

**Infrastructure for nuclear newcomers.
Risks. Legal support. Obstacles on the ways of international
cooperation.**

Round-table session.

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Opening panel
Infrastructure for nuclear newcomers.
Risks. Legal support. Obstacles on the ways of international cooperation.
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Three months ago I would start my talk saying that now more than 60 countries are considering the introduction of nuclear power and asking support from international organizations and countries supplying nuclear technology and services in this area. After Fukushima accident we can see slightly different picture. There are some countries with nuclear program that firmly said about phasing out their nuclear program, other countries also are firm saying that they would continue using and developing nuclear power, some newcomers said that they will continue introduction of nuclear program, others announced about freezing their original plans for time being. Time will clarify this picture.

The motto of this Conference “Nuclear power: break or progress” reflects this moment of truth for nuclear power. Even with over thinking of the nuclear role in some country’s energy mix it will continue to be used and will continue to be implemented in some new countries. Lessons of Fukushima and possible technical and institutional changes in the nuclear power global or national regimes are expected. The extend to which these changes can impact the established solid basis of recommendations and accumulated experience in introduction of nuclear power in newcomer countries will be discussed today together with main topic of the session about routs to nuclear power for interested States involved in introducing nuclear power programs. It is also an opportunity for better understanding what has to be done to ensure that any use of nuclear energy in these countries is beneficial, responsible and sustainable.

Beneficial use implies that benefits outweigh associated costs and risks and that these risks and benefits are transparent to and accepted by the public. Transparency is critically important for the trust of the public in the country developing nuclear power as well as for the confidence and trust of neighbouring countries.

Sustainable use implies efficiency in using natural resources and accumulated knowledge. It also means innovations in technology to improve the economics, safety, security, proliferation resistant and environmental features of nuclear power.

The principle of responsible use is based on the understanding that every country has the right to introduce nuclear power, as well as the responsibility to do it right.

Responsible use of nuclear power implies that people and the environment are adequately protected and that the use of nuclear power does not increase the risks of proliferation of nuclear weapons or malicious use of nuclear materials.

It includes the institutional, organizational and technical elements that provide a high level of safety that can be achieved through technological development and engineering solutions, effective human interventions, leadership for a strong safety culture and independent regulatory systems. The role of government in establishing the legal and regulatory framework is critical as well as control and responsibility for prompt and adequate actions in case of accident. Case of Fukushima indicated on this once more.

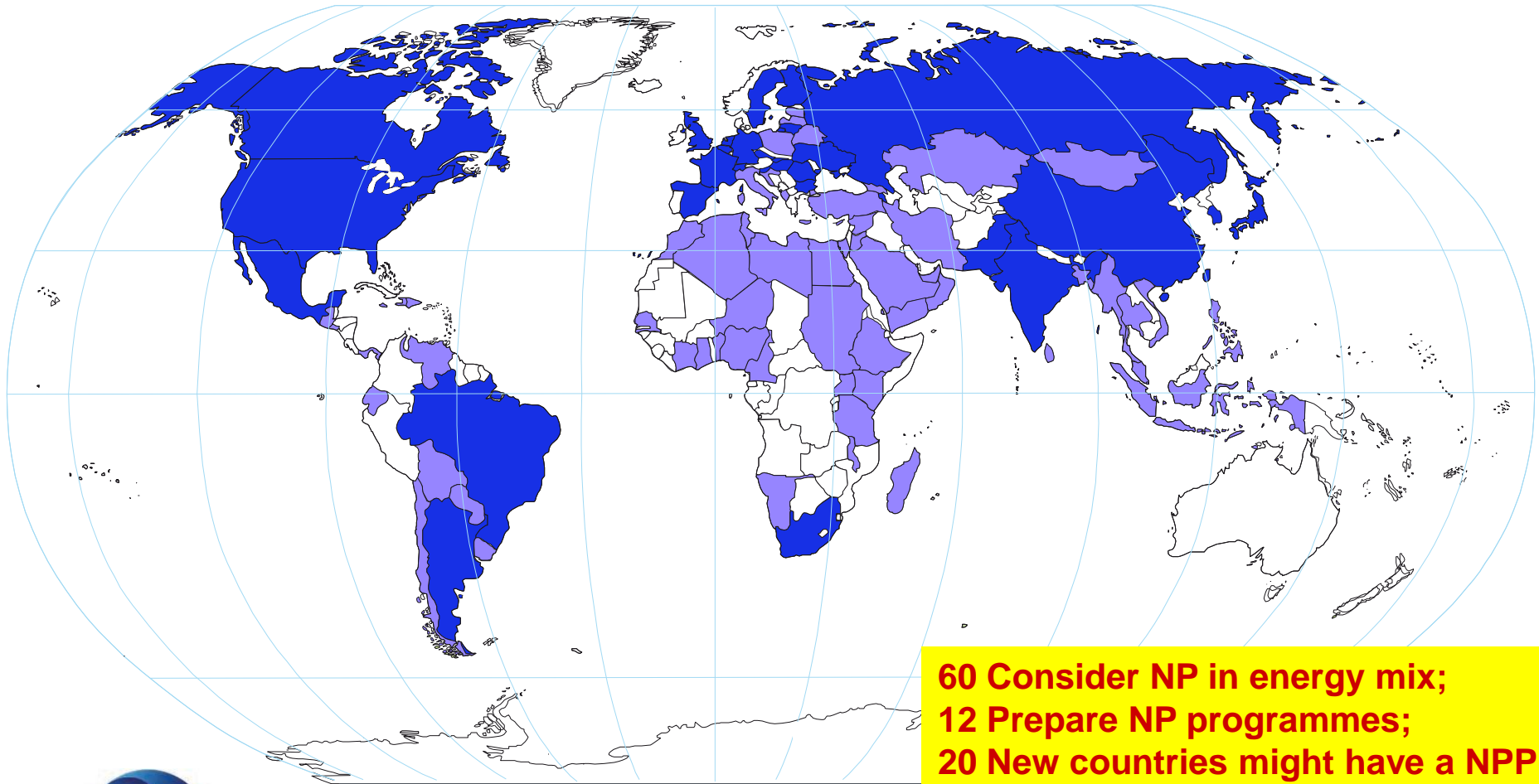
As it has been said each states has a right to take a decision about national nuclear power program - responsible and knowledgeable decisions taking into account social and economic considerations, the State's commitment to use nuclear power for peaceful purposes in a safe and secure manner; and with understanding of the need to establish a national nuclear infrastructure for the governmental, legal, regulatory, managerial, technological, human and industrial support of the national nuclear program.

