

# Methods of Environmental Law in Finland<sup>1</sup>

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## 1 Introduction

Environmental law is a branch of jurisprudence that responds with regulation to environmental changes caused by people and their institutions. The most extensive of such changes are global, for example those affecting climate or biological diversity. Local harmful changes to the environment may include concerns such as contaminated soil in particular parcels of land. Environmental law is a reactive part of the legal sciences and cannot, methodologically, confine itself merely to legal dogmatics at the core of jurisprudence. In other words, environmental law is not only the interpretation and systematization of present legislation; it looks forward with other methods, such as regulation theory, to give recommendations for new regulation and legislation.<sup>2</sup>

Environmental law is understood in this article in a broad and cooperative sense to include all legal research with environmental relevance even where the research may formally be located in another branch of law or stress different viewpoints on the environment than the field has traditionally done.<sup>3</sup> Actually, it is typical of research in environmental law that the studies simultaneously cover many parts of environmental law and are connected to the many fields of law. A good example is *Vihervuori*'s doctoral thesis, which has connections to water, environmental protection, administrative, procedural and real property law as well as the law of damages.<sup>4</sup>

Researchers in environmental law also discuss relevant research questions with other social scientists.<sup>5</sup> In fact, many private and public interests in society are linked to the environment, whereby a balance has to be struck between them in legal decision making. In other words, legal control is a matter of balancing interests in society.<sup>6</sup> At the end of the day, alongside legal

2 See Similä, Jukka, *Oikeustieteellinen ympäristötutkimus ja oikeuspolitiikka*, Oikeus (36) 4, 2007, p. 409.

3 See Määttä, Tapio, *Monitieteisyys ympäristöoikeudessa – oikeustieteen sisäiset ja ulkoiset yhteydet oikeustieteellisen tutkimuksen haasteena*, Oikeus 3, 2003, p. 333–355, esp. p. 341–344. Hollo has expressed the same idea in the publication Hollo, Erkki, *Ympäristöoikeus*, Jyväskylä 1991, p. 19.

4 See Määttä, Tapio, *Ympäristöoikeudelliset väitöskirjat Suomessa 1908–2010*, Ympäristö-juridiikka 2, 2010, p. 37–60, esp. 49 and Vihervuori, Pekka, *Ympäristöoikeuden alkuaskelmilla. Miten meistä tuli oikeustieteen tohtoreita*. Edit. Halila, Heikki and Timonen, Pekka, 2003, p. 229–234. See also Vihervuori, Pekka, *Viranomaisten asianosaispuhevallasta vesiasioissa, tutkimus edunvalvonnan edellytyksistä vesien käyttöä koskevassa päätöksenteossa*, SLY 1981.

5 See for example the following works on justice and legitimacy: Lehtinen, Ari & Rannikko, Pertti (edit.), *Oikeudenmukaisuus ja ympäristö*, Gaudeamus, 2003 and Rannikko, Pertti & Määttä, Tapio, *Luonnonvarojen hallinnan legitimitetti*, Vastapaino, 2010. The phrasing of a research question means the choices made between the potential objects of research, the informational interests involved, the research audience, the researcher's ideologies, as well as the research methods and their emphases. See Määttä, Tapio, *Ympäristöoikeudellisen tutkimuksen uudet suuntauksiset ja menetelmät*, Oikeustieteellinen opinnäytetyö, edit. Miettinen, Tarmo, University of Joensuu 2004b, 113–166, esp. p. 114.

6 The interests of society consist of the claims, demands or desires that are involved in life in civilized society and are asserted in pursuit of that life. These interests are connected to,

dogmatics the researcher must draw on the approaches of environmental policy, economics and law, legal philosophy or legal sociology, among other fields.

Comparisons between Finland and other countries have been a central research design in environmental law. Globally, different countries may have common environmental challenges, but their responses to them will be based on their particular legal cultures and, thus, produce policy instruments of different kinds. Accordingly, focusing on the variations and similarities in the legal orders examined will be the most salient and interesting approach to the particular research questions, such as who has the right to use water<sup>7</sup>. Typically, research in Finnish environmental law has taken an instrumental approach to such comparisons, aiming to solve particular problems identified in regulation or to introduce regulatory innovations.<sup>8</sup>

Environmental law is typically an inter- and transnational branch of legal science. On the one hand, national environmental legislation is seldom passed without any influence from the regulation of the European Union (EU) or international conventions. On the other, the environmental problems addressed in regulation do not necessarily stay within national borders. A look at current Finnish environmental legislation reveals both EU and Finnish environmental policy. Finland is a member state of the EU and its national legal order is actually combined with that of the EU. Moreover, international environmental policy is usually implemented at both the EU and national levels.<sup>9</sup> Thus, environmental law has many themes that lend themselves to international and transboundary research.<sup>10</sup> Yet, internationality in environmental law research is not a given. While the EU and the member states share competence, the

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among other things, public safety and respect for economic, political and ethical values. The interests of society are at present socially controlled through law. *See* Laakso, Seppo, *Lainopin teoreettiset lähtökohdat*, University of Tampere, Tampere 2012, p. 68–70 and Pound, Roscoe, *The Theory of Social Interests*, in *Readings on Jurisprudence* (ed. Jerome Hall), The Bobbs-Merrill Company Publishers, Indianapolis 1938, p. 238–246. This kind of thinking can be seen as a link to later human and basic rights based on natural law and to social control through those rights.

7 *See* Husa, Jaakko, *Oikeusvertailu*, Lakimiesliiton kustannus, 2013, p. 221 and Belinskij, Antti, *Oikeus veteen*, SLY A N:o 300, 2010.

8 On the management of flood risks, *see* for example Helander, Outi, *Tulvariskien hallinta oikeudellisena ongelmana*, *Oikeusvertaileva tutkimus*, Ministry of Agriculture and Forestry, 2007 and on the legal innovations in biodiversity protection, Fromond, Louise, Similä, Jukka & Suvantola, Leila, *Regulatory innovations for Biodiversity Protection in Private Forests – Towards Flexibility*, *Journal of Environmental Law*, Vol. 22, Issue I, 2009, p. 1–31. However, more empirical research on environmental regulation and resources for that purpose is needed. *See* Määttä, Kalle 2001, *Regulatory reform and innovations: Whether to trust the invisible hand or use the visible one?* Sitra Reports series 10, 2001, p. 74.

9 The Member States and the EU have shared competence to negotiate international environmental agreements (Article 191.4 of the Treaty on the Functioning of the European Union, OJ C 326. 26.10.2012).

10 *See* for example Bastmeijer, Kees & Koivurova, Timo, *Theory and Practice of Transboundary Environmental Impact Assessment*, Martinus Nijhoff Publishers, 2008, esp. p. 71–92.

principle of subsidiarity means that the research themes pursued in environmental law will be purely national to some extent and, moreover, the choice between international or national research themes will determine the question of suitable methods and language in a particular case. Practical legal dogmatics in particular depends on the language used in the national legislation and legal practice. Thus, the possibilities to use this research method for international or transboundary research work are mainly limited by the material, such as international conventions or EU legislation, the authentic versions of which are published in several languages. Moreover, other methods than practical legal dogmatics are usually more appropriate when doing research on environmental regulation for an international readership.<sup>11</sup>

Environmental law research is also inter- and multidisciplinary. It is often done in projects with experts from other disciplines. In these projects, the first task is to find a common language and understanding of key terms. In fact, the same terms may mean different things in different disciplines. Thus, environmental law scholars today need good general knowledge about society and environment and a willingness to discuss research themes across disciplines with other researchers. Projects investigate common topics from different angles and with varied methods. In this respect, one can speak of environmental law entailing an external methodological pluralism.

One typical feature of environmental law research has been and still is amalgamation of varied research perspectives. *Määttä* has studied doctoral theses written in Finland in the years 1908-2010 on environment-related law. Studies based mainly on practical legal dogmatics frequently include the theoretical development of general doctrine. Moreover, dissertations almost always include as one of their aims the improvement of environmental regulation. In addition, their links to social scientific environmental studies have been strong. The methodological pluralism in environmental law is internal and is to be counted among the criteria for good research work.<sup>12</sup> Thus, a single study may use many methods simultaneously. In particular, a thesis composed of several articles is a suitable forum for methodological pluralism.

In the following sections, I describe the main research methods of environmental law, the ways in which they formulate research questions and the limitations on those questions. I illustrate the research methods in use through some examples taken from studies in Finnish environmental law.

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11 Finnish science policy stresses international research, which in practice usually means that Finnish legal studies are published increasingly in English. This policy, sound in principle, may mean in the future that legal science will sink into internal conflict between practice and theory: the courts and public authorities will still have an urgent need for information based on practical legal dogmatics written in Finnish or Swedish, but legal research will be using other methods and legal theory will be written more often in English especially for the legislator.

12 See *Määttä* T. 2010, p. 52.

## 2 Legal Dogmatics

### 2.1 *Theoretical Legal Dogmatics*

Legal theory commonly distinguishes theoretical and practical legal dogmatics. The main tasks of theoretical dogmatics are, as suggested above, the systematization of law and the reconstructing of general doctrine. Hollo however has, stated that one is using an abstract approach when one employs a formal rationale in pursuing a particular objective, for example, the acceptance of a proposed decision or judgement. The approach is appropriate when a single discrepancy in practice has no legal relevancy or when a particular symbol or pattern clarifies outcomes of the proposal. The abstraction work can target a single concept (a right, decision criterion, etc.) or the decision-making model itself. In the latter case, for example the part of systems theory that accounts for decision making based on legal norms can be understood as an abstraction. The research approach of practical legal dogmatics does not stand in contrast to the abstract or theoretical one; rather, the two complement one other and can be used as checks on each other's research results.<sup>13</sup> As mentioned earlier, practical and theoretical legal dogmatics usually go together in environmental law and even in the same studies. Indeed, it is not sensible to draw sharp boundaries between the two.<sup>14</sup> Moreover, new proposals on general doctrine appear from time to time and are tested in practice.

Research interests in legal dogmatics are geared towards legal norms and their contents.<sup>15</sup> The main tasks of legal dogmatics are to 1) clarify the content of the law in force and 2) systematize, that is, restructure, the normative material in force. Clarification includes both the interpretation of the provisions in legislation as proposals for legal norms and the recommendations on amendments *de lege ferenda*. Moreover, the legal definitions of the terms used in the provisions sometimes need clarification. These aspects of clarification are described later, in section 2.4. Sections 2.2 and 2.3 introduce some other tendencies of legal dogmatics as applied in environmental law. This section concentrates mainly on the systematization and restructuring of general doctrines as applications of legal dogmatics in research in environmental law in Finland.

Systematization is the building of new legal theories in order to parse the mass of norms in a general and abstract way. This kind of legal dogmatics is typically called theoretical. In the theory of science, it can be compared with other sciences and their similar acts of systematization or classification. In theoretical legal dogmatics, as in any theoretical classification, it is typical that the forming of theory is a creative undertaking in which the theoretical

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13 Hollo, Erkki, *Oikeuksien tutkimisen näköaloja*, Oikeus ja ympäristö, Edita 2012, p. 78–79. On the links between systems theory and environmental law, see Luhmann, Niklas, *Ekologinen kommunikaatio* (originally *Ökologische Kommunikation*, vs Verlag für Sozialwissenschaften, 4. Auflage, 2004), Gaudeamus 2004.

