guide their decisions. Perspectives



for management of natural resources often include poorly articulated "mental models" about how ecosystems function. Dominant perspectives are very important for sustainability as, over-time, they guide the crafting of formal institutions governing natural resources, all the way from their goal statements, whose voices count in the design, through to the types of policy instruments favored. Perspectives also shape the way knowledge is used to guide institutional designs. Institutions, in turn, can re-inforce perspectives by setting boundaries and rules which constrain the goals and functions of knowledge systems, for example, by defining the directions for pursuit of new knowledge.

Fortunately, there are often several relatively powerful perspectives expressed in society. Over time, perspectives wax and wane, with different ones coming to prominence, in part as a result of how well they help their holders negotiate environmental changes, relative to other perspectives, and in part owing to the degree they allow actors to stay in power or amass power, for example, through new knowledge, technologies or wealth. We refer to this as a *battle of perspectives* (after Janssen and de Vries 1998).

In this paper we propose and then illustrate a framework for understanding how dominant perspectives influence the crafting of institutions, and how these, in turn, constrain the functions and goals of knowledge systems. The paper develops the framework for the case of forest governance in stages. First the set of perspectives is described. Second the structure of knowledge systems is outlined. Third, some of the mechanisms by which institutions influence knowledge are identified. The final section of the paper then examines the recent history of forest governance in Southeast Asia, finding several examples of battles of perspectives leading to new dominant perspectives.

## 2. Alternative Perspectives

In this paper, we consider five perspectives each named after their assumptions about where the "best" knowledge for forest management and capacity for governance lies (Table I). The first four categories are similar to those used by Dryzek (1997) for characterizing environmental discourses and adapted by Silva et al. (2002) for examining policies for sustainable forestry.

#### 2.1. STATE KNOWS BEST

For most of the last century, Southeast Asian societies, in the pursuit of modernization, and state-building projects, have accepted, almost without question, a technocratic and managerial view of ecological and social systems. This has been reinforced through education and economic incentives. It is a view in which the elites in power, and their experts in control of knowledge, are seen as having the skills and foresight to develop land-use plans, forest management systems, and institutional

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Perspective	Sources of knowledge	Institutional forms and arrangements
State knows best	Scientific knowledge generated by organizations of the state	Command and control by state. Formal legislation. Nationalization of forests, strict control of land-use and intervention in timber, as well as NTFP* markets, is necessary. Adherence to state sovereignty principles restricts influence of external institutions. Government monitoring programs
Market knows best	Scientific knowledge generated by "more technologically advanced" organizations from outside the state needs to be tested against the knowledge that lies distributed among producers (as profit maximizers) and consumers (as utility maximizers)	Markets sort out most efficient way to use land or products from forests. Voluntary private sector initiatives. Harmonization and transparency in transactions to promote trade and investment by external agents. Markets, as systems of incentives and exchange, are dominant form of institutions to guide behavior
Greens know best	Scientific knowledge generated by "more technologically advanced" organizations from outside the state with emphasis on conservation of global biodiversity and sustainable forest management	Collective action at international scale through inter-governmental treaties, agreements, cooperation, and more coercively through structural adjustment programs and conditions needed to guide behavior of states. Vertical institutional interplay is promoted
Locals know best	Local knowledge based on experiences from a particular place and/or set of traditions that may be recognized or embedded in social practices	Most goods and services from forests are best managed as common property by the resource users themselves. Subsidiarity principle guides need for any institutions above the local level and these may be polycentrically organized
Nobody knows best	Pluralistic. All forms of knowledge are recognized to be biased. Critical (reflexive) analysis of scientific knowledge systems and validation of local/traditional systems is encouraged	The only way to handle the inevitable uncertainties in understanding and trade-offs between different interests, local and wider, is to devise institutional arrangements that are explicitly participatory, cross-scale (e.g. co-management) and adaptive. Vertical and horizontal interplay and polycentricity are common and encouraged. Redundancy is seen as valuable
* NTFP: Non-timber f	orest products.	

Table I. Preferred sources of knowledge, and institutional forms for forest management under the five perspectives.

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arrangements to govern predictable and inexhaustible forest resources (Contreras 2003). A "State Knows Best" perspective has often held sway.

