



## Unfolding the organised irresponsibility: Ecosystem approach and the quest for forest biodiversity in Finland, Peru, and Russia

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### ABSTRACT

The decline of biological diversity is one of the major global concerns of our time. Despite all the efforts over the past 15 years since the Rio Summit, we have seen no improvement in the state of biodiversity; in fact, if anything, the decline has accelerated. The paper argues that problematic institutional incentive structures are an important contributing factor that aggravates biodiversity crisis worldwide. In this, countries do differ from each other, but in essence biodiversity loss has become more severe because of the empty status function for biodiversity and the organised irresponsibility allowed by erroneous natural resources policies not able to reasonably and efficiently address the interlinkedness of human and ecological systems. The paper uses Finland, Peru, and Russia as examples. The paper concludes by offering an explanatory hypothesis how slowly acknowledged significance of ecosystem functions and, consequently, ecosystem approach is initiating changes in the governance principles of forest resources in these three countries – and why.

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### 1. Introduction

The decline of biological diversity is one of the major global concerns of our time. Despite all the efforts over the past 15 years since the Rio Summit, we have seen no improvement in the state of biodiversity; in fact, if anything, the decline has accelerated (Butchart et al., 2010). One of the most critical stages of the global biodiversity crisis is forest land, all types of forests: tropical, temperate and boreal forests together offer a diverse set of habitats for plants, animals and micro-organisms and hold the vast majority of the world's terrestrial species (Millennium Ecosystem Assessment, 2005). Almost 13% of world's terrestrial surface is designated as protected areas (Jenkins and Joppa, 2009), but biodiversity remains vanishing because of adverse human impact both within and outside these nature reserves. Natural values are being degraded and destroyed as a side-effect of forestry, agriculture, animal grazing, infrastructure projects, and other land use related activities. While strictly protected areas remain an irreplaceable ingredient of global conservation efforts other approaches are also urgently needed.

Since Rio, biodiversity considerations have been incorporated into numerous national legislations and policy agendas. The implementation of international legislative frameworks has been less than impressive, though, chiefly because national policies have mostly

been geared to constructing a *status function* for biodiversity. Nothing wrong there: indeed the significance of biodiversity must be collectively recognised, accepted and endorsed in order to be taken seriously in natural resources planning and decision making. Searle (2005) has defined status function in the following way: function that cannot be performed just in virtue of its physical structure, but the performance of the function requires that there be a collectively recognised status that (person or) object has, and it is only in virtue of that status the object can perform the function. A wetland functions as a water reservoir in virtue of its physical structure, but a one Euro coin has a status function – what it does cannot be derived from its physical properties. Rather than safeguarding real forest *ecosystem functions*, we claim, most societies have had an abstract image created of forest biodiversity and that image made the primary concern. This misunderstanding is well described by Hanski (2005a, p. 391) when he points out that “[h]abitat loss occurs in our minds”.

Consequently, despite all the national and global attempts to halt and reverse the trend, forest biodiversity has continued to decline. Perhaps for this reason, ecosystem approach and ecosystem services (MA, 2005) have begun to attract increasing attention. Ecosystem approach is a framework within which adaptive management practices are applied on ecologically meaningful scales. There are several elements in the ecosystem approach that set it apart from other environmental policy approaches. First of all, it stresses the interdependence of human and ecological systems, suggesting that these systems are tied together through productive practices that are always both social and ecological in nature. Second, the approach

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underlines the importance of simultaneous use and protection of biodiversity. Third, the approach is aimed at enhancing benefit-sharing and ensuring cooperation between different actors involved in the management of ecologically defined landscape components.

To be more specific – and this is our starting point here – the interest in the ecosystem approach has two quite different characteristics. On one hand, the interest is to a large degree local, based on local problems and needs for balancing the utilisation and sustainable use of renewable resources. On the other hand, the ecosystem approach has been launched and hailed from above, derived from global principles and norms such as those embedded in the Convention on Biological Diversity (CBD, 2004) and Millennium Ecosystem Assessment (MA, 2005). MA presents ecosystem approach as a framework for integrated responses to current environmental threats. In this sense, it is the overall strategy advocated by the international community for integrated environmental management promoting conservation and sustainable use in an equitable way – in the spirit of the CBD.

The ecosystem approach and the development of its principles have been evolving and taking shape beyond the formal governance structures of nation states. In this paper our purpose is to answer why very different nation states are responding to this challenge in rather similar ways. Our approach is at once abductive and genealogical. It is abductive in that we will be trying to offer tentative hypotheses what *societal* purposes the “ecosystem approach” seems to be serving, i.e. we predict an unobservable case on the basis of a rule created out of an observable result (Bromley, 2006, 111–112, on abduction, Peirce, 1997) and genealogical in that we will be trying to trace and uncover the institutional structures and social valuations that lie behind the present, unfortunate state of forest biodiversity (on genealogy, Foucault, 1984).