14 Määttä, T. 2004 b, p. 119.

15 See e.g. Laakso 2012, p. 97.

framework defines research questions and these questions define how answers are given and sometimes even the answers. In this respect, interpretation and systematization, praxis and theory, and the special and the general interact with each other. Legal dogmatics as it is applied in practice shapes the content of the legal order.<sup>16</sup> Actually, legal dogmatics builds legal systems by forming, among others things, the general doctrine of environmental law from the legal order. Although the diversity of legal sources within the legal order itself does not allow total coherence as a single legal system, it is not necessarily an obstacle to local coherence with general doctrines in the different fields of law<sup>17</sup>. The aim of systematization is usually to clarify and aid legal decision making in practice and in a particular field of law.

A general doctrine for legal regulation with environmental relevancy is usually formulated and presented as a coherent and systematic entirety, a legal system. A general doctrine also foregrounds the special features of regulation. Among other elements, the core of new environmental law doctrines include 1) the categorizations of policy instruments and 2) the understanding of the characteristics and legal effects of the instruments, as well as the bases for their selection and use in legislation and connections to other, non-legal regulation<sup>18</sup>. A general doctrine can also shape and structure the key principles, concepts, models and paradigm of a legal field. It helps to identify and describe the ethical, ecological, economic and political views underlying environmental regulation inasmuch as they form the link to scientific and other environmental discussions in society. A general doctrine is also useful in interpretation especially when legal problems are recognized and restructured using legal concepts. The doctrine, along with legal principles, policy instruments and concepts, is used in the interpretation, argumentation and grounds invoked in legal decision making. Moreover, the researcher in theoretical legal dogmatics can have a complementary task, providing views that differ from those of the practical legal actors. Thus, the researcher can produce knowledge about law which is not produced by other actors, the legislator or the person or body applying law. In this respect, academic legal research can bring to light the structures of law and legal practicalities which are not readily visible in the legislation and in the practice of courts and public authorities.<sup>19</sup>

Historically, environmental law has been constructed from, among other fields, land, water and economic law. Accordingly, the general doctrine has been amended constantly. An example of this kind of theoretical change of

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16 See Aarnio, Aulis, *Oikeusteoriasta*, Lakimies 6-7, 1998, p. 983–991, esp. p. 990.

17 Tuori, Kaarlo, *Oikeuden ratio ja voluntas*, WSOYpro 2007, p. 131.

18 Here, regulation must be understood in a broad sense that encompasses standard setting; monitoring and enforcement; sustained, reactive and informative oversight with reference to rules or provisions; intervention by public authorities to steer actions concerning the environment and the economy; and all types of policy instruments for social and legal control. See for example Kokko, Kai 2009, *A Legal Method and Tools for Evaluating the Effectiveness of Regulation: Safeguarding Forest Biodiversity in Finland*, Nordic Environmental Law Journal, p. 57-78, esp. p. 59.

19 See also Määttä, Tapio, *Ympäristöoikeuden monitieteisyyden haaste: oikeustieteen kolmannen tehtävän hahmottelua*, Lakimies 6, 2004, p. 1102 and Määttä, T. 2004b, p. 119.

doctrine is the shift in pollution control from a focus on water law and the law of adjoining properties towards that seen in the present environmental protection law. The roots of the shift can be traced to, among other sources, Hollo's, Vihervuori's and Kuusiniemi's doctoral theses (in 1979, 1981 and 1992).<sup>20</sup> These works form the main theoretical basis for Finnish environmental protection law and its general doctrine, which is now complemented by EU law. As a result, in a 2000 amendment pollution control was moved mainly from the old Water Act (264/1961) to the present Environmental Protection Act (86/2000) and control of nuisance among neighbours, based on private law, was integrated with environmental protection, which is based on public law. Later, in a doctoral thesis published in 2007 that was an assessment of sorts, *Similä* studied the pollution control system using the tools of regulatory theory.<sup>21</sup> In a similar vein, in 2008 *Warsta* analysed the current state of and possibilities to develop the environmental protection permit system.<sup>22</sup>

Another example of a doctrinal shift in environmental law that was also reflected in practice can be found in the discussion of land ownership. As Hollo has pointed out, the meaning of ownership as an institution varies from one legal order to another.<sup>23</sup> *Hyvönen* has rebuilt land ownership as a concept, drawing on, among other sources, *Zitting's* ideas about dynamic and static elements.<sup>24</sup> *Määttä* went further in 1999 in his thesis by stressing the dynamic element, in keeping with analytical jurisprudence, and took the view that the institution of ownership is most likely a network of legal relations that includes many aspects of social and environmental responsibility. His views sparked vigorous debate among scholars.<sup>25</sup> According to *Laaksonen*, the reform of basic rights in the Constitution of Finland in the year 1995 seemed to change the protection of ownership less than that of other basic rights.<sup>26</sup> However, since the reform, the basic right to a healthy environment, along with the

20 See Hollo, Erkki, *Pilaamiskiellon sisältö vesilain mukaan*, SLY 1976, Vihervuori 1981 and Kuusiniemi, Kari, *Ympäristönsuojelu ja immisioajattelu*, Lakimiesliiton kustannus 1992.

21 Similä, Jukka, *Regulating Industrial Pollution: The Case of Finland*, Forum Iuris, University of Helsinki, 2007.

22 Warsta, Matias, *Ympäristölupajärjestelmä – analyysi nykytilasta ja kehittämismahdollisuuksista*. Espoo 2008.

23 Hollo 2012 (published originally in 1976), p. 72–77.

24 See Hyvönen, Veikko, *Kaavoitus- ja rakentamisoikeus*, Espoo 1988, p. 56–60. See also Zitting, Simo, *Omistajan oikeuksista ja velvollisuuksista I-II*, Lakimies, 1952, p. 387–401 and p. 501–531 and Zitting, Simo, *Omistusoikeudesta systemaattisena käsitteenä*. Lakimies 1953, p. 590–599.

25 Määttä, Tapio, *Maanomistusoikeus. Tutkimus omistusoikeusparadigmoista maaomaisuuden käytön ympäristöoikeudellisen sääntelyn näkökulmasta*. SLY 1999, Määttä, Tapio, *Zittingin omistusoikeusanalyysin hyödynnettävyydestä maanomistusoikeuden käytön tutkimuksessa*, Lakimies 1, 2000, p. 3–27, Hyvönen, Veikko, *Maanomistusoikeudesta*, Lakimies 2, 2001 p. 307–317 and Määttä, Tapio, *Oikeustieteellisestä keskustelusta, omistusoikeusajattelun muutoksesta ja oikeusjärjestelmän jännitteistä*, Lakimies 2001, p. 318–325.

26 Laaksonen, Kalevi, *Kiinteän omaisuuden perustuslainsuoja*. Lakimiesliiton kustannus 1998, p. 248–258.

responsibility everyone has for the environment, has been used by the Constitutional Law Committee of Parliament to counterbalance the protection of ownership.<sup>27</sup> Thus, the general doctrine of ownership was amended in practice.

Määttä draws on seven doctoral theses in building this theoretical approach to environmental law. However, the themes and even method-mixes of the theses vary to such an extent that I mention some of them also in other contexts in this article.<sup>28</sup> The special approaches applying legal dogmatics as a method in Finnish environmental law are conceptual, critical, problem-based and empirical (practical) legal dogmatics.

Theoretical legal dogmatics also considers research questions about legal arguments and the theory of judicial decision. These questions may bear on the use and balancing of legal and other resources in legal practice, an example being Määttä's articles about soft law or about reconciling the provisions from different statutes.<sup>29</sup> Among other questions, one can ask whether, in terms of using the environment, the field of law brings any special theories or structures to the judicial consideration of a case and what kind of discretion is allowed in such matters.<sup>30</sup>

## 2.2 *Conceptual Legal Dogmatics*

Until the 1950s, conceptual legal dogmatics described an old form of Finnish jurisprudence; it has mainly been replaced by analytical and other new forms of jurisprudence. It is also linked ideologically to the one-rule doctrine in procedural law (*Tirkkonen 1898-1976*)<sup>31</sup> and in environmental law, even as recently as in 1990, when *Repo* published his doctoral thesis on the right to

27 See for example PeVL 21 and 22/1996. See also Kokko, Kai, *Ympäristöperusoikeuden evoluutio kirjallisuuden ja erityisesti korkeimman hallinto-oikeuden vuosikirjaratkaisujen valossa*, Oikeus kansainvälisessä maailmassa, Ilkka Saraviidan juhlakirja, edited by Aarto, Markus and Vartiainen, Markku, Lapin yliopisto, EDILEX 2006, p. 309–341, esp. p. 318.

28 The dissertations are Määttä, Tapio, *Maanomistusoikeus*, SLY 1999, Ranta, Jouni, *Varautumisperiaate ympäristöoikeudessa*, Helsingin yliopisto 2001, Kokko, Kai, *Biodiversiteettiä turvaavat oikeudelliset periaatteet ja mekanismit*, SLY A N:o 243, 2003, Kumpula, Anne, *Ympäristö oikeutena*, SLY A 252, 2004, Hepola, Matti, *Oikeusvoimaopin transformaatio, Siviilioikeudellisen oikeusvoimaopin muuttuminen ja siirtyminen hallinto- ja ympäristöoikeuteen ympäristöluvan pysyvyyden kannalta*, Edita 2005, Utter, Robert, *Normativ miljökvalitet. Funktionen av en rättsligt institutionaliserad måttstock beträffande kvaliteten av miljön*, Forum Iuris, University of Helsinki, 2007 and Herler, Casper, *Markföroreningsansvaret*, Talentum, 2008. See Määttä T. 2010, p. 53. See also Määttä T. 2004b, p. 127–128.

29 See Määttä, Tapio, *Soft law som rättskälla på nya rättsområden i den nationella rätten*, JFT 6, 2006, p. 553–571 and Määttä, Tapio, *Lakien väliset suhteet oikeudellisen ratkaisun teorian haasteena: ristiriita-ajattelusta yhteensovittamismalliin*, Lakimies 2, 2013, p. 171–191.

