

Chapter Four

Theories for forest policy: An overview

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Abstract

This paper is an overview of political and policy theories which are used in the sub-discipline of forest policy analysis. Also, trends over time in theory use are followed. The aim is to consider whether the sub-discipline of forest policy analysis deviates from the “mother discipline” of policy science in general, and if so, how and to what extent. While doing so, the paper also offers an overview of current theories in forest policy analysis. Such an overview might be helpful for MSc and PhD students as well as for other researchers who are searching for a relevant theory to structure their data collection and analysis on forest policy. Finally, the overview offers a guide to the theories provided by the various papers in this publication.

1. Introduction

Forest policy analysis originally developed as a sub-discipline from the forest sciences. This meant that it was foresters, rather than political scientists, who primarily became involved in policy analysis. As a consequence, the role of political theory in such analyses remained limited. Also, the analyses tended to be normative and oriented towards policy advice (Glück 1992). Two decades ago, this situation gradually but fundamentally changed. Foresters became more knowledgeable about political and policy theories when forestry curricula at several universities started to introduce policy courses, both at the BSc and MSc levels. In addition, political and policy scientists got more involved in forest issues, probably because “green politics” had become a serious topic within their disciplines. Today, when reading forest journals that include policy analyses, many political and policy theories that are fashionable in the “mother discipline” can be encountered. This article gives an overview of the use and trends in such theories in the forest sciences, both from a contemporary and a historical perspective. It does so by (1) presenting an overview of relevant political and policy theories, based on two handbooks; (2) producing an overview of the use of such theories in forest policy papers as can be deduced from the

database *Scopus*; and (3) distinguishing trends in theory use in the forest policy sciences.

2. An overview of theories

There are naturally many handbooks from which one can construct an overview of political and policy theories. As an illustration, we select two—one from the political sciences in general and one from the policy sciences in particular—which are frequently used in university curricula, often cited in the literature and of which the authors are widely recognized as being authorities within their disciplines. The first one is *Theory and Methods in Political Science* of Marsh and Stoker (2002). They distinguish the following political theories relevant for current political analysis:

1. Behavioralism
2. Rational choice
3. Institutionalism
4. Feminism
5. Interpretative theory
6. Marxism
7. Normative theory

We briefly introduce these theories here. *Behavioralism* focuses on observable conduct in politics and on empirical testing of theoretical claims to explain such political behavior, for example political activism; so observing, testing and explaining are the three key words. To generalize findings, large-N datasets are preferred. With that, behavioralism stands in the positivist tradition, which claims that: (1) reality exists independently of our knowledge (this is the so-called *realist* position), (2) natural and social sciences are analogous, (this is the so-called *naturalist* position), and (3) science should explain phenomenon, generalize findings and separate facts from norms and values (this is the so-called *objectivist* position (Crotty 1998). This mainstream philosophy of science is contested, for example by *interpretative theory*, the counterpoint of behavioralism. This position rejects the notion that the world exists independently of our knowledge. On the contrary, it is claimed that, through scientific inquiry, scientists construct specific “facts” about the world (the so-called *constructivist* position). Hence, there is no objective, real and independent world “out there,” since our scientific assumptions and theories create its image and characteristics in the first place. Moreover, scientists—being people after all—are influenced by their normative environments (*anti-objectivist* position). As a consequence, facts, values, norms and meanings are strongly intermingled. Also, a distinction is made between the natural and social sciences, because the objects—either nature or society—are so different (*anti-naturalist* position). Since political scientists have to understand a socially constructed and mutually interpreted world a double hermeneutics characterizes the social sciences. In contrast, the natural sciences are based on a single hermeneutics, because nature does neither “interpret itself” nor “speak back” to the researcher. Just like behavioralists, interpretative theorists can study political activism, but their approach would be very different. Instead of sending a questionnaire to many political activists, statistically processing their answers and providing general explanations, they would visit some of them personally and interview them openly and in-depth to reconstruct the meanings that activists attach to their own political activism.

The other theories, dealt with in Marsh and Stoker (2002), stand somewhere on the continuum between these two extremes. *Rational choice* is a specific elaboration of behavioralism which does not build on sociology or psychology but on economics. The central idea is that individuals make political choices on the basis of the highest expected utility, this is to say, they choose that option that probably yields the highest benefits and lowest costs in the near future. *Institutionalism*, next, can be considered a critique of rationalism. It claims that rational choice is mediated by rules,