Topics for discussion

In conclusion, there are a number of issues associated with the effective support to build nuclear infrastructure that can be highlighted by the members of the panel:

- role of the government of a supplying country: expectations, experience, conditions, ways of strengthening responsible use and building capacity;
- role of the government, national industry and other organizations in a newcomer country: expectations, building competence and human resource development, strengthening responsible use;
- role of, and expectations from, international organizations and initiatives; multilateral and international approaches; front and back end of the fuel cycle; and
- role of industry: responsibility, different options for construction, support in operation, technology and knowledge transfer;
- regional cooperation of countries starting NP program, coordination and joint infrastructure development, e.g. E&T for countries using the same language, technical support organisations, etc.
- strengthening the trust, building confidence, and cooperation with public;
- assistance in human resource development, establishment of the comprehensive system in the interest of all elements of nuclear infrastructure; role of carriers of knowledge, mentoring;
- link of principle of the responsible use with principles of beneficial and sustainable use in the nuclear infrastructure development;

Number of Countries Considering Nuclear Programme



**60 Consider NP in energy mix;
12 Prepare NP programmes;
20 New countries might have a NPP
in operation by 2030**



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Operating
Considering

Nuclear Power Trends

- High and low projections continue to grow: 803/546 GW(e) in 2030
China 40 GW(e) in 2020, India 470GW(e) in 2050
- New plans in UK, Romania, Finland, Slovakia, RF, and Canada;
- 5 new NPPs and 15 constructions (12 in Asia) started in 2010
- Center of growth in Asia: 44 (out of 66) NPPs under construction,
34 (out of 43) NPPs connected to the grid
- Growing interest in nuclear power among “NEWCOMERS”
About 20 newcomer-users by 2030

But: 11 March 2011- Fukushima nuclear accident

Phase out/freezing policy: Germany, Switzerland, Italy(?)...



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Steps into Nuclear Power Programme

Energy Planning (energy options, national resources, waste management policy, regional approach...)

Infrastructure Development (E&T; nuclear law; safety regulations, operational/ industrial capacity; policy in NPP, FC, WM ...)

Development and Deployment (Turn key, BOOT, BOO, ...)

Assessment of future NES (INPRO, G-IV...)

