Global Lessons Learned

MS have **analysed and shared** common safety improvements including:

- enhancing NPP **protection** against extreme natural events and their consequences, strengthening **severe accident** management programmes, and stronger **accident mitigation** measures;
- enhancing **emergency preparedness and response**, at national and international level, including RANET, JPLAN , Agency's capabilities and emergency communications;
- recognizing the importance of proper consideration of the **human and organizational factors** for safety; and that **safety culture**, starting with **strong and effective leadership**, is essential for a successful, sustainable nuclear power programme.
- improving communication with the public on **radiation in the environment** considering the concern of people to be assured of their safety, answering questions such as "can I drink water?", "can my children go to school ?" and "can I eat vegetables?".

Technical Lessons Learned

International Expert's Meetings have identified actions to improve safety in the framework of the Action Plan:

- The availability and operability of resources for prolonged **station blackout and loss of ultimate heat sink** should be ensured as well as strengthening containment integrity, measures for hydrogen removal and mitigation and more efficient monitoring and control of hydrogen.
- In a nuclear or radiological emergency**, effective communication** should be ensured so that decision makers as well as the public, understand the situation and have sufficient information that will allow them to protect people and the environment.
- The response to the threat from external hazards should include **combinations of hazards** and include consideration of complications that can arise on **multiple-unit sites** and from disruption of infrastructure.

Technical Lessons Learned

- **On-site** and **off-site resources**, including mobile equipment and facilities for dealing with multiunit and disrupted infrastructure, **should be available** at the regional, national or even international level;
- The values used for **restrictions** on drinking water, foodstuff and commodities, should be reviewed to provide a consistent message..
- **Realistic emergency exercises** are necessary to insure effective emergency response capability;
- For **new nuclear power plants** lessons learned should be taken into account in designing, siting, constructing, operating, and in the licensing process;
- **Regulators** should have sufficient **competence, resources and independence**, and take into account the IAEA Safety Standards and applicable knowledge. Regulatory Peer reviews must clearly include **national action plans and follow-up mission** to complete the process.

IAEA Lessons Implementation

- **Expanded** the content of IAEA expert **peer review services** to include lessons learned from the accident; including additional guidance for expert reviewers and incorporate a **specific module on Fukushima lessons learned** in OSART, IRRS and EPREV.
- Systematically reviewed **IAEA Safety Standards**, taking into account lessons learned from the accident;
- Reviewed **our emergency preparedness and response** and identified areas where we could have done better, including in communication;
- Assisted Member States and developed **new guidance in several areas including:** accident management, communication to the public, capacity building, remediation and decommissioning and human and organizational factors;
- Launched a series of **International Expert Meetings** focussing on important technical issues as specified in the NSAP.

The Way Forward

"....We will also prepare a comprehensive report on the Fukushima Daiichi accident, to be finalized in 2014."

Fukushima Comprehensive Report

Working Groups

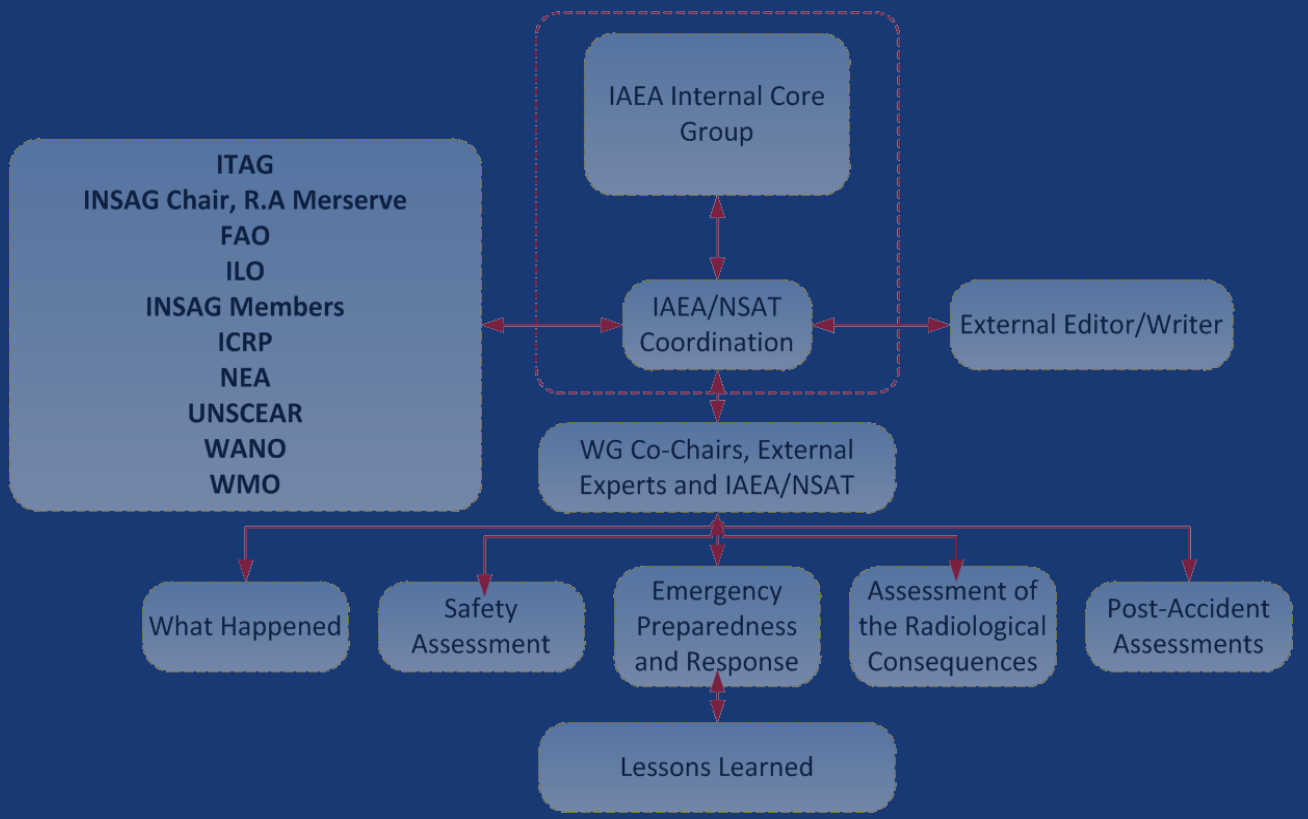
- External experts and IAEA staff.

International Technical Advisory Group (ITAG)

- INSAG chairman
- FAO, ILO, INSAG Members, ICRP, NEA, UNSCEAR, WANO, WMO
- Advise, review consistency/accuracy

IAEA Internal Core Group

- Validate/approve work



IAEA Safety Standards
Classification of Radioactive Waste
CAUTION
MAKING NUCLEAR POWER
SAFER
The IAEA Action Plan