Under the "State Knows Best" perspective forest resources have typically been degraded by un-sustainable logging practices and conversion to mono-crop plantations that provide only a small subset of the original set of goods and services to a much smaller group of beneficiaries (Dauvergne 2001). At the same time conservation areas have been set aside with out recognition or adequate compensation for previous dwellers and users of forest resources (Vandergeest 1996). Consequently dissatisfaction with the social and forest outcomes of the "*State Knows Best*" perspective has grown resulting in conflict with, and organized resistance to, state agencies (Hirsch 1996). The integration into larger market and knowledge systems of communities living in forested landscapes has helped open public policy processes that had earlier limited local access to information and decision-making (Pasong and Lebel 2000). This has led to the emergence and re-discovery of several alternative perspectives.

#### 2.2. MARKET KNOWS BEST

A *Market Knows Best* perspective has grown in prominence in parallel with the power of corporations and the reach of markets into the forest frontier areas. Often with technical and financial support of international banks, this worldview has been promoted, as a solution to development, through re-structuring programs that open economies to trade and investment. Analysis of maximum yields, costs, benefits and, later, trade-offs and economic valuation of various ecosystem goods and services, including tourism, are central to the policy justifications, but only rarely address: to whom will the benefits flow, and who pays?

As elites within the state have often been well placed to capture part of the benefits as well as determine how markets will operate in practice, complicity among holders of *State-* and *Market-Knows Best* perspectives is common. When the rights to the benefit stream generated from a forest are determined by centralized power, markets are even denied a role as a means of resource allocation. Ironically, the response when this occurs is usually a call for more market mechanisms. The consequences of this combination for forests have been devastating, and, for local communities, unjust. Again and again, the quick profits to be made from logging fell to a few associates of those in power, and were barely captured by the state for re-investment in public infrastructure, education or other public goods. The development of resorts and recreational areas often serve narrow "markets", while others are excluded from even subsistence practices. Ecological and social externalities, in practice, are not incorporated in land-use planning decisions about forests and forest management.

Despite the obvious failing of the mental model, today the dominant view among multi-lateral agencies is the *Market Knows Best*. This was seen after the financial collapse of Indonesia in 1997–1998 the World Bank and International Monetary Fund introduced a series of conditions on the "rescue package" loan which

continued the policy of promoting selective cutting, rent capture and market efficiency. The results to date have been very disappointing (see Section 4.2).

# 2.3. Greens Know Best

Southeast Asia is an example of a region where, at various times, wealthy and powerful nations have succeeded in undermining the power of local bureaucracies, pointing to corruption, wasteful logging practices, and environmental disasters. They have been able to manipulate and persuade, often with science-based knowledge and the perspective that *Greens Know Best*. Those Southeast Asian states with still valuable timber resources remaining have resisted these challenges when it comes to logging, but, over time, all have conceded to changes in values with regards to conservation. Unfortunately, many of the mental models adopted, for example, on how to conserve wildlife in protected areas with systems of national parks with no human inhabitants, and no hunting or gathering unless for the recreation of urbanites, did not fit the landscapes or social development contexts of the countries in the region. With large numbers of people directly dependent on agriculture and collection of timber and non-timber products, living in areas declared as parks, conflicts between state and community were inevitable (e.g. Ganjanapan 2000; Hirsch 1996).

## 2.4. Locals Know Best

A strong counter-reaction to state, green and corporate-centered views of how forest resources should be allocated and managed has been the resurgence of community forestry movements (Laungaramsri 2002; Colfer and Byron 2001). In essence, they argue local communities or *Locals Know Best*. For the most part, the emphasis is on experiential and local knowledge, perhaps traditional (e.g. Santoasombat 2003; Sardjono and Samsoedin 2001), and much less interest or even outright mistrust in science-based information. An argument is sometimes made that traditional societies have been able to live sustainably for long periods of time in their landscape and have evolved practices and institutions, especially various forms of common property, to successfully govern their forest resources (e.g. Laungaramsri 2002). Sound ecological practices are said to be embedded in social practices.

Some research has tended to glorify the success stories, in part to act as a counter point to the dominant *State Knows Best perspective* (Brosius et al. 1998). Interests conflicting with the state help explain the production of conflicting knowledge. More dispassionate analyses, however, reveal a wide range in performance. Some societies have succeeded whereas others have failed. Even more significant is that many of the conditions under which local arrangements were developed no longer pertain to the higher densities of forest users, the wider systems of exchange, or faster rates of exploitation possible with new technologies. On the other hand, many forest-dependent and forest-using communities have shown remarkable capacities to adapt their land use systems and transform their livelihoods when challenged or provided with new opportunities, arguing for the importance of allowing local adaptation and flexibilities in policy (Berkes 1999). Thus, although the *Locals Know Best* perspective has metamorphosed over time and produced some minor variants, it remains focused on the importance of local knowledge some of which may be new.

