

The Espoo Convention + Protocol on SEA:

transboundary impacts of nuclear energy-related activities and the lifetime extension of nuclear power plants



Secretary to the Espoo Convention and its Protocol on SEA United Nations Economic Commission for Europe (UNECE)

International workshop on environmental and health impacts of the lifetime extension of nuclear power plants (Lisbon, 5 June 2019)















Overview

- Brief introduction to UNECE Espoo Convention and the Protocol
- Nuclear energy-related activities under the Convention
- LTE of NPP cases under consideration by the Implementation Committee



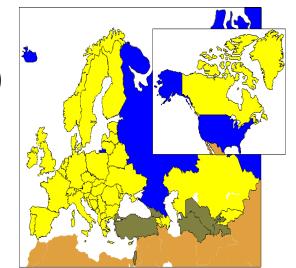
UNECE: Over 70 years of cooperation

- Established in 1947 by UN ECOSOC
- One of the 5 UN regional commissions
- **56 member States** (Europe, USA, Canada, Central Asia, Israel, Russia, Turkey) = around 20% of world's population
- Mandate: facilitate greater economic integration & cooperation in environment, energy + other sectors, by:
 - Policy dialogue
 - International legal instruments, regulations and norms
 - Technical assistance and capacity building
 - The only UN regional commission hosting 17 multilateral environmental instruments (5 Conventions: Aarhus; Air Pollution; Espoo; Industrial Accidents; and Water and their 12 Protocols)

UNECE Espoo Convention: Basic facts



- Negotiated under United Nations Economic Commission for Europe (UNECE)
- Adopted in Espoo (Finland) in 1991, in force since 1997
- Amended twice (2001 and 2004 amendments in force since 2014 and 2017)
- Has 45 Parties, in UNECE region, incl. EU
- Accession by all UN member States possible in the future (6 ratifications missing)





Espoo Convention objectives (implied)

NVIRONMENT



- To ensure environmentally sound and sustainable development
- To enhance international co-operation in assessing environmental impact
- To prevent, mitigate and monitor significant adverse transboundary environmental impact
- To give explicit consideration to environmental factors early in decision-making (= precautionary approach, principle of prevention)
- To improve quality of information leading to environmentally sound decisions

Preamble, paras. 2, 3, 4, 7



Unique international legal regime on transboundary EIA + a means to implement global commitments



- Enshrines principle 19 of Rio Declaration and Agenda 21 (1992)
 - "States shall provide prior and timely notification and relevant information to potentially affected States on activities that may have a significant adverse transboundary environmental effect and shall consult with those States at an early stage and in good faith".
- Codifies/implements an obligation of general international law
 - "to undertake EIA where there is a risk that a proposed industrial activity may have significant impact in a transboundary context" Pulp mills on the river Uruguay (Argentina v. Uruguay) International Court of Justice (2010).
- Together with Protocol on SEA, helps countries achieve targets under most SDGs
- Convention and good practice by its Parties are of global relevance



Protocol on SEA: Basic facts



- Protocol on SEA to the Espoo Convention
- Adopted in Kyiv, 2003, in force since 2010
- Has now 33 Parties, in UNECE region, including EU
- Open to <u>all</u> United Nations Member States
- Applies to public plans & programmes at national level and in transboundary context + optionally, to policies and legislation
- Similar to EU SEA Directive but with stronger emphasis on health

SEA Protocol objectives (art. 1) High level of environment, including health, protection



- Ensuring that environmental, including health, considerations are thoroughly taken into account in development of plans & programmes;
- Contributing to consideration of environmental, including health, concerns in preparation of policies & legislation;
- Establishing clear, transparent and effective SEA procedures
- Providing for public participation
- Integrating by these means environmental, including health, concerns into measures and instruments designed to further sustainable development



Espoo Convention vs. Protocol on SEA

- Espoo Convention (EIA) all about transboundary impacts of specific projects (in a specific location)
- SEA Protocol mainly about national (public) plans & programmes. Transboundary effects considered, if needed.
 Special emphasis on health

