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**Reconciliation of Inconsistent Frameworks:
An Analysis of the WFD and the Renewable Energy Directive**

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Abstract

This thesis explores and reflects on the inconsistencies that exist between the Water Framework Directive (WFD) and the Renewable Energy Directive related to the activity of hydropower. The provisions which incorporate the conflicts in the Directives are highlighted and the implications they might have on the generation of hydropower are addressed. In this context, I tackle the importance of integrating environmental concerns and objectives into energy policy decision making as an instrument to overcome the contradiction existing between environmental and energy policies.

The country of Albania is considered as unit of analysis in order to look at the process of institutional convergence which is driving the harmonization of its legislation to the European one, and the way it is influencing the water and energy policy in the country. Aware of the fact that the adoption of these policies and legislations bring the inconsistency existing within their nature, I address the issue of EPI's implementation in Albania for a successful realization of these policies' goals.

Keywords: Water Framework Directive (WFD); Renewable Energy Directive; Environmental policy integration (EPI); hydropower; Albania

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1. Introduction

1.1. Problem Statement

The European Union and its Member States rely on a vast range of legislations which covers the main policy areas and is based on the main treaties, regulations, directives, decisions and recommendations. Over the last 30 years, the extent and the intensity of policy-making and legislation-making have increased exponentially, although at different speeds and in different degrees, across the different policy domains (Alesina et al. 2002).

Although this abundance of legal instruments represents a certainty of tutelage of EU citizens, it has risen concerns on other very debated grounds such as the conflicts with national political interests, the effective implementation of the EU legislation at the national level and, last but not least, the incompatibility of certain EU directives' provisions with other EU provisions (Henle et al., 2008; von Hoof and van Tatenhove, 2009; Volk et al., 2009). The issues of law harmonization and the conflict that can generate between EU legal frameworks and national legislations of Member States have been largely debated, but very little is actually discussed upon the conflict that can rise between the objectives of two EU legal frameworks, such as the issue rising between Birds and Habitats directives (79/409/EEC; 92/43/EEC) and the Common Agricultural Policy (CAP); or among the Marine Strategy Directive (2008/56/EC), Integrated Marine Policy (MP, 2007) and the Common Fisheries Policy (CFP, 2002); or the CAP and the Water framework Directive (WFD); between Renewable Energy Directive and WFD concerning biofuels and bioliquids (Herczeg et al., 2007: 14).

The impetus for this study came from researching more on this theoretical gap. Indeed, reports of the European Small Hydropower Association (ESHA) and VGP Power-tech concerning the impact of the Water Framework Directive (WFD) implementation on hydropower captured my attention. By being one of the most mature and certainly the first renewable energy in terms of global production hydropower plays a key role in many counties. Indeed, according to the International Hydropower Association (IHA) it accounts for one fifth of the world's power generation and, for some countries as Albania, it is the only domestic energy resource for the production of electricity (IHA, 2003). Moreover, its use can still make significant contribution to future energy needs while offering an alternative to carbon-based sources of electricity and helping to reach the targets set by the Directive on the promotion of the use of energy from renewable resources (from now on Renewable Energy Directive).

For this reason, I look a little closer to the relation between the objectives of the policies behind WFD (environmental protection of waters) and the Renewable Energy Directive (energy generation from renewable sources, thus also hydropower) and the conflict that might come out. I will discuss the inconsistency of these legislations as part of the ongoing debate related to the need to reconcile economic growth and development with

the environmental objectives. This need represents the main driver towards policy integration in general, and Environmental Policy Integration (EPI) in particular, as core principles of the Ecological Modernization (EM) theory.

As sustained by Alan Bryman (2008: 532), a review of academic literature allows the researcher to identify ways in which existing knowledge is incomplete, inadequate, or incommensurate. It is in this way that, as sustained by Bryman, my research is provided a context for the study (the conflict between these directives) and can serve as support for the argument that the study is needed.

1.2. Analytical Framework

1.2.1. Research Aim

This thesis seeks to contribute to the discourse on Environmental Policy Integration (EPI) by discussing how policies in the different fields of energy and water are integrated.

This study aims to enhance the understanding of the conflict that rise between the goals of the EU legal frameworks of the WFD and the Renewable Energy Directive, the impact of the conflict and the possibility of reconciliation. Both these frameworks express particular needs: on one hand WFD asks for the achievement and maintenance of a good status of all waters, on the other hand the Renewable Energy Directive stresses the importance of energy production through renewable sources. The inconsistency between the objectives of the Directives becomes evident when we look at a specific sector which involves both of them, hydropower.

In order to overcome this conflict I address the importance of integrating environmental concerns and objectives into energy policy decision-making through the process of environmental policy integration (EPI). Defined as a process in which sectors' policy objectives and strategies evolve over time with the aim to promote and implement sustainable development, EPI represents a tool for the reconciliation of the inconsistency generated between the WFD and the Renewable Energy Directive. (Nilsson et al. 2007)

The case of the inconsistency among WFD and RED is illustrated through a field study in Albania. The reference to Albania is motivated by the opportunity that transition Eastern European Country (EEC), already involved in the EU's economical and institutional convergence process (De Benedictis & Tajoli, 2003; Varblane & Vahter, 2005), offers for generalizations and replications of discussion and findings. By applying the transfer policy theory, I look at the process of institutional convergence which is driving the harmonization of the Albanian legislation to the European one, and the way

it is influencing the water and energy policy in the country. Aware of the fact that the adoption of these policies and legislations bring the inconsistency existing within their nature, I address the issue of EPI's implementation in Albania for a successful realization of goals of these policies. My assumption is that policy innovation processes, as EPI, which has been taking place in the EU will diffuse to the neighboring countries as Albania, speeding up the convergence and their integration process.

1.2.2. Research Question and sub-questions

In order to fulfil the purpose of this thesis, the following research questions will be investigated and analysed:

- 1. *What are the critical points in the EU directives and how are they affecting the hydropower production, thus the achievement of the Renewable Energy Directive goals?***
- 2. *How can we reconcile the objectives of the policies behind WFD and Renewable Energy Directive?***
 - a. *How can EPI be used for the reconciliation of the policies behind the WFD and the Renewable Energy Directive? What does reconciliation of the conflicts mean?***
 - b. *What does the conflict implies in Albania?***

1.3. Research Process

With the overall aim and research questions in mind this section will address the methodological approaches employed by this thesis.

1.3.1. Research Strategy

On the whole, this study can be categorized as qualitative research, as it has served to enhance the comprehension of the complexity of a problem (Mikkelsen, 2005).

The general research strategy employed by this study relies on a mix of text analysis and interviews, and a single case study of policy integration, using Albania as a unit of analysis (Bryman, 2008)

The single case study has been supplemented by an accurate analysis of the EU legal documents and a literature review which is still very young and not well developed. In

the analysis I have focused on the identification of the incongruence between WFD and Renewable Energy Directive objectives since I think that is appropriate point of departure for the analysis and discussion of this complex problematic.

In this context, I have adopted Albania as unit of analysis. This country represents an interesting reference form two points of view. On one hand, it might be seen and as a representative for other similar Central and Eastern European countries because of the social, political, economic and historical context the countries of this region have in common. Although I am aware of the diversity of the context among those countries, they maintain some important similarities as well such as: the former presence of a strong centralized regime; a transition to free market economies with the emergence of multi-party regimes based on democratic principles; willingness to access the EU and plans for the acquisition and adoption of its legislation; traditionally a high reliance upon hydropower; and currently under a reformation process of many crucial sectors, among which the energy sector (Medarova-Bergström et al., 2007). On the other hand, Albania represents an exception among these countries since it currently relies totally on hydropower. For the country this might signify either a great chance for to remodel the energy sector keeping in mind the environmental challenge, or a risk factor due to the conflict existing among the WFD and the Renewable Energy Directive.

The qualitative analysis is especially relevant for this thesis, which aims not only to describe the conflict emerged between the two EU directives, but also to consider future implications on hydropower generation and the capacity of environmental policy integration to remove the incongruence in EU and neighboring countries. Moreover, the qualitative analysis was considered suitable for the current research as a strategy suggested for the exploration of the subject. Beside this, it leaves room for interpretation of the studied phenomena from the perspective of agents involved.

1.3.2. Research Methods

Hereby, I turn to an elaboration upon the methods utilized by the study of: text analysis, interviews and observations.

1.3.2.1. Archival Information

Firstly, the data on the two EU Directives were obtained directly from the Directive texts published on the Official Journal of the European Communities. This part of the research consisted in analyzing the main text sources in order to find the conflicting issues which I will discuss in the next chapter. I enriched my knowledge about these legislations through a literature review carried out through academic articles and other publications available.

The main data about the unit of analysis - Albania - were obtained through published reports from international organizations, private companies and non-governmental organizations as well as academic articles, which have examined the recent developments of the country from the political, legislative and economical point of view. This research has led to the discovery of the key areas to be further analyzed and to a preliminary selection of the interviewees' base.

These materials were located primarily through search engines like Lund University's ELIN system, Google Scholar and the Norwegian NTNU library.

Being Albania my home country, the knowledge of the language and society has made my research easier and faster, without the need of intermediation or study of the country itself.

1.3.2.2. Interviews and Observations

The principal activity in Albania consisted of making interviews and observations on how the country is dealing with the integration process, how the developing energy sector might be affected by the adoption and implementation of the Renewable Energy Directive and the WFD and, last but not least, how the government perceive and conceive the Environmental Policy Integration. Hence, part of my data has been constructed through qualitative research interviews conducted with key informants. The interviewees' base for the study is constituted by bureaucrats (working in the public institutions and ministries) and technicians, external observers as EU, WB and EBRD, and two foreign companies investing in the Albanian energy sector (Statkraft and Enel SpA). A Table with all the interviewees and representative questions can be found in Annex I.

