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Environmental impact assessment in a transboundary context particularly about nuclear energy related activities

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The United Nations economic Commission for Europe (UNECE) set up in 1947 by UN-ECOSOCwhich is in Geneva has been a very active UN body for acting in drafting multilateral environmental law treaties. UNECE has 56 countries members including north America. European Union is a party since 1997. It was inside UNECE that were adopted several conventions on transboundary issues: in1979 the convention on longrange transboundary air pollution with its 5 protocols, in 1992 the convention on the transboundary effects of industrial accidents and the convention on protection and use of transboundary watercourses and international lakes.

One year before the 1992 Rio conference, was adopted in Finland the Espoo Convention signed on 25 february 1991 on environmental impact assessment in a transboundary context. It came into force in 1997 with 16 Parties. Now they are 45 Parties including Canada. But United States who is too member of the UNECE for historical reasons signed but did not ratified the convention. Russia is not a party to Espoo.

There had been before awairness and efforts to promote the use of environmental impact assessment both at national and international levels as a necessary and important tool to develop anticipatory policies and to prevent, mitigate and monitor significant adverse environmental impact. It had been referred to in the declaration of the Stockholm conference on the human environment of 1972 and works had been carried out in the seminar on environmental impact assessment in September 1987 in Warsaw, Poland and mentioned in the ministerial declaration on sustainable development in may 1990 in Bergen, Norway. The governing council of the United Nations environment Programm (UNEP) approved an important document in: "goals and principles on environmental impact assessment (EIA)"

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(decision 14/25 of 17 june 1987). In that UNEP decision its is mentioned that goals were "to encourage the development of reciprocal procedures for information exchange, notification and consultation between States when proposed activities are likely to have significant transboundary effects on the environment of those States". According to Principle 11 of that decision: "States should endeavour to conclude bilateral, regional, or multilateral arrangements, as appropriate, so as to provide, on the basis of reciprocity, notification, exchange of informations, and agreed-upon consultation on the potential environmental effects of activities under the control or jurisdiction which are likely to significantly affect other states or areas beyond national jurisdiction". With this decision of 1987 all the main issues of the future Espoo Convention is already present. It can be said that Espoo convention is the direct legal document implementing the goals and principles of UNEP at regional level. In 1991 Espoo Convention was open only to states members of the UNECE ie European countries and north Americans. But there has been an amendment in opening Espoo to all members of United Nations adopted in 2001. It entered into force on 26 august 2014 and so now Espoo convention is a universal treaty on EIA.

1) Objectives of the Espoo Convention

According to the Espoo convention several objectives must be obtained. As it is mentioned, especially in the preamble, the Parties affirm the need "to ensure environmentally sound and sustainable development". Before Rio 1992 it is the first international convention referring to sustainable development as an "objective", before becoming later a "principle" and then in some places a "rule". For that it is necessary to enhance international cooperation in assessing environmental impact in particular in a transboundary context by developing anticipatory policies. What for? To prevent, mitigate and monitor adverse environmental impact, but only those being "significant". It concerns all adverse environmentally impact in general, but more specifically in a transboundary context. As EIA is a preventive instrument for sustainable development it should be part of the decision making process. But that means to take into account the environmental factors "at an early stage" in the decision making process and in all appropriate administrative levels. That is why the Parties must take, individually or jointly, all appropriate and effective measures related to proposed activities and adopt the necessary national policy, and legal,

administrative or other measures to implement the provisions of the Convention (art. 2-1 and 2). EIA being a key instrument of environmental policy for the public interest of all, EIA must be a tool to improve the quality of information for the public being aware of environmental damages and for the decision makers to pay careful attention to minimizing adverse impacts. For that purpose the public, defined as one or more natural or legal persons, must have the opportunity to participate to the decision making process and to comment the draft EIA with specific procedure organizing an effective participation.

2) Obligations in the Espoo Convention:

For any new proposed activity or any major change of an existing activity listed in appendix 1 that are likely to cause significant adverse transboundary impact, the Party of origine must send notification to affected party or parties asking for a response by a certain date (art. 3). This notification must contain information on the proposed activity, the nature of the possible decision. The affected Party must respond and inform its own authorities and public and shall indicate whether it intends to participate in the environmental impact assessment procedure. Then the Party of origin has to provide to the affected party more informations on the procedure, on the proposed activity.

When no notification has taken place and if a Party considers that it would be affected by a future activity, the concerned Parties should hold discussion and if they do not agree whether there is likely to be a significant adverse transboundary impact, they can decide to ask an opinion to an inquiry commission. There has been one case with submission to an inquiry commission about a project of a canal by Belarus affecting Romania. The inquiry commission said that the project could have a transboundary impact and then the two Parties used the Espoo procedure of exchange of EIA and comments by the affected Party.