Convention	Protocol		
Projects ("concrete")	Plans, programmes (<i>Government</i>) + policies, legislation (as appropriate)		
Transboundary context	Domestic, and transboundary		
Environmental protection (preventing adverse impact) & international cooperation	Achieving environmental + health/sustainable development/green economy objectives		
Specific	Larger scale, less specific data		
Competent (environmental) authorities	Main responsibilty of sectoral (public) authorities - Consultative role for Envt + Health authorities		

Espoo Convention applies to:

- Proposed activities (and major changes to activities)
- with likely significant adverse environmental impacts
- across boarders
- As listed in appendix I
 - 2. (b) Nuclear power stations and other nuclear reactors, including the dismantling or decommissioning of such power stations or reactors (except research installations ...).

[Footnote 1/ For purposes of this Convention, nuclear power stations and other nuclear reactors cease to be such an installation when all nuclear fuel and other radioactively contaminated elements have been removed permanently from the installation site.]

- 3. (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 for more than 10 years) of irradiated nuclear fuels or radioactive waste in a different site than the production site.



Protocol on SEA: Automatic application – without screening – to plans/programmes

In econom. sectors/areas listed in art. 4.1: agriculture, forestry, fisheries, energy, industry including mining, transport, regional development, waste management, water management, telecommunications, tourism, town and country planning or land use

<u>AND that</u> "Set the framework for future development consent for projects" (= guiding criteria/conditions for later permitting of individual activities)

- Listed in annex I
- Listed in annex II + requiring EIA under national legislation



Protocol on SEA: Covers nuclear energy plans and programmes

ENVIRONMENT

Annex I, lists:

- 2. [....] **Nuclear power stations and other nuclear reactors** (except research installations for production and conversion of fissionable and fertiles materials, whose maximum power does not exceed 1 kilowatt continous thermal load)
- 3. Installations solely designed for production or enrichment of nuclear fuels, reprocessing of irradiated nuclear fuels, disposal and processing of radioactive waste

Annex II, lists

- 7. Nuclear power stations and other nuclear reactors including dismantling or decomissioning or such power stations/reactors (except research installations for etc.)
- 16. Installations, as far as not included in annex I, designed: For production or enrichment of nuclear fuel; For processing of irradiated nuclear fuel; For final disposal of irradiated nuclear fuel; Solely for final disposal of radioactive waste; Solely for storage (planned for more than 10 years) of irradiated nuclear fuels in a different site than the production site; or For processing and storage of radioactive waste

Nuclear energy related activities under the Convention

- One of Convention's many fields of application (listed in appendix I)
- Very topical since :
 - Many planned activities in UNECE region
 - Potentially wide scope of severe impacts, great public concern, national interests
 - **Diverse national positions/views/interpretations**, notably re «major change», e.g. life-time extension (LTE) of NPPs
 - Multiple compliance cases before Convention's Implementation Committee
- **2011, at MOP-5**: Panel discussed detailed background paper recommended preparation of guidance also codifying good practice
- 2013: Workshop by AU, FIN and S to exchange experience on implementation challenges and solutions + good practice
- 2014 at MOP-6: Geneva declaration on nuclear matters; panel discussion + mandate to prepare good practice recommendations; decision VI/2 re LTE of Rivne NPP
- 2017: MOP-7 endorsed «Good practice recommandations» (VII/6) and set up ad hoc working group on LTE of NPPs
- 2019: IS-MOP considered progress in preparation of guidance + confirms that draft to be submitted for adoption to MOP8 in 2020 (IS/2)

Geneva declaration (2014) on Convention's and Protocol's application to nuclear energy issues