Our discussion is focused on the case of forests in Finland, Russia, and Peru. These three nation-states represent very different traditions in terms of their institutional structures. Not only do their cultures, economies, and political and economic institutions vary, but so do their positions on the global bio-political map of biodiversity concern and forest-based economies. Finland is located within the North European institutional framework, Russia represents post-socialism, and Peru is situated within the institutional history of those Latin American countries that have recently implemented neo-liberal economic policies. Yet institutions in none of these countries have been able to prevent biodiversity loss.

Our study is comparative. The aim of the paper at hand is to make comparisons between these institutional traditions and the ways to face the emerging challenges. In Finland, forests cover most (70%) of the land area, and in the course of history livelihoods deriving from forests have been established as the cornerstone of the economy. Private ownership of forests is dominant. For Russia, the situation is ultimately different. The country possesses 22% of the world's forests. These forests are owned by the state, but leased to companies for exploitation. Given the huge size of forested area, forests are managed and utilised rather extensively. Peruvian forests belong to the state and they are utilised by private actors through concessions and logging permits, but also by loggers and farmers without legal authorisation. In the Peruvian case it is noteworthy that the astonishing diversity of commercial tree species and their scattered distribution over vast extensions of forest dictate selective logging as the prevailing harvest method.

With these three examples we are able to articulate, first, the general characteristics of the interdependence of institutional incentive structures of forest-based economies and the state of biodiversity, and, second, abduct local and global reasons why the ecosystem functions are penetrating in into the forest-related incentive structures. The work builds upon our empirical studies on subject matter (see Hiedanpää, 2002, 2005; Hiedanpää and Bromley, forthcoming; Kotilainen, 2004; Kortelainen and Kotilainen, 2006;

Salo, 2009). In what follows we explore the various characteristics of forest policy in the three countries. First, we compare the definitions that have been given to forests. We then analyse the importance of collective action and investigate ecological consequences of forest policy, followed by the sources of change in perceiving and managing forests that seem to be evolving in these countries and an analysis of the emergence of the ecosystem approach. Instead of devoting a separate section to theory, we intertwine theory and empirical observation as we develop our abductive argument.

## 2. Definitions matter

In Finland, according to the legal, statistically-oriented definition, a forest is an area of land covered by trees that grow by at least one cubic meter a year per hectare. If an overall annual growth increment is less than a cubic meter per hectare, the area is still considered forest land, but classified as scrubland. In other words, the definition of forest is not dependent on tree species, other plant or animal species, soil type, landscape, ecological interactions, or ecosystem characteristics, but on the forest land and the potential volume of tree growth (Finnish Forest Research Institute, 2008).

In Russia, the federal forest code adopted by the State Duma in 2006 defines forest as follows: ‘Forest use, protection and renewal shall be based on the notion of forest as an ecological system or a nature resource’ (Forest Code of the Russian Federation, 2006, article 5). In the previous forest code that dated back to 1997, forests were defined more according to forest land. Therefore, an ecosystem approach into forests seems to have made its way to legislation in Russia. On the other hand, the tendency in Russia has been to subsume nature as natural resources, not least following their importance for the Russian economy (Bradshaw, 2006). Moreover, the legislative definition leaves it open as to what extent and in which situations forests actually should be seen as ecosystems, and in which situations as natural resources.

In Peru the prevailing definition of forest connects them to national wealth (El Peruano, 2001): in Peru all natural resources belong to the state and cannot be privatised under any circumstances. In the case of forests this includes not only the forest itself but also the land upon which the forest grows. The categorisation of lands, in turn, is based on the main use capacity of their soils (ONERN, 1982), and all areas where the soils have been assessed to best suit timber production are part of the national forest wealth (along with lands designated for protection of soils, watersheds and biodiversity). This designation cannot be changed, which also means that these lands cannot be privatised. In 2008, Peruvian government tried to open this definition mainly in order to enable the change of land use designations thus promoting private investment in Amazonia. The proposed forest law (“law 1090”) excluded the production forests from the national wealth and also contained a definition of forest based on canopy cover, stand surface, and canopy height (El Peruano, 2009). The reform encountered strong resistance above all on the part of Amazonian native organisations fearing further loss of indigenous peoples' lands. Resulting from the violent confrontation and the international outcry it generated, the law was revoked in 2009 (Shephard, 2009). Currently the Peruvian government is drafting a new version of the forest law.

Do definitions make a difference in practice? We think they do. Our thinking here follows Fish (1989), who claimed that linguistic definitions focus our attention to something that is brought forth by the very same definition. Language does not just describe properties, it also, necessarily, involves a social commitment to believe and bring about those properties: in other words, language is constitutive (Searle, 2010). If definitions are collectively accepted, they function as constituents in broader cultural signification and collective intentionality and action. In Finland, the customary definition expresses a collective will and focuses on the positive aspects of forest growth.

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