



French Academy of Science

Working group

"Solidarity for Japan 2011"

Lessons From Fukushima

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French Nuclear Energy Programme

- **74% of the electric mix**
- **58 PWRs**
- **Spent fuel reprocessed and used**

French Nuclear Energy Organization

- **National research centre (CEA)**
- **Education Institute (INSTN)**
- **National industry in charge of nuclear constructions (AREVA)**
- **Agency in charge of nuclear wastes (ANDRA)**
- **Institute for safety and radioprotection (IRSN)**
- **Public industrial operator (EDF)**
- **Independent national administrative authority (ASN) in charge of security**



INSTITUT DE FRANCE
Académie des sciences

The major accident at Fukushima

Seismic, nuclear and medical considerations



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Seismic Subgroup

Recommendations

- **Long periods of observation of seismic activity**
- **Review paraseismic construction standards**
- **International cooperation**
- **National Council for Natural Risks**
- **Reinforce public information**
- **Specific information in school programmes**

Nuclear Subgroup

Recommendations

- **Residual heat from the core**
- **Cooling pool specifications**
- **Dangers presented by natural accidents**
- **External circuit connections**
- **Scientific experts**
- **Rapid task force (RTF)**
- **Research generation reactors**
- **Long-term disposal wastes**
- **Transportation of radioactive matter minimized**
- **Research on safety**

Medical Subgroup

Recommendations - I

Particularly stressing were the risks hanging over the population following radiation

- **INES scale should be reviewed**
- **Executive Committee for post-accidental phase management**
- **Studies on long exposure to low-level radiation**

Medical Subgroup

Recommendations - II

- **Soil rehabilitation improvement of decontamination equipment**
- **Identification of plants capable of concentrating radionuclides**
- **Rapid distribution of iodine**
- **Hospitals and evacuation means**
- **Research on the psychological impact of real or perceived risks**
- **Epidemiological research**

Conclusion

Nuclear power production may have serious drawbacks which do not spare the most technically advanced countries. Absolute transparency of information is mandatory to acquire the confidence of the population. The reinforcement of safety and radioprotection measures is a high priority. Solidarity with other countries is essential. Our priority in France is not decommissioning 57 nuclear plants but the reinforcement of their Safety.



