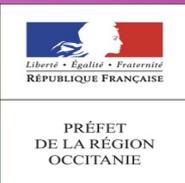


Natural risks department

Decentralization, a fundamental principle of French policy for managing natural risks

Pierre-Olivier Dubois - Head of the Flood Forecasting and Hydrometry Department

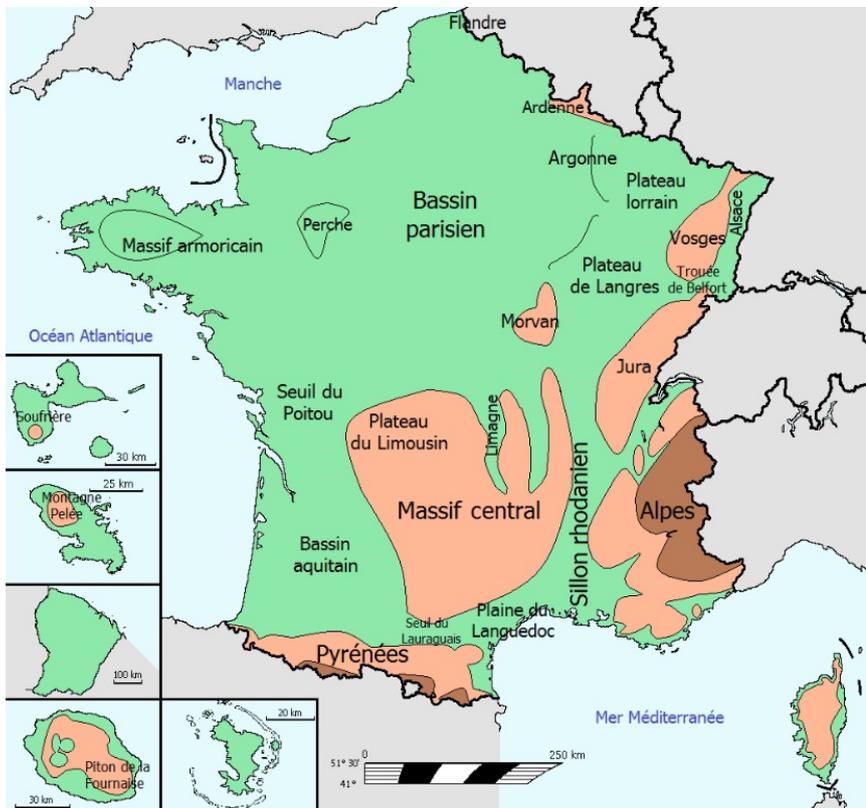


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- French policy for managing natural risks
- Prevention policies
- Protection policies
- Forecast, alert and crisis management
- Feedback and return to normal
- Who pays ?

French territory exposition to natural risks

French territory exposition to natural risks



Category	Type of hazard	Main affected areas
Hydrological	Floods, coastal flooding	River basins, coastal zones
Geological	Earthquakes, landslides	Mountainous and coastal areas
Climatic	Storms, heatwaves, droughts	Nationwide, with varying intensity
Volcanic	Eruptions	Overseas territories (Caribbean islands, Réunion)
Biophysical	Wildfires, avalanches	Southern regions and mountainous zones

French territory exposition to natural risks

Floods, the main risk

- 18,5 Millions Unhabitants (/ 60 M)
- including 1,4 M exposed to coastal tide
- 9 M people concerned by River overflows
- Cost of climatic hazards in 2023 = 6,5 Billions euros ...



with some remarkable events

- 1875 : more than 500 dead – **Garonne** floods
- 1930 : 230 dead – **Tarn and Garonne** floods
- 1940 : 350 dead – **Eastern Pyrenees** floods
- 1992 : 56 dead – Vaucluse - floods
- 2010 : 53 dead – coastal tide (Xynthia)
- 2018 : 18 dead – **Aude** floods
- 2020 : 18 dead – **Vésubie** floods



French territory exposition to natural risks

But not only...