## 2.5. Nobody Knows Best

Each of these perspectives considers forest ecosystems and their user groups as knowable, manageable, and predictable and does not account for the recurrence and variation of ecological and socio-political crises affecting forest governance in Southeast Asia. Such crises bring surprises and challenges that require flexibility, the maintenance of channels of innovation, and the options of diverse and tested experiences. Management plans and regulations or policies aligned to a single "best" practice or method leave forest user groups without the capacity or sources of innovation to cope with new types of challenges.

Each of the previous perspectives results in a set of institutions and knowledge systems that is ultimately not resilient, because it prioritizes only one set of factors, those supporting the interests able to exercise power. The *Nobody Knows Best* perspective, on the other hand, values pluralism because it provides multiple sources of knowledge and institutional options, and makes more transparent the mixed set of interests in forest management. It allows the possibility of recognizing that poor forest inhabitants, for example, may use, value and experience forests and therefore forest "degradation" in very different ways than those who do not rely directly on forest resources. To avoid battles between entrenched perspectives, a *Nobody Knows Best* perspective intentionally cultivates mechanisms for debate and negotiation. The types of knowledge fostered under a "*Nobody Knows Best*" perspective become less concerned with power and more with understanding of causes and consequences.

The main constraint of this more pluralistic approach is the challenge of coordination. Everything takes longer as there must be substantial participation, examination of options and monitoring of past performance. Moreover, the underlying uncertainties in understanding both social and ecological systems facilitate the continued co-existence of radically different perspectives even after mutual confrontation. This could create institutional gridlocks which would be less likely if previously dominant perspectives were able to hold sway.

## 3. Production and Dissemination of Knowledge

Dominant perspectives, and battles among perspectives, frame the way institutions and knowledge systems co-evolve (Figure 1). While it is well recognized that new



*Figure 1.* Conceptual framework for how institutions and systems of knowledge are linked through perspectives that ultimately help guide forest management and practices.

knowledge can bring about institutional changes, in this paper, the emphasis is placed on the role of institutions in guiding the production and dissemination of knowledge.

## 3.1. POWER AND AGENCY

Power is central to this framework. Perspectives differ in who exercises power (Table I). For example, in the *Greens Know Best*, funding agencies, philanthropic organizations, and parts of the state bureaucracy are emphasized, whereas in *Markets Know Best*, firms and consumers are dominant. A *Locals Know Best* perspective emphasizes the community actors, living in or near the forest resources. The *Nobody Knows Best perspective* promotes the importance of multiple actors, especially facilitators. Some actors, such as legislators, are not clearly aligned with any perspective but may still be crucially important to which institutional arrangements ultimately arise in the dying stages of a battle of perspectives. A key feature of stronger perspectives is that they reproduce and grow through the formation of alliances or coalitions among diverse actors.

Perspectives also differ in how power is expressed. Force, persuasion and manipulation (or the control of agendas) are important dimensions of power in the

State Knows Best perspective. By contrast, in Nobody Knows Best even the agenda could be open for negotiation, but in practice dimensions of force and persuasion will likely maintain a role. Science-based knowledge is of importance for all perspectives, but so far has played a minor role in *Locals Know Best* perspective. The control of knowledge is a critical expression of power.

# 3.2. KNOWLEDGE SYSTEMS

Different perspectives obtain their knowledge from different sources (Table I), and because they favor different interests and aim to organize society in different ways, they influence the way knowledge systems are manipulated and used.

A knowledge system typically includes components for producing, evaluating, storing, copying, transmitting and translating knowledge. In the language of a state or international organizations, for example, there may be components involved with *monitoring* environmental changes, others in making *assessments* of scientific understanding of observations and causal relations, and yet others in the short (media) and longer-term (formal education) *dissemination* of knowledge (Figure 2). Natural resource managers (from farmers to national park staff) may make use of *decision-support* tools to help translate complex observations into actions.

Traditional and local knowledge systems often have similar sets of functions and structures (Ganjanapan 1996; Berkes 1999; Santasombat 2003). For example, assessment functions may be achieved by a regular meeting of hunters or collectors at the end of the day. Stories or direct copying of practices may represent "education and training" functions in the dissemination of knowledge. Whether these are incorporated into the overall knowledge system used in decision-making and management depends on the dominant perspective.