- ..To be applied in accordance with the Convention, in sustainable manner, taking into account precautionnary + polluter pays principles; respecting international nuclear safety standards + relevant environmental legislation
- ...in consistent, cooperative and transparent manner
- ...ensuring early, timely and effective consultations and public participation — when all options are open;
- ...EIA documentation should describe reasonable alternatives;
 identify + assess all impacts throughout whole life cycle
- ...close cooperation + improved mutual understanding of other Parties' practices and needs will facilitate transboundary procedures
- Encourages effective cooperation, synergies and strengthening of capacities with all relevant international organizations and treaties, to ensure highest possible quality of environmental assessment and level of safety, especially stressing importance of IAEA treaties

2017 Good Practice Recommendations on the Application of the Convention to Nuclear energy-related activities

ENVIRONMENT

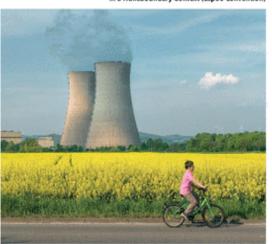
- Describe obligations + illustrate good practice
- Aim to assist in Convention's consistent, cooperative + transparent application, ensuring early, timely + effective consultations + public participation
- Endorsed by MOP in 2017 (decision VII/6): Parties invited to take them into account
- "Early information builds trust": informing about screening + inviting comments;
 Considering risk of major accidents/disasters
- "Early" and "wide" notification, beyond neighboring countries; facilitated by prior informal contacts
- Early participation in scoping; assessment of impacts throughout full life cycle; including on health and safety
- Early, timely, open, transparent, equal public participation (main concern = health+safety, particularly if accidents)
- Early, transparent, open, serious, thorough, well planned, sufficiently long consultations
- Timely sharing of final decision + its justification
- Prior agreement on monitoring + reporting



UNECE

Good Practice Recommendations on the Application of the Convention to Nuclear Energy-related Activities

> Convention on Environmental Impact Assessment in a Transboundary Context (Espoo Convention)





Development of guidance on LTE of NPPs: background

- MOP decision VI/2 as adopted (2014) limited to finding Ukraine in non-compliance for not having applied Convention to LTE of Rivne NPP
- After 2014, IC informed of several other (similar but not identical) cases where Convention also not applied to LTE of NPPs;
- At MOP7 (2017), IC proposed to prepare guidance, but MOP established instead an ad hoc working group to draft ToR for guidance on Convention's applicability to LTE of NPPs
- In May 2018, Working Group on EIA &SEA adopted the ToR + extended ad hoc group's mandate to drafting guidance + reporting on progress to IS-MOP in 2019
- Guidance should build on ToR and consider conclusions of a stakeholder workshop of May 2018 (with Parties, IC Chair, IAEA, OECD/NEA, NGOs)



Workshop on Convention's application to LTE of NPPs (28-29 May 2018, Geneva): Agreed conclusions



- 1 Implementation Committee's work severely constrained: **Guidance needed urgently**
- 2 Convention's interpretation should be in line with its main purpose and objectives;
- 3. LTE of NPPs **not only about nuclear safety, but also about environment**; changes in surrounding environment (eg. population increase/water scarcity) must be considered
- 4. Environmental issues must be properly addressed in EIA, possibly through screening;
- 5. Safety reviews cannot replace transboundary EIAs: processes are complementary
- 6. Convention largely aligned with EU's EIA Directive, but is a legally distinct instrument
- 7. LTE of NPPs also entails ensuring public participation and transparency, including in transboundary context
- 8. Consideration should be given to impact of multiple short-term extensions;
- Not all safety upgrades lead to environmental benefits; can also have adverse impacts

Development of guidance on LTE of NPPs: MOP decision IS/2 (2019)

- (Preamble) "...Aware of continuously growing number of information-gathering cases on LTE of NPPs before IC and IC's call for guidance or criteria on Convention's applicability in this respect to assist it in assessing compliance by Parties with the Convention"
- "Wishing to assist Parties in complying with their obligations under the Convention and to promote its legal certainty and effective application"
- (Para. 4): "Recognizes urgent need for guidance, as expressed by IC, to assist Parties in Convention's practical application re LTE of NPP decisions and to guide IC in its assessment of the related compliance cases"
- (Para. 9): "the draft guidance should be finalized for consideration by the Working Group in mid-2020, before its submission to MOP for adoption at its eighth session in late 2020"
- (Para. 10): Invites IC to continue gathering information on pending cases regarding LTE of NPPs and to continue providing its inputs to ad hoc working group's work, as appropriate"