conventions and traditions, to be defined as “institutions.” People do not behave on the basis of the highest expected utility alone, but on the basis of what is appropriate in a certain institutional setting. For example, corruption in politics may produce the best financial outcomes, but in certain political cultures this is not an option at all. Whereas most institutional approaches still stand in the positivist tradition, *normative theory* departs from this. Instead of trying to objectively analyze and explain political behavior by scientific inquiry, either through rational choice or institutional constraints and opportunities, normative theorists try to judge current political practices against some moral reference points, through applying political philosophy or ethics. The central question is: What is a just, democratic and fair political order? Critical theories like Marxism and feminism also stand in this tradition; however they add a radical social change program to their scientific work. *Feminist* scientists often analyze the power structure of current politics and conclude that it is gender-biased. Politics are male-dominated and male virtues are overvalued. On the basis of such characteristics, a just political system cannot be built. It should therefore be “re-gendered,” e.g. through positive discrimination of women for vacant power positions. Finally, *Marxism* takes the unjust, capitalist world economies and the unfair superstructures built on them—like the national state or the World Bank—as their points of departure for critical analyses. However, as Marx already wrote, philosophy and science should not aim at interpreting the world, but at changing it. Therefore a lot of intellectual attention is paid to new social movements and their potential for radical social and political change.

The second book is *Theories of the Policy Process* by Paul Sabatier, which has been published in two editions (Sabatier 1999, 2007). Together, these volumes describe the following policy frameworks:

1. Stages approach
2. Institutional rational choice
3. Multiple streams framework
4. Social constructivism
5. Policy networks
6. Punctuated-equilibrium theory
7. Advocacy coalition framework

(Note: In his volumes, Sabatier adds a “comparative policy analysis framework” to his overview. However, this is not a theory in its own right, but a certain methodological approach. For that reason, it is not integrated in the overview of this paper.)

Until recently, the *stages approach*—often referred to as the *policy cycle model* too—was the most dominant framework for understanding policy making in the political sciences. It divides the policy process into a number of stages or phases—

for example, agenda setting, policy design, decision making, policy implementation and evaluation—in order to simplify the complexity of current policy processes and enable meaningful analysis. However, this model has been severely criticized. According to the critics, it is not accurate and too simple in a descriptive sense, not a “real” theory in an explanatory sense and it is too top-down, legalistic and rationalistic in its approach. However, there are a number of other approaches within the policy sciences that serve as alternatives. *Institutional rational choice* is a “thin” institutional approach, as briefly discussed above, which stays close to rational choice. The premise of self-interested and utility-maximizing individuals is maintained, however the fact that rules in politics or cultural settings may alter preferences, cost-benefit analyses, option rankings and—consequently—behavior is taken on board. This model, with its clear action-theoretical premises, is much more analytical and explanatory in nature than the policy cycle model. Next, the *multiple stream framework* (MSF) is a response to the simplicity of the stages approach. Policy making is considered to be much more complex. The key assumption is that policy making can only take off when the three so-called “independent streams” of problems, policies and politics are brought together by entrepreneurs on the one hand and windows of opportunity on the other. In other words, if the streams are not well managed by agencies and/or the political situation is not ripe, no meaningful policy making will happen. Again, MSF is a much more explanatory model than the stages approach.

A third alternative is the *punctuated equilibrium framework* (PEF). The starting point for PEF was the observation from American politics that long periods of continuity have been punctuated by brief periods of major policy change. A Dutch example is the change in water management policy in the late 1990s, where a “water run off” paradigm has been replaced by a “room for the river” paradigm (Wiering & Arts, 2006). The founding fathers of PEF asked themselves where such sudden policy changes may have originated, and their assumption was that it was a result of countervailing coalitions that challenge dominant policies and that gain ever more ground by fashioning new “policy images” through “venue shopping”, that is, by advocating their views in as many political venues as possible. This was indeed the case in Dutch water management, where a movement for a more ecologically sound type of water management got ever more response, although external shock events—for example the near-flooding of the River Rhine and the precautionary evacuation of more than 200,000 people in 1995—played crucial roles too.

Another approach that focuses on policy change and policy coalitions is the *advocacy coalition framework* (ACF) of Sabatier himself. Contrary to rational choice theory, the driving forces for political

action are assumed to be “shared belief systems” and not rational calculations. Actors from different backgrounds who share certain deep policy and technical beliefs regarding a certain issue may form coalitions, which generally compete with opposing beliefs and coalitions in a plural political system. From this competition and through interaction with policy brokers and outside events, policy learning and change may eventually occur. *Social constructivism*, next, refers to another philosophy of science that Sabatier himself adheres to, namely post-positivism, and has been briefly explained above. In terms of specific policy models, one might for example think of policy discourse analysis or frame analysis. Policy dynamics are explained by how the policy issue and process are named and framed by powerful individuals or hegemonic coalitions in terms of narratives and concepts. The *policy network approach*, finally, does not take the rational, individual actor as the starting point, but as the social agent in policy networks, interacting with and being dependent on others. This leads to patterns of resource exchange, communication, issue framing, social learning and joint policy making in networks.