30 See Syrjänen, Olavi, *Harkintavalta kaavoituksessa ja rakentamisessa*, 1999, p. 28–30 and also Määttä 2004b, p. 128.

31 See Laakso 2012, p. 462.



float timber<sup>32</sup>. The one-rule doctrine can still be seen as a regulatory idea, but one that is mainly past in Finnish legal theory: as *Aarnio* categorically argues, ‘there is no such thing as one right decision’.<sup>33</sup>

*Helin* has distilled the presumptions of conceptual legal dogmatics into four different factors: 1) trust in the term definitions of law and the classifications of legal phenomena, 2) understanding subjective rights as substance, 3) the idea that legal effects can be derived from the general doctrine formed in the different fields of law, and 4) the idea that law is a closed system.<sup>34</sup> A good example of research in this vein in Finnish environmental law is *Manner’s* doctoral thesis about public use as a concept of water law.<sup>35</sup>

Although conceptual legal dogmatics as a research orientation or approach has passed into history, analyses of terminology and principles have a part to play in legal studies. In fact, new legal principles and concepts are still needed in environmental law, and concepts such as safeguarding biodiversity, land ownership, or principles such as the precautionary principle have quite recently been the focus of doctoral research in environmental law in Finland. However, the approach and presumptions of legal dogmatics have changed to the extent where today we can confine ourselves to a discussion of theoretical, critical, problem-based and practical or empirical legal dogmatics.<sup>36</sup>

### 2.3 *Critical and Problem-based Legal Dogmatics*

Critical legal dogmatics in Finnish environmental law refers to a critical, value-based approach to the legal order. The focal values are mentioned openly at the beginning of the research and the research topics are then studied from this perspective but within the limits of jurisprudence as well as the requirements of the constitutional state regarding legitimacy (lawfulness), fairness and justice in society. This approach can clarify the limits of interpretation when particular environmental values are protected. It is a matter for civil society, not a researcher, to decide how to balance different values and what weight a particular value has in legal decision making. Critical legal dogmatics must be distinguished from critical legal studies, a line of research originally pursued in the USA in the period 1970-1980. However, critical legal dogmatics has some relation to *Tuori’s* critical legal positivism in the sense that critical legal dogmatics in environmental law embraces ethical arguments and social

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32 Repo, Matti, *Oikeudesta uittaa puutavaraa*, SLY 1990.

33 Aarnio, Aulis, *Laintulkinnan teoria*, 1989, p. 264–271 and Aarnio, Aulis, *Tulkinnan taito: Ajatuksia oikeudesta, oikeustieteestä ja yhteiskunnasta* 2006, p. 277. See also Laakso 2012, p. 388.

34 See Helin, Markku, *Lainoppi ja metafysiikka*. Helsinki 1988, p. 322. See also Laakso 2012, p. 463.

35 Manner, E.J., *Yleiskäyttö vesioikeudellisena käsitteenä*, SLY A N:o 46, 1953, esp. p. 290–291.

36 On the concepts, see Kokko 2003 and Määttä T. 1999; on the principle, see Ranta 2001.

interests underpinning legislation and discusses the relation of moral values and objectives to legal and other principles.<sup>37</sup> In addition, critical legal dogmatics aims to not only understand the current society or explain it and in that way promote the prevailing legal order, but also to take a morally based, critical approach in the interpretation and systematization of norms. Research applying critical legal dogmatics may also put forward recommendations for amending legislation.

Critical legal dogmatics can in principle be theoretical or practical or both<sup>38</sup>. In critical legal dogmatics it is necessary to explicitly articulate the rationalities and objectives underlying the analysis. A limitation of the approach may be that without careful analyses it overlooks the pluralism behind legal objectives and also some legally relevant arguments. Thus, the limitations of the critical approach relate to the potential use of results in practice<sup>39</sup>, for they highlight new possibilities to interpret and systematize or otherwise to improve regulation in the light of the critical approach chosen.<sup>40</sup> It is also important to point out that legal provisions which can be interpreted in an environmentally centred way are worded such that they change traditional legal protection only to the extent intended in each case according to the political considerations behind the legislation<sup>41</sup>. Thus, critical approaches are dependent on the particular legal culture in which they are applied and they should always recognize the traditional legal guarantees given by a valid legal order. Among other things, the acceptance of safeguarding biodiversity in environmental law should not mean discarding people's traditional fundamental rights or considerations of legal protection; rather, any mechanisms created for safeguarding biodiversity must complement those rights.<sup>42</sup>

The central tools of critical legal dogmatics are the objective provisions of legislation, as well as the environmental principles and human and fundamental rights that play a central role in the interpretation of flexible provisions and

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37 Legislation and legal principles form the bases for balancing social interests in the courts. The legal sources are themselves results of discourses about values and objectives in society. On these discourses, see Tuori 2007, p. 50-51. See about the theory Tuori, Kaarlo, *Critical Legal Positivism*, Aldershot, Ashgate, 2002. In these critical views law is an aspect or field of social experience, not some mysterious external force acting on it. See Cotterrell, Roger, *Law, Culture and Society*, Legal Ideas in the Mirror of Social Theory, 2006, p. 25.

38 See Määttä T. 2010, p. 53.

39 See Pölönen 2007, p. 14–15.

40 On the Finnish discussion concerning committed and detached (critical) legal dogmatics, see also for example Siltala, Raimo, *Oikeudellinen tulkintateoria*, 2004, p. 346-355 and Määttä T. 2004b, p. 134-135.

41 Hollo, Erkki, *Oikeustieteen tieteenteoria ja teoria ympäristöoikeudellisesta sääntelystä*, Oikeus ja ympäristö, Edita 2012, p. 421.

42 See Kokko, Kai, *Biodiversity Law*, Working Papers of the Finnish Forest Research Institute 1, 2004 p. 166. "www.metla.fi/julkaisut/workingpapers/2004/mwp001.htm".

norms.<sup>43</sup> The critical approach has been applied in several dissertations on environmental law.<sup>44</sup>

Problem-based legal dogmatics usually means an analytical approach that is applied to a socially relevant problem or institution and that simultaneously draws on different views from the many fields of law. Määttä found only one doctoral thesis that fulfils these exacting methodological demands.<sup>45</sup> Usually, the interest of the studies is systematization. The risk in the problem-based approach is that excessively broad research problems may lead to superficial analyses.<sup>46</sup> However, if the demands are relaxed such that a study focusing on an environmental problem can concentrate on the analysis of the particular matter in order to find solutions to the problem by improving interpretation, systematization and even legislation *de lege ferenda*, then the problem based-approach is most applicable in environmental law.<sup>47</sup> This methodologically 'lite' approach has links to the analysis using regulatory theory and to other scientific methods.<sup>48</sup> The approach may also remain viable when it concentrates only on the subfields of environmental law.<sup>49</sup>

## 2.4 *Practical and Empirical Legal Dogmatics*

Interpretative (practical) legal dogmatics discerns the logics of possible worlds without being a logical-analytical science itself. The statements of practical legal dogmatics are not tautologies but comments about particular socially

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43 See Määttä T. 2004b p. 135.

44 According to Määttä T. (2010, p. 53) the dissertations that have some features of critical legal dogmatics are Mäkinen, Eija, *Maankäyttösopimus ja hyvä hallinto*, Finnnpublishers Oy 2000, Kokko 2003, Nordberg, Eero, *Maatalouden ympäristövastuu*, SLY 2009 and Mäntylä, Niina, *Luonnon edustajien puhevalta*, Acta Wasaensia no 225, 2010, Laaksonen 1998 and Tolvanen, Jukka-Pekka, *Maankäytön luonnonsuojelullinen sääntely*, Talentum, 1998. The themes of the theses span land use agreements, the protection of ownership, the environmental responsibility of agriculture and nature protection. The most recent theses of the kind are Andersson, Heidi, *Veden saatavuus, oikeustieteellinen tutkimus*, University of Helsinki 2010 about water law and Borgström, Suvi, *Iso paha susi vai hyödyllinen hukka? Ekologis-juridinen näkökulma suden suojelun yhteiskunnalliseen hyväksyttävyyteen*, Publications of the University of Eastern Finland, Dissertations in Social Sciences and Business Studies, No 20, 2011 about the protection of wolves.

45 See Määttä T. 2010, p. 54. The doctoral thesis is Hepola, Matti, *Oikeusvoimaopin transformaatio*, Edita 2005.

46 See Määttä T. 2004b, p. 131–132.

47 For example, methodologically Belinskij (2010, p. 22) locates his own dissertation about access to household water supplies in the area of problem-based legal dogmatics. The study includes material from the fields of water rights, fundamental and human rights, and water supply management law. In fact, it can also be located methodologically in the area of comparative law.

48 See for example the doctoral thesis Borgström, 2011, esp. p. 17–20.

49 See for example the doctoral theses of Ekroos, Ari, *Kauneus ja rumuus ympäristöoikeudessa*, SLY, 1995 and Tolvanen, 1998. See also Määttä T. 2010, p. 54 and Määttä T. 2004b, p. 131–132.

coloured problems. These comments are not random observations or ad-hoc interpretations. Practical legal dogmatics aims to give information about the law in force and thus works under special demands imposed by the realities in society for outlining the limits and relevance of interpretation. This constraint steers the empiricism in jurisprudence.<sup>50</sup> In fact, empirical studies on legal dogmatics usually focus on legal decisions in practice. This research approach in legal dogmatics is shaped to a particularly large extent by acceptable legal sources. After the relevant facts have been extracted from the empirical material, interpretation of regulations to recognize the legal norm at work can be based on, among other permissible grounds, historical and teleological arguments.

Some of the salient considerations in practical legal dogmatics are 1) the recognition of the facts and norms, 2) the management of uncertainty in the facts and norms, 3) the authority to make a judgment and 4) the duty to justify. These concerns are interconnected in the courts.<sup>51</sup> According to the principle of conformity to law, even so-called open arguments and the development of interpretations are to be based on applicable provisions in the law.<sup>52</sup> In addition, the case-by-case consideration may be based on legal principles, established legal practice, *ratio legis* arguments (sometimes augmented with historical studies), as well as real and teleological arguments which weigh the relative advantages and disadvantages and, in general, the different effects of, possible alternative decisions. The predictability and transparency of decision making set the limits on what arguments may be deemed useful.<sup>53</sup> Decisions based on closed legal systems should interface with society. Thus, legal decisions are tempered by the legitimacy demands of the constitutional state (lawfulness) and ethical arguments about fairness and justice in society or in the particular decision. Practical legal dogmatics as a research method concentrates on the lawfulness of the norms applied, whereas legal philosophy is interested in fairness and justice in their application.

Generally speaking, a research approach in environmental law is considered practical when empirical material is used as a basis for the results.<sup>54</sup> The core of the analysis, however, is considered to be legal dogmatics. The most common empirical approach in environmental law is the interpretation of legislation in light of the decisions of courts and public authorities. The commentaries on the Land Use and Planning Act, for example, are based on

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50 See Aarnio, Aulis, *Mitä seuraavaksi?* Lakimies 6-7, 1998, p. 990

51 See Aarnio, Aulis, *Tuomioistuin ja demokratia*, Lakimies, 1997, p. 424.

52 See Hallberg, Pekka, *Korkein hallinto-oikeus 2000-luvulle*, Korkein hallinto-oikeus 80 vuotta, Helsinki 1998.

53 Kokko, Kai & Suvantola, Leila, *Luonnon monimuotoisuus, tuomioistuimet ja legitimoiva kommunikaatio*, Luonnonvarojen hallinnan legitimizeetti (edited by Rannikko, Pertti & Määttä, Tapio), Vastapaino 2010, p. 187–188.