Ad hoc WG on LTE of NPPs: Membership

- Co-Chaired Germany and the United Kingdom
- Composed of experts (env. + energy sectors) nominated by other 24 State Parties: Armenia, Austria, Belarus, Belgium, Bulgaria, Canada, Czechia, Finland, France, Greece, Italy, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and Ukraine and the European Commission (DG ENV and ENER)
- Assisted by UNECE secretariat to the Convention
- NGOs consulted regularly by Co-Chairs

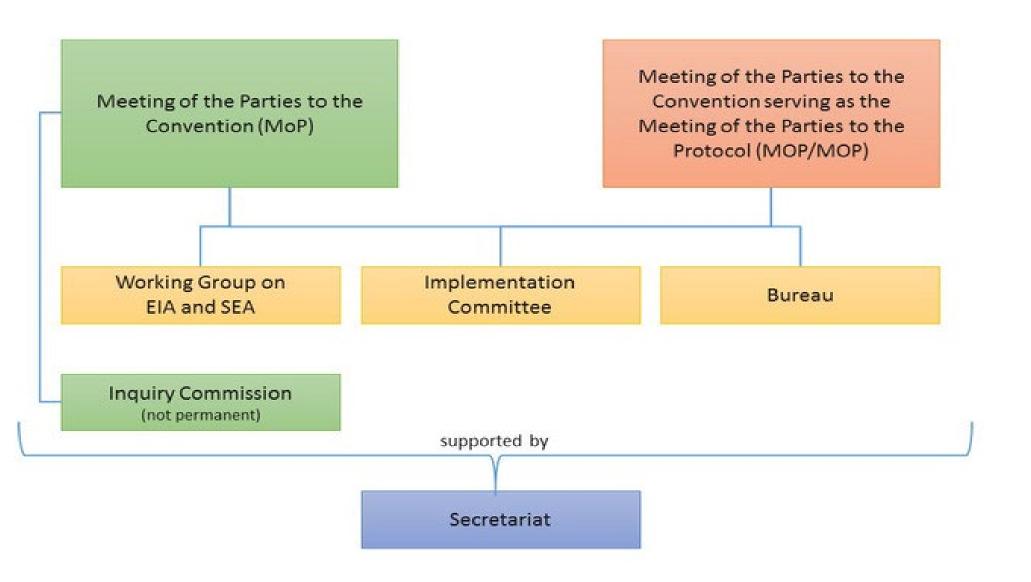


Ad hoc WG on LTE of NPPs: Meetings (summary reports available on Convention website)

- 1st meeting: (27 28 November 2017), Luxembourg
- 2nd meeting: (20 21 February 2018), Brussels
- 3rd meeting: (20 21 June 2018), Berlin
- Meeting between NGOs and Co-Chairs (8 August 2018), Brussels
- 4th meeting: (2 3 October 2018), London
- 2nd Meeting between NGOs and Co-Chairs (18 Dec. 2018), Brussels
- 5th meeting: (25 26 March 2019), Geneva
- 6th meeting: (3 4 June 2019), Lisbon
- 3rd Meeting with NGOs, 17 June 2019
- 7th meeting: (8 9 October 2019), Rotterdam
- 8th meeting: 3-4 December 2019, Vienna (+ possible workshop with NGOs)
- 9th meeting: March 2020, Paris
- 10th meeting: May/June 2020, Bulgaria



