Joint FAO/IAEA Programme
Nuclear Techniques in Food and Agriculture

Food and agriculture: responding to nuclear emergencies

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Accidental or malicious releases of radioactivity have the potential to threaten health and disrupt life. Communities, agricultural production and food trade can be severely affected with global consequences for consumers and producers. It is important that contingency plans and arrangements for dealing with contaminated land and agricultural products are developed and maintained.

What FAO does

FAO is a full party to two international conventions[1] governing notification and assistance to nuclear or radiological emergencies. They establish the emergency preparedness and response framework, and both were adopted in 1986 following the accident at the Chernobyl nuclear power plant.

The Food and Agriculture Organization of the United Nations , thorough the Joint FAO/International Atomic Energy Agency (IAEA) Division is part of a system to facilitate the provision of relevant information about nuclear accidents as early as possible in order to minimize transboundary radiological consequences. In the event of a nuclear accident, countries that could be directly affected and the IAEA are notified promptly by the affected country. The IAEA in turn informs other States Parties, countries, the FAO and other international organizations.

Providing timely assistance and support is also an FAO function. If help is requested, the FAO and its UN partner organizations channel information, give support and provide their services.

[1] The Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency.

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Contributes to FAO's Strategic Objective 5

Increase the resilience of livelihoods to threats and crises

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Understanding the context

Work in this area can best be described with reference to events in Japan in March 2011. In the Fukushima accident, information was provided in accordance with the Early Notification Convention. Within one hour, the international procedures were initiated, under the Joint Radiation Emergency Management Plan (JPLAN) of the International Organizations.

Under the JPLAN, the Joint FAO/IAEA Division is the FAO focal point and has assigned liaison officers to staff the IAEA Incident and Emergency Centre. This has ensured coordination and dissemination of information between FAO and the IAEA. Other appropriate international organizations were also represented at the IAEA and international coordination was maintained through regular video and teleconference meetings of the Inter-Agency Committee on Radiological and Nuclear Emergencies.

Support from FAO was requested, and a joint FAO/IAEA Food Safety Assessment Team (FSAT) visited Japan within a week. The FSAT provided advice and assistance to the authorities, including local government, on technical issues related to food safety and agricultural countermeasures, including sampling and analytical strategies and interpretation of monitoring data to ensure that reliable and continuous updates could be provided on the extent of food contamination in the affected areas. These data were also used for the development of possible mitigation and remediation strategies.


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Data on radioactivity were processed in accordance with the FAO mandate to collect, analyse, interpret and disseminate information relating to food and agriculture. These data were received directly from Japan through the International Food Safety Authorities Network (INFOSAN). An authoritative database of monitoring data was compiled by the Joint FAO/IAEA Division. Not only did this database support information exchange, it was also fundamental to FAO follow-up activities and input into international assessments and reports.

Current activities include an international research project to develop a nuclear emergency response package that can be adopted by agricultural departments. An international network of institutions are collaborating to develop and implement an electronic system that includes protocols for sampling, mapping and to optimize response efforts and the implementation of urgent actions such as food and commodity restrictions and food safety announcements.

The prototype system can accessed as an application on smartphones. A feature is that it can be used in routine monitoring as well as in an emergency. Promoting the routine use of such a system ensures that it will be maintained and developed in line with best practices and that users will not require specialist training should they be faced with an emergency – the system could be implemented at a moment's notice.

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MORE INFORMATION

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