When the Party of origin receive EIA documentation from the developer or from the proponent, it must send the EIA documentation to the affected Party. The affected Party must then distribute this documentation to its own authorities and to its public. The concerned Parties shall ensure that the public of the affected Party be informed of the project and be provided with possibilities for making comments or objections. These comments and objections are sent to the Party of origin.

Together the concerned Parties must hold bilateral consultations and discussions relating to possible alternatives including non action alternative and possible measures to mitigate transboundary impact and to monitor the effects of such measures. But the Parties shall agree at the commencement of such consultations on a reasonable time frame for the duration of the consultation.

At the end of the process, and according to national law of the Party of origin, it takes a final decision. But according to art. 6 the final decisions must take due account of the EIS as well as of the comments received from the affected Party and its public and of the outcome of the bilateral consultation. The final decision must be sent to affected Party "with reasons and considerations on which it was based" (art. 6-2).

Eventually both Parties may agree on need for a post-project analysis A post project analysis shall include the surveillance of the activity and the determination of any adverse transboundary impact. If it appears discover of effective impact or threaten of transboundary impact, the Parties must consult on necessary measures to reduce or eliminate the impact (art. 7).

3) Benefits of Espoo mechanism

There are several. It provides legal framework for discussing planned developments with neighbouring states. Being a Party obliges other parties to notify and consult about planned developments on their territory that are likely to have a significant adverse impact on environment. Article 1 gives a broad definition of environmental impact: any effect on the environment including human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures or the interaction among these factors; it also includes effects on cultural heritage or socio-economic conditions resulting from alterations to those factors.

The Espoo procedure and requirements can enhance international cooperation, including awareness of importance of the environment, and so help to prevent conflict between states. Anyway sovereignty is retained because decision making process remains in country where the development is planned, but the freedom of decisions of the Party of origin is carefully controlled and obliges to take into account foreign comments. Confidentiality is respected: not prejudicial to industrial and commercial secrecy or national security as mentioned in art. 2-8. A big advantage of Espoo process is that it gives the opportunity, for environmental purpose, to

improve the project including by identification of better project alternatives. The result should be a better environmental protection with impacts avoided or reduced by revising project design. Public information and participation is seriously organised in a non discriminatory way because the opportunity provided to the public of the affected party must be equivalent to that provided to the public of the Party of origin.

The way it works is rather satisfactory because there was about 10 cases per year in 2001 and almost 100 each year since 2010: about wind farms, cross border infrastructure such as railways and roads, nuclear power plants and waste repositories, thermal power plants, power lines, hydropower, oil and gas pipelines, waterways, mining, chemical plants, airports, ground water extraction.

4) The Kiev Protocol on strategic environmental assessment (SEA)

This protocol to the Espoo convention was adopted and sign in Kiev (Ukraine) in 2003. It came into force in 2010 with 16 parties. Now they are 26 parties, less than for Espoo convention. Its contents is similar to a European directive on SEA (2001/42) and European Union is a Party to the Kiev protocol since 2008. It must be mentioned that since its adoption in 2003 the protocol is not a European treaty but is open to all United Nations members being a universal treaty (art. 23-3) as the Espoo Convention.

The objective of the protocol on SEA is to provide for a high level of protection of the environment that means that any plans and programmes reducing the level of protection would be regressive and contrary to that legal objective. Environmental considerations should be taken into account in the development of plans and programmes as instruments promoting sustainable development. A very specific issue much more developed than in the Espoo Convention is the permanent reference to health issue. The World health organization played an active role in the drafting of the protocol acknowledging the benefits to the health and well being of present and future generations that will follow if the need to predict and improve people's health is taken into account as part of SEA. That is why at each mention of the word "environment" it is specified "including health". That is why it can be considered that this protocol is in reality a legal document dedicated to health protection as intrinsic part of environmental protection.

Environment including health consideration must be included in the development of plans and programs listed in annex 1 and too in the

preparation of policies and legislation. For that purpose their should be a clear, transparent and effective procedure for SEA providing for public participation.

This purpose implement in a binding international instrument principle 4 and 10 of the Rio Declaration on environment and development of 1992.

All the procedure used for SEA about plans and programmes is similar to the Espoo procedure when the plan or programme is likely to have a significant transboundary environmental effect: notification, consultations, public participation, and final decision.