54 Hollo 2012, p. 79.

this approach.<sup>55</sup> The practice-based approach may also draw on the systematization of legislation, as, for example, *Kiviniemi* has done in his book about forestry law.<sup>56</sup>

In the practice of the courts, at least in matters relating to environmental law, the grounds for decisions are still based on traditional (practical) legal positivism. The decision making is open cognitively to society and thus may use relevant information from the environment and society, but the legal consideration and grounds for decisions are bound to legislation and other legal sources.<sup>57</sup> As noted earlier, in critical legal positivism legal sources are themselves regarded as the outcome of discourses about values and objectives in society. In court cases, ethical issues and protected social interests can be brought to light through human and fundamental rights, the objective provisions of statutes, legal principles and soft law.<sup>58</sup> Thus, the court practice in environmental law does not necessarily fit neatly within either inclusive or exclusive legal positivism.<sup>59</sup> In any event, it is clear that theoretical and practical legal dogmatics are both still needed together to provide a functional method – or at least a home base – for environmental law researchers before inter- or multidisciplinary work can start.<sup>60</sup>

### 3 Legal History in Environmental Law Studies

The history of environmental law is not a very well-established line of research in its own right in Finnish jurisprudence. In principle, it could combine the research traditions of environmental law, legal history and environmental history to produce an approach that differs from that used in any one of the

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55 See e.g. Hallberg, Pekka, Haapanala, Auvo, Koljonen, Ritva & Ranta, Hannu, *Maankäyttö- ja rakennuslaki*, Talentum, 2006 and Ekroos Ari & Majamaa, Vesa, *Maankäyttö- ja rakennuslaki*, Edita 2006.

56 See Kiviniemi, Matti, *Metsäoikeus*, Metsälehti Kustannus 2004.

57 Kokko & Suvantola 2010, p. 183–215, especially p. 190 and 210.

58 See Kokko, Kai, *Ympäristöoikeuden perusteet*, Oikeusjärjestys, osa II, Lapin yliopiston oikeustieteellisiä julkaisuja, C 57, 2011, p. 17–59, esp. p. 38–39 and for example Supreme Administrative Court (KHO) 2002:86. See about soft law for example Määttä 2006 p. 553–571.

59 See for example Niemi, Matti, *Eksklusiivinen ja inklusiivinen lakipositivismi*, *Lakimies* 5, 2013, p. 819–843. The summary of the article mentions that the starting point of the debate was Ronald Dworkin's early and famous critique of positivism and in particular the theories of H.L.A. Hart. Niemi's conclusion is that exclusive positivism is a solid and robust theory. In modern times, however, it is not a plausible reflection of the reality. It is unfit as an instrument for rejecting Dworkin's critique. In turn, inclusive positivism also proves to be a weak theory. It entails inconsistencies which become apparent when its proponents attempt to incorporate principles into the law.

60 A suitable guide to understanding inter- or multidisciplinary work is Booth, Wayne, Colomb, Gregory & Williams, Joseph, *The Craft of Research*, The University Chicago Press, 1995, 2003.

fields. In fact, studies in environmental law have concentrated mainly on clarifying the current law, but this research may draw on historical materials on which the norms are based.<sup>61</sup> Traditionally, historical aspects of environmental law have been described at the beginning of articles and textbooks, mainly in terms of legal dogmatics.<sup>62</sup> Hyvönen, for example, has used grounds from the history of law in his studies on the rights to form real estate and argued for this approach in the following way:

The significance of the history of law is higher when applying, studying and developing the valid law of forming real estate in particular and effective real estate law in general than in many other fields of positive law. Particular reasons can be cited for this: The status and scope of a real estate is determined mainly according to the legal order and legislation which was in force at the time when the real estate was formed or allocated its component parcels, shares and benefits. The roots of land ownership are even deeper in history. Thus, a profound command of the law on land ownership and the forming of real estate requires a knowledge of historical grounds.<sup>63</sup>

Legal history analyses law and rights using the methods of historical research.<sup>64</sup> One such study near environmental law is *Korpijaakko's* dissertation on the legal status of the Sámi people in Sweden-Finland. In fact, Korpijaakko used two different approaches in the study: 1) the history of the Sámi people (historical research) and 2) the history of legal regulation (legal history).<sup>65</sup> Today, Korpijaakko's study could also be located among studies in the history of environmental law, especially as regards the analyses of the land rights of the Sámi people. Another good example of research in the history of environmental law is *Joona's* book on special fishing rights in northern Lapland. The study charts the relevant legal regulation and discussion both in the literature and in practice from the beginning of the 20<sup>th</sup> century until the year 2011. The historical perspective on fishing rights in the material studied goes as far back as the 17<sup>th</sup> century.<sup>66</sup>

Differences between the research approaches used in environmental history and in the history of environmental law become naturally apparent in that research in environmental history does not analyse changes in the legal tradition (changes in the interpretation of provisions) and in the deeper structures of law (changes in the legal culture). Thus, the research approach or perspective of the history of environmental law can give added value to

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61 See Herler, Casper, *Ympäristöoikeushistoria – oppikirjatäytettä vai tulkinta-apuvälineistöä?* *Ympäristöjuridiikka* 3, 2006, p. 9–10.

62 See e.g. Hollo, Erkki, *Ympäristönsuojeluoikeus*, WSOY 2001.

63 Hyvönen, Veikko, *Kiinteistönmuodostamisoikeus I*, Yleiset opit, 1998, p. 74.

64 The methods of historical research can be found in many sources. A classic example of research in literary history is, *What is history?* by Edward Hallet Carr, 1961 (In Finnish, *Mitä historia on?* Otava, 1963).

65 Korpijaakko, Kaisa, *Saamelaisten oikeusasemasta Ruotsi-Suomessa*, Lakimiesliiton kustannus, 1989, esp. p. 80.

66 Joona, Juha, *Pohjois-Lapin erityiset kalastusoikeuskysymykset*, *Juridica Lapponica* 36, 2011.

multidisciplinary cooperation with environmental history. Also important is the discussion among scholars of legal history about the special characteristics of studying law and history. Reflections on the cyclic or linear nature of history among researchers in environmental history also make a valuable contribution to approaches in studies of the history of environmental law. Moreover, the research on environmental history produces information on and views of what was known earlier about environmental matters and how to evaluate this knowledge.<sup>67</sup>

*Herler* has argued that the history of environmental law has added value beyond that of providing an introduction to a textbook on environmental law; namely, it contributes to forming the theory of environmental law and to the self-reflection of the legal scientist on the past. *Herler* uses polity law (*poliitirätt*) as an example of the historical form of internal administration which still explains the general aspects of environmental law at present. Historically, polity was wider administration of internal affairs than just police matters and *Herler* uses the term to refer to the 19<sup>th</sup> century in particular. After knowing or at least becoming aware of polity law, one can improve the systematization of environmental law and restructure its general aspects. Thereafter, the interpretations of law arrived at no longer appear as case-by-case outcomes, but draw on grounds that can be generalized in a better way to apply to many cases.<sup>68</sup>

Another example of using the history of environmental law as a tool for the systematization of environmental law and the improvement of its general principles is seen in *Kuusiniemi's* dissertation. In the work he systematizes the central regulation on environmental protection and nuisance in Finland by using both legal history and comparison as research methods. The results clarify the criteria that were used at the time in administrative supervision for interpreting environmental law and that influenced the improvement of environmental protection legislation.<sup>69</sup>

Thirdly, the role of historical material is also very strong in *Hepola's* dissertation about the transformation of the doctrine of legal force. The study concentrates on the permanence of environmental permits as well as the change and shift of *res judicata* from civil procedure to administrative and environmental law.<sup>70</sup> *Salila's* doctoral thesis on forestry law also leans on history, although it is described below as an example of a comparative legal study.<sup>71</sup>

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67 See *Herler*, 2006, p. 10.

68 See *Herler*, 2006, p. 11, 19 and *Herler* 2008, p. 53–62.

69 See *Kuusiniemi* 1992, esp. p. 37 and *Kuusiniemi, Kari, Ympäristölupa, Lakimiesliiton kustannus*, 1995.

70 *Hepola* 2005.

71 *Salila, Jari, Metsäalueen oikeudellisesta asemasta*, SLY A N:o 266, Vammala 2005.

## 4 Regulatory Theory

The roots of regulatory theory<sup>72</sup> lie in economic analysis and quite often the law and economics are mentioned as the background to the methods using the theory. Moreover, the relative prominence of law and economics in the method has changed; whereas law and the functioning of markets were originally the core of the method, today it does not necessarily entail economic analyses.<sup>73</sup> Pure regulatory theory avoids the information interest of legal dogmatics, in other words, the question of the interpretive meaning of effective law, and evaluates instead the cost efficiency and social and environmental effectiveness of the regulatory models used by the legislator.<sup>74</sup>

Law and economics can be divided into many subfields, regulatory theory being one. Moreover, regulatory theory encompasses at least two different approaches: 1) normative regulatory theory and 2) positive regulatory theory. If regulation is needed, it can be analysed using normative regulatory theory and asking what kind of policy instrument or alternative for regulation best serves the objective of the particular policy for society. Positive regulatory theory can be used to analyse the factors which in reality influence the drafting of legislation. The main hypothesis is that legislation does not always and categorically promote general interests but rather is affected by different stakeholders and the interests of civil servants.<sup>75</sup> In this respect, positive regulatory theory comes close to critical legal studies, mentioned above. The approach does not feature prominently in Finnish environmental law studies. Partly, it overlaps with the field of legal sociology, which may include empirical studies. However, normative regulatory theory is a familiar method in these studies and it merits more detailed analysis.

The aim of normative regulatory theory is to find expedient regulation.<sup>76</sup> Different evaluation criteria are required in order to find the optimal policy

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72 Regulatory theory is not actually a coherent theory, but rather a research approach which has been contributed to by, among others, economists, legal scientists and sociologists. The background of the approach can be studied by reading, among other sources, Ogus, Anthony, *Regulation, Legal Form and Economic Theory*, Clarendon Press, Oxford, 1994, Majone, Giandomenico, *Regulating Europe*, Routledge, 1996, Gunningham, Neil & Grabosky, Peter, *Smart Regulation, Designing Environmental Policy*, Oxford University Press (1998) 2004, Baldwin, Robert & Cave, Martin, *Understanding Regulation, Theory, Strategy and Practice*, Oxford University Press, Somerset, 1999, Hilson, Chris, *Regulating Pollution, A UK and EC Perspective*. Hart Publishing, Oxford 2000, Picciotto, Sol & Campbell, David, *New Direction in Regulatory Theory*. Blackwell Publishing 2002, Driesen, David, *The Economic Dynamics of Environmental Law*, The MIT Press, Cambridge Massachusetts 2003.

73 See Mähönen, Jukka & Määttä, Kalle, *Nya tendenser inom rättsekonomin*, JFT 2, 2003, p. 221.

74 See Siltala 2004, p. 582–583.

75 Määttä, Kalle, *Oikeudellisen sääntelyn tutkimus – lastuja sääntelyteoriasta*, Oikeus 2002 (31); 2: 132–142, p. 133.

76 See for example Määttä, Kalle, *Taloudellinen ohjaus ympäristönsuojelussa*, Helsinki 1999, especially pp. 1–2. The aim of this research on normative theory is to determine what kind of environmental policy steering is needed to fulfill policy aims as effectively as possible



mix. These include, for example, 1) effectiveness (contributing to the improvement of environmental quality), 2) cost efficiency (improving the environment at minimum cost), 3) equity (fairness in the burden-sharing among actors, including inter-generational equity) and 4) political acceptance (including factors such as liberty, transparency and accountability).<sup>77</sup>

Usually 'effectiveness' is understood as the extent to which the policy goals (regulatory objectives) associated with a body of legislation are achieved.<sup>78</sup> However, effectiveness can also be understood otherwise, as exemplified in the following questions:

1) Has the steering been effective; in other words have the objectives of the regulation been achieved within the limits of the planned timetable?

