Social participation and environmental assessment policies

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Introduction

The global environmental crisis is acknowledged both in and out of the scientific community and the evidences produced by international panels of experts[1] are taken seriously by decision makers. The environmental crisis is not only the sum of local environmental problems. When speaking about global change, it is referred to three main global threats. Climate change is the best identified environmental issue. The IPCC provided evidences of global warming and pointed out the role of GES emissions. Results presented at the International Scientific Congress Climate Change (Copenhagen, 12-14 March 2009) show that the worst-case IPCC scenario trajectories are being realised. Even though climate change is shading other environmental issues, global change refers also to land use change and biodiversity loss. The main issues related to land use change are deforestation, urban sprawl and agriculture intensification. This affects directly biodiversity by destruction or fragmentation of natural habitats. Scientists say we face now the sixth crisis of extinction

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[1] "The Millennium Ecosystem Assessment assessed the consequences of ecosystem change for human well-being. From 2001 to 2005, the MA involved the work of more than 1,360 experts worldwide." (www.millenniumassessment.org). "[The role of IPCC –International Panel on Climate Change] is to assess on a comprehensive, objective, open and transparent basis the latest scientific, technical and socio-economic literature produced worldwide relevant to the understanding of the risk of human-induced climate change, its observed and projected impacts and options for adaptation and mitigation." www.ipcc.ch

(Thomas, Telfer et al, 2004), mainly driven by human factors.

If global changes are resulting mainly from human factors, human societies are directly threatened by the environmental crisis. Increasing resources scarcity, (especially regarding water availability) and health issues (emerging diseases) are of great concern for most of the political authorities. It is referred to environmental security (Mc Donald 1995) when taking into account the risks linked to "overpopulation, industrial disasters, pollution (air, water, acid rain, toxic substances), loss of vegetation (overgrazing, deforestation, desertification), loss of wildlife, soil degradation, soil depletion, erosion; global warming" (Central Intelligence Agency, 2009).

However, concern for environmental degradation is not new and since the end of the 19th century we can observe several initiatives for launching policies aiming at environmental remediation. Across time, spatial scale of such policies changed with a shift from local to national, regional and now global regulations. This change in spatial scale is followed by a change in the substance of those policies. We shifted from narrow nature conservation issues (establishment of national parks or nature reserves) to projects for a green society or a global sustainable development (Weizsäcker, Lovins et al. 1997).

Theoretically, taking environment into account in political choices can be done following two models (Latour 1999). The first one, passed on since the emergence of "modernity" is based on a strict separation between nature and culture (fig 1). Human societies think themselves as separated from nature. They take nature into account only as a provider of unlimited resources that can be exploited to fill human needs. This separation puts, on one hand, politics as a sphere dedicated to manage humans interactions and, on the other hand, science as the only way to understand the living and physic world.

Science and politics are strictly separated and independent. They only communicate through consultancy and expertise when scientists are asked to give information for policy making and to policy makers.
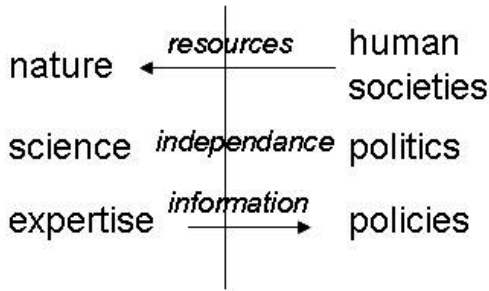

Figure 1. Separation between nature and culture

According to Latour (1999) the alternative model would be to whip out separation between humans and nature and to recognize that bringing nature into politics requires building collectives associating humans and non-humans (fig. 2). Latour argues that environmental problems are always a matter of how humans and non humans interact. Once recognised that humans and non humans form hybrid collectives, policy making refers to a mediation work in order to bring nature into politics. This mediation means that "Science" is no more the unchallengeable way to produce a true explanation of nature. Instead, "sciences" operate as diverse interpretations of what occurs in the physical world. Policy making, as one of the driving forces, is not out of the living world. In that model, sciences are brought into democracy because decisions are made through an informed public deliberation. This public deliberation makes possible the definition of a "common world", that is a temporary and revisable agreement on how to live on earth, among other non human beings.
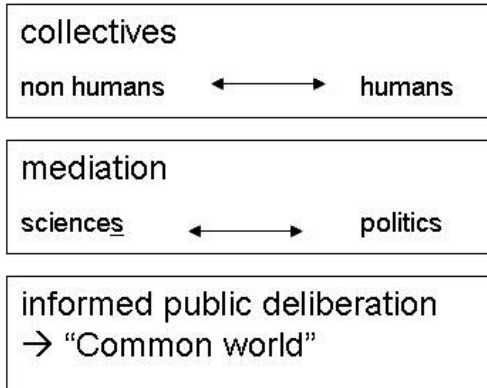
Figure 2. Bringing nature into politics