But what is remarkable is that in reality this Kiev protocol does not apply only to transboundary situations but applies too to plans and programmes without transboundary impacts. There is only one article on transboundary issue (art. 10). Article 3 to 9 apply to any national SEA even without transboundary effects. The field of application concerning plans and programmes of art. 4-1 mentions "significant environmental, including health, effects" without mentioning "transboundary".

5) Benefits of Kiev protocol on SEA

Because of the requirement of high level of environmental protection, it avoids irreversible and severe effects, safeguard protected areas and sites, maintain critical habitats and important biodiversity conservation areas. There should be too a better planning and programming by helping it to be more focused, rigorous and open to alternatives, and to coinsider full range of potential effects and opportunities for achieving more sustainable forms of development. SEA produces a more efficient decision-making enabling environmental issues to be taken into account consistently at different stages or levels of decision making. A better and more consistent decision making at plan and programme level, leads to fewer appeals and less discussion at operational level.

SEA process prevents costly mistake by providing early warning signals about unsustainable development options; it reduces risk of costly remediation of avoidable harm or corrective actions, such as relocating or redesigning facilities, it saves time and money. In general SEA strengthened governance by improving good governance and public trust in policy, plan and programmes making through fostering greater transparency; it allows planners and decision makers, national as local, to consider opinion of key stakeholders early in planning process.

Finally SEA enhance transboundary cooperation providing an important new area of regional cooperation to address difficult issues concerning for example, shared natural resources and transboundary pollution.

6) The review of compliance of the Convention and the Protocol

There is a common tool of reviewing compliance of the Espoo convention and the Kiev protocol with the so called "implementation committee" which is a compliance committee.

Compliance committees are nowadays common tools for monitoring the compliance of environmental conventions. It is a non judicial process generally open to public claims complementary to the reporting system. States must regularly report to the secretariat of the conventions and the compliance committees gets informations through these reports on difficulties or problems encountered to implement the convention. Sometimes any information received by the secretariat or the compliance committee allow an inquiry about violation of the convention by a Party. The findings of the compliance committee are only recommendations which then must be taken into account by the conference of the Parties. But it is a useful and effective soft way to convince states to respect the convention and to adapt its national legislation to the requirement of the convention.

Since the Montreal protocol on ozone layer of 1987 most multilateral environmental conventions have a specific provision setting up a compliance committee, or if not, the first meeting of the parties decide to create such a committee as a specific body of the convention.

The implementation committee legal basis is for Espoo convention indirect through art. 11-2 of the Convention: "the Parties shall keep under continuous review the implementation of the Convention. . .". The second amendment to the Convention introduced by decision III/7 of 2004, new article 14 bis precise the compliance mechanism already set up and functioning since a decision of the second COP in 2001 (decision II/4 and decision III/2 of 2004):

> "The Parties shall review compliance with the provisions of this Convention on the basis of compliance procedure, as a non-adversial and assisted-oriented procedure adopted by the meeting of the Parties. The review will be based on, but not limited to regular reporting by the

Parties. The meeting of the Parties shall decide on the frequency of regular reporting required by the Parties and the information to be included in those regular reports".

The legal basis for the Kiev protocol compliance is a direct mention in the protocol itself with article 14 para. 6: adopt the modalities for applying the procedure for the review of compliance with the Convention to this Protocol.

That is why now exists one common compliance committee responsible for compliance review for both the Convention and the Protocol.

There are specific procedures and rules for Committee work: rules of procedure (MOP decision I/1), structure and functions of the committee and procedure for the review of compliance (MOP decision III/2, appendix), operating rules (MOP decisions IV/2, annex IV, and MOP decision V/4 , annex). For each file there is a curator designed among the Committee members who prepare the finding and recommendations.

How the implementation committee intervene? There are different ways of action. There could be a "submission" by a state about non compliance by an other state, or a self referral. It expresses concerns about another Party's compliance with its obligations backed up by supporting information. Party whose compliance is in question has 3 months to reply. After consideration, including hearing of Parties, the Committee drafts findings and recommendations for adoption by Meeting of the Parties.

An other way of intervention of the implementation Committee is "committee initiative". But it needs before informations given called "information gathering". This information comes from the review of implementation or national reports and completed questionnaires, or it comes from other sources as NGO or the secretariat. But for information to lead to a "committee initiative", the following have to be taken into account by the Committee in accordance with operating rule 15, para. 2: the source of the information is known and not anonymous, the information relates to activity listed in Convention's appendix 1 likely to have a significant adverse transboundary impact, the information is the basis for profound suspicion of non compliance, the information relates to implementation of precise and quoted convention provisions, the Committee must have time and resources available for examination. Once, with

information gathering, the Committee becomes convinced that there may be an issue of non compliance (profound suspicion), it will begin a committee initiative. Meanwhile, the Committee respects confidentiality of information pending a decision on whether to begin a Committee initiative.