A non-random sampling was conducted based on methods such as convenience sampling and snowball sampling, thanks also to the contacts provided during the interviews (Bryman, 2004: 100). The key informants were sampled according to their knowledge of the legislation and policies and their principal interest in the energy sector. At the end of the sampling process I could enumerate four categories: bureaucrats, technicians, external observer and stakeholders. The rationale for this categorization is that bureaucrats, by being involved every day in the debate regarding the energy sector, the integration process in the EU and its implications, should have updated information. Technicians have the theoretical knowledge and deep understanding of the Albanian and EU legislations, the challenges the country is facing in the transition process and the implications of these issues on the energy sector. External observers, which have been observing and assisting the transition of the country by facilitating the transfer of policies and ideas, should be impartial institutions and have

additional data. Finally, the foreign investors can give a more focused view on the alternatives of the energy market.

Interviews were based on semi-structured questions, where the interviewees had room for open discussion in their reply (Bryman, 2004: 321). In this way I had enough flexibility and freedom in changing and reforming the questions to meet the demands of the research question. Unfortunately, none of the interviews could be recorded on tape and later transcribed giving me the chance to focus mainly on the topic and on the dynamics of the interview (Kvale and Brinkmann, 2008: 179). However, each interview has been followed by a transcription into a diary and elaboration of notes, data, information, documents and impressions collected during the talks.

Non-participatory unstructured observations (Bryman 2004: 167) have been carried out during the interviews, through the consultation of newspapers and media. Observations and perceptions concerning interviewees' behavioral patterns, interest and reaction to my questions, their way they turned off the discussion from the main goal have been gathered and utilized for conclusions.

1.4.Limitations and System Boundaries

Due to the complex nature of this topic, it is necessary to clarify the limitations of this research, so as to set some boundaries.

It is, thus, relevant to point out that this thesis attempts to assess whether there are conflicts generating from the European Directives, where are they located in the legal texts and, which are the potential impacts on hydropower.

Furthermore, the thesis limits its scope to the elaboration upon the conflict arising between the WFD and the Renewable energy Directive with regard to hydropower, although another example is given by the inconsistency existing upon the production of biofuels and bioliquids (Herczeg et al., 2007: 14).

This thesis attempts to open a discussion on EPI and its impacts on the policy making of the states adopting it rather than discuss the way it operates in practice or whether there are alternative and more efficient mechanisms.

No emphasis is given to the policy of individual Member States. However, the thesis covers the country of Albania as a representative of other non-EU convergent countries. Thus, connections and comparisons are often elaborated between Albania and the other Eastern European Countries.

Limitations to this research manifested in primary and secondary data due to the very low cooperation and participation of the interviewees, and to the lack of literature and

reference points on the incongruence existing between certain the WFD and Renewable Energy Directive.

The networking activity has been intense before and after joining the country in order to have access to names, information and contacts, and use was made of the “snow ball” instrument.

However, the major problem encountered was to get answers which reflected the questions made and which were useful for the scope of the thesis. Two interviews out fourteen have been informal interviews conducted out of the public offices and it is during those meetings that I experienced the highest degree of confidentiality, frankness and openness concerning the current position of Albania towards the adoption and implementation of EU legislation, and most importantly, the relevance of environment in the policy decision making process of different sectors, including energy.

1.5. Structure of the Thesis

The paper is organized as follows: the next chapter discusses the theoretical framework of the study. Chapter 3 analyzes the EU Directives, identifies the critical parts and evaluates the potential implications for hydropower in the future. Chapter 4 describes the Environmental Policy Integration. Section 5 analyses and discusses the impact of EU Directives in Albania and the potential implications of EPI's implementation in the country and in the Region. It includes a critical consideration of EPI. The conclusion session concludes.

2. Theoretical Framework

For the development of this qualitative research two different theories are adopted in order to assist the elaboration of information and data and, to support the findings at the end of the analysis. The study is based on the idea that it is possible to reconcile the environmental goals with those of different policies as it is possible to decouple economic growth from environmental deterioration.

2.1. Ecological Modernization theory

The perception of environmental problems is related to the way these problems are framed and defined. One way of conceptualizing them is through the ecological modernization which defines the environmental problems as a “matter of inefficiency” and as “challenges for businesses to stimulate innovation in all sectors” (Hajer, 1995: 32-33). Although historically economic activities and environmental protection have been perceived to be mutually antagonistic, the theory of ecological modernization, as elaborated by Spaargaren and Mol (1991), Weale (1992), Gouldson et al. (1996) and Jänicke (2008), suggests that policies for economic development and environmental protection can be combined with “synergistic effect” (Gouldson et al., 1996: 11).

Through the Environmental Modernization discourse, there has been a turnaround of environmental problems which, rather than being perceived by governments and entrepreneurs as a thread/obstacle to economic development, represent what Schumpeter identified as “fundamental impulse that sets and keeps the capitalist engine in motion” (Schumpeter, 1943: 83), thus the drivers to increase the economic efficiency and technological innovation. Similarly, rather than perceiving economic development to be the cause of the environmental crisis, Environmental Modernization tries to tie together the power of entrepreneurship for environmental gain.

We can see therefore, how strictly interconnected Environmental Modernization and EPI are in their challenge of “decoupling” economic growth from environmental deterioration.

Furthermore, beside the integration of environmental objective, another important factor associated to Environmental Modernization is technological innovation which is seen as a solution to the contrast between the hydropower technology and environmental protection in this specific case. Although conscious of the importance played by technology innovation, in the rest of the thesis I will focus my analysis and discussion mainly on EPI and its implications.

EM has been criticized under several aspects such as: the idea that a reduction in one type of environmental impact may result in other types of environmental impacts (York, Rosa & Dietz, 2003); or the underestimation of the inherent growth orientation of modern capitalism and the effects on environment of its production mechanism for

profit (Gould, Pellow, & Schnaiberg, 2004). Though I find these critiques founded and under certain points of view, extendable also in this case, I still consider Environmental Modernization theory can represent a useful tool for EU Member States for reframing their objectives and policies, and a prescription for policy reforms.

2.2. Policy Transfer theory

As a second tool for my analysis, I have selected the policy transfer concept (PT). Building on earlier work on the international movement of ideas and practices, and reinforcing the established political science literature on “policy diffusion” and “lesson-drawing” (see Hulme 2004, Rose 1991, and Bennett 1991), this theory has been defined by Dolowitz and Marsh as: “The process by which knowledge about policies, administrative arrangements, institutions and ideas in one political system (past or present) is used in the development of policies, arrangements, institutions and ideas in another political system” (Dolowitz & Marsh, 2000, 5).

As Stone suggests, there has been a proliferation of terms in defining the phenomenon, ranging from “lesson-drawing” (Rose, 1993), to “policy borrowing” (Cox, 1999) or “policy shopping” (Freeman, 1999), all “terms that convey a sense of transfer being a voluntaristic activity” (Stone, 2001: 3). Beside these, there are other definitions which suggest a pressure, a coercion or an obligation to conform, such as “external inducement”, “penetration” and “direct coercive transfer” (Dolowitz & Marsh, 1996: 347).

Despite the multitude of definitions and rephrasing, and the fact that policy transfer and learning can occur both at the sub-national level and at an international level, this study will be concerned primarily with inter-national modes of transfer, and particularly with the voluntaristic transfer occurring between the EU and Albania (looking to Albania as an example of the other Eastern European countries undergoing the same process). Thus, although aware of the fact that there is a multitude of “foreign agents and institutions as sources of policy ideas, policy design, and implementation” involved in the “complex trend towards the internationalization of policy regimes” (Jessop 2004, 66), I have limited the analysis to the influence of EU since the conflict I am analyzing raises between EU policies.

Inside the EU, the transfer of policies can take place by way of the EU harmonization process (being available to all the Member States at once), or it might take place from one country to the other and in this case it will need to be incorporated first by one or some of the more influential EU countries before it achieves the necessary widespread impact (Jänicke, 2008).

While analyzing and discussing the convergence process of the country, the policy transfer suggests important questions to address such as: why and how does this

process take place; who are the key actors involved in it; what limits or facilitates it; what does it imply and which are the challenges it generates for the country (Dolowitz and Marsh 2000, 8). These questions have been particularly relevant in the interviewees sampling process during the field work.

2.3. Combination of the theories

As mentioned above, Environmental Modernization can be defined as the sum of the government actions aimed to stimulate policy and technological innovations and their diffusion in order to pursue environmental improvements while reducing the environmental impact of economic activities. These actions are the result of the integration of environmental concerns into other sectoral objectives with the aim of influencing the policy making process and its output.

As Jänicke sustains, “The compulsion to continuously improve procedures and products is now to be placed at the service of our environment” (Jänicke, 2008: 2) and developed countries have the leading role in elaborating new policies and new clean technologies beside reparative and mitigation measures.

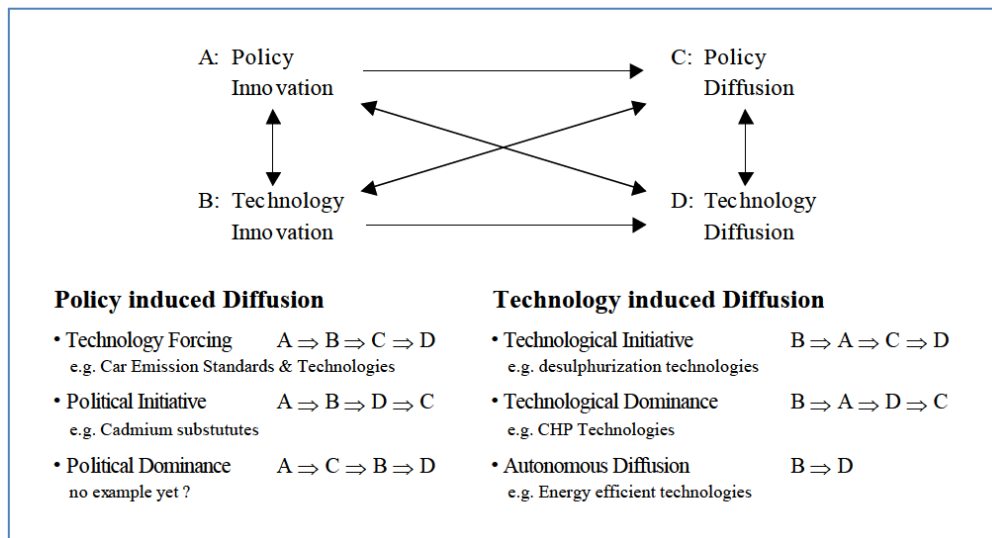
However, policy and technological innovations are not easy to achieve for all governments, especially the less developed ones. In the perspective of an international strategy of the Environmental Modernization theory and an implementation of EPI, the need for transferring these innovations is evident.

