

**IRSN**INSTITUT  
DE RADIOPROTECTION  
ET DE SÛRETÉ NUCLÉAIRE

## AIR CONTAMINATION

# Air contamination levels were significantly different depending on the geographical area and changed rapidly between 30 April and 5 May 1986

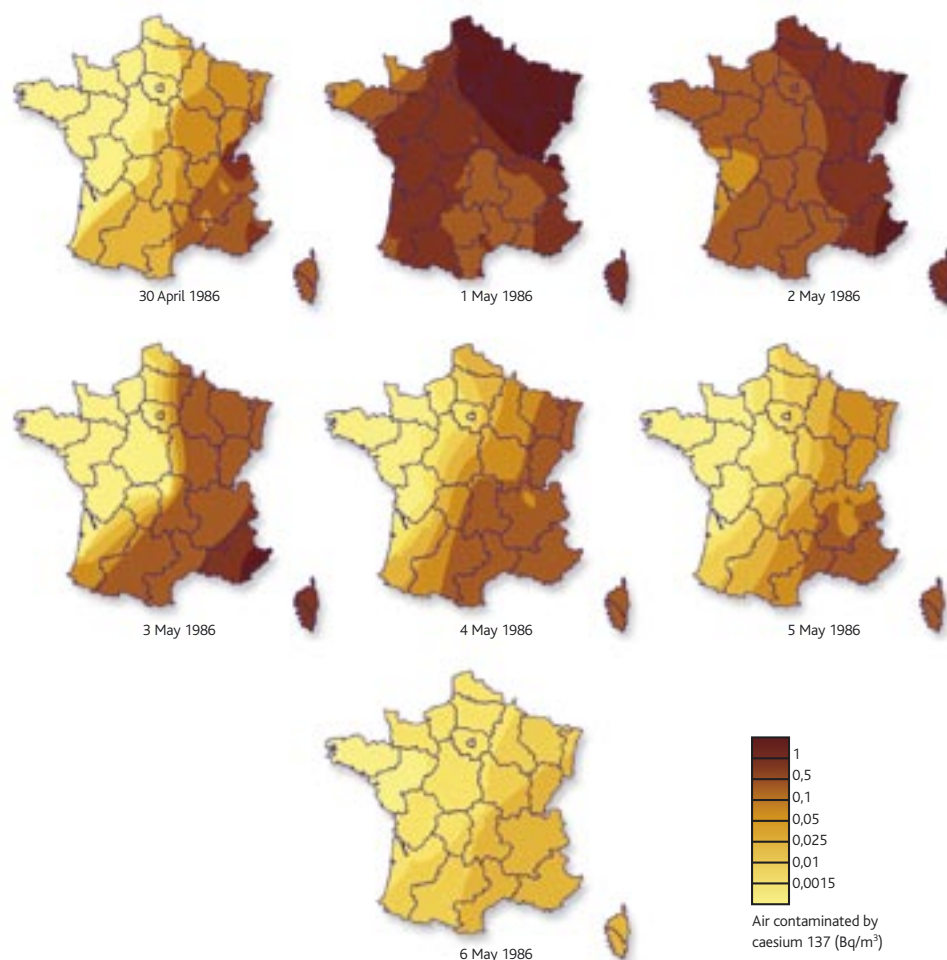
On reaching its highest level in the north-east quarter of France on 1 May, air contamination quickly fell in the west and then throughout France, except for the south-east quarter, where it remained unchanged until 5 May. The level was already 100 times lower by 6 May.

## ABOUT FIFTEEN DIFFERENT RADIONUCLIDES WERE DETECTED IN FRANCE

The radionuclides significantly affecting the food chain in terms of deposits

and contamination were caesium 137, caesium 134 and iodine 131.

The IRSN's 2004 reconstruction of events based on activity measurements on atmospheric particle samples from the SCPRI<sup>1</sup> stations.

**CONTACT**

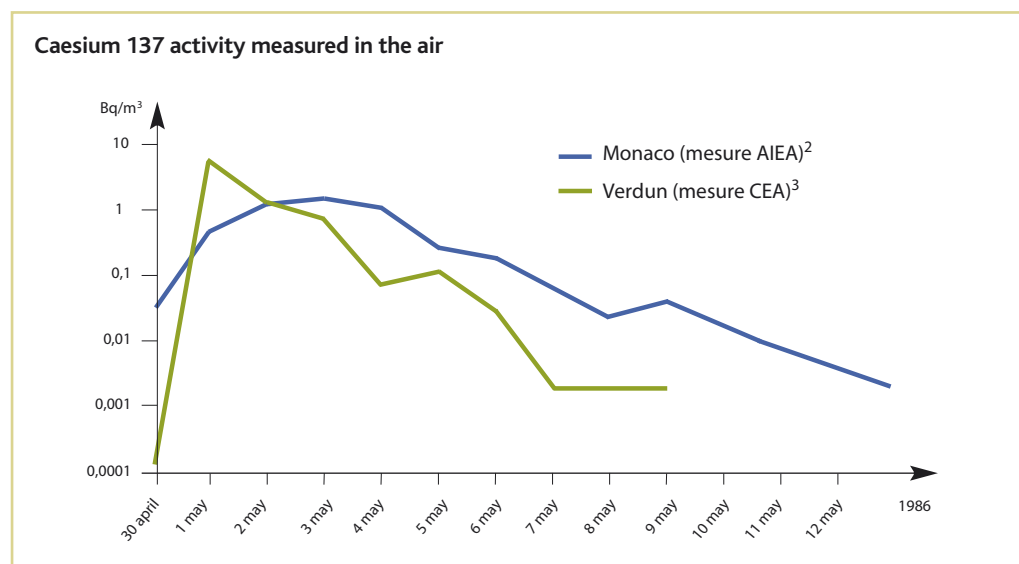
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<sup>1</sup> SCPRI: French Central Protection Service against Ionising Radiation

## MAPS OF AIR CONTAMINATION BY CAESIUM 137 SHOW STRONG GEOGRAPHIC DISPARITIES

The east to west fall in air contamination was due to the path taken by the plume, which just bordered the west of France, as well as to an unsettled front outlining two air masses with different characteristics, and heavy rain in Austria, Switzerland, northern Italy, southern Germany and eastern France which «washed» the contamination out of the air.



<sup>2</sup> IAEA: International Atomic Energy Agency

<sup>3</sup> CEA: French Atomic Energy Commission

- Between 1 and 3 May 1986, the monitoring stations in the north-east and south-east of France recorded levels of caesium 137 contamination in the air of over 1 Bq/m<sup>3</sup>, with a peak level of 7 Bq/m<sup>3</sup> on 1 May in Verdun.
- On 4 and 5 May, contamination levels plunged except in the extreme south-east of France where they remained unchanged.
- On 7 May, caesium 137 activity in the air had fallen to below 0.1 Bq/m<sup>3</sup> everywhere.

The other radionuclides detected in the air underwent similar developments, though decay of short-lived radionuclides, such as tellurium 132 and iodine 131, tended to occur faster.

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