What are the findings of the Compliance Committee? They are not sanctions because the Committee is an assistance-oriented body to help Parties for a better and complete compliance. To date, Committee has decided on several findings of non compliance for specific provisions and has proposed specific recommendations.

7) Application to nuclear energy related activities

There have been a large number of nuclear power plants built before the Espoo convention entered into force in 1997. At that time their construction was rarely subject to environmental impact assessment. But even after the Chernobyl nuclear disaster, mainly in eastern countries, new projects were prepared to plan construction of nuclear plants. In the same time, many older existing plants were being decommissioned as they reach the end of their operational life. Sometimes states and operators want to extend their operational life. There are too many new interim or long term repositories for spent nuclear fuel and radioactive wastes. All these different nuclear activities are now submitted to Espoo Convention because radiation respects no border. That is why the implementation Committee has many cases related to nuclear activities. (see Greenpeace brochure on application of the Espoo Convention to nuclear energy related activities, by Jan Haverkamp, may 2014). It became such a main issue that at the fifth meeting of the Parties in 2011 a note was presented on the application of the Convention to nuclear energy-related activities. It is not a guidance note but only information on the issue (ECE/MP. EIA/2011/5, 2 April 2011). Quoting examples of the application of the Espoo Convention to recent nuclear activities it shows which provisions of the Convention are used for and gives illustrations of some good practice. A list of operating nuclear plants and plants under construction in the UNECE member States was presented to the working group on EIA in 2010 available on the website at http://www.unece.org/env/eia/meetings/wg_eia_13.htm).

Nuclear activities are listed in appendix 1 to the convention and submitted to EIA: Item 2 includes "nuclear power stations and others nuclear reactors" Item 3 specifies "installations . . . solely designed for the

production or enrichment of nuclear fuels, for the reprocessing of irradiated nuclear fuels or for the storage, disposal and processing of radioactive wastes". These items have been revised in the second amendment of the Convention adopted in decision III/7:

Items 2 (b) identifies "nuclear power stations and other nuclear reactors, including the dismantling or decommissioning of such power stations or reactors (except research installations for the production and conversion of fissionable and fertile materials, whose maximum power does not exceed 1 kilowatt continuous thermal load"

Item 3 identifies: (a) installations for the reprocessing of irradiated nuclear fuel (b) installations designed: for the production or enrichment of nuclear fuel; for the processing of irradiated nuclear fuel or high level radioactive waste; for the final disposal of irradiated nuclear fuel; solely for the final disposal of radioactive waste; or solely for the storage (planned fir more than 10 years) of irradiated nuclear fuels or radioactive wastes in a different site than the production site".

Here are some recent illustrations of findings by the Compliance Committee on nuclear activities. According to transparency principle all documents can be read in the website of the Convention: www.unece.org/env/eia, see bodies: Implementation Committee.

a) About submissions:

— Azerbaidjan v. Armenia: after a communication in 2011 from Azerbaidjan about an Armenian nuclear plant in Metsamor, it was stated that there was difficulties of communication between the two states because they had no diplomatic relations. The Compliance Committee considered that absence of diplomatic relations does not prevent to apply the Espoo Convention using other modern means of communication. The 6 th Meeting of the Parties in Geneva on June 2014 endorsed findings prepared by the Compliance Committee that Armenia was in non compliance with its obligation under the article 3 paragraph 1 of the Convention to notify Azerbaidjan as early as possible and no later than when informing its own public, with respect to the construction of the nuclear plant in Metsamor. Also endorses the finding of the Committee that Armenia was not in non compliance with art. 3 para. 5 and 8, art. 4 para. 2, art. 5 and 6 of the Convention considering that, to the extent that the final decision on the

construction of the nuclear plant had not yet been taken and the works had not yet been initiated, there was still the possibility for Armenia to continue the implementation of the subsequent steps in the transboundary EIA procedure, and requests the implementation Committee to follow up, and as appropriate, monitor the case. (6 th MOP, decision VI/2, para. 45-46)