Espoo Convention and Protocol on SEA bodies and secretariat



Implementation Committee: reviews compliance + implementation

- Set up in 2001 (art. 14bis) + in 2011 extended to Protocol (art. 14.6)
- 8-12 members (lawyers + EIA/SEA experts)
- Reviews Parties' compliance with their obligations under the Convention and Protocol – to assist them to fully meet their commitments (= assistance-oriented body)
- Non-compliance is failure to:
 - Apply the Convention/ Protocol fully
 - Fully transpose the obligations into national legislation
 - Report on implementation
- No sanctions ... but the Committee still has "teeth"
- Drafts decisions on compliance for MOPs to endorse
- To date, 5 findings/decisions of non-compliance (Azerbaijan, Belarus, 2 x Ukraine, UK) and one "caution" (Ukraine)

Possible sources of non-compliance

ENVIRONMENT

- **Submissions** (Government to Government, including self-referrals)
 - Regarding Ukraine, Romania, Armenia (NPP), Belarus (NPP) and Azerbaijan
 - After consideration, including hearing of Parties, Committee drafts findings and recommendations for adoption by MOP

Committee initiative

- Regarding Armenia, Azerbaijan, Albania, Serbia, Ukraine (NPP), UK (NPP)
- Based on "profound suspicion of non-compliance"

Information gathering

- Specific compliance issues from reviews of implementation or completed questionnaires (some 20 cases)
- Information from other sources, mainly NGOs, some 30 cases on Convention matters (3 on Protocol)
- May be closed after clarifications by Party or may lead to Committee initiative

Committee's rules, procedures and opinions

ENVIRONMENT

- Rules of procedure (MOP decision I/1)
- Structure and functions of the Committee and procedures for the review of compliance (decision III/2, appendix; decision VI/2, annex I)
- Operating rules (decision IV/2, annex IV; MOP decision V/4, annex; decision VI/2, annex II)
- Role of the curator (informal)

Publicly available information:

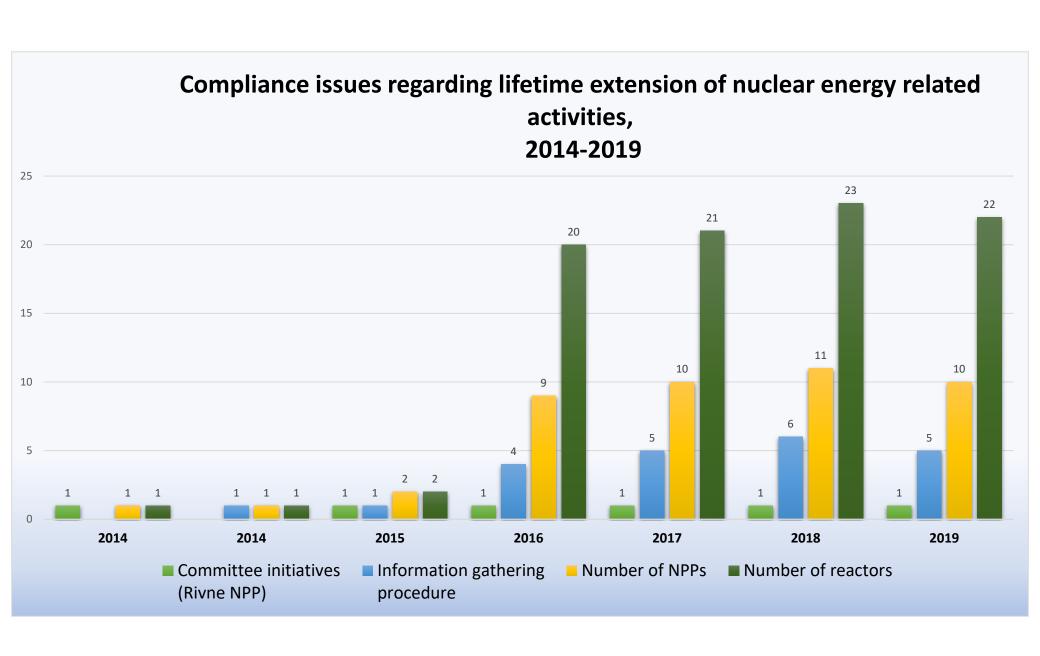
- Full information on cases, once closed (unless opposition by Party)
- Committee's opinions (=case law)
- MOP decisions