Basic Principles of NP Peaceful Use

Beneficial

Benefits outweigh costs and risks

Open/transparent communication to public

Responsible

People and environment are protected

Limit risk of proliferation and malicious use

Sustainable

Long-term commitment

Efficient in using resources

Continuous improvement in technology

Nuclear Power Infrastructure

Regulatory infrastructure

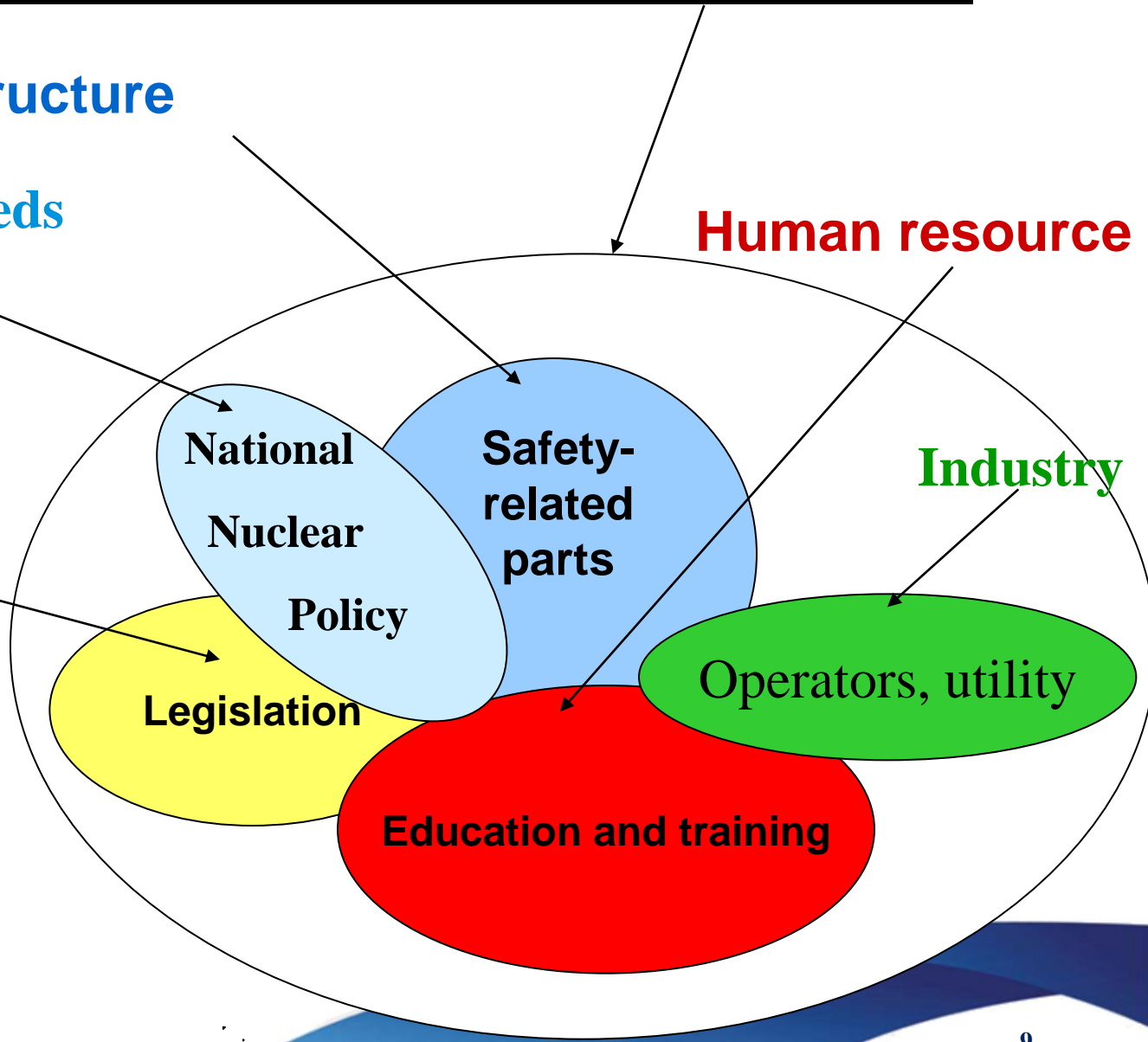
Socio-economic needs

Human resource

Nuclear law

Industry

- National Position
- Legal Framework
- Regulatory Framework
- Radiation Protection
- Nuclear Fuel Cycle
- Human Resource
- Environmental Protection
- Emergency Planning
- Nuclear Waste
- Nuclear Safety
- Stakeholder Involvement
- Industrial Involvement
- Security
- Financing
- Safeguards
- Sites selection
- Electrical Grid
- Procurement



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Topics for discussions

- Role of the government of a supplying country**
- Nuclear infrastructure in a newcomer country: government, industry, universities....**
- Role of, and expectations from, international organization**
- Role of industry/vendor of supplying country**
- Regional cooperation of countries starting NP program**
- Building trust, confidence, and cooperation with public**
- Infrastructure for comprehensive human resource development**
- Principles of beneficial, responsible and sustainable use in the development of nuclear infrastructure**



Спасибо за внимание!