The aim of this paper is to examine to what extent environmental assessment policies and its associated participatory devices could be a tool for achieving this shift from the dualist model to the integrated or hybrid one. In Europe, environmental assessment is promoted by two main Directives: Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA). EIA and SEA are not expert-driven expertises. They contain the idea of public involvement and consultation in decision making. Can this policy framework be a first step towards a new model of environmental management based on informed public deliberation and on mediation between sciences and politics? We will first show that environmental assessment policies differ from previous environmental policies, especially by the emphasis put on human dominated places and areas, and even more regarding the importance given to public participation. We will then briefly present the situation of SEA in Czech Republic because of the special interest of examining how an environmental policy based on two characteristics inexistent in the communist period (preventive environmental assessment and public participation in

decision making) is implemented. In the last section, we will discuss the interest and limits of public participation and of the available tools for implementing it.

Environmental policies: from expertise to participation?

Nature conservation

First environmental policies were built on the idea of man and nature being incompatible. They were based on experts views and knowledge. The establishment of national parks and nature reserves aims at saving genuine nature or wilderness from human transformation (Cronon 1995). For landscapes transformed or damaged by humans, ecological engineering was based on the idea restoring natural processes in order to optimise the use of natural resources. This was the case for the French policy for mountain soils restoration (Kalaora and Savoye 1986; Larrère et al. 1981): tree planting was supposed to regulate water cycle, to reduce erosion hazard and to provide best resources for mountain communities. Ecological problems in the USA during the "dust bowl" were addressed by applied ecology with the aim of restoring ecosystem functioning and available resources.

These first environmental policies were largely based on expert knowledge and forest engineers took an important part in designing management measures. The French experience in mountain soils restoration was implemented in a exclusive top down approach: local populations were perceived as responsible for the ecological degradation and were not consulted at all regarding the choice of reforestation perimeters. After several local conflicts between mountain communities and forest administration, the law was modified and included measures for pastures restoration in order to take local needs into account.

Environmental assessment

Environmental assessment first important law is the National Environmental Policy Act (NEPA) of 1969, in the USA. This act insists on encouraging "productive and enjoyable harmony between man and his environment"; the purpose is no more to separate functions in space with places dedicated to nature conservation and others to humans' activities and livelihood. The act is about improving the environmental quality by preventing or eliminating "damage to the environment and biosphere". To reach that goal, the act is about promoting a better understanding of the "ecological systems and natural resources important to the Nation". With the NEPA, ecological systems are understood as an interaction between man and nature. The objective is to think about human management in order to avoid negative consequences on the environment, not only in the name of nature or wilderness but in the name of the interests of society ("stimulate the heath and welfare of man").

Even though some critics were made to this policy (lack of theory, search for alternative solutions only at federal scale), this act is seen as the first step towards integrated environmental assessment.

During the 70's, in France, French policies for urban planning launched an innovative management measure who can be seen as the second important legal device for environmental assessment: the "études d'impact" (1976). Every important project has to be submitted to public consultation before implementation. The public can suggest modifications and transformations and check if every legal requirement is respected.

Environmental assessment become an EU legal disposition with the *Environmental Impact Assessment Directive* (85/337/EEC), amended in 1997 (Directive 97/11/EC). According to Van der Vorst et al. (1999),

there are four main properties of EIA. First, EIA is procedural: each project has to be assessed following a given path, in order to ensure that environmental considerations are correctly integrated into decision making. Second, EIA is informational: information is to be provided to the decision making authorities and to the public in a clearly defined way, guaranteed by the EIA procedure. Third, EIA is preventive: the point is to avoid decisions with negative environmental impacts and to avoid future remediation costs. Finally, EIA is interactive because the result of the assessment provides feedback and allows the project design to be adjusted or modified.