ECONOMIC COMMISSION FOR EUROPE

Opinions of the Implementation Committee (2001–2018)

Convention on Environmental
Impact Assessment in a
Transboundary Context
and
Protocol on Strategic
Environmental Assessment





Life-time extension of NPP (reactors) cases under IC's consideration

ENVIRONMENT

- ➤ Ukraine (EIA/IC/CI/4), Rivne NPP (2 reactors) (Follow-up to MOP decisions VI/2 and IS/1g)
- Netherlands (EIA/IC/INFO/15) Borssele NPP (1 reactor)
- ➤ Belgium (EIA/IC/INFO/18), **Doel and Tihange NPPs (2 + 1 reactors)**
- Czechia (EIA/IC/INFO/19), Dukovany NPP (4 reactors)
- ➤ Ukraine (EIA/IC/INFO/20), Rivne (2), South Ukrainian (3), Zaporizhia (5) and Khmelnitsky (2) NPP reactors
- ➤ Bulgaria (ECE/IC/INFO/28), Kozloduy NPP (2 reactors)

Closed:

➤ Spain (ECE/IC/INFO/26), Santa Maria de Garoña NPP



Overview of LTE of NPP cases under consideration of the IC

Case	Information received	Country	Name PP/nro	Status
EIA/IC/CI/4	20-Apr-11	Ukraine	Rivne NPP	Decision IS/1g adopted at the IS MOP
EIA/IC/INFO/15	7-May-14	Netherlands	Borsselle NPP	Ongoing
EIA/IC/INFO/18	8-Mar-16	Belgium	Doel and Tihange NPPs	Ongoing
EIA/IC/INFO/19	27-Jul-16	Czechia	Dukovany NPP	Ongoing
EIA/IC/INFO/20	1-Aug-16	Ukraine	Rivne NPP, South-Ukrainian NPP, Zaporizhia NPP, Khmelnytsky NPP	Ongoing
EIA/IC/INFO/26	17-Aug-17	Spain	Santa María de Garoña NPP	Closed information- gathering at the IC 43
EIA/IC/INFO/28	Mar-18	Bulgaria	Kozloduy NPP	Ongoing

Ukraine (EIA/IC/CI/4), extension of the lifetime of Rivne NPP (1)

- April 2011: Ukrainian NGO Ecoclub informed IC of Ukraine's alleged noncompliance re LTE of Rivne NPP reactors 1 + 2:
 - Adding 20 years to initial 30, qualifies as major change
 - No EIA; No notifications (to Belarus, Poland + other European countries)
 - PSRs do not comply with Convention's appendix II; not subject to public participation, not disclosed to public on request
- Ukraine's responses to IC's information gathering:
 - PSR included a section on environmental assessment
 - Assessed impact did not exceed legal limits (radioactivity constant, with tendency to decrease over past decades)
 - Highest international safety standards applied
 - Safety upgrades but no changes to objective nor technical/performance characteristics/terms of operation of project as licensed in 1981, therefore no major change
 - No changes to impact indicators of the project, including environmental impacts
 - No request from any Parties for exchange of information
- December 2011: IC concludes that Ukraine did not apply the Convention



Ukraine (EIA/IC/CI/4), extension of the lifetime of Rivne NPP: IC's opinions

- September 2012: IC members reach consensus that LTE of an NPP, even in absence of any works = major change to an activity, i.e. subject to Convention.)
- Appendix I.2 identifies "nuclear reactors" as activities
- Impact likely not only from construction + 1st operation, but from continued operation beyond originally authorized lifetime
- If EIA necessary only for construction/demolition of physical parameters, e.g. buildings, and not for modernization + replacement of technical components for safety reasons, Parties could continuously modernize and thus extend LT of NPPs without ever carrying out EIA in accordance with Convention.