3. Methodology

The list of theories deduced from the book of March and Stoker as well as from the two editions of Sabatier’s volume—in total 11 theories, when overlapping ones from the books are taken together—was used as an input for an analysis of theory use in the forest policy sciences, to be compared with the policy sciences in general. Also, a trend analysis over time was made. For the analysis, the database *Scopus*, in which a vast number of scientific papers is stored, was used to search the main international peer reviewed journals of various disciplines. The program also includes an extensive search machine through which samples of literature can be constructed. For this paper, two searches were performed, one on the forest policy sciences particularly and one on the policy sciences in general. The keywords used were “forest policy,” “forest governance” and “forest politics” for the former and “policy,” “governance” and “politics” for the latter. These keywords were searched in the titles, keywords and abstracts of all papers. For the policy sciences in general, the search was limited to the social and environmental sciences, the “mother disciplines” of the forest policy sciences. These searches were constructed as such: (1) TITLE-ABS-KEY [“forest policy” OR (“forest governance” OR “forest politics”)] and (2) TITLE-ABS-KEY [“policy” OR (“governance” OR “politics”)] LIM (“social sciences” AND “environmental sciences”). These searches resulted in two samples of about 12,000 papers on the one hand (forest policy

sciences) and about 220,000 papers on the other (policy sciences). In a next step, the theories from the list and their various synonyms were used as key words to further delineate sub-samples of individual theories. Finally, a top 5 of mostly used theories in the forest policy sciences was constructed.

This method has some drawbacks. If the abstracts of papers are taken into account in the search for keywords, the reference list is automatically included in the search too. This cannot be separated in *Scopus*. For example, a rational choice paper that cites a Marxist book in the reference list with the term “Marxism” in the title will also be marked, not only as a rational choice paper, but as a Marxist paper as well. However, deleting the abstract is not an option, since the first mention of the application of a certain theoretical approach is normally in the abstract. Therefore we should extend the notion of “theory used” to “theory used or referred to.” Moreover, the example of rational choice and Marxism shows that there might be overlap and double counting of papers. Therefore the figures below only give a rough indication of theory use and reference in the forest policy sciences. But since we do not use these figures in an absolute sense, but only rank the various theories, the tables below remain modest in their quantitative ambitions. Finally, it should be noticed that both the handbooks and *Scopus* have their own Anglo-American biases. The handbooks

show the theories which are most popular in the Western world—for example excluding post-colonial theories developed in Latin-America—and scientific papers in languages other than English are hardly represented in *Scopus*.

4. Use and trends

The results are shown in Tables 1 and 2. The first table shows the top five theories used or referred to in the policy sciences literature in general as well as in the forest policy sciences in particular. It shows that the classical political theories—rational choice, institutionalism, Marxism—are still quite strong in the general literature, but that the newer ones—policy networks, social-constructivism—are present in the top five as well. This mirrors what some have called the “argumentative turn” in the social sciences (Fischer 2003). Clearly this turn has been more prominent in the forest policy literature. Here policy networks and social-constructivism are higher in the hierarchy, while institutionalism and rational choice are positioned lower. Moreover, Marxism is absent in the top five in the forest policy sciences, although its ranking is still six. Another striking difference is the prominent presence of the advocacy coalition framework (ACF). ACF is clearly particularly popular among forest policy analysts; it

Table 1: Top five theories used or referred to in forest policy literature

Top five theories in policy literature	Top five theories in forest policy literature
Rational choice	Policy networks
Institutionalism	Advocacy coalition framework
Policy networks	Institutionalism
Marxism	Social constructivism
Social-constructivism	Rational choice
<i>6% coverage</i>	<i>9% coverage</i>

Table 2: Rankings of the five core theories in forest policy literature by five year period

	< 1995	1995-2000	2000-2005	2005-2010
Policy networks	-	4	2	1
Advocacy coalition framework	-	1	1	5
Institutionalism	-	2	4	2
Social-constructivism	-	-	3	3
Rational choice	-	3	5	4

ranked second in the forest policy literature, but only eighth in the policy sciences in general. This may be explained by its origin, the environmental policy sciences, of which forest policy analysis is part. A final observation regarding Table 1 is the extent to which the top five theories cover part of the samples: the top five theories cover 6% of the sample of policy sciences papers as a whole. This figure is lower than expected. It might imply that more than 90% of those papers are just descriptive or use theories other than those in our list, but this is highly unlikely, because it is based on the core handbooks of the disciplines. Again unexpectedly, this score is higher for the forest policy sciences at 9%. Implicitly, it was expected that this literature would be more descriptive than the policy sciences in general, because forest policy is limited to a specific empirical field; however, this expectation is false. Obviously, the forest policy sciences are as current, in terms of theory use and reference, when compared to the mother discipline.