- 1900 : 30 000 dead – volcano eruption / Martinique
- 1928 : 1 200 dead – tropical cyclone / Antilles
- 1970 : 71 dead – landslide / Alpes
- 1990 : 81 dead – tempest / western coast
- 1999 : 92 dead - tempest / western coast
- 2024 : 39 dead – cyclone / Mayotte



And in 25 years :

- 65 200 landslides, rock falls, earth floods...
- 12 Mds cost due to shrinkage swelling of clays
- increasing forest fire and drought



French policy for managing natural risks

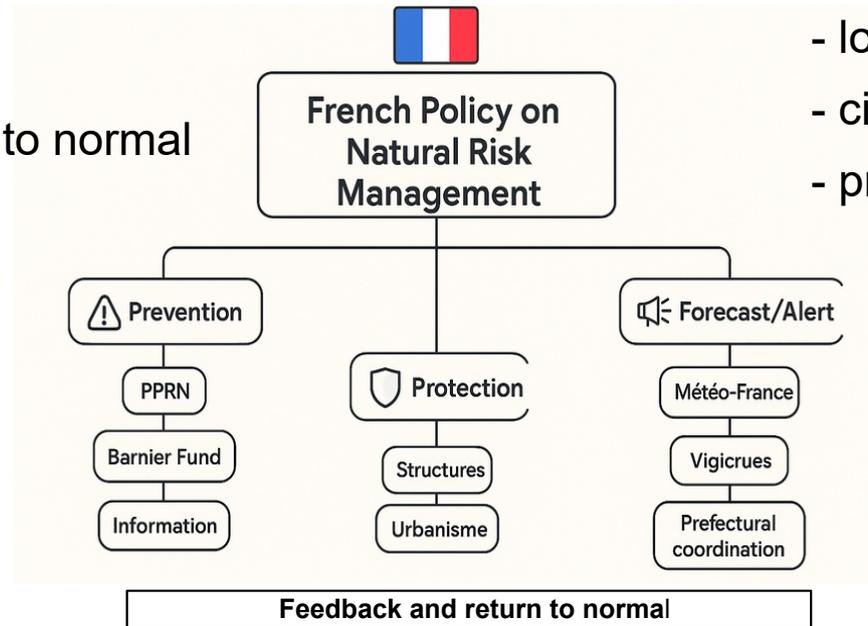
French policy for managing natural risks

A public policy based on :

- prevention,
- protection,
- crisis management
- feedback and return to normal

Which brings together :

- the State,
- local authorities,
- citizens
- private sector.



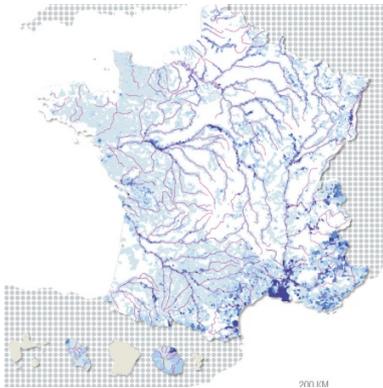
Prevention policies

Prevention policies

1 - Hazard and risk data and mapping :

- national observatory of natural risks
- historical flood database
- flood zone map
- ground movement database
- seismic risk map

...



2 - Public information – national scale

2 - Public information – local scale

department - prefect

municipality - mayor

Prevention policies

3 - Awareness actions

On a national scale

> National Day of Resilience to Natural and Technological Risks (JNR)

=> **13 october 2025** → 11 000 actions

> National Conference on Natural Risks

=> **13/14 october 2025** (every 4 years)

> Seasonal actions

=> Mediterranean rains

On a local scale

- Municipalities events

- flood markers

...



good reflexes



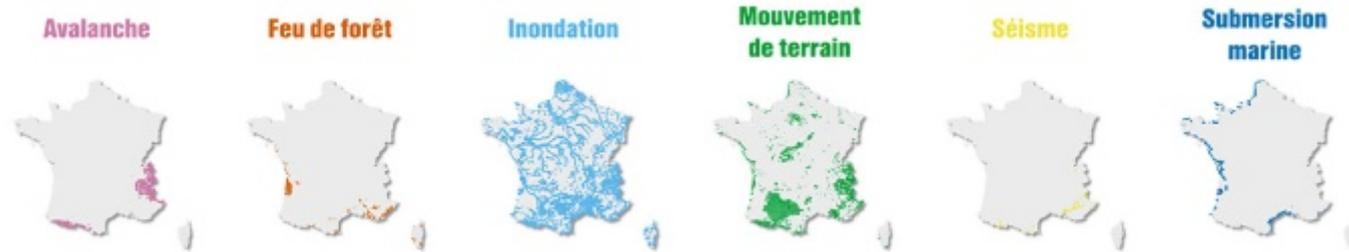
Prevention policies

Mastery of urban planning – the PPRN (Natural Risk Prevention Plans)

- A presentation report
- A zoning plan, resulting from the intersection of hazards and challenges
- A regulation describing the construction and/or town planning constraints