As sustained by Jänicke, nowadays, the transfer and diffusion of environmental policies can help in the diffusion of environmentally efficient technologies, both directly from one country to another through the imitative political learning and, through international institutions and organizations such as the European Union, Greenpeace, World Bank, OECD, WWF, and many others (Jänicke, 2008: 9). However, the prerequisite for the diffusion to occur is actually the communication capacity and activity of agents and institutions. (Kern 2000)

Figure 1 below, elaborated by provides A representative map of the interplay between environmental policy and environmental technology in the diffusion of innovation, elaborated by Martin Jänicke, is provided below (Figure 1). It clearly shows how the input for innovation and diffusion can come both from the policy area and from the technology producers.

These findings are particularly important for the discussion that will come, because at the EU level, the transfer of policies and legislations towards other Member States or neighboring countries might signify transfer of technology in order to comply with those policies and vice-versa.

Figure 1. Diffusion patterns of Environmental Innovation



Source: Jänicke (2008: 10)

3. The Legal Framework

The main scope of this chapter is to look at the objectives of the Directives and, locate and identify the critical parts in them which try to address the inconsistency of these

objectives. In order to do so I will briefly introduce the Directives and after identifying and examining the critical parts related to the conflict on the topic of hydropower, I will discuss the potential implications of the incongruence on the future development and utilization of this technology.

3.1. The EU Renewable Energy Directive

On 23 April 2009, the European Parliament and the Council adopted Directive 2009/28/EC on the promotion of the use of energy from renewable sources (from now on the “Renewable Energy Directive”. This directive amends and subsequently repeals Directives 2001/77/EC and 2003/30/EC which have been first relevant pieces of legislation in the promotion of electricity produced from renewable energy sources in Europe.

The Renewable Energy Directive establishes a common framework for the promotion of energy from renewable sources, and provides rules relating to statistical transfers between member states, joint projects between member states and with third countries, guarantees of origin, administrative procedures, information and training, and access to the electricity grid for energy from renewable sources. It is perceived as the answer to the needs for increasing energy security through the reduction of the strong dependency on imported fuels, cutting down greenhouse gas emissions in order to comply with the Kyoto Protocol requirements, and address the reduction of the European carbon footprint¹.

3.1.1. The Aim of the Directive

The scope of the Directive, as stated in Article 1, is to establish a common framework for the promotion of energy from renewable sources by setting mandatory national targets for the share of energy from renewables in the consumption of energy and in transport. As underlined by von Homeyer and Knoblauch (2008) the EU Renewable Energy Directive seeks to integrate environmental concerns into Member State’s energy policies in order to “decouple” the economic activity from environmental deterioration.

The overall Community target, which is stated in Article 3 of the Directive, reconfirms the target expressed in the Renewable Energy Roadmap² provisions of “at least a 20 % share of energy from renewable sources in the Community’s gross final consumption of energy in 2020”. In order to achieve this goal, mandatory national targets for the use of

¹ According to the EU Commission statistics show that this new legislation would permit to save up to 900 million tones of CO2 emissions per year (EC MEMO/08/33, 2008: 3).

² European Commission communication of 10 January 2007 entitled “Renewable Energy Roadmap – Renewable energies in the 21st century: building a more sustainable future”.

renewable energy sources and national indicative trajectories³ are set for each of the 27 Member States. Accordingly, the main effect of the Directive is that each EU Member must ensure by 2020, that the share of gross final consumption of energy from renewable sources is at least the national overall target for that year as fixed by the Directive. The calculation and allocation of the legally binding targets takes into account the “Member States’ different starting points and potentials, including the existing level of energy from renewable sources and the energy mix” (Preamble para.15).

The achievement of the scope of the directive is facilitated by other relevant aspects represented by the provisions on the National renewable energy Action Plan (Article 4) and the Priority Access to the electricity grid (Article 16). Thus, each EU country has to elaborate a National Action Plan (NAP) where it is indicated how the government has programmed to meet its overall national target, including elements such as sectoral targets for shares of renewable energy for transport, electricity and heating/cooling and how they will tackle administrative and grid barriers (Article 4).

However, what is crucial for the purpose of this research is the definition that the Renewable Directive gives of “**renewable energy sources**”. This elucidation is enclosed in Article 2(a) which reads exactly:

Energy from renewable sources means energy from renewable non-fossil sources, namely wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, **hydropower**, biomass, landfill gas, sewage treatment plant gas and biogases.

As we can see, hydropower is here defined as a renewable resource and through this article it is given an important role in the achievement of the Directive’s goal. Therefore, hydropower is one of the technologies that Member States will utilize in order to achieve their national targets relatively to their hydrological characteristic.

Another relevant provision for my research concerns the coherence between the objectives of the EU Renewable Energy Directive and other environmental legislations of the Community. Indeed, paragraph 44 of the Preamble reads:

The coherence between the objectives of this Directive and the Community’s other environmental legislation should be ensured. In particular, during the assessment, planning or licensing procedures for renewable energy installations, Member States should take account of all Community environmental legislation and the contribution made by renewable energy sources towards meeting environmental and climate change objectives, in particular when compared to non-renewable energy installations. (Renewable Energy Directive 2009)

³ According to the national ‘indicative trajectory’ by 2011-12, MS should be 20% of the way towards the target (compared to 2005); by 2013-14, 30%; by 2015-2016, 45% and by 2017-18, 65% (Article 3(2) and part B of Annex I).

It is clearly stated in this paragraph how important it is to assess the compatibility of new renewable projects with all the existing EU environmental legislation. This point will turn very useful later on in the discussion concerning the development of new hydropower projects.

As a last point in this outline, I would like to clarify that the discussion will be limited to the incoherence between the goals of the Renewable Energy Directive and the WFD related to hydropower.

3.2. The EU Water Framework Directive

On December 22, 2000 the European Water Framework Directive (EU/60/2000) came into force establishing a new framework for Community action in the field of water policy. The Directive has been defined as a very innovative initiative in many respects (Petersen et al. 2009; Sigel et al. 2010).

It tries to overcome the “piecemeal approach to European water legislation” integrating all water-related EU legislation such as directives on urban waste water treatment, nitrates, bathing or drinking water, protection of special habitats (Landy, 2008: 28; Acreman & Ferguson, 2010: 33).

This directive introduces the environmental objective of “Good Status” and expands the scope of water protection to all waters – to surface water bodies including coastal waters, as well as groundwater – irrespective of their use or their size, over a long-term perspective (Landy, 2008).

Furthermore, by looking at the water bodies themselves, their floodplains and catchment areas as one unit, it attempts to realize Integrated Water Resource Management through the adoption of integrated river basin management (WFD, Art.13-14; European Commission, 2000; UNESCO, 2006).

Therefore, the directive focus more strongly than before for the ecological function of water bodies as a habitat for different species of plants and animals, including also nature conservation objectives (Landy, 2008; 28).

3.2.1. The Aim of the Directive

The purpose of the Directive, stated in Article 1, is to establish a framework for the protection of inland surface waters (rivers and lakes), transitional waters (estuaries), coastal waters and groundwater. It is important to underline that many European river basins are international since they cross administrative and territorial borders, and the common understanding and approach offered by the WFD represents perhaps the key to

an effective European water management. It strives for prevention of further deterioration and pushes towards protection and enhancement of the status of the aquatic ecosystems.

The main environmental objectives of this directive, for both surface waters and groundwater consist in achieving and maintaining a “good chemical and quantitative status” of all surface water and groundwater bodies by 2015, preventing any deterioration and ensuring the conservation of high water quality where it still exists (Article 4, para.1).

Looking specifically at the surface water which is the one affected by hydropower, Article 4 reads exactly:

(i) Member States shall implement the necessary measures to prevent deterioration of the status of all bodies of surface water, subject to the application of paragraphs 6 and 7 and without prejudice to paragraph 8;

(ii) Member States shall protect, enhance and restore all bodies of surface water, subject to the application of subparagraph (iii) for artificial and heavily modified bodies of water, with the aim of achieving good surface water status at the latest 15 years after the date of entry into force of this Directive;

(iii) Member States shall protect and enhance all artificial and heavily modified bodies of water, with the aim of achieving good ecological potential and good surface water chemical status at the latest 15 years from the date of entry into force of this Directive....

With this article a general requirement for ecological protection and a general minimum chemical standard have been introduced to cover all surface waters. Therefore, there are two elements that Member States have to consider in the assessment of not only water bodies, but also of the activities they plan to undertake on surface waters: "good ecological status " and "good chemical status".

“Good ecological status”(GES) is defined in Annex V of the EU WFD in terms of the quality of the biological community, the hydrological characteristics and the chemical characteristics. Due to large ecological variability among the Member States, there is a lack of common standards for the biological quality at the Community level. Therefore, the point of reference for the control is the status of the biological community expected in conditions of minimal anthropogenic impact.

A “good chemical status” is defined in terms of compliance with all the quality standards established for chemical substances at European level in order to ensure a minimum chemical quality, particularly in relation to very toxic substances, everywhere in the Community.

