

## **Economic Commission for Europe**

### **Meeting of the Parties to the Convention on Environmental Impact Assessment in a Transboundary Context**

#### **Sixth session**

### **Meeting of the Parties to the Convention on Environmental Impact Assessment in a Transboundary Context serving as the Meeting of the Parties to the Protocol on Strategic Environmental Assessment**

#### **Second session**

Geneva, 2–5 June 2014

Items 4 of the provisional agenda

#### **Seminar on wind and hydro energy**

### **WORKSHOP ON RENEWABLE ENERGY**

#### **Wind and Hydro-Energy**

Lead country: Poland

with contributions from: Germany, Slovenia and Ukraine

3 June 2014, 15:00-18:00

MOP 6 / MOP 2, Geneva,

### **I. PROVISIONAL PROGRAMME**

**Introduction** – *Moderator, Mr. Jerzy Jendrośka Ph.D., Poland, (10 min)*

#### **PART I - WIND ENERGY**

- 1) **Maritime Spatial Planning for an effective implementation of offshore wind farms and the grid connections – Spatial Offshore Grid Plan for the German Exclusive Economic Zone of the North and Baltic Sea.** How are the grid connections for offshore wind farms planned? How does Maritime Spatial Planning together with SEA facilitate and simplify the development process of wind farms and grid connections? How is crossborder participation with respect to the SEA carried out?

- *Ms. Anna Hunke, BSH, Germany (15 min)*

*Questions to the speaker (10 min)*

- 2) **Offshore wind farms impact on biodiversity and shadow uncertainty.** Problems with research methodology, e.g. gathering data concerning fauna and the migration corridors, source of available data basis.

- *Mr. Lukasz Rejt Ph.D., General Directorate for Environmental Protection, Poland, (15 min)*

*Questions to the speaker (10 min)*

- 3) **Landscape analysis for wind energy on the basis of transboundary EIA procedures.** The identification of the most problematic issues related to the landscape analysis performed for transboundary EIA purposes,

e.g. What kind of methodology is used? Is there any legal background? How to influence impartiality of these analysis? Good practice and experience.

- *Ms. Paulina Filipiak, General Directorate for Environmental Protection, Poland, (15 min)*

*Questions to the speaker (10 min)*

- 4) **Practical experiences of Polish regional authority responsible for conducting the EIA for offshore wind farms, also in a transboundary context.** The most problematic and questionable issues of the procedural and substantial nature, e.g. What kind of issues should be included in a scoping decision? Should the grid connections be treated as a part of wind farm (one project)? How to handle with lack of availability of data regarding potentially affected environment? What kind of methodology is used to assess possible impacts on the individual parts of the environment, in particular on the landscape and fauna.

- *Ms. Hanna Dzikowska, Regional Directorate for Environmental Protection in Gdańsk, Poland (15 min)*

*Questions to the speaker (10 min)*

## **PART II - HYDRO-ENERGY**

- 5) **Good practice example for implementing Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context on two Slovenian National Plans for Hydropower Use on the Lower Sava in Brezice and Mokrice.** How to deal properly and effectively with application of the SEA Protocol in order to facilitate the implementation of strategic documents regarding use of hydropower?

- *Ms. Vesna Kolar-Planisnic, Ministry of the Environment, Slovenia (15 min)*

*Questions to the speaker (10 min)*

- 6) **Environmental Problems of hydro energy in Ukraine.** What are the impact factors of hydropower facilities on the environment? What kind of conflicts of interests of water users and environmental impacts of hydropower development might arise? What are the environmental problems resulting from hydraulic construction of hydropower facilities?

- *Mr. Igor Markelov, Ministry of Ecology and Natural Resources, Ukraine (15 min)*

*Questions to the speaker (10 min)*

## **II. BACKGROUND NOTE**

### **PART I - WIND ENERGY**

#### **1) Maritime Spatial Planning for an effective implementation of offshore wind farms and the grid connections – Spatial Offshore Grid Plan for the German Exclusive Economic Zone of the North and Baltic Sea**

The Spatial Offshore Grid Plan is a new planning instrument in Germany. Within the hierarchy of different planning and permitting tools of offshore activities the Spatial Offshore Grid Plan is situated on a medium level between the Maritime Spatial Plan for the German Exclusive Zone and the individual permitting procedures (approval) for a certain electricity subsea cable.