Finally, knowledge systems, whether state or local, modern or traditional, should not be thought of as "fully planned" or consciously designed. The existence of a knowledge system also does not mean that knowledge somehow flows smoothly "down the pipes" to the next in line. Previous research on scientific assessments, for example, has shown that knowledge perceived as legitimate, credible and salient is more likely to be used and that a pipeline model of information flow is inaccurate: the production and transfer of knowledge is multi-directional and involves mediation and negotiation across multiple boundaries (Social Learning Group 2002; Clark et al. 2002; Cash et al. 2003). Knowledge may also be distorted, manipulated and abused as frequently as it is shared.

## 3.3. MECHANISMS OF INFLUENCE

There are several likely mechanisms by which institutional arrangements can influence forest knowledge systems. We summarize these in an initial classification in



*Figure 2.* Generalized structure of the formal (or state-based) knowledge system for forest management in Southeast Asia.

Table II, acknowledging that most research to date has examined the converse relationship – how knowledge influences institutions. In the following discussion some examples are illustrated of influence on language, research, education, assessment and practices.

# 4. Forest Governance in Southeast Asia

Current systems of forest governance in Southeast Asia are products of historical and more recent battles of perspectives. Forestry science in Southeast Asia still strongly reflects the colonial history of the region, even in Thailand, which remained free of formal colonial rule, but not influences (Bryant 1998). Colonizers brought maps, survey techniques to inventory stocks, and methods to calculate tree growth. They also brought a view of forests that emphasized timber as a crop, which later formed the basis of industrial tree plantations, especially to service the pulp and paper industry. Limited capacities of bureaucracies have meant that, when change

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Table II. Classification of mechan Component of knowledge system	isms by which institutions for forest management may have influenced knowledge systems in Southeast Asia. Mechanism by which Institutions Influence the knowledge system.
Research	Creation of new research and development organizations ( <i>de novo</i> or more typically through re-organizations) Te-organizations) Creating new kinds of puzzles related to implementation and refinement of the institution, for example, on policy instruments or the use of indicators Altering the incentives for research areas, for example, through funding allocations
Observations (Monitoring)	Requiring the establishment of a regular system for monitoring forest conditions Specifying variables or indicators that need to be monitored and measured
Assessment	Requiring or stimulating assessments of understanding about controversial issues Creating mechanisms by which different knowledge systems (e.g. held by people with different perspectives) can be validated and compared
Education and Training	Selectively promoting certain modes of analysis or tools, for example, associated with the use of mapping and remote sensing, required for classification and "zoning" procedures Incorporation of successive "scientific forestry" paradigms into organization culture so that other sources' bodies of knowledge (e.g. traditional) can be ignored as they are considered "non-scientific" Re-orientation of organizational goals for forest areas that require re-training of staff and changes to education system
Dissemination	By requiring implementing agencies to make information accessible to public. Thus stimulating collective interest (and consequently action or re-action), which can affect compliance. For example, creation of public information systems on the web Re-defining terms and categories or aligning them with other parts of popular discourse in ways that makes spread of ideas easier (and more favorable to the perspective that bore them)
Decision-support	Creating demand for formal procedures, either technological as in use of models, or institutional, for example, in participatory processes for negotiation, and conflict resolution Creation of boundary spanning institutions or organizations which facilitate communication and translation of ideas across the research/policy-interface
Practices	Embedding of knowledge in social practices and routine operations of organizations

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has come, it has often done so by simple *cut-and-paste* operations from model legislation in other countries. Much of this knowledge has not really fit the tropical ecosystems with their poor soils, high diversity, and structural complexity. Nevertheless, extractive uses with the aid of science and technology have been seen as an essential part of modernization, and contrasted with the backwardness and destructiveness of swidden (slash and burn) systems (Dove and Kammen 1997; Bryant 1998).

Governments in Southeast Asia, with the *State Knows Best* perspective, have been active in legislating to support their expanding and poorly coordinated bureaucracies. At the same time, an increasing number of international agreements aim to influence land-use and forest management from a *Greens Know Best* or *Markets Know Best* perspective. As a result, the international forest regime remains fragmented and largely ineffective (Taraksofsky 1999) although some international actors have nevertheless been influential.

