

# INPRO Dialogue Forum #5

## Long-term Prospects for Nuclear Energy in the Post-Fukushima Era

### Summary | Findings | Actions

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# The INPRO Dialogue Forum

## History

- INPRO Dialogue Forum on Global Nuclear Energy Sustainability
- Strategic dialogue
  - Between nuclear technology holders and users
  - On topics of joint interest
    - Nuclear energy innovations (2010–2011)
    - Broader: global nuclear energy sustainability (2012–2013)
- Objectives
  - Discuss, jointly deliberate, slowly develop common views or identify issues to be addressed

- Predecessor: CUC
  - **Common User Considerations (CUC)** by Developing Countries for Future Nuclear Energy Systems (Published in 2009)
- 1<sup>st</sup> INPRO Dialogue Forum (2010)
  - Socio- and **macroeconomic** factors, Proven **technology**, **Safety** Approaches for Innovative Nuclear Systems
- 2<sup>nd</sup> INPRO Dialogue Forum (2010)
  - **Multilateral Approaches** to Sustainable Nuclear Energy Deployment - Institutional Challenges
- 3<sup>rd</sup> INPRO Dialogue Forum (2011)
  - Common user considerations for **small and medium sized reactors**

- 4<sup>th</sup> INPRO Dialogue Forum (2012 July/August)
  - At IAEA headquarters, Vienna, Austria
  - Drivers and Impediments for Regional Cooperation on the Way to Sustainable Nuclear Energy Systems
  - Related to SYNERGIES
- 5<sup>th</sup> INPRO Dialogue Forum (2012 August)
  - Hosted by Republic of Korea
  - Global nuclear energy prospects in the post-Fukushima era

# INPRO Dialogue Forum #5 (2012)

## Summary

## Topic: Long-term Prospects for Nuclear Energy in the Post-Fukushima Era

- Sessions
  - Nuclear Power Deployment in the 21<sup>st</sup> Century
  - Nuclear Safety and Innovations
  - Stakeholder Involvement and Public Communication
- Breakout sessions: analysis
- Plenary discussion of findings

- Participation
  - 80+ registered participants
  - 33+3 Member States + international organizations
- Governments, academia, regulators, industry and operators, R&D institutions
- Strong regional participation
  - First INPRO Dialogue Forum in Member State
  - Hosted Republic of Korea through MEST and KAERI



- Topics addressed in total of some 50 presentations
- Three sources for findings and conclusions. Comprehensive.
  - **Source 1: Publications on global prospects**
    - OECD/NEA, WNA, IAEA and academia. Integrated analysis.
  - **Source 2: National statements**
    - From 30 Member States. Nuclear and non-nuclear.
  - **Source 3: Individual expectations**
    - “Informed judgement”

- Analysis of history of nuclear programmes shows:
  - we need to distinguish between:
    - “Near term trends”
    - “Long term developments”
- Analysis of existing national plans shows:
  - Planning timeframes vary greatly
  - Some countries have long term strategies in place
    - They cover nuclear power; national R&D; global goals; export goals.
  - Others have only nearer term plans and policies
  - Timeframes vary from 2020 to 2050

## Topic 1: Nuclear Power Deployment in the 21<sup>st</sup> Century

- **Near term trend: difficult** phase for nuclear
  - Some reports on delays or reconsideration. Others continue.
  - Need to address cost, public acceptance, predictability, SF&W, other issues
- **Long term development: more positive** outlook
  - **Global analyses** and publications: stable or positive
    - Reason: drivers remain. Climate, development, population, resources.
    - But also: risk of current trend to become the long term development
  - **National statements**: need for nuclear power in national programmes
  - **Individual expectations** for global development: stable or positive

## Topic 2: Stakeholder Involvement and Public Communication

- Important **in all phases** of nuclear power programme
- Important in context of regulator – operator – government – public interactions
- Important for dealing with emergencies
- For 21<sup>st</sup> century expectations: relevance of **stable public acceptance** for growth of nuclear power in the long-term
  - i.e. in addition to public acceptance for the introduction.

## Topic 3: Nuclear Safety and Nuclear Innovations

- Fukushima lessons learned:
  - **Emphasis on nuclear safety**
    - Regulatory approach, technical safety, licensing
  - **Emphasis on innovations**
    - As means to **achieve** desired safety
    - Topic for INPRO

# INPRO Dialogue Forum

## Follow-up actions and next steps

- **Share outcome** of INPRO Dialogue Forum #5
  - E.g. with **IAEA General Conference** delegations at INPRO briefing
- **Issue proceedings** (IAEA publication)
  - Print copy with CD-ROM
  - INPRO Dialogue Forum website
- **Support Member States** in developing long term nuclear energy strategies
  - Guidance publication on “How to ...”?

# Next INPRO Dialogue Forum



- Next INPRO Dialogue Forum
  - Again hosted by a Member State?
- INPRO Dialogue Forum #6 (2012)
  - Topic: Licensing of SMRs
  - Time: November 2012, to be confirmed
  - [www.iaea.org/INPRO](http://www.iaea.org/INPRO) will have details



# Thank you for your participation!

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