Table 2 shows the trend in theory rankings in the forest policy sciences in timeframes of five years. Here it is clear that: (1) the policy network approach and social-constructivism have become more popular over time; (2) the opposite is true for the ACF; and (3) institutionalism and rational choice have more or less maintained their positions. These observations further support the thesis of the argumentative turn, although this conclusion should not be overemphasized, since the classical theories remain present. Striking is the recent decrease in the rating of the ACF. Obviously, ACF has lost attractiveness, as it appears to have been a fashionable instrument for some time. A final striking observation in Table 2 is the fact that all theories are absent in forest policy sciences literature published before 1995. Certainly these sciences are a young sub-discipline, but they definitely existed before 1995 (Glück 1992). Therefore one can conclude that this literature has become less descriptive over time. Hence, it is not only current, in terms of theory use and reference, but it has been scientifically professionalized over time as well.

This publication also contains a number of related theoretical perspectives that were presented at the CIAS Conference *Forest Policy for a Sustainable Humanosphere*, held at Kyoto University, Japan, February 17-18, 2009. Besides regional accounts of the latest empirical developments in forest policy in Africa, Asia, Latin America and Europe, this discussion paper also presents several case studies in which theory has a prominent status. Buizer, in her study of local initiatives by Dutch farmers to manage nature, applies the policy arrangement approach that builds on network theory, institutionalism and discourse theory. This approach helps her to analyze the different nature discourses of farmers on the one hand and official policy makers on the other. The discourses are played out in power games

and formal rule settings, leaving the local initiatives with little room to maneuver and scale up. Van Gossum uses the same approach but applies it quite differently. He evaluates the governance capacity of institutional arrangements on sustainable forest management (SFM) in a Dutch province. He concludes that all stakeholders more or less share the same SFM discourse. Moreover, the institutional arrangement fits the shared discourse quite well. Due to this congruence, Van Gossum believes that the chance that SFM will be realized in this region in the near future is quite high. A social-constructivist account is to be found in the paper of Ubukata. He shows how agricultural science is easily re-interpreted—and misused—to legitimize certain forest policies. To illustrate this, he goes into the Thai Eucalyptus debate. Although local communities and NGOs criticized the use of this species, due to assumed adverse ecological effects, forest departments selectively mobilized FAO knowledge to move their own policy forward.

5. Conclusion

The five most popular theories used or referred to in the forest policy sciences are the policy network approach, advocacy coalition framework (ACF), institutionalism, social-constructivism and rational choice. The papers applying or mentioning these theories cover about 9% of the forest policy sciences sample from *Scopus*. This implies that about 90% of the papers apply other theories or remain rather descriptive. However, forest policy science scarcely deviates from its mother discipline. The list of theories as well as the coverage percentage come very close to the observed rankings and figures in the policy sciences literature in general. This implies that the forest policy sub-discipline is current. This conclusion also goes for this publication, in which a variety of theories are applied to forest policy cases. Over time, the policy network approach and social-constructivism have become more popular, suggesting that the so-called argumentative turn has also taken place in forest policy analysis. At the same time, the more classical theories of institutionalism and rational choice have remained with the same rankings. Only the ACF has become less popular. Overall, the use and reference to theories has increased compared to 20 years ago. Hence, the forest policy literature is not only current, in terms of theory use and reference, but it has scientifically been professionalized at the same time.

References

- Crotty, M. 1998. The foundations of social research. Meaning and perspective in the research process. SAGE, London, United Kingdom.

- Fischer, F. 2003. Reframing public policy. Discursive politics and deliberative practices. Oxford University Press, Oxford, United Kingdom.
- Glück, P. 1992. Evolution of forest policy science in Austria. IUFRO, Vienna, Austria.
- Marsh, D. and Stoker, G. 2002. Theory and methods in political science. Palgrave MacMillan, Houndmills and New York, United States.
- Sabatier, P. (ed.). 1999. Theories of the policy process. Theoretical lenses on public policy. Westview Press, Boulder, United States and Oxford, United Kingdom.
- Sabatier, P. (ed.). 2007. Theories of the policy process. Second edition. Boulder, Oxford: Westview Press, Boulder, United States and Oxford, United Kingdom.
- Wiering, M. and Arts, B. 2006. Discursive shifts in Dutch river management: 'deep' institutional change or adaptation strategy? *Hydrobiologia*, Vol. 565, No. 1, pp. 327-338.