Ukraine (EIA/IC/CI/4), extension of the lifetime of Rivne NPP: IC's opinions (2)

- Possible reasons for time-limited decisions authorizing operation:
 - Risks associated
 - Changes in state of the environment
 - Changes in population density
 - Possible effects on human health
 - Development of scientific knowledge + relevant regulations
 - Developments re mitigation measures.
- At expiry of time period, re-evaluation needed after proper and comprehensive EIA, including transboundary
- No consideration to changed environmental conditions since 1980 and to potential impact of continued operation:
- Arguments that LTE has no likely impact cannot be based on PSRs but on Convention procedures; Without EIA documentation arguing to contrary, such impact could not be excluded;

Ukraine (EIA/IC/CI/4), extension of the lifetime of Rivne NPP: IC's opinions (3)

- Notification necessary unless significant transboundary impact can be excluded
- Even low likelihood of such impact should trigger obligation to notify
- Procedure in art. 3.7, did not substitute Party's obligations to notify, or to fulfil other procedural steps in compliance with the Convention in case transboundary environmental impacts could not be excluded.
- Participation of some NGOs in meetings of nuclear safety authority did not amount to public participation in the meaning of the Convention

MOP decision VI/2 (2014) on LTE of Rivne + follow-up

- Ukraine found in non compliance with art.2.2 + 3, art.
 4.1+ art. 3 +6 for not applying Convention to LTE of Rivne NPP reactors 1 + 2, after expiry of initial license
- To IC, Convention's obligations = same for all Parties, in similar circumstances
- IC initially identified 3 conditions under which Convention always applicable to NPP's LTE:
 - (a) limited lifetime of NPP;
 - (b) NPP's operating license set to expire;
 - (c) no previous EIA in accordance with the Convention



Ukraine (EIA/IC/CI/4), extension of the lifetime of Rivne NPP (follow-up)



- May 2017: Adoption of Ukraine's EIA law, which, further to VI/2, requires transbounary EIA of LTE of NPPs
- Initiation of Convention procedure re units 1, 2 (Austria, Belarus, Hungary, Poland and Slovakia)
- **Decision IS/1g (2019)**: Ukraine to report each year to IC on its finalization of transboundary procedure.



Netherlands (EIA/IC/INFO/15), extension of the lifetime of Borssele NPP

- Information in May 2014 from Greenpeace NL re LTE of Borssele NPP, close to Belgium (In operation since 1973, decommissioning 1st decided for 2004, then 2013, then 2033)
 - Alleging violation of provisions re public participation
 - Potentially affected Parties: BEL, D, FR, LUX, UK, entire EU and beyond
 - Alleged impacts: potential long-range emissions of radioactive substances by air and water if severe accidents caused by ageing induced malfunctions, human error, terrorist attack, sabotage or act of war, natural events;
 - increased production of radioactive waste;
 - increased pollution by uranium mining and nuclear fuel production; increased risk of plutonium pollution due to use of MOX
- IC began its consideration in Sept 2014
- EIAs carried out in 2004 and 2011 but covering only use of new fuel + fuel diversification
- Deliberations still ongoing pending
 - ICs efforts for systematic comparative analysis
 - Guidance on LTE of NPPs





Belgium (EIA/IC/INFO/18), extension of the lifetime of reactors at Doel and Tihange NPPs

- Information in March 2016 from German Federal states (North Rhine-Westfalia + Rhineland-Palatinate) re LTE of NPP reactors Tihange 1, Doel 1 + 2 in Belgium, close to German border
- Alleged possible impact after prolonged LT to 50 years e.g. risk of airborne radioactive releases from accidents affecting agriculture + forestry within 250 km radius
- Consider being deprived of rights to information; formulation of grievances
 participation in elaboration of emergency plans
- IC started its consideration in Sept 2016 information gathering case still ongoing
- Belgium: decision on LTE not under Convention's scope
- Germany not notified, but cannot exclude impact



