



## Negotiating river ecosystems: Impact assessment and conflict mediation in the cases of hydro-power construction

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### ABSTRACT

In this paper we discuss how the legitimacy of the impact assessment process is a key issue in conflict mediation in environmental impact assessment. We contrast two EIA cases in hydro-power generation plans made for the Ii River, Finland in different decades, and evaluate how impact assessment in these cases has contributed to the creation, mediation and resolution of conflicts. We focus on the elements of distributional and procedural justice that made the former EIA process more legitimate and consensual and the latter more conflictual. The results indicate that it is crucial for conflict mediation to include all the values and interests of the parties in the goal-setting process and in the definition and assessment of alternatives. The analysis also indicates that procedural justice is the most important to help the people and groups involved to accept the legitimacy of the impact assessment process: how different parties and their values and interests are recognized, and how participation and distribution of power are organized in an impact assessment process. It is confirmed in this article that SIA may act as a mediator or a forum providing a process through which competing knowledge claims, various values and interests can be discussed and linked to the proposed alternatives and interventions.

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### 1. Introduction

River ecosystems and catchments are zones of conflict where the population, resources, and the environment increasingly compete (Pahl-Wostl, 2006). In many cases environmental conflicts over the use and preservation of river ecosystems and catchments have remained mired in controversy for decades – such as in the case of northern rivers in Finland presented in this paper.

There are concurrently policy initiatives (such as the EU Water Framework Directive) to restore the multi-functionality of riverine ecosystems and landscapes (Pahl-Wostl, 2006; Sigel et al., 2010; Wolsink, 2006), and elaborate plans aiming to maximize the use of European and northern rivers for hydro-electric power production to meet the obligations of international climate agreements and to gain profit thereof. The greatest remaining potential for large scale hydro-electric development in the northern areas is in Russia and Canada, but in Finland there is considerable political pressure to open the adjudications on the former conflicts of hydro-power construction plans, such as the Act on the (national) Protection of Rapids in the Ii River (Koskiensuojelulaki, 1987/35).

Large watercourse infrastructure projects are generally justified by national or regional macro-economic benefits – or now increasingly

by climate change mitigation – while their physical and usually also social impacts are locally or sub-regionally concentrated, mostly affecting those living along the river valleys and reaches (e.g. Maxwell et al., 1997; Rosenberg et al., 1995; McNally et al., 2009). The mismatch of benefits and costs translates easily into confrontational attitudes, and in many cases into *conflict(s)* understood here as the fundamental and underlying incompatibilities that divide parties (Gray, 2003) and which are usually long-term involving seemingly non-negotiable issues, moral or value differences or high-stakes distributional questions (Burton, 1990).

Conflicts related to large scale hydro-power plans and projects develop in many cases into intractable conflicts which are typically very complex, involving many parties and issues, a long history, and strong emotions (Putnan and Wondelleck, 2003). Conflict mediation here means managing these complex, long-term conflicts involving high-stakes distributional and fundamental value conflicts. While it is difficult to solve them, we see a role for EIA and especially SIA to act as a mediator in managing conflict issues in an impact assessment process in order to produce a commitment of the stakeholders to reach some mutually acceptable decisions on, for example, how to organize and conduct an assessment.

This paper examines conflict mediation in environmental impact assessment processes in the cases of hydro-power construction plans. We evaluate and contrast two assessments in the same river in different decades, paying attention to how the processes of assessments have contributed to the creation and mediation of conflicts, and

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focus especially on how the legitimacy of impact assessment and conflicts in these kind of highly conflictual issues are connected to the elements of social justice: distributive (fair allocation of resources) and especially procedural justice (recognition, participation and power distribution) (Shrader-Frechette, 2002; Paavola, 2007). The central questions are: 1) what are the interlinkages between the legitimacy of an EIA process and conflicts? and 2) how does distributive or/and procedural justices or injustices explain more consensual or conflictual outcomes of the EIA process.

The lower course of the Ii River in Northern Finland was constructed for hydro-power production in 1959–1971 (Rusanen, 1989). Since then three different plans have been introduced in order to harness the upper parts of the Ii River, and all of them have caused conflicts between planners and locals as well as other people who have been for or against these plans. It is noteworthy that the former EIA case in the Ii River conducted in the 1980s was and has been seen as legitimate, while the latter, more recent one done in the era of EIA legislation and formal institutional structure (e.g. Ministry of Environment), has been evaluated as one the most contradictory assessments in Finland.

The potential role of social impact assessment (SIA) in environmental conflict management was noticed years ago (e.g. Manring et al., 1990), and SIA could certainly have a major role in conflict prediction, managing the substantive content of conflict and overall in resolving conflicts and promoting social sustainability (Ross, 2003). However, its role in conflict mediation could be more prominent, if focused explicitly on issues of justice (see also Walker, 2010–this issue).