The ecological condition is evaluated within a five-stage classification scheme, where Class I (“High Ecological Status”) represents the reference condition and Class II (“Good Ecological Status”) the minimum quality standard to be achieved.

3.2.2. Exemptions to the achievement of the objective

In rivers waters there exists a wide range of interests and uses that continuously overlap and compete. Achieving the environmental objectives of the EU WFD may have an impact on businesses and sectors which activities heavily rely on water and contribute to the pressures on the aquatic environment. For instance, sectors like transport, water industry, agriculture and fisheries, all businesses that have discharge consents or abstraction licenses, and last but not least energy, rely on the use and extraction of either ground water or surface water and discharge of wastewater causing in this way morphological, chemical and biological modifications (Panariti et al., 2009). On the other hand, this set of uses which adversely affect the status of waters, has its own legitimacy since this uses represent important policy objectives for the national governments (EC, 2006: 8).

This brings to the divergence between objectives, the economic activity and growth on one side and the protection of the environment on the other.

However, because of the relevance of certain policy areas, the EU WFD tries to take into consideration the socio-economic factors and consequences during the decision-making process (Acreman & Ferguson, 2010: 36). The resolution of these conflicts and the concerns they rise are addressed through the inclusion in the EU WFD provisions of exemptions from the obligation to achieve a GES of the surface water by 2015 (Art. 4 Para. 3-7). The exemptions range from the allowance of temporary deterioration of the waters' status and postponement of deadlines, to the acceptance of the achievement of a good ecological potential (GEP) instead of a GES for heavily modified water bodies and modifications of water bodies because of the development of new activities.

Henceforth, I will discuss about the exceptions of the EU WFD focusing just on two of them which could be significant for the estimation of the impacts on hydropower (Article 4, para.3 & para.7). The rationale of these exemptions is important for the discussion on the conflicts rising between the EU WFD and the Renewable Energy Directive and their impact on hydropower production.

3.2.2.1. Changes to the hydromorphological characteristics of existing sites

The first exception (Article 4, para.3) is related to water bodies designated as artificially (AWB) or heavily modified (HMWB).

AWB are bodies of surface water created by human activity (Article 2, para.8) such as construction of canals for navigation, drainage channels for irrigation, harbors and docks, storage reservoir for peak demand hydropower production or waters that are directed to the reservoir via diversions.

HMWB are considered to be bodies of water that have been subject to physical alteration and substantial changes in character (Article 2, para.9) as a result of human activity such as navigation, recreation, water storage and drinking-water supply, irrigation or power generation, flood protection, and other similarly important sustainable human development activities (Article 4, para.3(a)). These activities tend to cause relevant physical alterations and hydromorphological changes to water bodies of such a scale that restoration to “good ecological status” (GES) may not be achievable even in the long-term without preventing the continuation of the specified use.

However, since these water uses provide valuable social and economic services and benefits, the concept of HMWB was created to permit for the continuation of these specified uses, allowing in the meanwhile mitigation measures to improve water quality. Indeed, the designation of HMWB and AWB is an optional for Member States but does not represent an opportunity to avoid achieving ecological and chemical objectives, since instead GEP the Member States have to ensure at least a “good ecological potential” (GEP)⁴ by 2015 (EC 2003).

Therefore, Member States are exempt from the achievement of the GES of the water bodies in case the actions addressed to achieve GES have negative impacts on the activities mentioned above or on other environmental objectives (Article 4, para.3 (a, i-v)) and, in case the beneficial objectives served by the artificial or modified characteristics of the water body cannot be achieved by other environmental friendly means, because of technical feasibility or very high costs (Article 4, para.3 (b)).

As we can see, the designation of HMWB is related to an economic need. Indeed, if a project generating modification is economically valuable, the water body might be designated as HMWB and by insuring the achievement of GEP, the project would have the possibility to continue to exist. Taking the example of a hydropower plant (HPP), if the electricity produced is economically valuable it can continue to produce, otherwise the HPP should be removed or the water body, due to the absence of one of the

⁴ GEP is defined as the best example of biological conditions in a similar water body with the same modifications (Article 2, para.22).

conditions, would not be designated as HMWB, requiring for the HPP functioning the achievement of the good ecological status instead. (Acreman & Ferguson, 2010)

3.2.2.2. New modifications to the hydromorphological characteristics

The second exemption which actually affects hydropower is related to new modifications to the physical characteristics of a surface water body and new sustainable human development activities which are exempted respectively from the achievement of a good ecological status, or from the goal to prevent the deterioration from high status to good status (Article 4, para.7) under the conditions that:

- (a) all practicable steps are taken to mitigate the adverse impact on the status of the body of water;
- (b) the reasons for those modifications or alterations are specifically set out and explained in the river basin management plan required under Article 13 and the objectives are reviewed every six years;
- (c) the reasons for those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the objectives set out in paragraph 1 are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and
- (d) the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option.

Therefore, water, use which substantially influences the morphology of a water body, can only be legitimized by documenting that it serves an overriding interest of the society as a whole. Likewise, it must also be proven that no alternative solution (technically and economically feasible) could fulfill the same needs of society with less impact. (EC 2003: 39; EC 2007)

Looking at hydropower for instance, the WFD implies that every new hydropower facility project must be evaluated against other technical solutions, which do not harm the environment and might be economically speaking more profitable (i.e. solar wind power).

3.3. Reflections on the Interaction between the Directives

The EU Renewable Energy Directive and the WFD are both European frameworks which stimulate positive environmental developments. The EU Renewable Energy Directive promotes the development of renewable sources in order to reduce the carbon footprint of Member States and seeks to integrate environmental concerns into Member State's energy policies (von Homeyer and Knoblauch 2008), whereas the EU WFD seeks to protect and enhance the status of the aquatic ecosystems. However, there is a conflict which emerges when analyzing the Directives and it is related to the impact that one of the activities contemplated by the Renewable Energy Directive, hydropower, has on the ecological status of water. For the Renewable Energy Directive, hydropower facilities represent an important instrument for achieving of the main objective, the production of renewable energy. In this perspective, the construction on new facilities and the refurbishment of old sites is incentivized and projected. On the other hand, hydropower facilities represent environmental pressures on the biological, hydromorphological and chemical physical quality elements. Therefore, from the WFD perspective, the construction of new facilities needs to be limited since it causes deterioration of the ecological status of water bodies. Here we come across with two conflicting objectives related to the European provisions that might have an impact on hydropower generation.

An important factor to underline is that the EU Water Framework Directive never mentions directly the term *hydropower*. The only expression related to the production of electricity from water is "*power generation*" and this has not been distinguished in specific types of power generations. Although the European Commission's documents on a Common Implementation Strategy for the WFD address the issue of hydropower in order Member States to better understand and implement the Directive, the deficiency of an appropriate and clear provision is at the basis of the conflict and will continue to generate uncertainties if not addressed in the future.

3.3.1. Potential impact of the conflict on hydropower production

Construction and operation of hydropower plants, although not regulated and mentioned at all in the provisions of the directive, are subject to its restrictions and rules because of the impact they have on the hydro-morphological and fish fauna alterations of water bodies⁵ (EC, 2006).

⁵ Alterations typically associated with hydropower dams are: structural barrier to the movement of aquatic fauna; altered water level fluctuations in reservoir; altered physicochemical conditions in reservoir; altered physicochemical conditions in downstream WBs; altered sediment dynamics; altered flow regime in downstream rivers (EC Technical Good Practice Paper of CIS activity on WFD & Hydromorphology, 11/2006).

Looking at the *existing sites*, as already explained in the section 3.2.2.1., the criteria and conditions to be met by a hydropower facility depend on the classification of the water body. In most cases the water body is assigned as artificial or HMWB because the WFD Article 4.3 applies. In that case the the water body quality status has to comply with the less strict criteria of the good ecological potential (GEP). Moreover mitigation measures aiming at increasing efficiency and improving the ecological conditions (such as an enlargement of existing fish bypass systems or, an increase in the amount of the ecological flow) for minimizing environmental pressures have to be adopted⁶.

However, the application of any renovation or modernization process on the existing facilities lead to additional investments and operation costs. The increase of expenditures that hydropower facilities' operators will have to sustain might make the facilities unprofitable and not economically feasible anymore (especially the small hydropower plants) in respect to other available technologies.

In this circumstance, whether other means which are environmentally superior and technically feasible do exist (i.e. wind and solar technology), the conditions of "disproportionate costs" of the WFD Article 4.3 would not subsist any longer, excluding in this way the application of the exemption on the good ecologic status achievement. This might oblige the operator of the hydropower facility either to undertake all the measures necessary to meet the GES, option that might turn out to be economically unsustainable if the mitigation measures are many, or to shut down the facility.

The mitigation measures might have an impact not only on the economic profitability of the plants but also on the technical production capacity of hydropower. One of the central requirements of the WFD call for undisturbed flow regime and the modifications of the HPPs in order to meet these requirements might signify a lower power generation⁷.

As far as the project for *new sites* are concerned, we know that the construction and operation of new hydropower facilities imply the occurrence of new modifications to the river and that the hydromorphological and biological quality elements are likely to be affected (EC 2006). Usually, the starting position of the water is more natural than the final state after the implementation of any hydropower project.

⁶ From an environmental point of view concerns pops out when thinking about the quantity of ecological mitigation measures and their ability to compensate for all the impacts and to avoid any further decrease of ecological quality.

⁷ The WFD requires for the flow regime to be based on ecological criteria and this means that the quantity of water discharge from the reservoir and its dynamics must meet the needs of the water body ecology. It is proven indeed that fluctuation in the flow of rivers and streams, as those created because of hydro-peaking⁷, have adverse effects on the residual flow which is fundamental for the habitat of the freshwater biota (Halleraker et al. 1999). Thus, the approval of a higher residual flow might lead to a reduction of hydro-peaking in large storage power plants, thus to a lower power generation.

