

# The French doctrine for the management of the Post-Accident Nuclear Situation

1. The CODIRPA works
2. The French doctrine : objectives, principles and key points
3. The PA zoning
4. CODIRPA development (new tasks)

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### The Prime Minister Directive, 7 April 2005

ASN is responsible for “establishing the framework, for defining, preparing and implementing the steps necessary to deal with a post-accident situation”

#### CODIRPA Composition

- ▶ National and local administrations
- ▶ Expert bodies
- ▶ Operators and associations, since 2008 ...
- ▶ Foreign radiation protection authorities (Germany, Switzerland, Luxembourg)

**Thematic working groups** : foodstuffs, drinking water, health surveillance, waste, radioactivity measurements, intervention in contaminated areas, compensation, regulation, information, culture ...

Then two “transversal commissions” (transition and long term periods)

Test of the doctrine at local level (3 NPP sites and 9 local communities)

Almost 300 associated experts involved (institutional and civil society)

## The CODIRPA works (2005-2012)

### Transparency of the projects ([www.asn.fr](http://www.asn.fr))

- Belarus feedback experience from the Chernobyl disaster (PAREX, 2004) served as the founding basis for the French doctrine ;
- The 12 technical reports of the thematic groups ;
- The draft guide for the termination of the emergency phase, subject to testing (2010).

### International outreach

- 2 international seminars in Paris (Dec. 2007 and May 2011)

### A doctrine grouping together (short time release) :

- Main document (15 pages) : objectives, principles, key actions and strategic orientations for the transition and long term phases.
- Annex 1 : The first actions to be put in place at the end of the emergency phase
- Annex 2 : The guidelines for managing the transition phase (few months).
- Annex 3 : The guidelines for managing the long-term phases (several years)

### Approval by CODIRPA in June 2012, followed by publication ([www.asn.fr](http://www.asn.fr))

# The CODIRPA doctrine :

## Objectives, principles and key points

### 3 fundamental objectives (strongly connected)

- To protect the population against the dangers of ionising radiations;
- To provide support for members of the population who have suffered the consequences of an accident;
- To prepare the social and economic recovery of the affected areas.

### 4 principles (very closed to ICRP 103 and 111)

- Principle 1 (Anticipation): issues relating to nuclear post-accident management must be taken into account immediately once the emergency phase is over, consequently the first actions for the protection of the population must be planned in advance.
- Principle 2 (Justification)
- Principle 3 (Optimisation)
- Principle 4 (“Co-construction and transparency”) : the management of post-accidental situation must involved the population, the elected people, the social economic and “communication” actors ; transparency of information is a corollary.

## The CODIRPA doctrine : Objectives, principles and key points

### 5 Key points

- The immediate delineation of a PA zoning for the contaminated area, with an evolution during the transition phase.
- The efficient organisation of medical and psychological care, human radiation monitoring, financial support and compensation for those affected by the consequences of the accident.
- The permanent radiological characterisation of the environment, foodstuffs and drinking water.
- The emergence of new forms of governance based on the vigilance and active participation of the population concerned, a key point for economic recovery within affected areas.
- A sustainable waste management in response of the rapid increase of diverse kinds of contaminated waste.

Immediate delineation of a PA zoning for the contaminated areas provides the structural framework (short time release) :

- for initial protection measures :
  - to decide about long term evacuation and relocation (after sheltering during the early phase) ;
  - to ban the sale and the consumption of locally produced foodstuffs ;
  - to engage the first clean-up operations within urban areas.
- for the organisation of medical and psychological care, human radiation monitoring, financial support and compensation :
  - opening information centres for the populations affected.
- for the radiological characterisation of :
  - the environment, foodstuffs and drinking water ;
  - the waste and manufactured product ;
- as well as for preparing the economic recovery of contaminated areas in transition period.