In the following two sections, we briefly summarize two very different examples of recent conflict over forest management and governance using the battle of perspectives metaphor. These illustrate that, of the many ways perspectives can influence knowledge systems, the pathway through institutionalized systems of forest governance, is an important one.

#### 4.1. Defining the Terms of Forestry in Thailand

The battle between *State Knows Best* and *Locals Know Best* perspectives over forest access, management and control has dominated domestic forest and land policy agenda in Thailand for more than a decade (Hirsch 1996; Ganjanapan 2000). Narratives of deforestation and degradation, and counter-narratives of "people living harmoniously in the forest" graphically illustrate the battle of perspectives (Laungaramsri 2002). In this battle, the control of language has been a fundamental mechanism by which forest institutions have influenced knowledge systems. The influence reaches back to the terms used to initially frame forest problems and forward to the goals of management and research organizations. This is illustrated using four simple questions:

What is a forest? The Thai Royal Forest Department (RFD), through a judicious definition of forests, was able to formalize control of almost half the national land area even though much of this land had no trees, was under cultivation, and was home to tens of millions of farmers from then on considered illegal squatters (Hirsch 1996; Vandergeest 1996). In practice, the details of land classification, the strength of local communities, and the attitude of the line agencies (RFD, Military, Border Police) in the field has had a large bearing on tenure security so in some places there is little risk of farmers losing their land, whereas in others much land has been taken (often for re-forestation with exotic pines or eucalypts). The *State Knows Best* combined with the *Market Knows Best* approach to "forest" lands in Thailand involved lucrative logging or land for plantation deals between the military, the

private sector and the state, at the same time excluding many farmers from land ownership.

Who is a forester? Most institutions under the *State Knows Best* perspective have been very clear that a forester is someone trained in forestry in the state's education system and employed in the state agency. In the age of industrial logging and plantations, the idea of company employees as "foresters" is also accepted. On the other hand, the notion that "simple villagers" or worse still, forest-dependent people, could be considered foresters, that is, vested with knowledge about and stewardship of forest lands, has been very difficult for the Royal Forest Department to accept (Laungaramsri 2002). However, the *Locals Know Best* perspective has joined the battle. The contemporary shift towards management of watershed forests and conservation in protected areas has also led to re-training, changes in core education for foresters, and creation of new divisions within the forestry and natural resource management bureaucracies that adopt the *Greens Knows Best* perspective.

What is forest management? A common goal today under the State Knows Best perspective is to manage forest to maintain watershed functions for lowland irrigation by maintaining a high level of tree cover. Another is that some forest areas should be being managed to conserve plant and animal diversity for "the world" by minimizing human use to non-consumptive and low-density recreational activities. Many upland farmers, holding onto to a Locals Know Best view, manage forests as part of a larger mosaic landscape in different stages of succession for the yield of a wide variety of non-timber products, fuel wood, and to replenish soil fertility before the areas will be used again for cropping. A simple version of the Market Knows Best perspective would support the idea that forest is being managed to maintain a sustained supply of timber. More sophisticated market emphases assign values to various ecosystem goods and services and propose establishing markets for them, for example, as in carbon crediting and trading schemes. Forest can thus be managed as a watershed, wilderness, timber supply, carbon store, or as part of a farming system. A Nobody Knows Best perspective not only acknowledges that there are multiple potential uses, but that these uses should be negotiated and monitored.

What is forest research? The state, through control of research and education budgets, has had substantial control over what is not known. For instance, the lack of critical scientific research about the hydrological and ecological impacts of swidden agricultural land-use systems in comparison with permanent agriculture in the uplands of Southeast Asia, has allowed poorly supported and probably erroneous mental models to persist for decades (Forsyth 1996; Schmidt-Vogt 1998; Fox et al. 2000). As a final example, the ban on the commercial use of non-timber forest products has been a strong disincentive for research on new and traditional uses of biodiversity.

Ironically, the battle of perspectives appears to have trapped proponents of the *Locals Know Best* in a difficult position: promoting community forestry where what upland farmers really need is secure access to land for food crop cultivation rather than trees.

#### 4.2. INTERNATIONAL INFLUENCES ON LOGGING IN INDONESIA

Forestry science in Indonesia has been strongly shaped by the interest of the state in resource control. Research and development has facilitated corporate extraction of native timbers and industrial plantations under management of the state (Dauvergne 2001). As a body of applied science it has failed to address the complexity of multiple forest uses. A powerful *State Knows Best* perspective has been resisted and challenged from within and without, but remains dominant (Peluso 1992; Campbell 2002).