Strategic Environmental Assessment

Strategic Environmental Assessment (SEA) is an extension of EIA, above all designed to assess projects, to programs (set of projects), plans and policies. SEA and EIA share the same principles. At EU level, SEA was framed by the 2001/42/EC directive "on the assessment of the effects of certain plans and programs on the environment". This directive is generally called "SEA directive" even though its strategic dimension can be discussed: SEA is above all an assessment procedure and is not designed to elaborate environmental strategies. The SEA directive has common points with the Kiev protocol on Strategic Environmental Assessment (2003) adopted by the countries of the United Nations Economic Commission for Europe (UNECE), after negotiations on cross-border environmental issues.

EU countries must have integrated SEA directive in their legislation since 2004. The SEA directive states that each state member must conduct SEA for plans and programs "which are prepared for: agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use" (SEA directive, article 3), as

well as for biodiversity and the implementation of the Natura 2000 network.

The SEA directive explicitly stress the necessity of public participation: "It is necessary to provide that authorities with relevant environmental responsibilities and the public are to be consulted during the assessment of plans and programs, and that appropriate time frames are set, allowing sufficient time for consultations, including the expression of opinion."

The EIA and SEA directives provide tools for assessing the environmental content of an extensive range of objects: projects, plans, programs and policies. However, depending on spatial scale, assessing those objects requires to deal with several constraints. Projects, for example, are designed on relatively small areas (town, municipality…). It is possible to conduct an EIA with on the basis of relatively detailed and quantitative information and the level of complexity and uncertainty remains low. On the contrary, programs and policies assessed through SEA are large scale (region, countries…). The information available is more aggregated and more qualitative. The complexity of the interactions between numerous factors makes that the level of complexity and uncertainty is higher than for EIA conducted on projects. Finally, plans (understood as a set of projects) are intermediate in terms of spatial scale and of complexity. Their assessment can be covered by SEA or EIA.

For the new state members of the EU, Environmental assessment is an innovative instrument, especially because of two important principles that were little taken into account during the communist period: preventive assessment and public participation in decision making.

SEA in the Czech Republic

Czech Republic joined the EU in 2004 but started to conduct SEA and EIA in the pre-accession period. SEA-like environmental assessments were conducted since a pilot assessment in 1998-1999, before the adoption of the SEA directive by the EU. Regarding SEA, the procedure goes through the following steps: 1) notification, 2) fact-finding procedure (screening and scoping), 3) drafting of the SEA report, 4) public consultations, 5) SEA statement, 6) decision making, 7) monitoring. Public consultations do not occur at each stage, but quite exactly in the middle of the SEA process, after the production of the SEA report, and before the final version submitted to the decision of competent authorities.

The number of SEA cases significantly increased over time. In the pre-accession period, until June 2004, 60 to 70 SEAs were conducted. In 1998-1999 a pilot SEA was conducted for the energy policy. ("SEA of national energy policy"). From June 2004: over 3,000 screening were carried out for local land-use plans and their modifications (EIA). In the current period more than 9700 documents are mentioned in the EIA database available on line at the Czech Environmental Information Agency[2] web pages (portal.cenia.cz). The SEA database (portal.cenia.cz) mentions 190 documents for plan assessments.

Public participation in SEA

After screening, some EIA and SEA documents are submitted to public consultation. Tools used for implementing public participation in SEA are generally

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[2]   Česká informační agentura životního prostředí.

based on stakeholders' consultation. But before that stage, information on each document is available to the public through the CENIA on-line database. CENIA is an agency depending from the Ministry of environment and in charge of providing information on environment and sustainability for the public. Regarding EIA/SEA, CENIA databases enable every stakeholder or citizen to follow, for each registered project, the procedure of EIA/SEA. For each stage of the procedure, it is possible to consult the documents provided by the EIA/SEA team and the administration. However, this database is rather a tool for practitioners than for the general public. It contains the official legislation, the list of SEA experts, etc. But the documents available are of a very technical matter and, given the number of files registered it contains, the database is not totally user-friendly.