The concerns of associations of hydropower producers (i.e. ESHA) and sector operators are related to at least two aspects.

The first one is related to the application of the principle of “no further deterioration” (WFD, Article 1(a)). An impact assessment of the hydropower facility on the ecological status is always elaborated before any concession or license is provided, and the application of this principle might declare the project as undesirable under the EU WFD and prohibit its development. (VGB 2005; ESHA 2007)

The second aspect is related to the financial uncertainty created by the long-term implementation process which the WFD is subject to review every six years. This fact represents a source of uncertainty for the operators of the sector which look for a more stable environment to plan and make their investments. Thus, additional requirements for mitigation measures and costs due to the continuous planning and consultation and review process may render the plants uneconomic, and this insecurity may endanger not only the existing operative HPPs (which are viable under the current legislation but may become unprofitable due to the WFD review) but also the construction of new HPPs (because of the economic insecurity). (ESHA 2007; VGB 2005, Landy 2008) Thus, although the WFD does not automatically ban the possibility of building new hydropower plants in the future, it is not clear yet whether the economic impact of the WFD will inhibit their development.

As we can see, the divergence of goals between energy generation through hydropower and environmental protection through WFD has been recognized and underlined by the industry for some time now (Landy, 2008: 31). Concerns are related to the fact that although hydropower serves an “overriding public interest” (the production and supply of energy which is fundamental for the social and economic development), the prioritization of environmental concerns might represent a cause of stagnancy, if not reduction, of hydropower generation hindering in this way the achievement of another important environmental goal, the increase of renewables share for the sake of CO2 emissions cut.

Given the conflicts between different policies’ goals, how can we reconcile them and what does it mean to reconcile them? Does it mean that we have to reach a balance among them or that environmental issues should have the priority during the policy-decision making?

The path towards the solution of this dilemma seems to be represented by what is known as integration of the different policy objectives. In the next chapter I will look at the Environmental Policy Integration process as the answer to the conflicting objectives that exist between environmental concerns and goals and sectoral policies.

4. Environmental policy integration

During the 1970s, the EU policy activity in many areas was characterized by intense expansion and concerns started to rise about the lack of coordination among policies and the resulting generation of negative externalities. In the same period the political debate on environmental concerns and the affirmation of sustainable development as an overriding goal of the society pushed towards the research of holistic and integrated approaches in order to address the development problems. (Briassoulis, 2005: 17)

That is how we come across the process of policy integration which scope is to reduce the conflicts existing among the objectives of different policies by facilitating the cross-sectoral coordination and integration of public policy.

With this perspective, I narrow down my analysis to the process of environmental policy integration (EPI) which stands for the incorporation of environmental concerns in the formulation and implementation of other sectoral policies⁸. Referred to as “sectoral integration” or “environmental integration”, EPI’s purpose is to integrate environmental objectives into policy decision-making and outputs (Medarova-Bergström et al. 2007: 1) in non-environmental policy sectors like agriculture, energy and transport in order to “minimize contradictions between environmental and sectoral policies by giving priority to the former over the latter” (Lafferty and Hovden, 2003: 12).

EPI has been defined as “first-order operational principle” of a broader strategy for the promotion and implementation of sustainable development (Lenschow, 2002: 6). Indeed, as sustained by Liberatore (1997: 107): “The relevance of [EPI] for moving towards sustainable development is straightforward: if environmental factors are not taken into consideration in the formulation and implementation of the policies that regulate economic activities and other forms of social organisation, a new model of development that can be environmentally and socially sustainable in the long term cannot be achieved.”

⁸ With the term “sector policy” I refer to a policy elaborated within the realms of traditionally “non-environmental” policy sectors, such as energy, agriculture, transport, tourism, industry and so on.

4.1. Discourses on Environmental Policy Integration

4.1.1. The Global Discourse

The pursuit of EPI builds on the long and vast policy debate related to the concept of sustainable development. The formulation of the concept of sustainable development started the debate on the complementarities between human development and environmental protection, influencing the policy making and generating *la raison d'être* for EPI. (Jordan and Lenschow 2006: 4) Therefore, the recognition of the need for sectoral integration lays its roots at the beginning of the 1970's in the UN conference on the environment in Stockholm (1972) and Brundtland Report (WCED 1987, Our Common Future). I report hereby two significant and self explicative statements made in the Brundtland Report in relation with EPI:

Those responsible for managing natural resources and protecting the environment are institutionally separated from those responsible for managing the economy. The real world of interlocked economic and ecological systems will not change; the policies and institutions concerned must (WCED 1987: 9).

The ability to choose policy paths that are sustainable requires that the ecological dimensions of policy be considered at the same time as the economic, trade, energy, agricultural, industrial, and other dimensions – on the same agendas and in the same national and international institutions. That is the chief institutional challenge of the 1990s. (WCED 1987:313)

Moreover, the Brundtland Commission has stimulated the principle of environmentally integrated policymaking affirming that the main economic sectors should proactively incorporate environmental objectives and concerns into their respective policies and strategies, instead of perceiving them as constraints (Nilsson, Eckerberg & Persson 2007).

Since then this idea has spread into global, regional and national systems and the recognition of the need for sectoral integration has been confirmed by numerous successive formulations, such as the one in Agenda 21, which was agreed during the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro. In Chapter 8, titled “Integrating environment and development decision-making”, it is possible to identify four important steps to improving the integration of environment and development: integration at policy, planning and management level; integration by establishing appropriate legal and regulatory frameworks; integration through the use of economic instruments; and integrated environmental and economic accounting (UNCED 1992: Chapter 8).

4.1.2. The EU Discourse

Finally there is the recognition of the sectoral integration challenge within the European Union. The EU is considered to be a global front-runner in matters related to Environmental policy integration (Lafferty 2004: 196; Knudsen 2009, 135) and as a demonstration of that stands the fact that the concept of EPI has been specifically incorporated as EU law by Article 6 of Treaty of European Community , reading:

Environmental protection requirements must be integrated into the definition and implementation of Community policies and activities [listing the full range of Community activities] in particular with a view to promoting sustainable development. (EC 2006).

Another important step is represented by the “Cardiff process”, initiated by the Luxembourg European Council in December 1997, in which the sectoral configurations of the Council developed “their own strategies for giving effect to environmental integration and sustainable development within their respective policy areas” (European Council 1998) that initially were only three, agriculture, energy and transport. (Lafferty 2004: 198; Nilsson, Eckerberg & Persson 2007)

Further, the EU “Strategy for Sustainable Development” presented to the European Council in Gothenburg in June 2001 can be mentioned. The strategy stated that:

The process of integration of environmental concerns in sectoral policies, launched by the European Council in Cardiff, must continue and provide environmental input to the EU Sustainable Development strategy, similar to that given for the economic and social dimensions by the Broad Economic Policy Guidelines and the Employment Guidelines. The sectoral environmental integration strategies should be consistent with the specific objectives of EU Sustainable Development strategy. (CEC 2001: 14)

As underlined by Jordan and Lenschow (2006: 7), in comparison to the non-binding international commitment of global organizations such as the UN and the OECD the EU has been able to make precise and legally forceful commitments in the environmental field.

4.2. Dimensions of the Environmental Policy Integration

It is possible to distinguish between the horizontal and vertical⁹ dimensions of EPI. In the next paragraphs I will briefly introduce the two concepts that have been represented graphically below (Figure 4.1).

⁹ The term “vertical” does not refer to a constitutional division of powers but as illustrated in Figure 1, it signifies that the administrative responsibility of the specific ministerial sectors consists in influencing and interacting with all the actors of that specific sector.

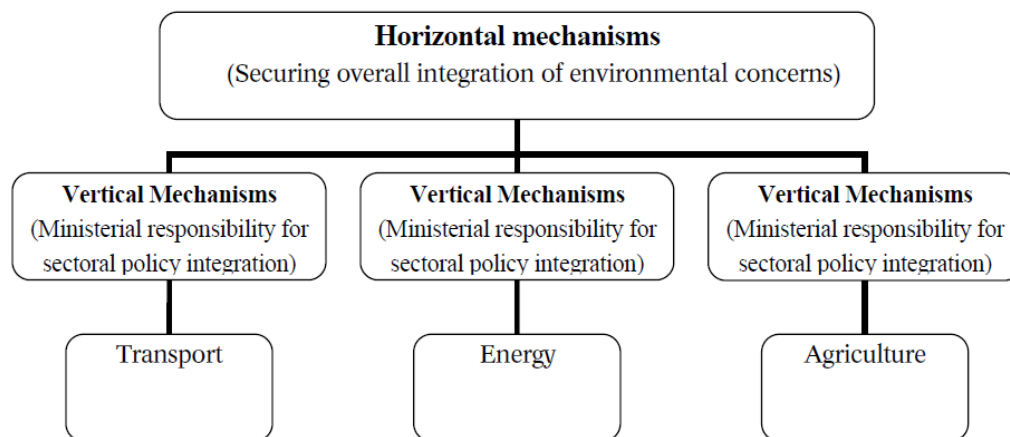


Figure 2. Environmental policy integration. Horizontal and vertical dimensions
Source: Lafferty and Hovden (2003: 14)

4.2.1. Horizontal Environmental Policy Integration

Horizontal Environmental Policy Integration (HEPI) is related to the ability and success of the central authority (which could be the government itself or a particular body) to develop a complete cross-sectoral strategy for EPI and to communicate to the different sectors what exactly it aspires and intends to achieve by EPI (Lafferty and Hovden, 2003:14). Therefore, this dimension is very much related to identifying and recognizing environmental interests and concerns as priorities and securing their overall integration in the different sectoral policies. It is in this process that takes place the negotiation of conflicts that might rise between the environmental objectives and other objectives of the society; between different sectors pursuing alternative environmental objectives; and between the possible consequences of specific environmental initiatives. (Lafferty 2004: 207)

A list of mechanisms, which should be considered as the minimum “baseline” requirements for implementing EPI at a horizontal level (i.e. *over-arching strategy* for the sectoral domain; a *national action plan* with both over-arching and sectoral targets; a *responsible executive body etc.*) has been proposed by William M. Lafferty (2004: 207).

