

# France

## EPR Fact Sheet

### Decision making

The Prime minister is in charge of managing a serious nuclear emergency situation at national level. He can appoint a Minister to ensure the operational management of the crisis, generally the Minister of Interior (in charge of homeland security and civil protection) or the Minister of Foreign Affairs for emergencies abroad. The Interministerial Crisis Cell is activated by the authorities in charge of the emergency management at the national level.

At the local level, the management is steered by the "Prefect of Departement" who is responsible for the implementation of population protective actions, the security of the vicinities and the logistics. He acts according to an "Off-site Emergency Plan" (PPI) with the advice of ASN.

### Advice

ASN provides recommendations to the authority in charge of deciding the protective actions: the Prefect if the crisis is managed at local level and the Prime minister if the crisis is managed at national level. The recommendations of ASN deal with the safety of the accidented facility, radiation protection of the population and the environment. ASN bases its recommendations on the technical support of IRSN.

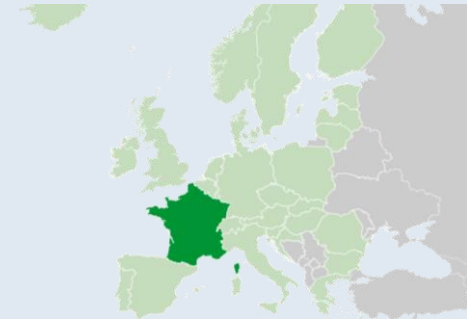
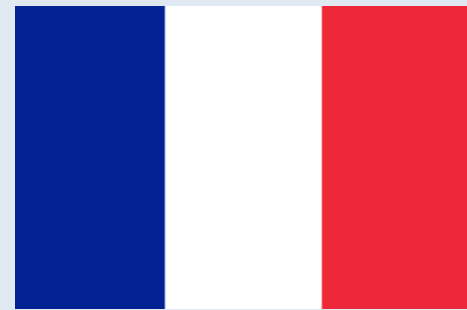
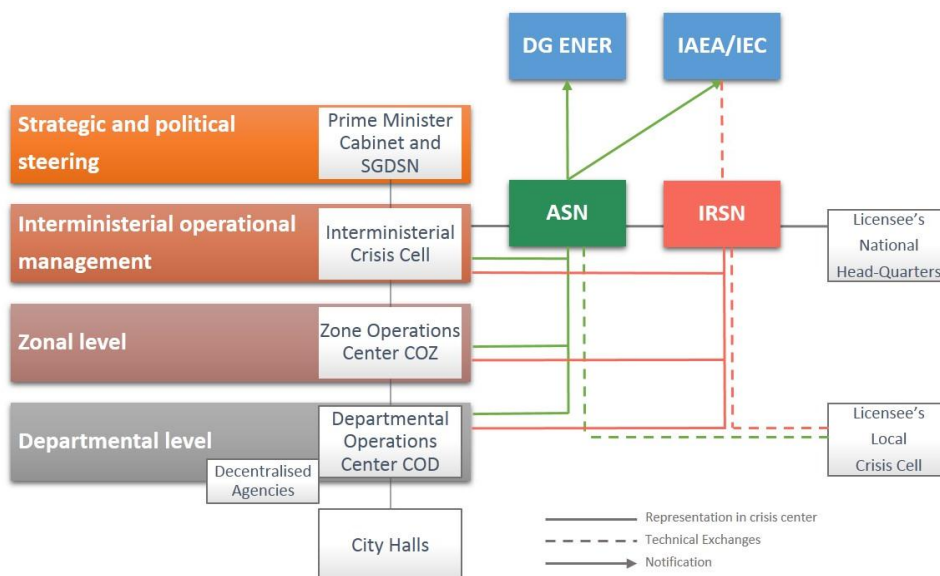
### Licensee

The licensee is responsible for the crisis management on site, based on an "On-site Emergency Plan" (PUI). He regularly informs the authorities of the evolution of the situation.

### Alarming

The main channels of alert diffusion are the followings: the licensee alerts immediately the Prefect of Département and ASN. ASN alerts IRSN. The Prefect alerts the Ministry of Interior (and the Prefect of Defense and Security Zone) who alerts the Prime Minister, if necessary.

