



Impact on the environment of accidents at the Chernobyl and Fukushima nuclear power plants

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IMPACT ON THE ENVIRONMENT OF ACCIDENTS AT THE CHERNOBYL AND FUKUSHIMA NUCLEAR POWER PLANTS

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The accident that happened at the Chernobyl nuclear plant in April 1986 was the most severe in the history of the nuclear power industry and caused the radioactive contamination of around 200 000 km² in Europe. The IAEA, in its role as a specialized nuclear-related technical UN agency, has been involved in the mitigation of Chernobyl accident consequences since early May 1986. During the 27 years since the accident happened, the IAEA has implemented a number of programmes to mitigate the environmental consequences in connection therewith. The accident at the TEPCO Fukushima Daiichi nuclear power plant (Japan) in March 2011 led to extensive contamination of the environment. Since the first hours of the accident, the IAEA has been working extensively, serving as the international focal point for assistance, information-sharing and follow-up. The presentation provides a broad overview of environmental consequences of these two accidents with special attention to the lessons learned. Major factors which have determined consequences of these accidents as well as need in countermeasures and remedial actions are also discussed.

Atmospheric conditions, environmental characteristics (topography, forestation, land use, properties of the soil, agricultural practices, food production and distribution systems, seasonality, etc.), human habits and features of living environment are major factors governing consequences of the radiation emergencies. These factors should be considered in the design of monitoring programmes, environmental assessments, planning and implementation of protective measures.

The existing international arrangements provide possibilities for cooperation on the assessments of the radiological impact on the environment, implementation of large-scale monitoring programmes and exchange of information in the case of major releases of radioactive materials.