2) Is the regulation cost-effective; in other words are the objectives achieved in the cheapest possible way?

3) Is the regulation dynamically effective; in other words, does the regulation prompt new innovations and further their spread into society?

4) Is the regulation administratively effective; in other words, do the administrative costs of the regulation stay within the agreed cap?

5) Is the regulation externally flexible; in other words, does the regulation adapt to changes in external conditions, such as inflation or technological development?

6) Is the regulation normatively flexible; in other words, how easy is it to amend the regulation, for example when the particular policy goals in society become more stringent?<sup>79</sup>

The questions can be grouped thematically: question 1 asks about the formal effectiveness of regulation, questions 2 and 4 about the cost efficiency of regulation, question 3 about regulatory innovations, and questions 5 and 6 about the flexibility of regulation. Moreover, the coherence of regulation can be studied. Examining the coherence or consistency of legislation is a basis for analysing the effectiveness of regulation (consistency tool) if only we remember that the logic of the regulation is but one among a number of factors; implementation and enforcement difficulties – not to mention the challenges of recognizing causality and the margin of different impacts on society (impact problem) – may also reduce effectiveness.<sup>80</sup>

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and, above all, to meet the demands of effectiveness and cost efficiency. See also Määttä T. 2004, p. 1098-1099.

77 See Gunningham & Grabosky 2004, p. 26, 30 and Kokko 2009, p. 59.

78 See e.g. Hildén M, Lepola J, Mickwitz P, Mulders A, Palosaari M, Similä J, Sjöblom S and Vedung E, *Evaluation of environmental policy instruments – a case study of the Finnish pulp & paper and chemical industries*, Monographs of the Boreal Environmental Research, 21 (Finnish Environment Institute), 2002.

79 Mähönen & Määttä K. 2003, p. 227.

80 See Kokko 2009, p. 69 and Similä, Jukka & Kokko, Kai, *Oikeudellinen sääntely ja metsäluonnon monimuotoisuus*, Ympäristöpolitiikan ja -oikeuden vuosikirja 2009, p. 79. See also Tala, Jyrki, *Lakien vaikutukset, Lakiuudistuksen tavoitteet ja niiden toteutuminen lainsäädäntöteoreettisessa tarkastelussa*, Oikeuspoliittinen tutkimuslaitos 177, 2001, p. 264–265.

I concentrate in the following on the formal effectiveness of regulation and introduce some methodological tools used in Finnish environmental law in this area. The formal effectiveness of regulation depends on many factors: the design of regulation, its implementation by public authorities, and compliance with it all influence its effectiveness. Here, regulation must be understood in a broad sense that encompasses standard setting; monitoring and enforcement; sustained, reactive and informative oversight with reference to rules or provisions; intervention by public authorities to steer actions concerning the environment and the economy; and all types of policy instruments for social and legal control.<sup>81</sup> It is important to note that regulation is not only a matter of public law; it plays a role in private and criminal law as well as in the self-regulation of private actors.

Although legal dogmatics uses different terminology than studies of regulation theory do, the research approaches partly analyse the same issues. The legal dogmatic literature of Finnish environmental law has used at least two kinds of arguments regarding the ineffectiveness of regulation: 1) defects in the focal regulation and 2) *lex imperfecta*.<sup>82</sup>

The first argument does not mean that there is a complete absence of regulation for fulfilling the policy goal, but only that certain factors impinge on the pursuit of the regulatory objective, with the result that the activity in question is not in practice regulated. One such reason may be that some powerful policy goal behind the regulation has in fact eclipsed a particular weak regulatory objective to the extent that the policy instruments and standards, as the components of the regulation, do not fulfil the weak regulatory objective. In fact, the argument means that there is a lack of instruments or standards for a particular regulatory target. Defects in the regulation can be analysed by comparing the possible factors that negatively affect the state of the target sector – the environment – with the logic of the regulation (*ratio legis*) and the regulatory objectives.<sup>83</sup>

What is the difference between a policy goal and a regulatory objective? A policy goal is usually divided into many regulatory objectives in the legislation. This division may mean that in practice some of the objectives are not met by the policy instruments and standards.<sup>84</sup>

The second argument concerns *lex imperfecta*, which is law or regulation that lacks backing by sanctions, incentives or other mechanisms of enforcement and thus may entail problems of non-compliance.<sup>85</sup> *Lex*

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81 Kokko 2009, p. 59. See Gunningham & Grabosky 2004, p. 4 and Foley, T, *Using a responsive regulatory pyramid in environmental regulation*, QELA Conference Carrot, Sticks & Toolkits, 2004, p. 1.

82 See Kokko 2009, p. 61 and Similä 2007, p. 417.

83 See Kokko 2009, p. 62.

84 See Kokko 2009, p. 62.

85 Traditionally, regulation which does not include sanctions is called *lex imperfecta*. See e.g. Makkonen K, *Zur Problematik der juristischen Entscheidung*, 1965, 74. If an imperfect regulation is somehow violated, authorities do not have any way to react to the violation. Thus, e.g. Makkonen, K, *Oikeudellisen ratkaisutoiminnan ongelmia* (SLY), 1981, 92–95,

*imperfecta* may in principle fulfil certain regulatory objectives or policy goals but it does not offer any legal guarantees of their being fulfilled in practice. *Lex imperfecta* can be identified by looking at the regulatory objectives and at the regulation as whole and how it is intended to work with various policy instruments and standards. The preparatory works usually mention the policy goals of regulation. If the real purpose of legislation is only to indicate the direction of desired behaviour without sanctions, it may be implemented as *lex imperfecta* deliberately, with informative guidance and social or moral norms compensating for the shortcomings. However, where *lex imperfecta* has no such purpose, it may lead to serious problems as regards the effectiveness of the law.<sup>86</sup>

The effectiveness of regulation has an indirect relation to compliance problems. Regulatory theory asserts that the best way to regulate is by being responsive to the conduct of the regulatees, the people who display the focal behaviour. However, in practice, those whose behaviour affects the state of the target environment, for example forest biodiversity, vary. Even the particular group of regulatees, such as forest owners in forestry legislation, have different attitudes and objectives. Thus, some kind of categorization is needed based on empirical studies. This categorization is not necessarily meant to correlate directly with the actual practice throughout the country, because even the same landowners' motivations may vary in different circumstances. However, even after categorizing and understanding the diversity of characteristics and means within groups of regulatees, analysing compliance with various policy instruments (compliance tool) will probably lead to a better evaluation and results where the effectiveness of regulation is concerned.<sup>87</sup>

The above-mentioned methodology combining regulatory theory and legal dogmatics is used by *Similä* and *Kokko* in their study on the regulation and protection of forest biodiversity.<sup>88</sup> *Similä* has also written a dissertation that is clearly based on regulatory theory and deals with the regulation of industrial pollution control in Finland. The study aims to provide new insights on how Finnish air and water protection regulation has worked by asking questions such as: Which features make pollution control regulation effective and efficient? Does pollution control regulation foster technological development? Are new policy instruments replacing traditional regulation? What should the role of European-wide standards be and how could regulation be improved? These and other regulatory issues are examined in the thesis, the first one in Finland on environmental law to use regulatory theory as its methodology.<sup>89</sup>

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unlike some other authorities, e.g. Alanen A, *Yleinen oikeustiede*, 1948, 34, considers that such a regulation is not in fact a legal, but more of a moral norm.

86 Kokko 2009, p. 63.

87 See Kokko 2009, p. 72–73.

88 Similä & Kokko 2009, p. 69–129.

89 Actually, the dissertation on environmental taxes by Määttä K. was published in 1997 in the field of financial law. It has relevance for environmental law and is based on regulatory theory.

Similä describes effectiveness as the degree to which a regulatory instrument has achieved the goals set for it. At the same time he cautions that despite the clarity of the concept ‘effectiveness’, its use is not always easy. Goals are often stated in a general and abstract way without specific outcomes that can be readily measured or observed.<sup>90</sup> For example, the regulatory objectives mentioned in legislation are not usually clear enough in themselves to form the basis for studying the effectiveness of the regulation. Accordingly, other legal sources, such as preparatory works and perhaps even soft-law documents such as regulatory strategies or guidelines for administration, are usually needed to clarify the regulatory goal before final evaluation.

Another example of the use of regulatory theory in Finnish environmental law studies is *Hovila’s* dissertation on the legal instruments for municipal land policy. The research aims to establish a hierarchy of instruments geared towards land policy goals that reflect how the instruments impact the legal position of landowners. In theory, the more potent the policy instrument used, the more effectively a municipality can achieve its land policy aims; yet, a potent instrument is not necessarily more effective than a weaker one in all situations. Drawing on regulatory theory, Hovila sets out not only a hierarchy of instruments, but also their interrelationships in terms of achieving the goals set.<sup>91</sup> The study is based on the pyramid model of regulation introduced originally by Ayres and Braithwaite, but the model is adapted in an innovative way to the research topic.<sup>92</sup>

## 5 Socio-political Research Interests in Environmental Law

Legal sociology<sup>93</sup> is a line of multidisciplinary research situated between the legal and social sciences. Different understandings about legal sociology as a line of scientific research and its tasks are dependent on the following perspectives, among others:

- 1) Is the perspective that of sociology or jurisprudence?
- 2) What kind of social scientific theory and tradition is used?

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<sup>90</sup> Similä 2007, p. 54.

<sup>91</sup> See Hovila, Ilari, *Kunnan maapolitiikka: Oikeudelliset ohjauskeinot*, University of Lapland 2013 and Hovila, Ilari, *Kunnan maapolitiikan oikeudelliset ohjauskeinot*, Ympäristöpolitiikan ja -oikeuden vuosikirja 2009, p. 198.

<sup>92</sup> See Hovila 2009, p. 192 and Ayres, Ian & Braithwaite, John, *Responsive regulation*, Oxford, 1992.

<sup>93</sup> I use this term to refer to the different approaches in the line of research such as 1) sociology and law, 2) law and society studies, 3) socio-legal studies and 4) empirical studies of law. See Ervasti, Kaius, *Oikeussosiologia tutkimusalana*, Oikeussosiologiaa ja kriminologiaa, Juhlajulkaisu Ahti Laitinen 1946–24/4–2006, edit. Ahonen, Timo, University of Turku, EDILEX 2006, p. 19.

3) What kind of idea does the viewer have of reality and the characteristics of information and knowledge?

How legal and social sciences are disposed towards each other is dependent on three starting points with sub-questions on how to analyse 1) law and society, 2) jurisprudence and the social sciences and 3) the relation between law and society. Legal sociology is thus a line of research for studying legal practice, institutions and doctrine as well as their links to the social context.<sup>94</sup> As Cotterrell has written: 'Insofar as law has been increasingly seen by lawyers and legislators as a policy instrument, much law and society research was originally encouraged and inspired by the dilemmas and responsibilities of modern law's policy-setting and policy-implementing roles.'<sup>95</sup> Thus, much depends on research questions in which disciplines and theoretical directions open up a sort of methodological grey area in legal studies. If the researcher is interested in the policy-setting and policy-implementing roles, they can be studied within the limits of legal sociology. Research questions about the effectiveness of policy instruments may prompt the researcher to use the framework of regulatory theory, and questions about the systematization of policy instruments and the focal legislation may steer the scholar in the direction of jurisprudence.