After the screening stage, when the plan has to go through public consultation, the SEA team applies different techniques. In the pilot SEA of the Energy Policy of the Czech Republic (1998-1999), the SEA was announced (Smutny et al. 2005) on the internet with a web page informing about the SEA process and providing background documents. A permanent e-mail address was given in order to allow the public to send any comments to the SEA team. Additionally, six regional public workshops were organised by regional coordinators coming from NGOs. These workshops aimed at providing information to the public and at gathering comments to be communicated to the SEA team.

In 2002-2003, during the SEA of Raw Material Policy for the North Moravia Region, the public participation techniques applied by the SEA team were slightly different. Instead of starting to communicate about the procedure through internet, a workshop was organised with stakeholders at the beginning of the process. The ways the SEA would be conducted and the time-table were proposed to stakeholders. A web page was created too, in

order to communicate the SEA documents for comments. Local stakeholders were directly involved with e-mails sent to about 350 municipalities. Companies and NGOs were also involved, after having been selected at the beginning of the SEA process. Exactly as indicated in the procedure, after having completed the first draft of the SEA report, a second public workshop took place. The results and outputs of the SEA were presented for feed back and comments. Stakeholders had a two week period to communicate their remarks.

It is obvious that SEA information is accessible for the public and that public participation is allowed by the several techniques implemented by the SEA team. CENIA is also open to any suggestion from the public to improve their services and even include new data and facts [3]. However, theoretically, the public can be associated more or less closely to the SEA procedure. It can be only consulted during the procedure but also be associated earlier in the conception.

Regarding the situation in the Czech Republic, Czech specialists viewed the first experiences in public involvement in SEA as rather disappointing. They (Smutny et al. 2005) observed only a "low interest and late involvement of the public". This refers to two close but different problems. The first one is the issue of the public willingness and interest in participating in environmental decision making when a possibility is offered. As pointed by Latour (1999), if environment is perceived as a technical matter requiring expert knowledge and thus submitted to a top-down decision making process, this limits the possibilities for participation. On the contrary, if environment is perceived as a stake for and linked to the everyday life, then citizens could find a real interest in

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[3]   Director's Introductory Statement on CENIA web site.

participating. The second one is linked to the way the political authority make room to participation in decision making (see Tereza Stöckelová's chapter in this volume). Smutny et al. (2005) say that in Czech Republic, "public participation in the SEA process only met the minimal legal obligation of a public hearing and comment, which typically took place near the end of the process". But they temper this quite pessimistic view by reporting some interesting experiences of extended participation: "In SEA of the national waste management plan, a series of regional and national public hearings was organised and drafts of the plan were open to comment"

Smutny et al. (2005) think that public participation in SEA of policies at national level "could be made less passive and more effective and useful by shifting to more active modes of public involvement; for example through using working groups or round tables".

This lead us to analyse what are the merits and drawbacks of the methods based on stakeholder's group participation or consultation.

Public participation in SEA: issues and challenges

Public participation in sustainability assessment can take various forms, from basic consultation and communication of information to active participation. If we look at the process of assessment of land use scenarios, like it was conducted, for example, for uplands of Europe in the Bioscene EU research program (Sheate et al. 2007), stakeholders can be involved at different stages. It's possible to only ask them giving an opinion on the final results. But they can also be integrated in the process of assessment itself and provide some input to select indicators for each field taken into account (e.g. biodiversity, sustainable use of resources, social and

economic development, institutional capacity for sustainable development). They can even be involved very early in the process: they can be asked for inputs and comment on the scenarios themselves. Finally, they could also be integrated since the very beginning of the assessment at the stage of scenario design and elaboration.

Several methods and tools are available for an active integration of social actors in sustainability assessment (van Asselt and Rijkens-Klomp 2002). Most of them are designed for small discussion groups (10 to 20 people). Van Asselt and Rijkens-Klomp (2002) distinguish between two main sets of tools. The first set contains tools for stakeholder involvement whose goal is the process itself. In that case stakeholders' participation is a mean for capacity building or is a technique used in trainings. The objective of theses participatory exercises can be, for a given environmental issue, to map out diversity of point of view and interests in order to know where are the main zones of conflict, or of convergence, between social actors. These participatory tools involved a limited number of social actors: focus groups usually gather 4 to 12 people, scenario analysis usually do not exceed 20 participants and policy exercises are designed for 10 to 15 persons. Participatory modelling or collective exercises of simulations and games (Mathevet et al. 2003) usually involve a limited number of participants. But this number may vary according to the type of modelling or participatory simulation tools used. Game roles sessions require several little groups (3 to 4 persons) with a final collective debriefing. Simulators based on agricultural technico-economic variables (Olympe simulator; Attonaty et al. 2005) can involve relatively large groups (up to 30 actors) but they can also be conducted with only one farmer with a facilitator and a pair of extension officers. Regarding participation exercises oriented towards consensus reaching, conflict resolution or designing of a common position concerning conflictive environmental issue, citizen's juries are effective with 15 to 25 people and