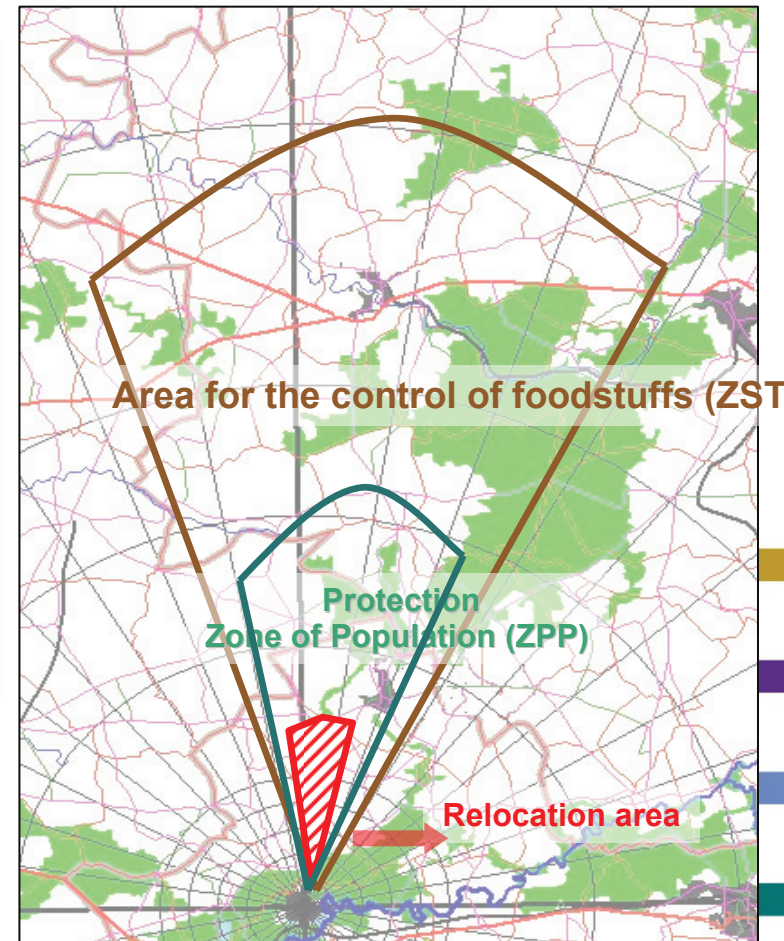
An area for the protection of the population (ZPP), based on dose criteria ; preliminary actions :

- Prohibition of trade and consumption of foodstuffs ;
- Starting cleaning actions (urban areas) ;
- ...

If needed, including a relocation Area (an exclusion area within ZPP depending of the level of external exposure).

An area for the control of foodstuffs (ZST), based on MPL (Euratom)

- Immediately : prohibition of trade and consumption
- Strategy for « clearance » control



### Dose criteria for the delineation of the ZPP (Protection of population) :

- Effective dose / 1st month : 10 mSv ; Equivalent dose Thyroid : 50 mSv.
- considering both external exposure (ground contamination) and internal exposure due to the “possible” consumption of contaminated foodstuffs (even if the consumption will be prohibited).

Dose criteria for the delineation of the “relocation area” : effective dose 10 mSv/1st month considering only external exposure.

### Which data ?

- At the end of the emergency phase, a predictive estimation (modelling) should be provided by IRSN ;
- The evolution of the PA zoning during the transition period will take into account the results of the radiological monitoring of environment.



# The new tasks for CODIRPA

To regularly analyze feedback experience from :

- the Chernobyl accident (long term) ;
- the Fukushima accident (long time release, transition period).

To engage preparedness works at local and national levels :

- The preparedness of the PA preliminary actions on each NPP sites (“co-construction and transparency” principle with stakeholders) ;
- The “road maps” for ministries (Civil security, Public Health, Agriculture, Environment, Industry, Economy, Education...),

To further develop certain topics :

- the social acceptance of low contaminated foodstuff ;
- the cost of PA ;
- the gradual commitment of stakeholders in “real” circumstances ;
- the contamination of water resources, of the sea ;
- the radiation protection culture ;
- the control of manufactured product.

To transfer the doctrine to all those involved, in particular economic players, elected people and opinion leaders

- Experimental projects

To exchange with neighboring countries and international organizations (HERCA, AIEA, WHO, NEA,...).