=> for : avalanches, forest fire, flood, landslide, seism, coastal tide

Répartition des communes à risque de :

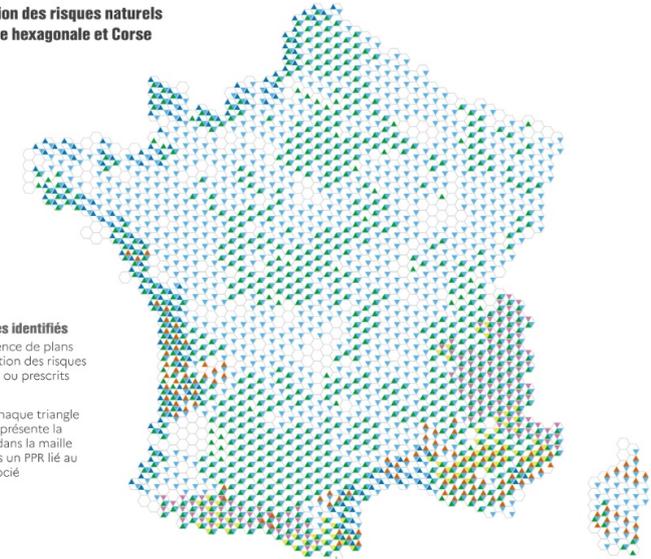


Source : Géorisques | Carte réalisée par : IGN France / Atelier de cartographie thématique

Répartition des risques naturels
en France hexagonale et Corse

Les risques identifiés
par l'existence de plans
de prévention des risques
approuvés ou prescrits

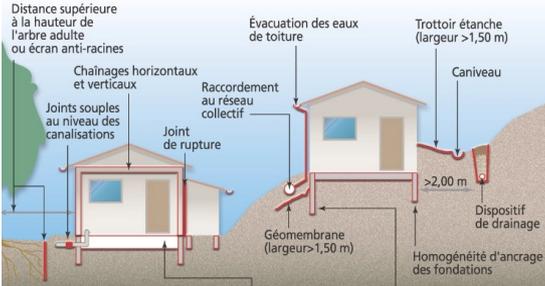
Chaque triangle
représente la
présence dans la maille
d'au moins un PPR lié au
risque associé