### Organizational structure



### Country info

Capital	Paris
Official language	French
Population	70 M
Area	640 000 km <sup>2</sup>
Currency	Euro (€)
Time zone	UTC+1
Calling code	+33
Internet TLD	.fr
NPPs /ele. share	58/75%

### NWP\*

Ministry of Foreign Affairs

### NCA\*

ASN

### Emergency website

[www.asn.crise](http://www.asn.crise)

### Online measurements

[www.criter.irsn.fr](http://www.criter.irsn.fr)

[www.mesure-radioactive.fr](http://www.mesure-radioactive.fr)

### Bilateral agreements

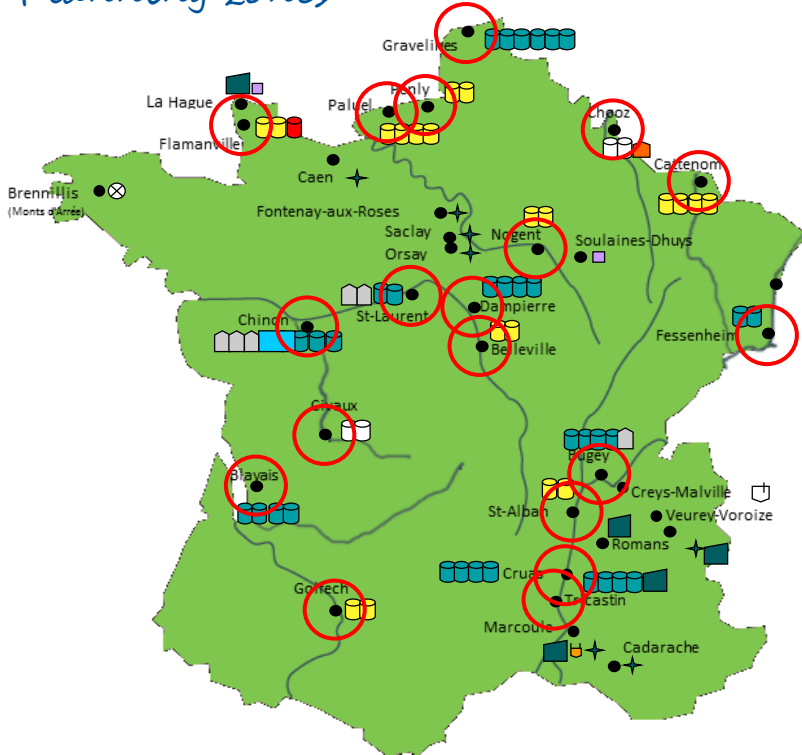
Belgium, Luxembourg, Spain, Switzerland

### RANET capabilities

- Source Search and Recovery
- Radiation Survey
- Environmental Sampling and Analysis
- Radiological Assessment and Advice
- Medical Support
- Dose Assessment
- Decontamination
- Nuclear Installation Assessment and Advice

\*National Warning Point and Competent Authority under the Emergency Conventions

## Planning zones



## Reference scenarios

The French National Response Plan to a Major Nuclear or Radiological Accident, published in 2014, defines eight “Reference Situations”:

1. Situation of uncertainty,
2. Facility accident resulting in an immediate and short-term release,
3. Facility accident resulting in an immediate and long-term release,
4. Facility accident resulting in a delayed and long-term release,
5. Accident during the transportation of radioactive materials with potential release,
6. Accident occurring abroad and with a potential significant impact in France,
7. Accident occurring abroad and having little impact in France,
8. Offshore accident with a potential release.

### Comments

- France does not use the IAEA concept of “Emergency Classification”.

## Protection strategy

In an emergency, leading to a threat of radioactive release off site, the Prefect activates the PPI and decides the protective measures, based on ASN recommendations and possibly other factors. He can order sheltering, evacuation, ingestion of iodine or food restrictions. The area covered in the PPI, specific to each facility, is designed to cover the first 24 hours of an emergency. In this area, iodine tablets are pre-distributed to the population. There is also a zone of 2 km for reflex sheltering. The extension of the current radius of the PPI zone (10 km) to a radius of 20 km and the setting up of a 5 km radius area for immediate evacuation is ongoing. In case releases affect areas beyond the scope of the PPI, the Prefect implements the zonal version of the national plan and also specific organizations like ORSEC, covering the whole territory of the country.