These mechanisms are interconnected and support each other in the achievement of HEPI. For instance, *over-arching strategies* and action plans which provide the long term stability goals and targets, need to be supported by an executive body that has a clear responsibility for the overall coordination and enforcement of the processes. This will avoid the possibility of neglecting the environmental goals and giving the priority to other strong sectoral interests.

4.2.2. Vertical Environmental Policy Integration

Vertical Environmental Policy Integration (VEPI) points out the degree to which a specific governmental sector has accepted the administrative responsibility for EPI and has implemented the integration of environmental objectives into the portfolio of objectives that the specific ministerial sector pursues.

VEPI refers therefore to a “greening” of sectoral policies, to the degree environmental objectives are merged into the sectoral objectives creating the basis for the decision-making process (Lafferty 2004: 205; Larsen 2005:32).

Lafferty (2004: 205) proposes indicators for identifying whether or not a governmental ministry has made any effort in integrating environmental concerns into its activities: i.e. a *scoping report* providing a map of major environmental/ecological impacts associated with key actors and processes including the government unit itself; a *forum* for structured dialogue and consultation; a *sectoral strategy*; an *action plan* to implement the strategy, and a *monitoring programme* for overseeing the implementation process etc..

These mechanisms are suggested as baseline institutional reforms for vertical policy integration and each of them can be adopted and assessed utilizing more detailed indicators.

4.3. The Goals Conflict and EPI

Once conflicts and trade-offs are identified between sectoral policy goals and environmental concerns, a basis for the accommodation of conflicts should be elaborated. In this respect, EPI is seen as the solution to the conflict creating many win-win situations where mutual benefits can be realized. It has to be followed up and implemented at national and sub-national levels and the success of its realization depends very much on the coordination of responses from all the levels of governments (Jordan and Lenschow 2006: 9), on the politically determined commitments and on the interaction and coordination with other important sectors' provisions.

However, a current debate which lies at the core of environmental policy integration and needs to be confronted clearly regards the prioritization of environmental policy vis-à-vis other policy sectors. This is what William M. Lafferty defines “Integration as a question of priorities” when reflecting on the importance of prioritizing the environmental goals and making a clear distinction between an integration of environmental objectives into other sectoral policies and a balance of environmental objectives with other policy objectives such as economic, energy objectives and so on. The two approaches are very different. Indeed, given a conflict of specific policy objectives, the first one is neutral with respect to the policy objective that will prevail in

the integration process whereas the latter underlines the priority for the environmental dimension. (Lafferty 2004; 202-204)

Another problem related with EPI is represented by the potential conflicts of objectives that emerge as a result of efforts at increasing EPI (Edvardsson 2004; Lafferty 2004). Within the environmental context, Edvardsson (2004: 178) points out two typologies of goal conflicts: an internal conflict which takes place between two environmental objectives, and an external one which arises between an environmental objectives and a sectoral objective. An example of the first is represented by two critical parameters related to the Renewable Energy Directive, climate change and quality of water and biological diversity. An example of the latter is represented by HPPs construction for power generation and the GES of water bodies.

In the coming chapter I look at the convergence process of the country of Albania, the implementation of the two EU directives, the implications on hydropower and the possible implementation of the EPI approach.

5. Evidences from Albania

The ongoing reforms of the energy and environmental sectors in Albania are part of a bigger reform process which encompasses the European region as a whole. Being surrounded by Member States and aiming to be part of the European Union in the near future, Albania is trying to reform and modernize the main policy areas, following the guidelines of EU. As underlined by Mintorm (1997), the probability of a state to adopt a policy is positively related to the number of bordering states that have already adopted that policy. Therefore, reflecting what stated in the context of the policy transfer theory, Albanian policies and legislations are influenced by the practices and legal frameworks of neighbour countries - EU and Eastern European Countries.

In this chapter I illustrate briefly the relations between Albania and EU, touching upon two of the most significant steps represented by the signature of the Stabilization and Association Agreement (SAA) and the Energy Community Treaty (ECT). The status of the implementation process of the EU WFD and Renewable Energy Directive will be briefly reported in order to introduce the debate on the reasons and actors involved in this process. As the last point discuss about the challenge of embracing EPI in Albania for overcoming the goals conflict.

5.1. The long process towards the EU integration

The diplomatic relations between Albania and the European Union date back to the beginning of 1991 when, subsequent to the end of the Communist regime, the country started the difficult path toward a democratic development by experiencing major political, institutional, and socioeconomic changes. Since then many positive and important steps have been taken in order for Albania to be considered as a potential candidate country for EU accession such as the signature of the Stabilization Association Agreement (SAA) with the EU in 2006 and the new European Partnership adopted by the Council with Albania in February 2008. (Vurmo 2008)

The EU membership of Albania can be defined perhaps as one of the most debated matters and most desired goals in the national public and political discourse. It has represented in the last two decades the strongest incentive for all the institutional and structural reforms toward the democratization process of the country.

As I stated above, one of the most relevant steps in the integration process of is represented by the signature of the SSA in June 2006 and its subsequent ratification and entrance into force in April 2009. Through this Agreement, Albania becomes an associated state of the European Union and confirms its status as a potential candidate for membership of the European Union. Finally, on 28 April 2009, Albania formally applied for EU membership. (Council of Ministers, 2008; Vurmo, 2008)

Another important moment for the relations with EU and the other countries in the region is represented by the constitution of the Energy Community with the aim to facilitate the creation of a common, competitive energy market in the region (Mihajlov 2009; Thomaidis et al. 2008).

5.1.1. The Stabilization Association Agreement

The SAA has been defined as the instrument which will enable gradual integration of Albania into the European Union. By setting out the terms and conditions for its accession, it helps the country to accomplish the standards that will guarantee its status as a candidate state and the subsequent association with the European Union¹⁰.

Among the different objectives stated in Art. 1 of the SAA, one objective is particularly relevant for this thesis: the commitment by Albania to approximate¹¹ its legislation to that of the EU. The approximation of the legislation is expected to take place in two phases of five years each, following a detailed program which is updated considering the realization of objectives as well as changes in Community law itself. (Council of Ministers 2008; SAA 2006: 10) At present, the governmental structures dealing with the process of European Integration are pretty much developed and are headed by the Ministry of European Integration¹² and the Council of Ministers.

5.1.2. The Energy Community

The Energy Community in South East Europe, created in 2005, is constituted by the European Commission and by the signatory countries of the Energy Community Treaty (ECT): Albania, Bulgaria, Bosnia and Herzegovina, FYROM, Serbia, Montenegro, Romania and the UNMIK Kosovo as contracting parties on the other hand (ECT 2005)¹³. The goal of the Energy Community is to establish a common competitive energy market in South East Europe, based on the standards of the common European energy market. (Thomaidis et al. 2008: 64)

¹⁰ This Agreement generates the indispensable framework for strengthening the rule of law, increase its effectiveness, and assist institutional and economic reforms necessary for Albania. (UNDG 2009, Council of Ministers 2008)

¹¹ In the context of EU integration, the terms "approximation" or "harmonization" of law refer to the process of adapting the legal systems of associated countries to the *acquis communautaire*. (Astone, 2007)

¹² MoEI is responsible for the coordination, monitoring and implementation of the process of approximation with EU *acquis communautaire*. (Rakaj 2010; Vurmo 2008)

¹³ The creation of the Energy Community was the culmination of a long process the European Commission had started with the aim of creating a common and competitive regional electricity market.

The ECT is a legally binding instrument which imposes to the Parties the obligation to adopt a series of measures that will drive them towards a more efficient organization of the energy system. One of the most relevant measures is related to the adoption and implementation of the *acquis communautaire* on energy, environment, competition and renewables (ECT Article 2(a)). Moreover, the Energy Community stresses the importance of promoting renewable energy and energy efficiency as they contribute to climate change mitigation through the reduction of GHG emissions, security of supply, sustainable development, economic growth, competitiveness and regional and rural development. (ECT 2005)

5.2. Convergence of Regulatory Patterns – why, who and how?

The approximation of regulatory patterns is taking place in all EEC countries which aspire to become EU member.

5.2.1. Drivers behind the convergence (driving forces)

Focusing on the sectors of energy and environment it is possible to distinguish different inputs of change and convergence in the case of Eastern European Countries.

First, we can look at the simultaneous implementation of international or multilateral agreements which addresses countries toward the adoption of a similar legislation. The ECT and the Kyoto Protocol are an example. However, another important driver of convergence is represented by the diffusion of existing and already practiced ideas, approaches, institutions and instruments.

Looking closely to the environmental protection, Tews et al. (2001) sustain that in the Eastern European countries there has been a development of the governments' capacities to deal with environmental problems and a key factor in this progress has been the adoption of similar legislation in many sensitive areas such as water, air protection, energy and waste management. Beside the international agreements and the policy transfer theory, these similarities can also be explained by the fact that countries in the same region share the same environmental problems such as surface water or ground-water pollution, urban air pollution and waste disposal. It is this communality of problems that drives them towards the application of the same policies and solutions.

In the case of Albania, all of these drivers can be counted. Indeed, Albania is Party in several important international conventions and agreements such as the Kyoto Protocol (where it holds the status of the Non-Annex 1 Party), the Ramsar Convention on Wetlands, the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters and many others (EBRD 2009, 50).

Second, as explained by the policy transfer theory, Albania is influenced and inspired by policies and legislations elaborated in the energy and environment sector by the neighboring countries such as the EU Member States, or the other EEC (Jänicke, 2008).