In the face of such dominance, of all international actors, the World Bank has probably been the most influential. The Tropical Forest Action Plans (TFAP), initiated in 1985 by the World Bank, the World Resources Institute (WRI), the United Nations Food and Agricultural Organization (FAO), and the United Nations Development Programme (UNDP), helped shape tropical logging policies by channelling aid into management, restoration, and protection of tropical forests and the establishment of plantations (Dauvergne 2001). In 1989, the World Bank made loans to the Indonesian government for a set of forest sector analyses in collaboration with the Ministry of Forestry and the FAO. The project led to a set of 17 volumes of assessment, the full reports of which, however, were not made public (Seymour and Dubash 2000). Over the next decade the World Bank and Indonesian government were often at "loggerheads" over reforms in the forestry sector, which the Bank tried to influence through conditions on loans. The strong relationship between the timber industry and the Ministry of Forestry, however, ensured that a State Knows Best perspective dominated, at least until the financial crisis of 1997– 1998, and the fall of President Suharto soon after created a window of opportunity for forestry reform (Silva et al. 2002). Much of the effort up to then had been and continued to be toward reforming the Hak Pengusahaan Hutan, or Forest Concession and Exploitation Rights System (Barr 2002).

For more than a decade, the stepped reforms to increase market-based efficiency in harvesting, processing and trade, capturing more of the rent (i.e. on taxes for legal logs and wood products), and better enforcement of harvesting guidelines, had driven research agendas, assessments, and decision-support tools of international and domestic non-state actors, framed in a *Market Knows Best* perspective.

The pressures for reform carried on after the financial crisis with the World Bank able to force the International Monetary Fund to include forestry reform issues in the 2nd Letter of Intent as part of the rescue loans for the crippled Indonesian economy. These efforts (or pressures) have continued, most recently under the Consultative Group on Indonesia. The forest product monopolies have finally been broken up, and arenas created for wider participation in forest policy-making. Administrative and financial decentralization, set in motion by critical laws introduced by Habibie's short administration in 1999, have been strongly resisted and may be revoked before decentralization has had a fair chance to be tested (Thorburn 2002). Powerful actors with strong links to the post-new order state now appeal again to the *States knows Best* perspective. Nevertheless, the attention to improving governance may have the

most important consequences for future institutional reform as it allows alternative perspectives to arise and persist. This brings, therefore, the possibility that the *Nobody Knows Best* perspective with its advantages as outlined above, albeit with its longer timeline and the risk of policy gridlock, could rise to the fore.

## 5. Conclusions

Although it is often claimed that new findings from science are important drivers of change in environmental institutions, the converse has been less frequently explored. Research over the past decade has shown that institutional arrangements for the governance and management of forests in Southeast Asia have had a significant impact on subsequent production and dissemination of knowledge. Through a range of perspectives, a relatively narrow set of elite, often corporate, interests is served by state research, education and development agencies. The knowledge base created has then helped drive the justification, refinement and revision of the institutions involved in ways that continue to serve the interests and related perspectives. For forestry, more often than not, this has led to rules that are fine on paper but which cannot possibly be acted upon.

At the same time the *State Knows Best* perspective has been resisted and challenged by indigenous and external knowledge systems. External influences have primarily been through civil society networks, for example, of environmental and rural development non-governmental organizations, and regional scientific networks. The role of the international forest regime has been modest, but within this, the activities of the World Bank and the FAO have been important for individual nations. The Consultative Group on International Agricultural Research (CGIAR) research system has been important in framing debate on many of the forest management issues in Southeast Asia. The dissemination of its assorted, often contradictory, findings, assessments and policy papers, has, at a minimum, altered the structure of debates, bringing additional perspectives beyond those of the state into the battle.

The emerging *Nobody Knows Best* perspective has created arenas for debate and negotiation that may allow the knowledge set best able to balance conflicting interests and find a satisfactory outcome for all stakeholders a chance to emerge. This is clearly more desirable than a battle of perspectives where reform is just an expression of power, and any learning crisis-driven.

Accepting a lack of certainty as fundamental, policy interventions as experimental, and scientific knowledge about forest ecosystems and social organization as useful but always incomplete, means the *Nobody Knows Best* perspective provides the optimal starting frame for a new round of social learning and governance aimed at achieving sustainability.

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