ECJ's pending case re Belgian law on LTE of Doel 1 +2 NPPs (without EIA nor public participation)



- <u>BEL Constitutional Court asks</u> whether: (i) legislative measures require EIA?; (ii) prolongation of already authorised activity requires EIA?; (iii) public interests could justify not assessing impacts of continued NPP operation?
- In ECJ's Advocate General's opinion from Nov. 2018 (not binding on ECJ)
 Espoo and Aarhus Conventions apply to LTE of NPPs
- "78. [...] Espoo Convention IC rightly inferred [...] that not only construction + 1st operation of nuclear reactor is activity, but also reactor's continued operation beyond originally authorised lifetime, as significant adverse transboundary impact likely ...by such operation."
- "131. As no thresholds set for commercial NPPs, any change to or extension of such an installation thus requires an EIA in principle."



ECJ's pending case re Belgian law on LTE of Doel 1 +2 NPPs (without EIA, nor public participation): AG's opinions (2)

- Para. 106... «extension of installation's operation may have significant environmental effects, not only as a result of continued operation but also because of altered environmental conditions in surrounding area. In addition, new scientific findings may be available when decision of extension is taken»
- Para. 119: «the environmental regulatory purpose of the Convention is of fundamental importance. [...] This must include opportunity to rely on rules of international environmental law, which, like rights of participation under the Espoo Convention, benefit individuals»



Czechia (EIA/IC/INFO/19), extension of the lifetime of reactors at Dukovany NPP

- Information from 5 NGOs from Austria, Czechia and Germany (4 jointly) re Dukovany NPP reactors in Czechia (in operation since 1985), alleging likely impact on Austria, Germany, Poland and Slovakia because:
- Plant too old, not of latest technology,
- All units lack a second containment; 2 units are in the same reactor hall
- Aging material, spare parts bought from Greifswald NPP(DE) (which 4th unit shut down due severe accident, unit 6 also closed after this).
- IC began its consideration in September 2016 information gathering case is ongoing
- Austria + Germany consider themselves affected Parties, Slovakia not;





Ukraine (EIA/IC/INFO/20), LTE of Rivne (3,4), South Ukrainian, Zaporizhia and Khmelnitsky NPP reactors

- Information in August 2016 from CEE Bankwatch Network re LTE by Ukraine of reactors at 4
 NPPs alleging impact to Austria, Belarus, Germany, Hungary, Moldova, Poland, Romania,
 Slovakia
- Transboundary EIA claimed necessary because PSR does not address following aspects:
- Physical changes in the environment:
 - Decrease of water in rivers + lakes that provide cooling water; increasing shortage of drinking water in downstream areas
 - Changes in other physical factors: number of inhabitants, new protected areas, agricultural activities that compete w use of water resources, impact waterflow+ quality;
- Other changes: Economic, political changes (e.g. need for new energy policy/infrastructure reflecting climate agreements) + societal, e.g. related to post Fukushima changes in risk perception;
- Additional radioactive impacts, from increased
 - use of uranium-impact of uranium mining and fuel production
 - production of radioactive wastes;
 - exposure to risk of severe accidents with substantial emission of radioactive material.



Spain (ECE/IC/INFO/26), LTE of Santa Maria de Garoña NPP



- Information in August 2017 to IC from Portuguese political party (Pessoas-Animais-Natureza) re planned LTE of Santa Maria de Garoña NPP (in operation since 1971)
- Spain informed IC in Oct. 2017 of its decisions to permanently end plant's operation + dismantle it
- In Dec 2018, IC closed its information its information gathering on the issue





Bulgaria (ECE/IC/INFO/28), extension of lifetime of Kozloduy NPP

- Information from Romanian NGO (ARC) re LTE of units 5 + 6 at Kozloduy NPP, close to Romanian border, alleging impact on Romania, in particular on natural habitats, population and habitats species subject to conservation in protected areas
- Romania considers itself affected
- IC started its considerations in December 2018, currently ongoing.







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