Both the interviews I took in Albania at the Ministry of European Integration (MoEI) and at the European Delegation Office Albania has turned out useful in understanding the dynamics of the transfer of policies between Albania and EU, and the gradual harmonization process. The MoEI has as a main goal the technical management and coordination of the Integration process of Albania in the European Union through the approximation of the national legislation to that of the Community and the development of integration policies. One relevant task of MoEI consists in assessing the compatibility of draft legislation proposed by line ministries and other central institutions to the Community, and indicating the degree of approximation. (MoEI 2010; European Delegation Office Albania 2010).

Third, the adoption of similar policies and solutions is driven by the similarity of environmental problems. An example is given by the pollution and degradation of transboundary waters. Defined by the European Commission as “a land of shared waters”, the European Union has 60% of its surfaces areas in transboundary river basins which cross at least one national border (European Commission (DG Environment), 2008: 1). As far as Albania is concerned, the transboundary co-operation and integrated water management are particularly important since about 50% of the territory of the country is within international river basins, and most importantly, about 35% of its water resources come from neighboring countries¹⁴. For this reason the country ratified in 1994 the Helsinki Convention¹⁵, which obligations have been now implemented in the WFD since their adoption¹⁶ by the EU (Consideration no. 35 Preamble of the WFD). Interesting from this point of view have been the interviews taken at the Albanian Agency of National Resources (AKBN).

Last but not least, the motivation to adopt others’ solutions (especially those promoted by international actors) may lay not only in the efficiency-improvement needs but also in the fact that the orientation towards affirmed “models” on the international scene provides an external source of legitimacy in the national context for policy-makers decisions as well as a way of establishing in the international arena. (Radaelli 2000: 28)

5.2.2. Channels of Transfer

The main mechanism by which the transfer of ideas and practices occurs is represented by trans-national communication which is valid also for the spread of environmental and energy policy innovations. (Kern 2000) There is a multitude of “foreign agents and

¹⁴ Currently, the country is implementing several environmental projects in transboundary lakes: Ohrid Lake jointly with the FYR of Macedonia, Prespa Lake jointly with Greece and the FYR of Macedonia and Shkoder Lake jointly with Serbia and Montenegro (WB 2003; Mylopoulos, 2008) and has offered its support for the achievement of a single basin-wide Danube River Basin Management Plan coordinated management plan (ICPDR, 2004).

¹⁵ Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes.17.03.1992.

¹⁶ Council Decision 95/308/EC. OJ L 186, 5.8.1995, p. 42.

institutions as sources of policy ideas, policy design, and implementation” involved in the “complex trend towards the internationalization of policy regimes” (Jessop 2004, 66).

Especially in the field of environmental policy (but not only) such communication channels exist primarily in the form of international organizations such as the United Nations, the World Bank or the OECD (which have placed environmental issues on their agenda), trans-national environmental networks such as the International Council of Local Environmental Initiatives and the Global Ecolabelling Network as well as various networks of environmental non-governmental organisations (NGO) like Friends of the Earth, the World Wildlife Fund, and Greenpeace. They all have an important role in the international communication and diffusion of ideas, approaches, problem perceptions and practices in this policy field (Kern, Jörgens and Jänicke 2001: 9).

In Albania, many of these actors have been operating in the last twenty years in several sectors. Especially in the energy and environmental sector a big influence and support have been given by the the World Bank and the European Bank for Reconstruction and Development (EBRD). (External Observers 2010)

Given the influence of external actors, the patterns of policy transfer are influenced very much by the national capacities of adopting changes and innovations. Thus on one hand we have to look at the specific political, economic, societal and institutional characteristics and on the other hand at the national need and demand for new (alternative) approaches to problem-solving. Beside this, the demand for innovation can also be shaped and induced by the existence of international “best practices” or “models”. (Kern, Jörgens and Jänicke 2001: 8)

Looking at the EEC countries in general and Albania in particular, we can say that the political, economic and societal transition and the need for a new “model” at the beginning of the 1990’s has very much helped in the transfer process with regard of policy stiles, administrative and regulative structures but also of technological diffusion and know-how. Of course changes have not occurred simultaneously and at the same speed for all of these countries, since in their similarity they are also very different among each other, and nowadays different degrees of success can be observed. The degree of convergence of these countries toward the EU and the status of candidacy for the EU accession process is an example of this diversity. (MoEI 2010) Indeed, Albania is now waiting to receive the candidacy status that other EEC such as Croatia and FYR of Macedonia have already obtained, in the mean time that countries like Poland, Romania and Bulgaria are already members of the EU.

Another “filter” of policy innovation and demand for alternative solutions the way the problem is perceived by the public opinion, and the power of pressure groups. (Kern, Jörgens and Jänicke 2001: 8)

Looking at the environmental and energy policies in Albania, the pressure exercised by the public opinion is still very weak although the progress made in the last decade. (External Observers 2010)

On the other hand, the powerful role of industry, service and transport sectors with high energy demands is more represented in the current energy policies while the environmental protection and EPI are influenced mainly by the pressure of the international community. (EBRD 2010; WB 2010; National Water Council 2010)

5.3. Status of the approximation in Albania

As we come to see, there are many drivers of convergence to other “models” and practices. Although Albania has started the approximation process to the EU legislation, a gap analysis on the status of the legal transposition of the WFD and Renewable energy Directive indicates that these frameworks have not yet been fully transposed into the current legislation (Sheridan, 2008; Commission of European Communities, 2009).

At the moment, the Albanian frameworks for the energy sector and water management are provided by the Law on Power Sector¹⁷ and the Law on Water Resources¹⁸ and the Water Supply and Waste Water Sector Strategy.

The Law on Power Sector is the primary law governing the energy sector in Albania and represents also the primary legislation that includes provisions relevant to the implementation of the Renewable Energy Directive. According to this law, the Council of Ministers is the institution in charge of issuing the authorization permits for the construction of new generation capacities, renewable energy sources¹⁹.

The Law on Water Resources and the Water Supply and Waste Water Sector Strategy (Panariti et al., 2009) encompasses among many other decisions related to water protection and management, the River Basin Principle, provisions on the preparation of a National Water Strategy (NWS)

¹⁷ Law on Power Sector No.9072/2002; amended in 2009

¹⁸ Law on Water Resources (LWR, No. 8093 dated 21.3.1996 as amended by Law 8736 of 01.2.2001.)

¹⁹ Article 39 of the Law on Power Sector contains an important provision which stipulates that new electricity producers with installed capacity higher than 100 MW are obliged to produce electricity from RES not less than 2% of their total generation.

5.4.Potential consequences for the Albanian hydropower production

Before talking about the impact of the conflict emerging between EU directives on the hydropower generation in Albania, I will introduce the main features of the country which are relevant for the understanding of the importance of the choice of the country.

The Albanian Context

The republic of Albania is situated in the south eastern part of Europe on the western seaboard of the Balkan Peninsula. With a total area of 2.9 million hectares (ha) and a population of 3,170,048 (INSTAT 2008; EC 2009), Albania is one of the smallest countries in Europe.

The country is endowed with an extensive hydrographical territory (44.000 km²) and a hydrographical system consisting of eight main rivers (Drini, Buna, Vjosa, Semani, Mati, Shkumbini, Ishmi and Erzeni) and 152 tributaries and large streams which have a southeast-northwest flow, mainly oriented towards the Adriatic coast (Ose 2009: 10).The average perennial total inflow of Albanian rivers is about 1,245 m³/s and the water conveyed to the sea is about 40 billion water m³/year. With full use, the potential annual generation may reach up to about 15,000 GWh of energy. Consequently, Albania is seen as a country rich in water reserves where hydropower potential can still have an important developmental role. (AKBN, 2010)

The electricity sector is the main sub-energy sector and currently it totally relies on hydropower. Nowadays, out of a total generation installed capacity of 1,557 MW, a total of 1,433 MW which represents 92% of the capacity is hydro based, 26 MW of the capacity is based on small hydro power plants²⁰ and only 98 MW is Thermal power based²¹ (ERE, 2010: 11). The installed capacity is distributed among 8 plants of different installed capacity which goes from 500 MW and 600 MW for Fierza and Koman, to 5 MW for Bistrice and Lana-Bregas.

The utilization of small hydro power (SHPP) technology has not yet been so heavily exploited, and for this reason the national energy strategy foresees an increase in small hydro power production up to 3.3% in 2017. In terms of possible new locations, there is a potential to install a total capacity of 140 MW in 100 locations, and for 20 of these locations it has already been awarded the relative concession. However, no SHPP has been constructed in these locations up to date. (Kosec et al. 2009)

²⁰ 32 out of 38 small hydropower plants operate on concessionary contracts, with an installed capacity of 24,4 MW; 16 of them have been privatized and operate with an installed capacity of 2,047 MW; and 22 of them are owned by the State with an installed capacity of 11,0 MW. In the past, the purpose of their construction was the energy supply of the remote mountain areas.(AKBN, 2010)

²¹ The construction of the new Vlore TPP has been finalized in late 2009 (ERE, 2010).

Electricity production in 2009 has been realized 100 percent from hydropower plants. It amounts to 5,200 GWh and it is composed by 5,110 GWh produced by the public company Kesh-gen and 89.3 GWh provided by the private sector.

As far as the electricity demand is concerned, the country has experienced a rapid economic growth in the last two decades and a consequent large and ever-intensifying demand for power (growth rate of 6%), accompanied by high levels of electricity imports (METE, 2007: 14).

Although the consumption of the private sector is only 33.6% of the total consumption, while the biggest share is represented by the household consumption (54.9%), it is expected to grow in the future because of the developments in the service and industrial sector (ERE, 2010: 24). This structure shows in a synthetic way the stage of the economic and industrial development of the country is still far from the level of the most developed countries. For this reason, the Albanian government has as a main priority the development of technically and economically feasible energy sources, in order to sustain the increasing energy demand and economic development of all regions in the country. Moreover, the focus of energy sector policies has been set on the development of renewable energy resources (hydro, wind, solar) in order to meet the requirements set by the RES-E directive of the EU, and in particular, on new hydro capacity (AKBN, 2007).