The first task of legal sociology is seen to be the development of general theories for explaining social processes relating to law. The second task is to empirically research and analyse legal and social factors and variables and their interrelationships. Legal sociology can study practices in which law is produced and renewed. Legal dogmatics can then be seen as a part of law as a social practice.<sup>96</sup> However, as Aarnio argues, 'the connection between legal dogmatics and the empirical social sciences is instrumental, not methodological. The sociology of law produces interpretation data for legal dogmatics, but does not provide methods for it'.<sup>97</sup> Thus, on the one hand, legal sociology complements legal dogmatics in jurisprudence by asking another kind of questions about the legal order. On the other, legal sociology competes with legal dogmatics in the interpretation of the law. The basis for legal dogmatics is that the legal order determines the application of the law. Legal sociology challenges legal dogmatics by arguing that there may be factors

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94 See Ervasti 2006, p. 20, 26. See also Cotterrell, Roger, *Introduction: The Law and Society Tradition, Law and Society*, The International Library of Essays in Law & Legal Theory, Schools 13, Aldershot, 1994, p. xi–xxii.

95 Cotterrell 1994, p. xi.

96 See Ervasti 2006, p. 27. See also Friedrichs, David O., *Law in Our Lives, An Introduction*, Roxbury Publishing Company 2006, especially p. 132 and Ylhäinen, Marjo, *Oikeus-sosiologia lainopin tutkimuksessa, Empiirinen tutkimus oikeustieteessä*, edit. Heidi Lindfors, Oikeuspoliittisen tutkimuslaitoksen tutkimustiedonantoja 64, Helsinki 2004, p. 41–52, esp. p. 43.

97 Aarnio, Aulis, *On Truth and Validity of Interpretative Statements in Legal Dogmatics*, Philosophical Perspectives in Jurisprudence, Acta Philosophica Fennica Vol. 36, Helsinki 1983, p. 165.

outside the legal order that determine the application of the law in a particular case.<sup>98</sup>

According to *Hydén*, even lawyers in practice do not merely interpret law; they also have the horizontal approach of legal sociology. When making agreements, among other activities, the practicing lawyer must consider both the reasons for and the consequences of different solutions.<sup>99</sup> Teleological and practical arguments are also discussed and used in legal dogmatics, so there seems to be a link between these two lines of research. Originally, *Hydén* depicted the differing approaches of legal dogmatics and sociology in the following figure:

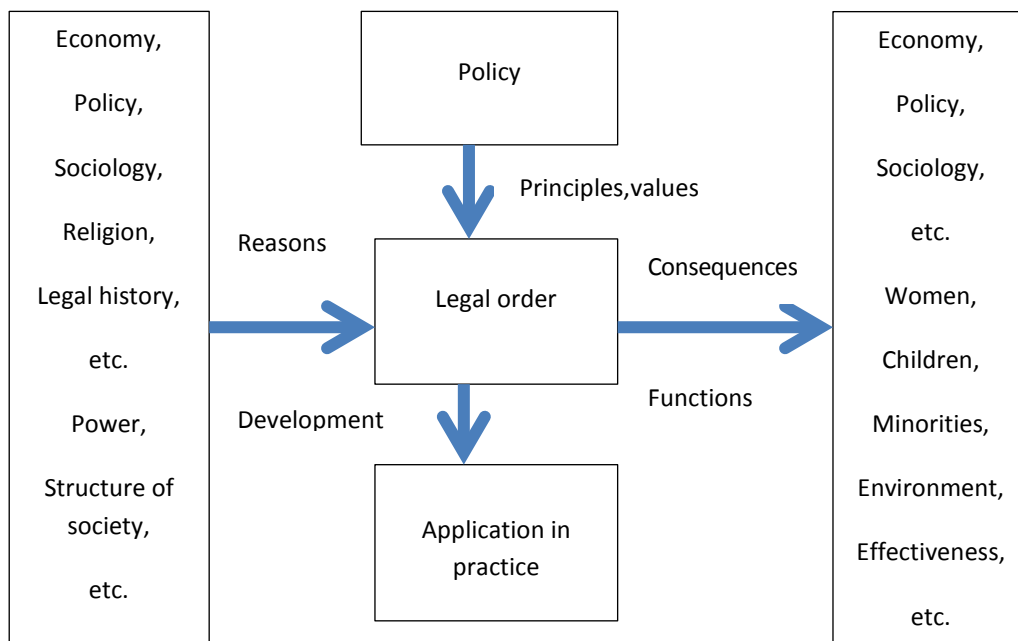


Figure 1: Relation of legal dogmatics and sociology to legal order.<sup>100</sup>

Legal dogmatic views in the figure are set out vertically and comprise the consideration of the legal principles and rules related to actions or human behaviour. The social scientific and sociological view is situated horizontally. Legal sociology takes into consideration social reasons and consequences on the one hand, and legal events like the development and functions of the legal

98 See *Hydén, Håkan: Vad är rättsociologi? Om rättsociologins forskningsuppgifter nu och i framtiden. Rättsociologi då och nu. En jubileumsskrift med anledningen av rättsociologins 25 år som självständigt ämne i Sverige*, edit. *Hydén, Håkan*. Lund Studies in Sociology of Law 1. Lund 1997, p. 105–135, *Hydén, Håkan 2002, Rättsociologi som rättvetenskap*, Studentlitteratur 2002, esp. p. 46 and *Ervasti 2006*, p. 29.

99 See *Hydén 1997*, p. 113.

100 See *Hydén 1997*, p. 112 and *Ervasti 2006*, p. 28.

order on the other. Thus, legal sociology studies legal phenomena using social scientific theories and methods.<sup>101</sup> The figure highlights differences but in practice both research fields – jurisprudence and sociology – have the above-mentioned methodological grey area which brings the respective views nearer to each other.

The grey area is suitable for a reconciliation of different research approaches. It may include the empirical approaches taken in legal policy or sociological research and the *de lege ferenda* approach taken in jurisprudence but it may also encompass research tasks which these traditional designations for research approaches do not describe very well. For example, regulatory theory may provide such approaches although the theory itself is not yet generally settled in the national legal language. The reconciliation of approaches and perspectives produces new information about environmental policy and regulation.

In criminal law, this kind of research work about policy and regulation is usually called criminological or criminal policy studies. In environmental law, the research approach concentrating on the evaluation of the impacts of regulation is usually bound to the discussions about policy instruments in the circles of social scientific environmental studies and economics. The research interests in the different fields of environmental studies concerning environmental policy instruments are partly the same as in the studies of legislation based on jurisprudence and regulatory theory. Määttä has called this line of inquiry ‘assessment, impact and policy instrument research’.<sup>102</sup>

The name of this line of inquiry is an open and general term including various and different ways to study environmental regulation and governance. Impact and assessment studies differ from each other. Policy instrument research can also be seen as a special approach to environmental law research. The term itself is still being debated, and the matter has yet to be resolved.<sup>103</sup> Thus, the research approach seems to be open inside environmental law also in the directions of empirical legal dogmatics and regulatory theory. However, if the research approach goes from the grey area into that of strict practical legal dogmatics, the audience of the research changes from the legislator to those applying the legislation, in other words the courts and public authorities, and the interests of research shift from social and environmental effectiveness to legal effects.<sup>104</sup> If the research approach and its questions go in the direction of the cost-effectiveness of the regulation then the focus returns to economic analyses and the roots of law and economics.

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101 See Hydén 1997, p. 112 and Ervasti 2006, p. 28; on the methods of sociology and social and cultural scientific methods, see for example Robertson, Ian, *Sociology*, Worth Publishers, 1981, Alasuutari, Pertti, *Researching Culture, Qualitative Method and Cultural Studies*, SAGE 1995 and Eskola, Antti, *Sosiologian tutkimusmenetelmät*, WSOY 1981.

102 See Määttä, T. 2004, p. 1097–1107 and esp. p. 1098.

103 Määttä T. 2010, p. 55.

104 See also Määttä T. 2004b, p. 148–149.

Hydén's figure gives too disjointed a picture of current research in environmental law and its fundamental assumptions in Finland. The pre-understanding about the relation between law and policy is essential when forming different approaches to research in environmental law. When talking about multidisciplinary work, that understanding reflects the extent to which social scientific material must be used in jurisprudence. If law is thought of as a separate phenomenon from policy, it is plausible to assume that the interest in using social scientific research and knowledge in legal studies is low, and this kind of cooperative approach can seem alien. If law and policy are seen as interconnected, it is not possible to carry out legal research without a sufficiently deep knowledge of the social background of the law.<sup>105</sup> In fact, not only the of drafting environmental legislation but also the decision making based on the Acts in force is dependent on governance, which entails social aspects.

In many current environmental law studies, no explicit distinction is drawn between policy and law, and also the social scientific orientation in some environmental legal studies has become stronger than it used to be in traditional environmental law, with its legal dogmatics orientation. *Kumpula's* article about the fundamental right to the environment and her doctoral thesis *The Environment as a Legal Issue*<sup>106</sup> are, as Määttä has pointed out, strongly based on studies of environmental policy or philosophical studies and thus their results bring a new cooperative study approach differing from that seen in the traditional legal dogmatics-based environmental law. It is clear that this kind of profundity of legal knowledge is needed in contexts such as the planning and decision making concerning environmental policy instruments and the enforcement of international conventions<sup>107</sup>. On balance, the legal view is necessary to round out the information produced by other social sciences.

Empirical environmental legal research can study topics such as the practices for applying particular provisions. The approach is applicable to all kinds of administrative and court practice and not only to precedents. Moreover, the study of routine cases is important to show the reality and to evaluate it in a critical way. Furthermore, the interpretation of flexible norms can be based on well-established practice, which cannot be studied using legal dogmatics, based as it is on the use of traditional legal sources.<sup>108</sup> This kind of empirical approach forms a basis for effectiveness studies based on regulatory theory. Thus, empirical material is needed for, among other purposes, evaluating compliance or the enforcement of policy objectives according to regulation. Empirical environmental research is useful when making recommendations about the interpretation of law based on legal dogmatics (empirical legal dogmatics). Empirical legal research makes it possible to

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105 See Määttä T. 2000, p. 349.

106 Kumpula, Anne, *Vastuu luonnosta ja sen monimuotoisuudesta*, Juhlajulkaisu Leena Kartio 1938 – 30/8 – 1998. University of Turku, Juhlajulkaisut N:o 7, 1998, p. 157–169 and Kumpula 2004.

