



Contexts and concepts of forest planning in a diverse and contradictory world

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ARTICLE INFO

Article history:

Received 13 April 2010

Received in revised form 28 January 2011

Accepted 10 March 2011

Available online 7 April 2011

Keywords:

Forest planning
Research
Education
Interdisciplinary

ABSTRACT

Forest planning is both a crucial and a microscopic field of education and research: crucial because it is hard to conceive of any forest management without long term planning and microscopic because only very limited manpower and resources are devoted to this field. The necessity of forest planning and the challenge to it are composed by rapid evolutions both in the way societies view forests and in technological and economic pressures on them. The paper proposes to review contemporary issues in the field of forest planning education and research. The “comfort zone” of classical approaches – techno-economic approaches concentrating on maximizing fluxes in the forest – is challenged in three directions. First, the foundations of forest planning are increasingly spread across different disciplinary fields. Second, the list of issues encompassed is rapidly expanding, for instance to risk analysis, public participation, biodiversity, new technologies and uses of wood, climate change, etc. Third, forest planning has to find its relevance in very contrasted societal needs and views regarding forests. By reviewing and attempting to order the multiple combinations between these various concepts of, and expectations from, forest planning, the paper attempts to map the landscape of a rapidly diversifying field.

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1. Introduction

Forest planning is both a crucial and a microscopic field in education and research. It is crucial because it is hard to conceive of any form of forest management not reliant on long-term planning. It is microscopic because only very limited resources are devoted to teaching, and especially to research, in this field. It has to be acknowledged that the difficulties are considerable. First, forest planning might be described as falling midway between the field of forestry on the one hand and the field of planning in general on the other. In the first of these fields, silviculture (the technical management of forest stands) occupies a central place, and tends to impose frames of reference which are too narrow for a genuine planning approach. Planning in general, on the other hand, is so much broader that the specific characteristics of forestry issues are in danger of being overlooked in it. Furthermore there is a fragmentation between different sub-fields of planning which has made it hard for a general planning language to emerge which would be applicable, *mutatis mutandis*, to forests.

The challenges faced by education and research in the field of forest planning are amplified by the major changes which forest management practice and thinking have undergone in recent decades (Innes, 2005; Mathey et al., 2005). The classic discipline of forest

management planning has been built at the end of the 18th based on the integration of two families of principles: silviculture defined as cultivation of wood (Hartig, 1805) and neo-classical economics (Kant, 2003). Education and research in the field of forest planning have been for decades organised, conceived and justified by such a view which has been dominating for a long time.

To those classic doctrines of forest management have been added entirely different approaches which reflect both the great diversity of situations in a globalised context and the accumulation of new social and environmental expectations (poverty, biodiversity, climate change, decentralisation, etc.). In fact, “with rapidly accelerating social, economic and technological changes, educational concepts and institutions that have been in place since the industrial revolution could become obsolete (Nair, 2004)”.

The aim of this conceptual paper is to offer a new framework providing a useful basis for a discussion – which we will merely sketch in outline here – of needs and future prospects with regard to forest planning education and research.¹

The conceptual starting point of the paper is to consider the forest planning process as part of the extended sphere of economic activity, i.e. the entire process involving the acquisition, production and exchange of resources between people. Planning objectives could thus be expressed in terms of production of goods and/or services. Such a

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¹ This text is the outcome of a discussion held at AgroParisTech (Paris) on 24 June 2008 during a seminar on forest planning education.

production would differ in relation to the types of human societies considered. Based on an adaptation of the typology proposed by Nair (2004), we shall attempt in this paper to present a structured overall view of the contrasting viewpoints to be found at present in the field of forest planning.

The paper is structured in a way allowing a progressive conceptual development of two different dimensions illustrated by examples from the literature. The first part of the paper will present the first dimension, that is, the diversity of situations and of societal concepts of forest planning. The second one will develop declinations of the foundations of forest planning as a discipline, the second dimension we will consider here. The third part will present a combination of both into a framework that is then discussed. The paper ends with conclusions and perspectives.

2. The diversity of situations and of societal concepts of forest planning

As Nair (2004) stresses, forestry issues vary enormously depending on the type of society and of development model within which they are located. Despite the great diversity of contexts, it is possible to propose a useful preliminary line of approach by distinguishing four extremely different types of situation.