In December 2009 the Maritime Spatial Plan for the German Exclusive Economic Zone in the Baltic Sea came into force. The objective of this plan is to regulate and harmonize conflicting interests and beneficiary claims on the EEZ for example by shipping, fishing, wind energy and scientific research.

The Spatial Offshore Grid Plan (Grid Plan) specifies the framework set out by the Maritime Spatial Plan. It identifies clusters for offshore wind farms suitable for collective grid connections. In addition the sites for platforms, routes and corridors for subsea cables for the offshore wind farms and for crossborder cables are determined. In order to ensure a systematic planning approach the cables and platforms are planned on the basis of planning principles (e.g. principle of bundling and parallel cable routing) and standardized technical rules (e.g. technology of alternating current).

Consultations with national and international authorities and stakeholders were carried out, especially to ensure consistency with terrestrial grid planning and other public/private interests. In this respect an extensive Strategic Environmental Assessment (SEA) to assess the impacts of the Plan's implementation was carried out. National and international authorities, stakeholders and the public were given the opportunity to comment on the first and the revised draft of the Grid Plan as well as on the structure and the draft of the Strategic Environmental Assessment Report (SEA Report). International consultation was carried out following the requirements of the ESPOO Convention.

The SEA concludes that, according to available knowledge, and in strict compliance with prevention and mitigation measures (e.g. avoiding routing through protected areas) no significant effects on the marine environment are expected by the implementation of the Grid Plan. Especially the assessment of alternative routes and sites supports the Environmental Impact Assessment on project level and aims at accelerating permitting procedures. Due to the fact that not all project specific conditions were known during SEA, more investigation is needed on project level and must then be considered in the update of the Grid plan and the SEA.

#### **2) Offshore wind farms impact on biodiversity and shadow uncertainty.**

To meet targets for a reduction in greenhouse gas emissions several countries within the European Union are encouraging the development of renewable energy generation such as offshore wind farms (OWFs).

However, there are concerns about the potential for OWFs to negatively impact wildlife including fish, marine mammals and birds through effects such as noise pollution, displacement or direct collision.

It is commonly accepted that estimating the impacts of OWFs on species and populations is often difficult and imprecise. The main question arising concerns the complex and coherent methods for assessing the possible negative impact on living components of natural environment.

Analysis of more and more numerous papers clearly shows a need of additional field data collected during both pre-construction surveys and post-investment monitoring to more precisely assess the possible negative impact. As the industry expands globally, improving the evidence base and reducing the uncertainty surrounding these assessments will enable more informed decisions to be made about OWFs, benefiting both the renewable industry and statutory national conservation advisors and regulators.

### **3) Landscape analysis for wind energy on the basis of transboundary EIA procedures**

The sources of renewable energy production, including wind power, are essential for future energy independence. As a new feature in the landscape, wind turbines and their “landscape integration” are the subject of much discussion.

According to the definition given in the European Landscape Convention landscape is an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors. The landscape is our living natural and cultural heritage, urban or rural, on land or in water. Each person perceives the landscape individually, in its own and specific way. Nevertheless, it is commonly known that the more natural and integrated landscape is the more satisfied observers are.

It is going without saying that the wind turbines can not be hidden. Their large size combined with the very large areas required for the construction of wind farms makes them particularly specific and conspicuous features in the landscape. This usually leads to public concerns and fears while EIA for planned project is carried out. Therefore, it is noticeable that while new wind farms are planned the public actively participate in the EIA procedures mostly being against of wind farms construction. The specific situation is in the case when new location of wind farm is in close vicinity to the state border and then public of the affected party is being involved in the transboundary EIA procedure. In a such situation we may observe strong resistance of public mainly due to the visual impacts of large size wind farms.