107 See Määttä T. 2000, p. 351.

108 See Määttä T. 2004b, p. 140–141.



collect information on legal practice in order to analyse the legality and legitimacy of decisions in the courts and administration and to identify possible disadvantages. Empirical information about the application of regulation in practice also aids, if necessary, in clarifying provisions that come under scrutiny.<sup>109</sup>

One of the main tasks of environmental law is to produce recommendations for the legislator to improve regulation. This line of inquiry, known as research *de lege ferenda*, is usually more sophisticated if it can also use material from empirical studies as background information. Empirical environmental legal studies can also use other scientific results or methods of research on ecology, forestry, environmental technology or environmental policy. Often this is even necessary. In research practice, this means a need to work in multidisciplinary teams with expertise in the social and natural sciences and technical expertise. Decisions in environmental administration are usually made by professionals other than lawyers. Thus, it is only sensible to use the same expertise (and the scientific knowledge behind it) in empirical studies of environmental regulation and governance.<sup>110</sup>

Empirical inquiry is used as a research method in environmental law in articles by *Laakso et al.*, who examine crimes in forestry, and *Hovila*, who considers the land use strategies of municipalities<sup>111</sup>. The research material in the first study included all the cases where the public authorities suspected offences against the Forest Act between its coming into force in 1996 and May 2002, that is, a period of over five years. The material encompassed 400 cases and was collected from all of the Forestry Centres around Finland.<sup>112</sup> The second study concentrated on the land use strategies of the cities *Kokkola* and *Rovaniemi*. In addition to using written documents, the research drew on empirical data collected in theme interviews; these rounded out the evaluation of policy instruments in general as well as the legal dogmatic analysis of land use planning legislation.<sup>113</sup> The municipal land use strategies identified by *Hovila* are quite generally used in administrative practice although they are not regulated in legislation. Thus, legal dogmatics alone could not give a complete picture of land use policy and legal practice in the municipalities.

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109 See Määttä T. 2004, p. 1099. The following study is mentioned as being one of the most important examples of empirical research in environmental law: *Vihervuori, Pekka, Maanainesten ottaminen ja suojele*, Lakimiesliitto 1989. See Määttä 2004b, p. 143..

110 See Määttä T. 2004, p. 1099.

111 *Laakso, Tero, Leppänen, Tanja & Määttä, Tapio, Metsärikollisuus empiirisen oikeustutkimuksen kohteena*, Defensor Legis 2003, p. 647–667 and *Hovila, Ilari, Maankäyttöstrategiat kunnan maapolitiikan oikeudellisessa ohjauksessa*, Edilex 13, 2013.

112 See *Laakso et al.* 2003, p. 650–651.

113 See *Hovila* 2013, p. 2-3.

## 6 Comparative Environmental Law

Comparative law is open to innovation; it is a developing branch of law that does not impose a fixed research approach. Although it gives more scope for research work than traditional legal dogmatics, it is not a field where ‘anything goes’. It is important to understand what is compared as well as how and why the comparison should be done. In the widest sense, comparative law is an academic practice for studying society and training the focus on law as a normative phenomenon. A typical approach to comparative law is to draw conclusions about similarities and differences. This approach would seem to be clear and simple, which it is not after one reviews the equivalent of the Finnish word ‘oikeus’ in other languages: Swedish ‘rätt’, English ‘law’, French ‘droit’, German ‘Recht’ and Latin ‘ius’. In the Nordic countries, lawyers have quite a similar understanding what law is, but each term actually has a somewhat different content in its particular legal culture and linguistic context. Thus, comparative law has an epistemological challenge: understanding the law (and legal order) of other countries, which have their distinct legal histories and cultures. Law should somehow be framed in terms of the broader social context, which requires the use of other than purely legal materials.<sup>114</sup> Moreover, what has been learnt in the comparison from one country should be in suitable form before proposing its incorporation into the legal order and culture of the researcher’s homeland.

Finnish environmental law has used at least two types of comparison. The first approach concentrates on increasing understanding about the legal systems in different countries in the particular sector of environmental regulation and at the same time recognizes the similarities and differences in these legal systems and bodies of regulation. Following are two examples of this approach.

In the first, *Salila*, in his 2005 dissertation, studied the legal status of forest areas in Finland and compared it to the status of such areas in Canada (British Columbia), Sweden and Germany. *Salila* did a great deal of legal historical work to familiarize himself with the development of forest regulation in these countries. After that, he carried out a thematic comparison of the regulation of land use and other planning, protection and forestry in forest areas. According to *Salila*, the purpose of the research was to chart the objectives and policy instruments that determine the legal position of forest areas.<sup>115</sup> In other words, the main research task was not to improve Finnish forestry legislation (*de lege ferenda*) and, in fact, the results do not include strong recommendations to that end. The second example is *Belinskij*’s dissertation published in 2010, which studied the right to water and compared South Africa and Finland. The research questions were: ‘What kinds of rights does an individual have to abstract or receive water for domestic use in Finland and South Africa and how do the different sources of law constitute these rights?’ The research also sought to give recommendations *de lege ferenda* although, in fact, the results seem to concentrate mainly on governance and the effectiveness and

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114 See Husa 2013, p. 27–28.

115 *Salila* 2005, esp. p. 292.

enforcement of regulation. The research methods in the thesis can be considered a combination of approaches and, according to Belinskij, ‘consist of systematisation, interpretation, comparison and assessment of the effects of the sources of law’.<sup>116</sup> In fact, Belinskij takes a methodological step in the direction of regulatory theory.

The second approach to legal comparison is not based so much on the legal system as on legal innovations. The main idea is to review other countries’ regulation in order to find suitable policy instruments for regulating the focal environmental challenges. This kind of approach does not focus on legislation or the legal system as such, but on governance and regulation. This is illustrated in what follows using two examples.

*Suvantola* has studied the policy instrument in Australia known as biobanking. The principal aim of the article was to study the instrument using particular assessment criteria. The research also sought to provide the background knowledge needed to evaluate how to develop policy instruments in Finland for compensating the damage to biological diversity caused by construction and to increase a willingness among landowners and builders to safeguard biological diversity.<sup>117</sup> The second example is an article by *Fromond et al.* on regulatory innovations designed to preserve biodiversity in private forests. The comparison looked at innovative policy instruments and regulation in order to increase flexibility in the Finnish regulation on nature conservation and forestry.<sup>118</sup>

In the legal comparisons undertaken by researchers in the field of environmental law, one can see a certain shift from the study of law and legal systems to the review of regulation and policy instruments. The shift has opened new research positions and, more importantly, given comparison an active role as a research method in the development of environmental regulation in Finland.

## 7 Inter- and Multidisciplinary and Inter- and Transnational Research

The introduction mentioned that inter- and multidisciplinary research is a common approach in environmental law. This section will provide a detailed account of the approach as well as briefly describe the connection of Finnish environmental law to international research. ‘Interdisciplinary’ usually means in practice that one researcher uses the sources and methods of different sciences, while multidisciplinary work is usually possible only with a research group whose members come from different fields. Both approaches can be seen in Finnish studies of environmental law. Some environmental law scholars

116 Belinskij 2010, p. 3, 363 and 375–376.

117 Suvantola, Leila, *Biobanking-järjestelmä* (NSW, Australia) *esimerkinä markkinoihin perustuvasta maankäytön ohjauksesta*, Ympäristöpolitiikan ja -oikeuden vuosikirja 2008, p. 155–156.

118 Fromond, 2009, pp. 1–31.

have a second advanced degree in addition to their qualification in law and it is natural that they use different methods even in the same studies.<sup>119</sup> Multidisciplinary research is done mainly in projects which are at present very common in the different Finnish universities and research institutions studying environmental law.<sup>120</sup> One of the most recent examples of multidisciplinary work is the guidebook published at the University of Lapland in September 2013 on environmental regulation and best practices for promoting social sustainability in mining<sup>121</sup>.

The need for drawing on different disciplines in research in environmental law becomes clear when the elements that figure in environmental decision making are set out as follows:

- 1) Natural scientific information and knowledge about the environmental impacts of human behaviour and about causality,
- 2) Value-based ethical and political consideration and choices,
- 3) Information and knowledge about economic conditions and mechanisms,
- 4) Information from regulatory theory about the effects of different regulation alternatives on human behaviour,
- 5) Factors about, sometimes coincidental, interactions and power relations between political actors, interest groups and non-governmental organizations and
- 6) Understanding of slowly changing cultural and mental structures. In political decision making, these elements together produce legislation that will become law in force. Määttä takes the view that the same elements are involved in the decisions of courts although perhaps with different weighting and visibility.<sup>122</sup> I consider, however, that the logical syllogism<sup>123</sup> as an

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119 Combinations vary. For example, the second degree has been in surveying, agriculture and forestry, ecology or administrative science. Hyvönen, for example, has doctoral degrees in both surveying and law and an interdisciplinary approach is very clear in his books about property formation. See Hyvönen, Veikko, *Määräalan luovutuksen saajan oikeusasemasta*, University of Helsinki 1970, Hyvönen, Veikko, *Asianosaisten määräämistöistä kiinteistötoimituksessa*, Espoo University of Technology (present Aalto University) 1970 and for example Hyvönen, Veikko, *Kiinteistön muodostamisoi-keus II, Kiinteistötoimitukset*, Espoo 2001. Interdisciplinary approach was common also in the studies of water and land law by Kyösti Haataja. See for example Haataja, Kyösti, *Vesioikeus I*, WSOY 1951.

120 There is a total of five chairs in environmental law at the universities of Helsinki, Turku and Eastern Finland and Aalto University. In addition there are several research professorships in the field. Researchers and experts in environmental law have their own professional association, the Finnish Society for Environmental Law (FSEL) which has published the *Journal of Environmental Law (Ympäristöjuridiikka)* regularly since 1980. Another common forum to publish articles on environmental law in Finland is the *Year Book of Environmental Policy and Law (Ympäristöpolitiikan ja -oikeuden vuosikirja)*.

121 The guide book popularizes the research results of the project *Different Land Use Activities and Local Communities in Mining Projects (DILACOMI)*. DILACOMI is a research consortium of the University of Lapland, the University of Oulu and the Finnish Forest Research Institute (Metla). The original project results are based on empirical research in anthropology, sociology, land use planning architecture and law.

122 Määttä T. 2000, p. 347-348.

ideological basis, and together with different legal sources, still forms a central tool in the decision making of the courts. Nevertheless, I agree with Määttä that the above-mentioned elements fall within the research gaze of different disciplines and in this version set out the requirements of multidisciplinary research on environmental regulation and legal decision making.

Määttä views it as a central task of academic environmental law research to bring to light ethical, natural scientific and economic grounds. Theoretical and practical problems such as how much one has to know the circumstances precedent to a law or the consequences of a law to understand the law itself will influence the orientation and emphases of a particular piece of research.<sup>124</sup> Määttä also argues that it is not necessary to take a particular coherent philosophical doctrine as the basis of legal scientific research but rather it is acceptable and important to review the particular judicial phenomena in the studies from different and even incompatible philosophical paradigms at the same time.<sup>125</sup> This does not mean, however, window-shopping for suitable arguments from the different philosophical schools of thought to defend the researcher's own arguments; it means deepening one's understanding of the different values and other bases underpinning effective legislation and of the possibilities to strike a balance between these aspects in the study.