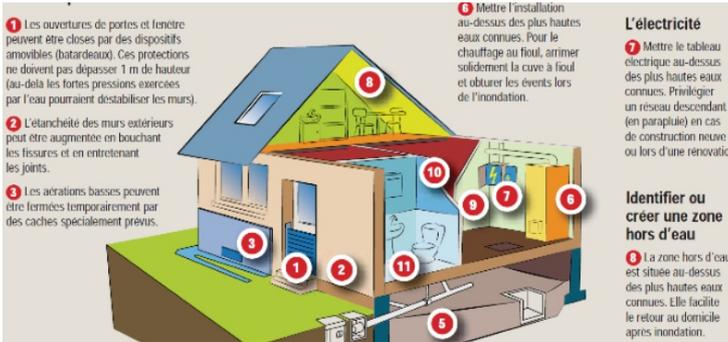
Protection policies

Protection policies

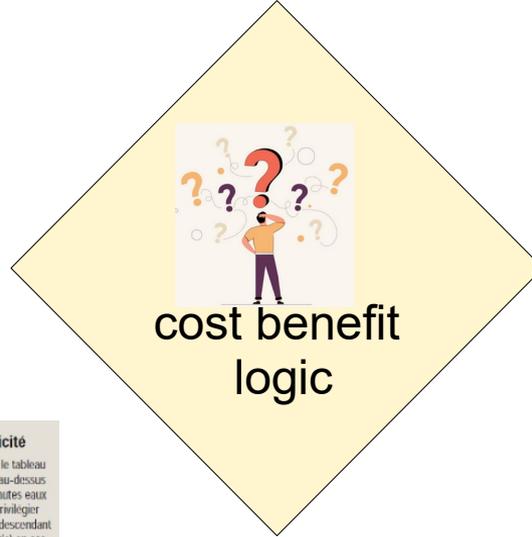
On an individual scale



=> example of measures against clay swelling retreats



=> example of protective measures against flood



On an collective scale



=> example of avalanche barrier



=> example of dike against coastal flood

Forecast, alert and crisis management

Hydro-meteorological anticipation services

J- 7 à J-2

medium-term forecasting

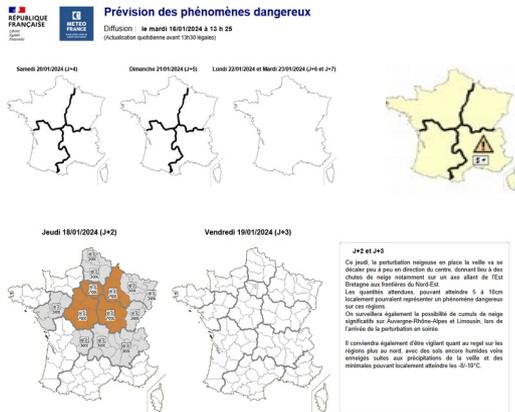


J-1 et J

The vigilance
9 risks covered

during the event

Real-time observations



Vigilance rouge

Une vigilance absolue s'impose. Des phénomènes dangereux d'intensité exceptionnelle sont prévus. Tenez-vous régulièrement au courant de l'évolution de la situation et respectez impérativement les consignes de sécurité émises par les pouvoirs publics.

Vigilance orange

Soyez très vigilant. Des phénomènes dangereux sont prévus. Tenez-vous au courant de l'évolution de la situation et suivez les conseils de sécurité émis par les pouvoirs publics.

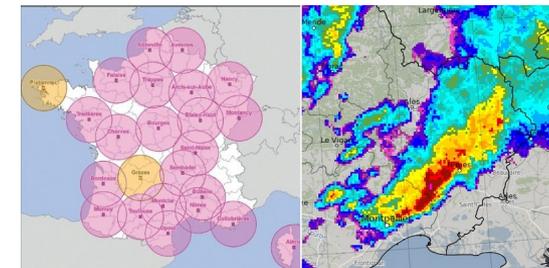
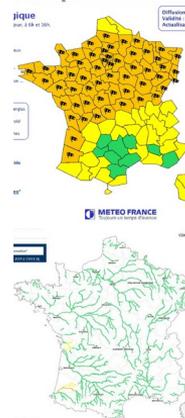
Vigilance jaune

Soyez attentif. Si vous pratiquez des activités sensibles au risque météorologique ou exposés aux crues, des phénomènes habituels dans la région, mais occasionnellement et localement dangereux (exemples : mistral, orage d'été, montée des eaux) sont en effet prévus. Tenez-vous au courant de l'évolution de la situation.

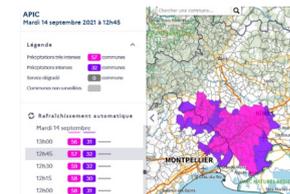
Vigilance verte

Pas de vigilance particulière.

- Vent violent
- Orages
- Vagues-submersion
- Crues
- Pluie-inondation
- Grand froid
- Canicule
- Avalanches
- Neige-verglas



APIC
Avertissement Pluies Intenses
à l'échelle des Communes



The vigilance and alert chain



Meteorological data

Hydrological data



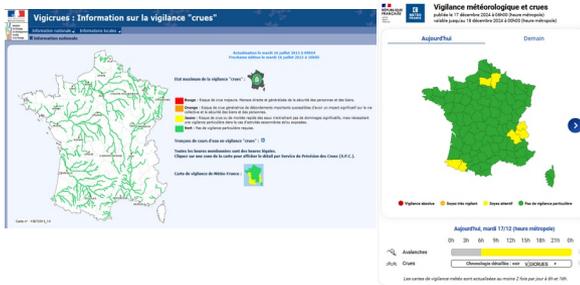
Analysis of forecasting services

Choice of vigilance color

Specific information to departmental civil security services

General public information by department

the prefects alerts the mayors



Crisis management organization



The mayor sets up a municipal emergency plan

State services set up emergency plans

Reinforcements can be mobilized at national or European level

Return to normal and feedbacks

Emergency →

Save lives and limit damage.

Stabilization →

Secure the area and meet essential needs

Rehabilitation →

Restore basic services and infrastructure
(roads, bridges, water networks, resettlement,
essential economic activities)

Reconstruction →

Rebuild sustainably and better
(build back better)

Resilience →

Return to normal life and prevent future
risks.