Consequences for the hydropower sector

Albania is a rich country in terms of water and more importantly, is a country relying totally on hydropower for its electricity needs. At the moment, the Albanian government is trying to adopt the WFD but it is still far from starting implementing and there is no legislation at national level that has a significant direct impact on the uptake of hydro resources for power generation.

Furthermore, the eligibility of new hydro developments and upgraded plants is stimulating an increased interest and activity in Albania, not only from national companies but also from foreign investors and big hydropower companies such as Verbund (Austria), Statkraft (Norway) and EVN (Austria) carrying capitals and experience, two indispensable ingredients for the development of large projects.

If Albania were to implement the WFD today, probably the country would encounter tremendous pressure and challenges since the whole electricity sector is based on the sole resource of hydropower.

Moreover, if the prospects of the WFD impact on hydropower (exposed in chapter 3) were right, the adoption of EU standards might become a barrier to the development of new hydropower schemes. This would hinder not only the achievement of the

renewable energy targets but also security of supply and economic development of the country.

Therefore, if Albania were to implement the WFD, on one side this would signify postponing the implementation of the directive (taking the risk of being fined or refused the EU candidacy status) while trying to diversify its energy sources, by possibly introducing in the energy mix other renewable sources beside the fossil fuels.

On the other side Albania might adopt all the suggestions given by the WFD on the existing HPPs, while being probably postponed or rejected the new project. In this second case, the only way for the country to meet the national energy demand would be to switch to fast built thermal power plants, which would represent a problem themselves because of a higher level of greenhouse gas emissions.

As we can see, the introduction of EU environmental legislation might generate conflicts in Albania between environmental goals and energy sector goals if an environmental integration policy approach is not adopted.

5.5.EPI in Albania

As underlined in chapter 4, EPI's purpose is to integrate environmental concerns into policy processes and outputs in order to strengthen the environmental dimension in sectoral decision-making.

The concept of EPI might be particularly important for countries in transition such as Albania and the other CEE countries because it offers an innovative approach to policy-making. Indeed, it can support governments in developing integrated policies for sustainable development with an emphasis on environmental protection.

In EEC, EPI is still "in maturation" and important elements which contribute to the "transfer" and realization of EPI are the EU accession process through the adoption and implementation of legislation, the political willingness and commitment, and the bureaucratic and administrative culture. (Medarova-Bergström et al. 2007: 8)

The WFD and the Renewable Energy Directive both aim to integrate environmental concerns into energy policies (von Homeyer et al. 2008) Although these directives contain legally binding targets, they leave the decision on how to reach these targets to the different countries.

Looking at Albania specifically, the country is trying to implement the EU Directives too through the adoption of national legal provisions.

Since the country has a strong reliance on hydropower, the influence of the EU Renewable Energy Directive combined with the "technological path dependence"

toward hydropower, provides a powerful driver for Albania to increase the share of renewable energy sources through hydropower.

Indeed, the Albanian government aims to invest more on hydropower by restructuring the old HPPs and by building new small and large HPPs. since there are still commercially attractive and environmentally acceptable sites that have not been used. 50 concessions for small HPP (≤ 15 MW) with a total installed capacity of 140 MW have been agreed and are under construction nowadays in several regions, while other has been requested. Furthermore, at least seven projects for large HPPs have been presented, for a total installed capacity of around 914 MW, and some of them are close to the finalization of the tendering process. (ERE 2010; METE 2010).

However, as we come to see, hydropower can create adverse effects to water bodies. Here we are in front of a case where EPI can produce negative environmental effects at the national level because of the flexibility left to MS to fulfill their obligation. However, these effects depend on particular national characteristics, such as the presence of a well established policy community which creates a bias in favor of the interests represented by this group (hydropower producers).

6. Discussion and Conclusion

In this thesis I aimed to contribute to the discourse on Environmental Policy Integration (EPI) by analyzing the conflict that arises between the goals of policies behind the WFD and the Renewable Energy Directive in relation to hydropower.

The starting point of this thesis has been the consideration of the existence of a conflict between the WFD and the Renewable Energy Directive.

Although both EU directives are estimated as frameworks which stimulate positive environmental developments through the integration of environmental concerns into sectoral policies, the conflict generates exactly from provisions of the Renewable Energy Directive on the use of renewable energy.

After analyzing the legal provisions of the Directives one important element can be underlined and considered as a source of this conflict: the lack of a clear definition of hydropower in the WFD. The deficiency of an appropriate provision is, in my opinion, at the basis of the conflict and will continue to generate uncertainties regarding the implementations of the directives if not addressed in the future.

Given the conflicts between different policies' goals, a question arises in relation to way these goals can be reconciled. The solution of this dilemma seems to be represented by what is known as integration of the different policy objectives, and in this specific case the integration of environmental objectives and concerns into the energy sector policies. A large debate has been taking place regarding the prioritization of environmental objectives vis-à-vis those of other policy sectors. This debate is strictly related to the need to define what is meant by reconciliation. Does it mean, as highlighted by Lafferty (2004: 202) to give a priority to environmental goals or does it mean that a balance has to be reached among all goals during the policy-decision making? The two approaches are very different and very distant are their implications.

From the analysis of the conflict between the two directives, another important issue has risen in relation to the environmental policy integration. It is represented by the conflicts of objectives that emerge as a result of the efforts at implementing and increasing EPI (Lafferty 2004). The case of the WFD and the Renewable Energy directive seems to fit very well in the discussion of the problem. This is due to the fact that conflicts that generate between them can be seen as a result of the application of EPI to the energy sector. Indeed, because of the implementation of the Renewable Energy Directive a conflict arise between two critical environmental objectives: mitigation of the climate change on one side and protection of the quality of water and biological diversity on the other (what is defined as internal conflict from Edvardsson (2004)). Beside this, the conflict between generation of hydropower and water quality lies (defined as external conflicts).

From my point of view, further research is needed in order to assess and solve the conflicts that might rise because of EPI's application. This research should be done keeping in mind that it is still not clear whether the priority should be given to the environmental objectives or we should seek to reach a balance among environmental and different sectoral objectives.

Reconnecting to the prioritization issue, in this case it is problematic defining and setting the "right of way". Furthermore, the final outcome of the EPI depends very much on the willingness of Member States to implement it.

Indeed, although the two Directives contain concrete and legally binding targets for Member States, the latter remain free to decide how to achieve these targets. This means that the application of EPI, the priority of environmental concerns, and the management of emerging conflicts are responsibility and depends on the political willingness of Member States. The solution of trade-offs between different sets of environmental concerns depends therefore on how social and economic concerns are taken into consideration, and this in turn depends on whether the decision-makers employ a medium or a long-term perspective, and whether they perceive relevant changes within local, national or global context.

Last but not least, the analysis of the conflict between the EU Directives and the implementation of EPI have been extended to Albania, in order to assess how non-EU Member States might be affected by these issues. The concept of EPI might be particularly important for countries in transition such as Albania and the other Eastern European countries because it offers an innovative approach to policy-making. Indeed, it can support governments in developing integrated policies for sustainable development with an emphasis on environmental protection.

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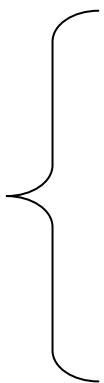
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Appendixes

Annex I List of interviewees - Tirana (Albania) 9 – 17 March 2010

Nr	Institution	Name of the person	Position	Contact information	Group
1	National Water Council –	Enkelejda Gjinali	Counselor of the First Minister	Email: egjinali@km.gov.al Mob: 00355682027713	T/P
2	Ministry of Economy Trade and Energy	Fatjon Tugu	Director of Energy Policies	Email: ftugu@mete.gov.al Office: 22222 45 ext 74180	P
3	STATKRAFT Albania	Bredo Erichsen	Managing Director	Email: Bredo.Erichsen@statkraft.com Office: +355(0)42221666	S
4	DEVOLL HYDROPOWER (Statkraft&EVN)	Jan Daleng	Chief Operation Officer	Email: jan.daleng@devollhydropower.al	S
5	ENEL SpA	Michele Porri	Business Development – International Division	Email: Michele.porri@enel.com Office: 00390683054339	S
6	ENEL SpA	Valerio Usella	International Regulatory Affairs – Regulatory and Environment	Email: valerio.usella@enel.com Office: 0039 06 83052431	S
	Electricity	Agim	Licenses and		

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8	Ministry of Integration	Greta Rakaj	Legislative department	Mob. 00355675688254	P
9	European Delegation Office Albania	Antoine Avignon	Sector Manager – Environment and Energy	Email: delegation-lbania@ec.europa.eu Office: 003554222 8320 Mob: 00355692079911	EO
10	World Bank	Gazmend Daci	WB Energy Projects	Email: gdaci@worldbank.org Office: 0035542280650 Mob: 00355692079911	EO
11	National Agency of National Resources (AKBN)	Dael Dervishi	Legal Director	Email: dael.dervishi@akbn.alb.gov Office: 0035542235834	T
12	National Agency of National Resources (AKBN)	Marjana Coku	Director of hydro energy	Email: m.coku@akbn.alb.gov Office: 0035542242998	T
13	National Agency of National Resources (AKBN)	Nikolin Prifti	Head of Exploitation and monitoring department	Email: n.prifti@akbn.alb.gov Mob: 00355672051856	T
14	EBRD	Donald Mishaxhi	Principal Banker	Email: mishaxhid@ebrd.com Office: +355 4 223 2898	EO



External Observers = EO	3#
Technicians = T	4#
T/P	1#
Bureaucrats/Politicians = P	2#
Stakeholders = S	4#