So far, Poland have participated or still is being involved in several transboundary EIA procedures for onshore and offshore wind farms, both as the affected Party and Party of origin. On the basis of analysis of the existing EIA reports it might be concluded that in the most cases the landscape analysis are performed. Nevertheless the landscape is treated marginally and briefly. This happens particularly due to the lack of unified methodology of landscape analysis as well as existing no specific legal framework that would constitute the landscape approach for wind farms. Moreover, in most cases the experts, who prepared the EIA reports, emphasize that the assessment of visual impacts of the wind farms is of the subjective nature and therefore it could not be clearly assessed if the impacts are positive or negative. What is more, the serious problem arises especially in the case when planned wind farm is likely to have a transboundary impacts on the territory of another Party. It happens because of the fact that each Party has different approach and methodology of assessing the visual impacts.

#### **4) Practical experiences of Polish regional authority responsible for conducting the EIA for offshore wind farms, also in a transboundary context.**

In Poland investors are preparing the first offshore wind farms in the Polish Exclusive Economic Zone. These investors are important players in the Polish Energy market. These projects have a complicated organizational structure. They require large financial support, and take a long time to be prepared and realized.

These aspects involve economic risk, and are inter-dependent on the changing situation in the Energy market. The first stage activities of the investors should be trustworthy, and in accordance with the environmental rules, must secure public and financial acceptance. Connected to the correct choice of location is the selected technical solution which will prove to be the best over time, as the project is realized. All these matters will be verified during the first phase of preparation – during the Environmental Impact Assessment (EIA) – in the meantime after all environmental conditions have been set, the possibilities for realisation of the investment in the chosen location will be tested.

Environmental conditions, mentioned above, will be based on various tests performed in situ, to judge the scope and technical solutions of the investment. The scoping phase, which determines the necessary investigations of the environment, happens before the investor has the required data to prepare the report. The period of data collection is long and expensive, depending on ships, laboratories, and the changing seasons. These factors mentioned above cause difficulties with the specification of the subject of the project and its scope. This can affect the evaluation process and cause additional modifications.

## **PART II - HYDRO-ENERGY**

#### **5) The good practice example for implementing Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context on two Slovenian National Plans for Hydropower Use on the Lower Sava in Brezice and Mokrice**

On the basis of the Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo) and the SEA Directive, the transboundary procedure for two National Spatial Plans for hydropower plants in Brezice and Mokrice was finalised between Slovenia and Croatia and after assessed according to the best practice recommendation. The process was managed via points of contacts/focal points for the purpose of the Espoo Convention.

The article presents the two processes as positive experiences in the region. Firstly, the process has been managed at the border, which is under dispute 1[a]. The notification with information on the proposed plan and possible transboundary effects, the nature of the decision, and the indication of time for response were sent and a response received in the proposed time of one month. The SEA report was send and also presented to the public and institutions for comments. Two environmental commissions were established and consulted on the following: the state of the environment, sediment, cumulative effects, erosion and underground water,

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1[a] The border is currently in the process of Arbitrage on International court

possible alternatives, including a non-action alternative, and possible measures to mitigate significant adverse transboundary impacts. In the case of Mokrice, the appropriate assessment in line with Article 6(3) of the Habitat Directive was also prepared. Both parties agreed on a public hearing and presentation on both sides of the border in an adequate timeframe. At the end of the process, the mitigation measures for reducing impact were agreed and included in the final decision.

The case shows the importance of the agreement on each stage in the transboundary SEA process to fully implement the provisions of European and international law.

#### **6) Environmental Problems of hydro energy in Ukraine**

Impact factors of hydropower facilities on the environment were analyzed. Conflicts of interests of water users and environmental impacts of hydropower development in Ukraine have been identified. Environmental problems resulting from hydraulic construction of hydropower facilities with other problems has been demonstrated. Real environmental problems in the region of the NPS and pumped storage reservoirs used for hydropower were illustrated by Tashlykская South Ukrainian Energy complex.