

# Food Control after a Major Nuclear Accident – the Need for Harmonisation



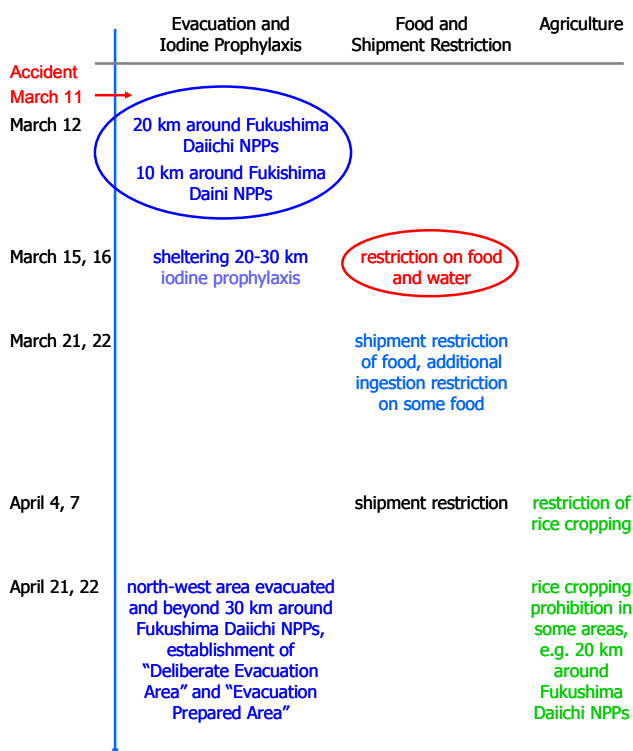
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## Introduction

- A restriction of food and drinking water is one of the first countermeasures after a major nuclear accident.
- Fukushima nuclear accident required implementation of a **full scope** of emergency countermeasures in Japan, e.g.:
  - evacuation (200 000 evacuees)
  - sheltering
  - iodine prophylaxis (230 000 distributed units)
  - control of food and feedingstuffs (control of drinking water, milk, vegetables,...).
- In Japan an extensive monitoring programme was put in place including firstly:
  - control of external exposure using also mobile cars and airplanes equipped by the monitoring systems
  - control of food and drinking water.
- Extensive monitoring programme was later applied also for soil, other agriculture products, cargo, ships etc.
- The extensive monitoring programmes were also established in other countries.

## Timescale of Major Countermeasures during the Fukushima Accident in 2011

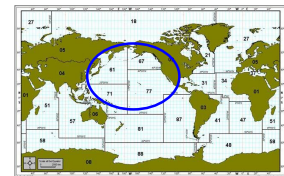


## Comparison of Triggers after the Accident in Japan Implemented for Food and Drinking Water

- In general, the intervention levels for iodine and caesium radioisotopes used in Japan were in line with levels prepared in the EU for "future" nuclear accidents based on the Codex Alimentarius.
- The EU adopted lower Japanese levels after the Fukushima accident where the levels were available.
- The Derived Intervention Levels of the FDA are used as a trigger for a control in the USA.
- No harmonisation exists regarding a list of radioisotopes important to control food and drinking water after a severe nuclear accident.
- Moreover, even if the triggering levels of specific activities of radioisotopes are given, they are not harmonised.

Triggers for Countermeasures for some Radioisotopes

Radioisotopes	Country	Food for infants and young children [Bq/kg]	Milk [Bq/kg]	Other foodstuffs, except liquid foodstuff [Bq/kg]	Liquid foodstuff [Bq/kg]
Iodine	Japan	100	300	2 000	300
	EU	150	500	2000	500
	USA	170			
Caesium	Japan	200	200	500	200
	EU	400	1000	1250	1000
	USA	1200			



Map of Japan (left), map of major fishing areas - FAO areas (right), where fishing areas 61, 67, 71 and 77 are affected.

## Conclusions

- Currently, after the Fukushima accident quite different guidelines and approaches are used in different parts of the world regarding a control of contamination of food.
- As a rule levels of specific activities of radioisotopes triggering a control of food and drinking water are based on the assumption that an accident happened in the vicinity of the affected country and a list of emergency countermeasures is in place, one of them is a control of food and drinking water.
- After the Fukushima accident a specific control is giving to fish, fishery products and other marine products caught in FAO Major Fishing Areas 61, 67, 71 and 77 and feed and food processed or contained items mentioned.
- The global trading requires harmonisation of approaches which could result in appropriate harmonisation of levels of specific activities of radioisotopes in food as a result of a severe accident based on the concept of "emergency exposure situation" presented in the ICRP 103.