— Lithuania v/ Belarus: Lithuania in a submission in 2011 considered that Belarus was in in non compliance because of a Belarus project of a nuclear plant at 30 km from Vilnius the capital of Lithuania. Lithuania claim was about the content of the EIA without alternatives and about the consultation procedure between the two states. The meeting of the Parties endorsed most of the Committee findings in the 6 th MOP of June 2014. It considered that Belarus has improved its legal framework on EIA and that there were no grounds for finding non compliance with art. 2 para. 2 of the convention requiring taking necessary national legal measures. But the MOP considered that Belarus in 2013 was in non compliance with its obligations about public participation, about the distribution of EIA documentation, and about the requirement related to the final decision. It request Belarus to provide to Lithuania the final decision with the reasons and considerations on which it was based. It request too both States to continue consultations and exchange of informations, to agree on a reasonable time frame for the consultation period, to improve language requirement of public consultation, to conclude a bilateral agreement for the implementation of the Convention, to establish a permanent joint body on post project analysis (6 th MOP, decision VI/ 2, para. 48 to 64).

b) After Committee initiative:

— regarding Ukraine: after gathering information from an NGO in 2011 about the extension of life time of the nuclear power plant Rivne, the Implementation Committee transformed the information gathering in Committee initiative in 2013. In its finding the Committe considered that extension of life time of a nuclear power plant was a "major change" subject to the provisions of the Convention. There has been a large controversy about that because some nuclear states did not want to submit to EIA the extension of life time considering that it

was not a new proposed activity. Finally the meeting of the Parties endorsed the findings of the Committee considering for that specific case (and not as an obiter dictum) that after the initial licence has expired, the extension of life time should be considered as a proposed activity subject to the Convention. Consequently Ukraine was in non compliance with several provisions of the convention without any EIA related to that life extension (6 th MOP, june 2014, decision VI/2, para. 68-71).

c) Information gathering:

— After an information received in 2011 from a Romanian NGO about a deposit of nuclear wastes near the border of Bulgaria, the Committee asked Romania more precise informations on alternatives on the EIA. In December 2013 the Committee considered that there was not non compliance and closed the file.

— After an information received from a Belarus NGO in 2012 about Ukrainian projects of two new nuclear reactors in Khmelnytska, information was asked to Ukraine. Intervention came from Austria, Slovaquia, Hungaria and Poland. There had been notification by Ukraine about the future nuclear power plant, but at different dates. A controversy existed about the final decision. Finally the Committee considered in February 2014 that there was a suspicion of non compliance and opened a Committee initiative to follow up the case with more data.

— After an information received from a green party deputy of the German Parliament in 2013 about the project of a nuclear power plant in United Kingdom in Hinkley point, the Committee closed the information and opened a Committee initiative in 2014 because there had been no notification of the project to any Party and that meant a suspicion of non compliance. Opinion were asked to several transfrontier Parties to know if they considered or not to be likely affected by the project and if they asked or not a notification by UK. UK tribunals considered that Espoo convention did not apply and European commission according to art. 37 of Euratom treaty considered a priori that there was not any transfrontier impact. The main question will be to know if, a priori , any nuclear plant is likely to cause a significant adverse transboundary impact in situation not only of

> normal working , but mainly in situation of a disaster, taking into account, west wind conditions about radiations moving on air long distance. The risk of a nuclear accident cannot be excluded after Chernobyl and Fukushima and the prevention of disaster risk reduction is now an obligation for States as a customary international law obligation according to the International Law Commission of the United Nations draft articles on the "protection of persons in the event of disasters".

According to draft articles adopted on fist reading in May 2014 (A/CN. 4/L. 831, 15 May 2014) in article 11 "Duty to reduce the risk of disasters"
" 1. Each State shall reduce the risk of disasters by taking the necessary and appropriate measures, including through legislation and regulations, to prevent, mitigate, and prepare for disasters.
" 2. Disasters risk reduction measures include the conduct of risk assessments, the collection and dissemination of risk and past loss information, and the installation and operation of early warning systems"

That means that States have a duty to reduce risk of disaster by conducting risk assessment normally included in EIA and by disseminating information. Espoo Convention is one of the main preventing instrument for reducing the risk of disaster in taking into account any effect of the activity, here the nuclear plant, on "human health and safety" (art. 1-vii). The European Union Directive 2011/92 on impact assessment in annexe 3 mentions about the characteristics of projects 1(f) "the risk of accidents having regard in particular to substances or technologies used". The appendix III of the Espoo Convention about "(c) effects" requires mention of effects of proposed activities with particular complex and potentially adverse effects, including giving rise to serious effects on humans". Nuclear plants activity are surely activities with serious and complex effects on human health. As stated in the note mentioned of 2011 on application of the Convention to nuclear energy related activities:

> "The inclusion of severe accidents is of importance since it has effects on the scope of the EIA, but, more importantly, it directly relates to the scope of the application of the Convention. Not covering severe accidents means weakening the Convention and it goals, especially in the context of nuclear power plants".