According to the International Association for Impact Assessment, “SIA includes the processes of analyzing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any social change processes invoked by those interventions. Its primary purpose is to bring about a more sustainable and equitable biophysical and human environment” (Vanclay, 2003).

From the perspective of conflict mediation, this definition of SIA is important. Following Vanclay (2003), this understanding puts the focus on a proactive stance to development and better development outcomes, not just the identification or amelioration of negative or unintended outcomes. SIA is understood in terms of adaptive management and it should assist communities and other stakeholders to identify development goals and cope with change. When an impact assessment takes such a stance, it automatically precludes especially value conflicts in advance, if the values behind development goals are discussed somehow (see Persson, 2006).

This article proceeds as follows: in the next section, we depict the framework of this study: interlinkages of legitimacy, justice and conflict types, and the approaches of SIA and conflict mediation. After that we present the short history and context of politics and policies over watercourses in Finland, and then our cases and methods of study. After that, the cases of the Ii River are analyzed.

## 2. Framework of the study

### 2.1. Legitimacy and issues of justice in EIA

It can be summarized that so far the EIA procedure has emphasized the role of natural and technical sciences and data (‘technical-rational’ model) in the identification or amelioration of the negative or unintended outcomes of proposed plan, although social impacts and social sciences should be integral to this evaluation, as the broad definition of environmental impacts and sustainable development requires. The precise role of EIA in the context of sustainability and substantive aim of contributing to more sustainable forms of development still remains to be clearly defined (Cashmore, 2004; Persson, 2006; Jay et al., 2007; Barrow, 2010–this issue).

Although the implementation of the EIA laws has certainly brought public involvement more in the front of the assessment process, the results are inadequate in many cases. One main problem seems to be that stakeholders’ values and interests are not involved from the initial stage of environmental impact assessment (Persson, 2006). For example, in the current framework of the Finnish EIA procedure a possibility for collaborative processes is often pressured by tight schedules and focused plans, in which most assessment criteria and indicators are preselected before the participation starts. In this ‘top-down’ situation, where ‘the agenda’ of EIA is already defined, stakeholder and citizen participation is more reactive than proactive and the assessments are usually more instrumental and technocratic than participatory or collaborative (Hokkanen, 2007). In many concrete cases the result is what can be called a ‘public hearing model’, which acknowledges stakeholder and lay knowledge(s) as *voices* but not as *knowledge*. As Rydin (2006, 1007) says, “(t)here is a danger in reducing the interaction of knowledges to a purely discursive level in losing the specificity of knowledge as opposed to other sorts of claims within the policy process”. This produces a major problem of knowledge production and causes conflicts.

Legitimacy has to do with rights in at least two senses: in the first sense, who has the right to rule or to speak on behalf of the entity, and in the second meaning, correct-‘right’-procedures (Dugan, 2004). Fair procedures generating unbiased, consistent and reliable decisions are central to the legitimacy of environmental governance.

The legitimacy of environmental governance rests on both distributive and procedural justice, and these two are tied together, as unequal distribution of wealth often translates into unequal participation in collective decision (Paavola, 2002; see about environmental justice and especially distributional justice Walker, 2010–this issue). This can also be noticed in hydro-power cases, since sense of justice and rights to use water and natural resources – which are thought to be common – are a part of these multiple-use conflicts: who has the right to control the river ecosystem, and how are the benefits and losses assessed and distributed especially between hydro-power generation and other interests and forms of uses.

Distributive justice is concerned with the fair allocation of environmental resources among diverse groups of citizens and stakeholders (Maiese, 2003), and it is connected in EIA with our view of how alternatives of a proposed project include different values and interests (of parties) and how they are studied. Sufficient recognition of stakeholders’ interests and values as goals of development included in alternatives is the core issue of distributive justice is EIA.

Procedural justice is the justice of decision-making power and procedures. Procedural justice is concerned with making and implementing decisions according to fair processes; it is easier to accept a disliked outcome, if the procedures that are adopted treat participating parties and citizens with respect and dignity (Deutsch, 2000).

In the EIA process the core concerns of distributional and procedural justice are as follows (adopted from Paavola, 2007): 1) which parties and whose values and interests are *recognized*, and how; 2) which parties can *participate*, and how; and 3) what is the effective *distribution of power* in the EIA process.

But what makes procedures fair? At least the following issues are relevant for the EIA process in conflictual cases. First, those conducting the procedures must be impartial and neutral. Involved parties and citizens should believe that those carrying out an assessment are treating people fairly and taking the viewpoint and needs of interested parties into account. If people trust the responsible partner of assessment, they are more likely to view the impact assessment process as fair. It is difficult to fulfill this guideline, since in many countries the proponent or developer (of the proposed plan or project) is responsible for impact assessment and in conflicting cases some parties do not perceive that a company planning a facility or power station is impartial and neutral (see e.g. O’Faircheallaigh, 2010). And thirdly, those directly affected by the proposed plans

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