Research in environmental law includes international research in many ways. Some studies lie clearly in the field of international law.<sup>126</sup> Some of the research themes are international although they are dealt with in the field of environmental law.<sup>127</sup> Moreover, EU environmental policy has brought a special layer above the national legal order and it has been analysed in addition to national and other international legal issues.<sup>128</sup>

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123 If the legal facts are B then the sanctions or other requirements mentioned in a particular provision, interpreted as a legal norm C, follow (norm premise). Environmental facts A are compatible with the legal facts B in the provision (fact premise). When facts A appear, then the requirements according to the legal norm C follow. If facts A appear then norm C applies (syllogism). For more on the use of syllogisms in argumentation and decision making, see for example the article, Sajama, Seppo, *Argumentaatio oikeudellisessa tutkimuksessa*, Oikeustieteellinen opinnäytetyö. Edit. Miettinen, Tarmo, University of Joensuu, 2004.

124 Määttä T. 2000, p. 348.

125 See Määttä T. 2004b, p. 159.

126 See for example Kuokkanen, Tuomas, *International Law and the Environment*, University of Helsinki 2000 and Koivurova, Timo, *Environmental impact assessment in the Arctic*, University of Lapland.

127 See for example Melkas, Eriika, *Kyoto Protocol Flexibility Mechanisms and the Changing Role of Sovereign States*, University of Turku 2008.

128 See for example Koivurova, Timo – Kokko, Kai – Duyck, Sebastien – Sellheim, Nikolas – Stepien, Adam: *The present and future competence of the European Union in the Arctic*, Polar Record 2011, p. 1-11, Kalimo, Harri: *Recycling electronics: at the crossroads of contemporary environmental and free trade law*, University of Turku, 2004, Poesche, Jürgen: *Ökologisches Energierecht in der Europäischen Union*, Helsinki University Print, 2008 and Kokko, Kai, *Eurooppalainen ympäristöoikeus korkeimman hallinto-oikeuden lainkäytössä*, Lakimies 3, 2011 p. 475–503.

The influence of the German and Nordic legal traditions on Finnish environmental law has always been strong, but regulatory innovations have also been sought from other regions, and as far away as South Africa and Australia. In fact, the transboundary diffusion of regulatory innovations can be located in the field of transnational environmental law, which is also studied intensively in Finland.<sup>129</sup> Transnational research means that the topic involves environmental legal issues and regulation transcending or crossing borders, but not necessarily laws created – or even affecting – states; these including environmental aspects in private international law, comparative law, as well as public international law.<sup>130</sup> The transnational research approach is closely connected to environmental policy studies.

All in all, international (including EU) and transnational environmental law research and cooperation have formed an important knowledge basis in improving of Finnish national environmental law.<sup>131</sup> Both research fields also lend themselves superbly to inter- and multidisciplinary cooperation. However, it is important to point out that some methods are more suitable and flexible for inter- and transnational cooperation than others. For example, methods based on legal comparison or regulatory theory function very well to this end, whereas possibilities to use language-based practical legal dogmatics are more limited.

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129 See for example Hollo, Erkki J., Kulovesi, Kati & Mehling, Michael (Eds.), *Climate Change and the Law*, Springer 2013 and Pappila, Minna, *Metsäsääntely Suomessa ja Venäjällä, Näkökulmia kestävään metsätalouteen*, University of Turku 2011.

130 For information on publications in this field of law, see for example The Columbia Journal of Transnational Law.

131 International research projects and master's degree programmes with relevance to environmental law are underway in different Finnish universities. See for example Sustainable Mining, local communities and environmental regulation in the Kolarctic area (SUMILCERE), the partners in which are the University of Lapland (Leading Partner), Finland, Luleå University of Technology, Norrbotten, Sweden, Northern Research Institute, Tromsø, Norway and Institute of the Industrial Ecology Problems of the North of the Kola, Russia Science Center, Murmansk, Russia "www.ulapland.fi/InEnglish/Units/Faculty-of-Law/Research/Research-Projects/SUMILCERE" and the Master's Degree Program Environment, Natural Resources and Climate Change in Environmental Policy and Law at University of Eastern Finland "www.uef.fi/en/envlawandpolicy".

Many researchers have visited abroad and even written their doctoral theses outside of Finland. For example Hollo did a second doctoral thesis in Germany: Hollo, Erkki, *Die Definition von geltendem Recht in der Rechtsfindung: rechtsvergleichend dargestellt an der Irrtumslehre*, Tübingen 1980. Määttä T. has also mentioned three other doctoral theses done in foreign universities. The most recent is that by Kati Kulovesi, titled *The WTO Dispute Settlement System and the Challenge of Environment and Legitimacy*, London School of Economics and Political Science, 2008. See Määttä T. 2010, p. 57.

## 8 Conclusions

When environmental law is understood in a wide and cooperative meaning, the diversity of research methods in use in Finland is actually considerable. Then again, the old paradigm still persists in many researchers' subconscious, prompting them to claim that lawyers should always use legal dogmatics when doing 'proper' legal research. Sometimes this can be seen in research, with claims that the method is legal dogmatics where, in fact, the analysis has used many methods or even a different main method. The examples of legal studies of environmental relevancy alone show great variation in the methods used although the examples do not tell the whole story. As of September 2010, 63 dissertations were reviewed or accepted in Finland that touched upon or dealt directly with environmental law<sup>132</sup>, and more have been published since. The amount of research in environmental law, such as scholarly articles, books and other studies, is much greater.

Finnish environmental law has traditionally cooperated with the general disciplines near jurisprudence and with the other fields of law (internal methodological pluralism). The branches of law have not been viewed as constraining the research tasks with environmental relevancy. Moreover, especially in inter- and multidisciplinary groups, research in Finnish environmental law uses different kinds of empirical material and varied methods in its analysis (external methodological pluralism). The internal and external methods of jurisprudence are used to serve both practical and theoretical analyses of environmental law. Legal history, for example, has been used traditionally to complement the results of interpretation based on practical legal dogmatics, but it has also been found to be a suitable method in Finnish environmental law studies to strengthen the systematization and the restructuring of general doctrine.

A quite new approach or method in Finnish environmental law is that afforded by regulatory theory. It has been adapted in theoretical work to the purposes of environmental law and thus its economic focus has not been very strong lately. However, regulatory theory in environmental law studies is combined with legal dogmatics and is still open to contributions from economic research. In fact, regulatory theory gives a good basis to link legal studies and economics to each other and to allow more variety in the information about regulation than traditional legal dogmatics alone provides.

Legal sociology is not considered a field very different from the empirical studies of environmental law. In fact, although it has been pointed out that the pre-understanding about the relation between law and policy has influenced the limits of the different pragmatic approaches, assessment, impact and policy instrument studies of environmental law have encouraged external methodological cooperation rather than any drawing of lines of demarcation between the disciplines.<sup>133</sup> The ground between legal sociology and legal dogmatics can

132 See Määttä 2010, p. 37 and Vihervuori, Pekka, *Lisäys artikkeliin ympäristöoikeudelliset väitöskirjat* (Tapio Määttä, *Ympäristöjuridiikka* 2/2010), *Ympäristöjuridiikka* 3, 2010, p. 113.

133 See Määttä T. 2003 p. 353–354.

be seen as a methodological grey area of sorts where both research approaches come close to each other and to regulatory theory. Ultimately, the research questions determine in which disciplines and theoretical directions the methodological grey area in legal studies opens up. This domain is depicted in Figure 2 below.

In Finnish environmental law, inter- and multidisciplinary studies have been carried out using also other methods than those of jurisprudence. Yet, as both natural and social scientific information is needed in environmental decision making it is only natural that environmental law cooperates with other sciences. At times, environmental law can take the main role in studies; at others, it can assist other sciences. Finnish environmental law lends itself easily to inter- and transnational research work and cooperation, as many examples show. At the same time it is important to note that some research methods are more suitable in inter- and transnational cooperation than others. Thus, the research approach may in itself also be a methodological choice.

Finally, it is necessary to stress that the research methods of environmental law should be studied and refined not only in Finland but in other Nordic countries as well. The development of the methods is needed to attain and maintain high-quality research in environmental law.<sup>134</sup> Globally and nationally there is a clear need for better information about environmental regulation that comprises, among other elements, sophisticated policy instruments that could address many environmental challenges and provide smart solutions to them in future. Thus, the new research methods, such as those based on regulatory theory, and even the model of the grey area between different methods, still need development in environmental law alongside traditional legal dogmatics.

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134 See also Määttä T. 2004b, p. 161-163.



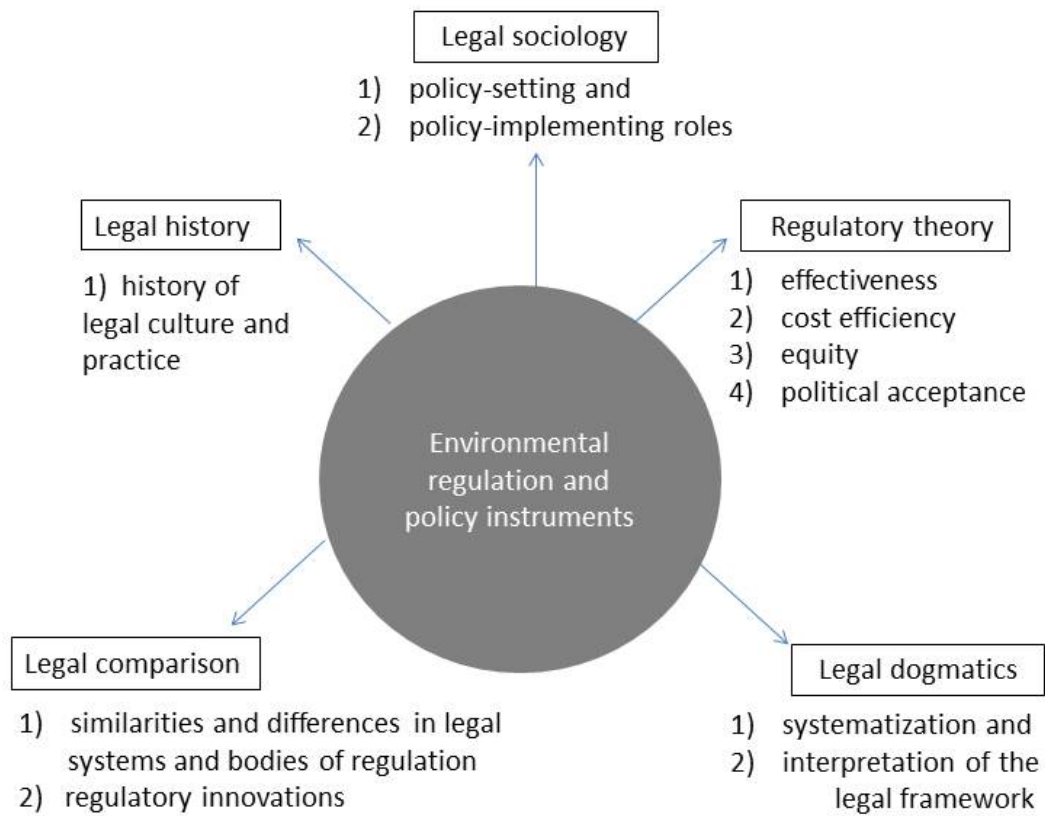


Figure 2: Methodological grey area in research on environmental law.