consensus conferences should be organised with around 15 persons.

The second set of tools refers to participatory techniques where the process is a mean for decision making. These tools are oriented towards reaching consensus. The participatory planning techniques can be workshop-based or community-based. In the first case it engages high level decision makers, experts or interest group representatives. In the second case, it involves citizens usually left out of the decision process. The number of people engaged depends on the issues addressed and the workshop based methods adopted.

The use of participatory tools with relatively small groups has the clear advantage of allowing a close involvement of stakeholders during the sessions or during the time period of the project. In a small group one can assume that every stakeholder has more possibilities to explain his position and to express his point of view. But small groups rise the problem of the selection of participants. When dealing with local environmental issues, a small group can be enough to represent the diversity of local actors. But when dealing with environmental issues involving larger spaces, a group of 20 people could be too limited to represent the different social groups interested. Additionally, as there is an increase in the number of participatory process, there is a risk of stakeholders fatigue and of having only the same groups being organised and powerful enough to send participants. Thus, there is a trade-off between the number of participants and the intensity of their involvement. With a growing number of people, the social representativeness is better but it is more and more difficult to use the above participatory tools and participation can be limited to a mere consultation. On the contrary, with small groups, it is possible to closely involve stakeholders, for one or several meetings, in an assessment process. But the legitimacy of that group and

of its selection can be challenged if it fails to represent the diversity of concerned social actors.

The second issue to address when dealing with participatory techniques is the role of the facilitators or of the project team. Ideally, the organisers of those exercises should be neutral and let the participants present and discuss their views. This is reasonably possible for participatory exercises where the process is a mean for building capacity. But when theses techniques are used for conflict solving or for decision making, it is always possible to suspect that the organisers are not neutral and could use the participative process for reaching a consensus on their project or on their solution. This type of remark often supports a strong criticism about participatory approaches: supposed to be designed for a more efficient and transparent decision making, they could only be new ways of legitimating topdown decisions. Participative modelling and simulation have particularly to take carefully into account that both information and processes are fully understood by participants. The political use of the results of participatory processes has to be seriously taken into account. But the result of participatory approaches depends very much of the capacities of participants. Participants are generally concerned by environmental issues and they have often empirical and/or technical knowledge on the debated issue. They are often able to discuss and challenge scientific information. This suggests that they cannot be so easily influenced. Ideally, participatory approaches in small groups could be a very useful tool for each participant to exchange and enhance his information. They are devices where academic, technical and empirical knowledge can be usefully put in contact.

Conclusion

Regarding environment EU has produced a large number of policies and instruments: more than 260 directives, more than 700 other legislations (Le Seigneur 2007), programs, incentives, voluntary instruments. This normative activity is largely accompanied by an encouragement to enhance participation and bottom-up approaches. EU environmental policies had a positive effect for tackling environmental issues in the State members (e.g. Reach regulation, Habitats directive, Water framework directive…) and for encouraging public participation and the end of exclusive top-down approaches. As it is the case for sustainability and environmental assessment processes, some policy tools are available for supporting learning processes and knowledge transfer from academic science to society.

If we refer to Latour's theoretical framework exposed in the introduction section, do we head towards option B, or do we stay at option A? There are strong signals, and environmental and sustainability assessment are among them, that we are heading toward option B. Environmental management is not only about technological or narrow ecological issues to be solved only by scientists and engineers. It is about collective decisions to be made through open and transparent processes and that imply humans and the non-humans that make their living environment. In that sense, participatory approaches in environmental issues are experiments that could prepare the arrival of more democratic decision making processes.

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Social Movements and Public Action

Lessons from Environmental Issues

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