2.1. Forest-dwelling societies

The situation here is one in which communities live in the forest, are dependent on it, and gain their livelihood from it by non-destructive means which are essentially outside the market, and by the general use of all resources in the forest. The forest is inhabited rather than managed or planned, and it is the forest that shapes life and society, which for its part derives virtually all its resources from it. Nowadays, this is only the situation of forest tribes living in vast areas of forest in certain countries, mostly in the southern hemisphere. Where such societies are concerned, forest planning is necessarily a form of external intervention, which may aim to preserve their social and environmental situation, or to replace it with another form of social and economic use of the forest's resources, or to seek a compromise by linking these objectives together (examples of this include certain instances of forest planning in the Congo Basin, Pierre and Cassagne, 2005).

2.2. Agrarian societies

The context here is one of a rural population which derives its resources from managing a territory consisting partly of cultivated land, partly of woodland and in some cases partly of range lands (Mazoyer and Roudart, 1997). The forest resources are exploited in a structured manner (with varying degrees of effectiveness), both for direct use by the population and, in many cases, for commercial purposes. Here, forest planning needs to see itself in the light of the various ways in which the forest is used by its multiple users, in close conjunction with other aspects of their involvement in the technical, economic and social set-up in the rural territory in question. This is largely a matter of negotiation within the local society.

2.3. Industrial societies

The context here is that of societies which many sociologists call 'modern'. The driving principles behind planning are the intensification and rationalisation of the forest's technical and economic exploitation, in a social context in which resources are exploited within specialised sectors, on the basis of a corresponding specialisation of geographical space and the marginalisation of local uses of the resources (Devillez and Delhaise, 1991; Huffel, 1926; Larrère and Nougarede, 1990). Forest planning is controlled at national level, or even higher, in the light of the priorities of the centres of power and

financing of the economic sectors associated with the forest. The French Forest Code of 1827 is emblematic of this situation and of the overall approach and concepts associated with it — concepts which have been predominant in the world of forestry for many decades. The main forest research and education institutions have been created following those dominating designs and schemes.

2.4. Post-industrial societies

This encompasses the contexts created by some contemporary societies, where industrial priorities are gradually being superseded by — or interlinked with — an accumulation of multiple and contradictory visions and practices with regard to the environment. These visions and practices are themselves associated with networks on various scales, ranging from the global to the hyper-local (Buttoud, 2000; Cullotta and Maetzke, 2009; Hoogstra et al., 2004; Kennedy and Koch, 2004; Subotsch-Lamande and Chauvin, 2002). Moving beyond the rationalisation of the 'modern' approach, forest planning thus becomes a problem of managing plurality (of visions, practices, expectations, technical, economic and social discourses, decision-making regimes and so on) over time. Sustainability, participation, co-management and adaptive management are some keywords here.

2.5. Matching concepts and contexts of forest planning

Of course, such a typology may seem exceedingly simple, given the extreme diversity of situations. However, it provides points of orientation in the current complexity of forest planning and management. They can be useful to clarify positions in public debates ahead of decisions about the use of forest land² or during discussions about the future direction of education and research in the field of forest planning.

It should be stressed at the outset that such a typology is based both on the characterisation of real-life situations — for example, a particular forest may as a matter of fact be primarily used by an agrarian society — and on the characterisation of concepts of the forest and its functions — for example, a particular engineer may think of forestry issues as primarily relating to the management of a set of flows (of timber, money, carbon, etc.). It is not unusual for a particular instance of forest planning to be based on a conceptual framework which does not reflect the actual situation. The classic example of this is the forest engineer who prioritises flow maximisation and who imposes (or attempts to impose) his planning approach on an agrarian society whose technical, economic and social equilibrium he disrupts (Benzyane et al., 2002). Or again, a second engineer might present a markedly post-industrial planning approach (characterised by plurality, participation, etc.) in a context where the actual exploitation of the forest is mainly steered by industrial priorities.

Whether the result is the imposition of a certain form of planning on a society, or the superficial application of a planning discourse to a situation which will remain unchanged, this type of mismatch between planning situation and planning conception has crucial implications for all aspects of planning (practice, education and research).

2.6. Clarifying tensions between differing perspectives

The proposed typology also helps to dismiss the claims of any one type of planning philosophy to supplant or surpass the others, either by rendering them obsolete or by encompassing them in an overall approach.

Such claims amount to ignoring the contradictions and powerful tensions between different situations and concepts of forest use. The truth of the matter is that there is a whole series of links between

² When such debates actually take place, which is not very often the case, even in many developed countries with strong traditions of forestry.

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