Technical feedbacks

→ to improve the standard organization

Under the direction of the Ministry
of the Interior and the prefects



DIRECTION DE LA DÉFENSE ET DE LA SÉCURITÉ CIVILES
SOUS DIRECTION DE LA GESTION DES RISQUES

Bureau de l'Analyse et de la Préparation aux Crises

Guide méthodologique

« La conduite du retour d'expérience,
éléments techniques et opérationnels »



Administrative inspections

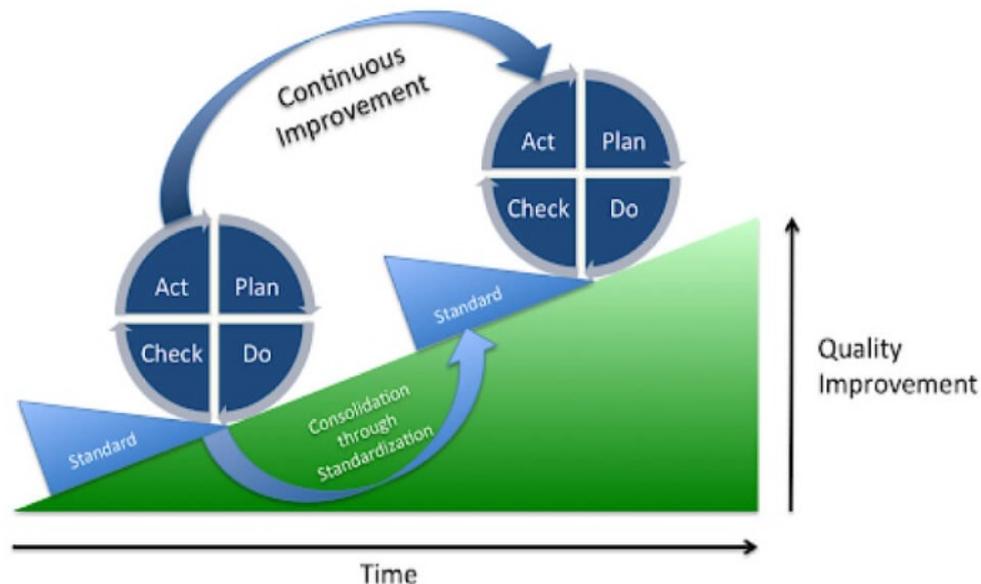
→ to adjust organizations

Under the direction of
the Ministries in charge



MINISTÈRE DE LA TRANSITION
ÉCOLOGIQUE ET SOLIDAIRE

MINISTÈRE DE L'INTÉRIEUR



Retour d'expérience des inondations
du 14 au 17 octobre 2018 dans l'Aude

Rapport CGEDD n° 012561-P, IGA n° 18105-RP

établi par
Hugues AYPHASSORHO et Gilles PIPIEN (CGEDD)
Isabelle GUION de MERITENS et Dominique LACROIX (IGA)

Who pays ?

Prevention and protection

The Major Natural Risk Prevention

Fund (a 12% levy on the “natural disaster” premium for home insurance contracts)

→ **about 200 M€/year**

European resources (Feder)

Collectivities resources (Region, Dpt)

Sectoral resources

- water policies
- housing policies
- ecological policies

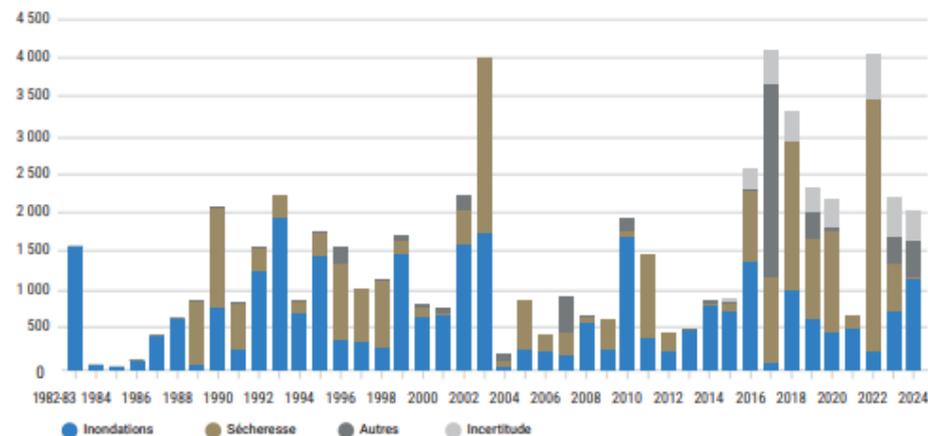
And comprehensive prevention programs

Compensation

The **CAT-NAT system** : organizes compensation for victims whose insured property has been damaged by an intense natural phenomenon

→ **about 2Mds € in 2024**

La sinistralité catastrophes naturelles Non-Auto de 1982 à 2024 (actualisée en millions d'euros 2024)



Thanks for your attention