

DEPOSITION IN SOIL

# Deposition across France, and throughout Europe, is highly uneven

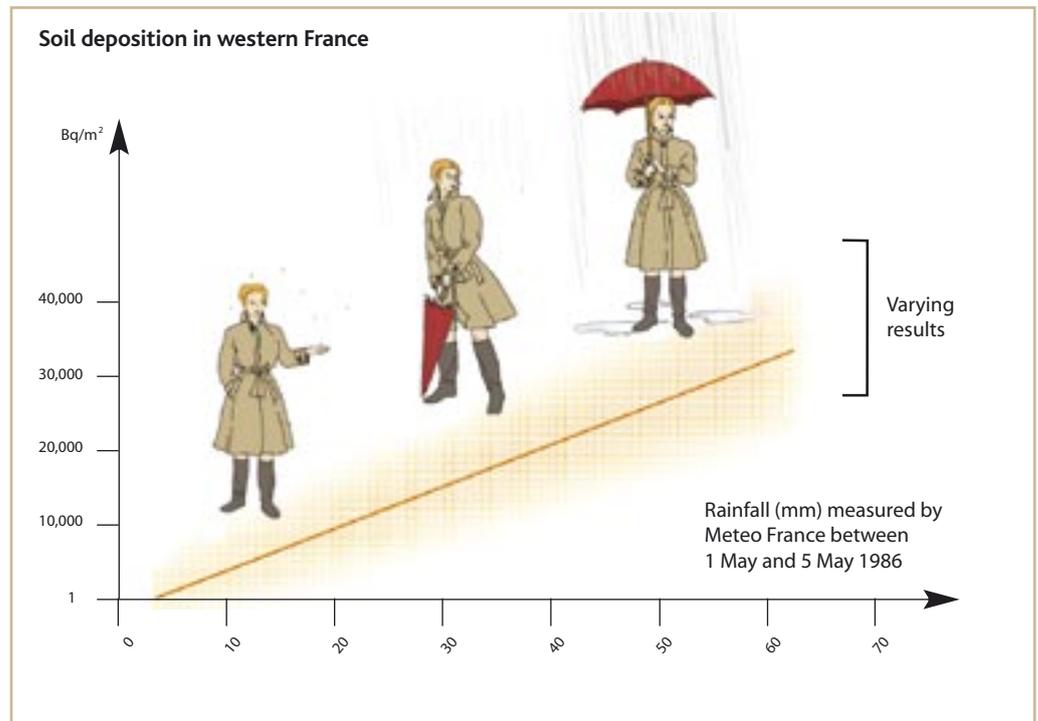
In dry weather, radioactive deposition is low. Precipitation results in higher levels of highly uneven deposition. In France, the highest levels of deposition occurred in the eastern regions of the country which recorded precipitation of over 20 mm between 1 and 5 May 1986.

**IN FINE WEATHER, DEPOSITION IS LOW AND RELATIVELY HOMOGENOUS**

It varies according to the contrasting levels of air contamination. Caesium 137 deposition

varied from a few hundred Bq/m<sup>2</sup> in the west to about a thousand Bq/m<sup>2</sup> in the east.

**WHEN IT RAINS, RADIOACTIVE DEPOSITION INCREASES IN PROPORTION TO THE LEVELS OF PRECIPITATION**



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Soil analyses carried out by the IRSN in France show that caesium 137 activity rose in line with rainfall recorded by the Meteo France national meteorological office between 1 and 5 May 1986.

Deposition levels of iodine 131 were 10 times higher than deposition levels of caesium 137.

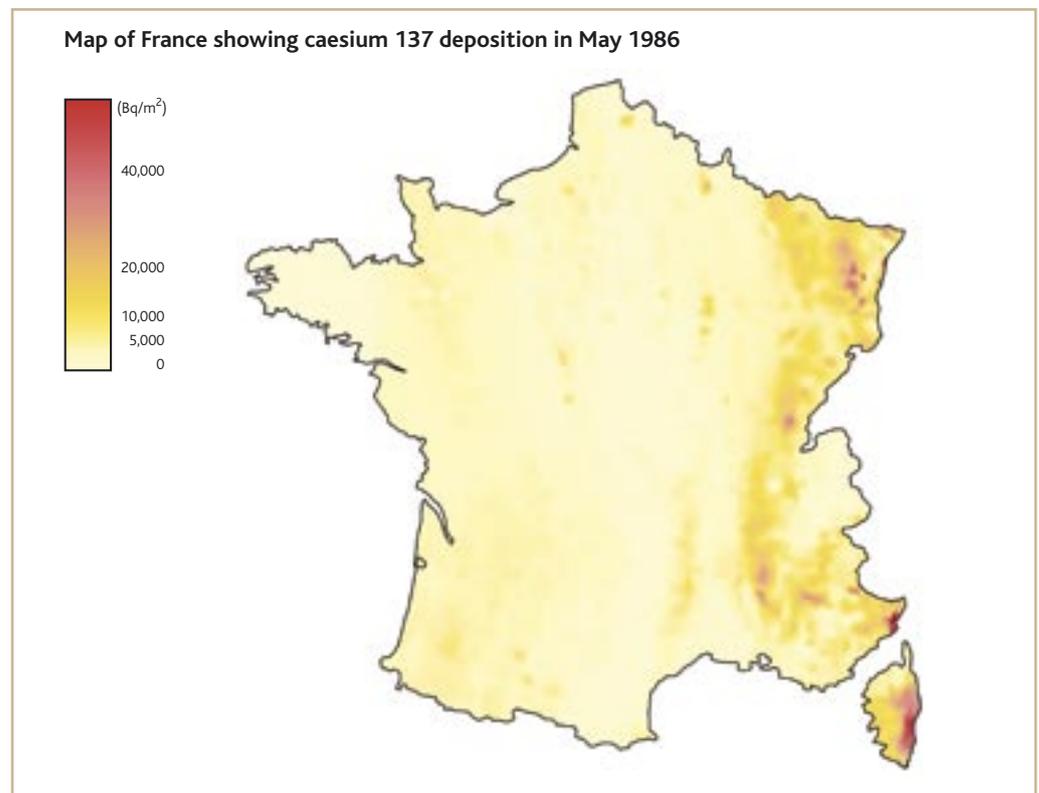
Deposition levels of caesium 134 were two times lower.

## PRECIPITATION OF OVER 20 MM FELL OVER THE EASTERN FRANCE

In the east of France, rainfall led to spots of radioactive deposition generally exceeding 10,000 Bq/m<sup>2</sup> with localised levels of 20,000 Bq/m<sup>2</sup> for caesium 137. Contrary to countries like Germany, Austria or Italy, deposition levels in France did not reach 100,000 Bq/m<sup>2</sup>.

Heavy rain in the west resulted in low-level deposition, often lower than 2,000 Bq/m<sup>2</sup> for caesium 137, due to a much lower level of air contamination.

The map of France below shows the trends based on a global correlation between rainfall and deposition. The spread of deposition on the map must be read according to the scale given. Obtaining a reliable and accurate quantification on the scale of a canton (district) or town is not possible.



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## WHEN THERE IS DEPOSITION DURING RAINFALL, LOCALISED REDISTRIBUTION PHENOMENA CAN RESULT IN RADIONUCLIDE CONCENTRATING OVER SMALL AREAS (LESS THAN A M<sup>2</sup>)

In this case, phenomena included:

- runoff at the foot of trees and below rock,
- reconcentration when the snow which fell in the first week of May 1986 melted.