These protective actions are decided on the foreseeable exposure to the radioactive risk and may change as the situation evolves. If necessary, radiological control measures and prohibitions on the harvesting, consumption and distribution of foodstuffs are taken.

### Post-accident phase

Policy elements for post-accident management are available on the website (<http://post-accidentel.asn.fr/Gestion-post-accidentelle/Elements-de-doctrine>). It includes the definition of the post-accident zoning (public protection zone on projected effective dose of 10 mSv or equivalent dose of 50 mSv at the thyroid for one month, heightened territorial surveillance zone if contamination exceeds European NMAs on the next month), the protective actions (consumption of foodstuffs, the placing on the market of foodstuffs, products...) and the population information and support.

## Criteria

Protective Action	Intervention levels	Comments
Sheltering	10 mSv	Immediately applicable. Public alerted by sirens or automated landline phone message sent by licensees
Evacuation	50 mSv	Also possible as an immediate protective action in particularly serious and urgent situation.
Ingestion of iodine tablets	50 mSv (thyroid)	Most effective when taken at the required dosage two hours before exposure. Stable iodine may be administered a second time after 24 hours.

### Comments

The protective actions are implemented in affected areas that are either identified as reflex zone, during the preparedness phase or proposed based on the evaluation of the projected dosimetric consequences for the population.

## Nuclear facilities\* and population

Facility	Type	MW <sub>e</sub>	GPS	Comments
Belleville	BEL1	PWR	1300 47° 32'	2° 50' E
	BEL2	PWR	1300	
Blayais	BLA1	PWR	900 45° 08'	0° 40'
	BLA2	PWR	900	
	BLA3	PWR	900	
	BLA4	PWR	900	
Bugey	BUG2	PWR	900 45° 50'	5° 19' E
	BUG3	PWR	900	
	BUG4	PWR	900	
	BUG5	PWR	900	
Cattenom	CAT1	PWR	1300 49° 26'	6° 13' E
	CAT2	PWR	1300	
	CAT3	PWR	1300	
	CAT4	PWR	1300	
Chinon	CHI-B1	PWR	900 47° 14'	0° 10' E
	CHI-B2	PWR	900	
	CHI-B3	PWR	900	
	CHI-B4	PWR	900	
Chooz	CHO-B1	PWR	1500 50° 06'	4° 47' E
	CHO-B2	PWR	1500	
Civaux	CIV1	PWR	1500 46° 26'	0° 40' E
	CIV2	PWR	1500	
Cruas	CRU1	PWR	900 44° 38'	4° 45' E
	CRU2	PWR	900	
	CRU3	PWR	900	
	CRU4	PWR	900	
Dampierre	DAM1	PWR	900 47° 43'	2° 33' E
	DAM2	PWR	900	
	DAM3	PWR	900	
	DAM4	PWR	900	
Fessenheim	FES1	PWR	900 47° 55'	7° 33' E
	FES2	PWR	900	
Flamanville	FLA1	PWR	1300 49° 34'	1° 53' E
	FLA2	PWR	1300	
Golfech	GOL1	PWR	1300 44° 07'	0° 51' E
	GOL2	PWR	1300	
Gravelines	GRA1	PWR	900 51° 02'	2° 13' E
	GRA2	PWR	900	
	GRA3	PWR	900	
	GRA4	PWR	900	
	GRA5	PWR	900	
	GRA6	PWR	900	
Nogent	NOG1	PWR	1300 48° 30'	3° 30' E
	NOG2	PWR	1300	
Paluel	PAL1	PWR	1300 49° 51'	0° 38'
	PAL2	PWR	1300	
	PAL3	PWR	1300	
	PAL4	PWR	1300	
Penly	PEN1	PWR	1300 49° 57'	1° 12' E
	PEN2	PWR	1300	
Saint-Alban	STA1	PWR	1300 49° 51'	0° 38'
	STA2	PWR	1300	
Saint-Laurent	STL1	PWR	900 47° 43'	1° 35'
	STL2	PWR	900	
Tricastin	TRI1	PWR	900 44° 21'	4° 43' E
	TRI2	PWR	900	
	TRI3	PWR	900	
	TRI4	PWR	900	

\*The IAEA emergency preparedness category 1 and other relevant facilities

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