

Decommissioning of ionizing smoke detectors used in France

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New regulations developed by ASN were published in December 2011 and make provision for replacing or removing all of the 7 million ionizing smoke detectors from around 300,000 sites.

Ionizing smoke detectors in France

What is involved?

The installation of Ionizing Smoke Detectors (ISDs) began in France at the beginning of the 1940's. The use of ISDs was then justified by the early signal emitted compared with the other technologies which were on the market at the time.

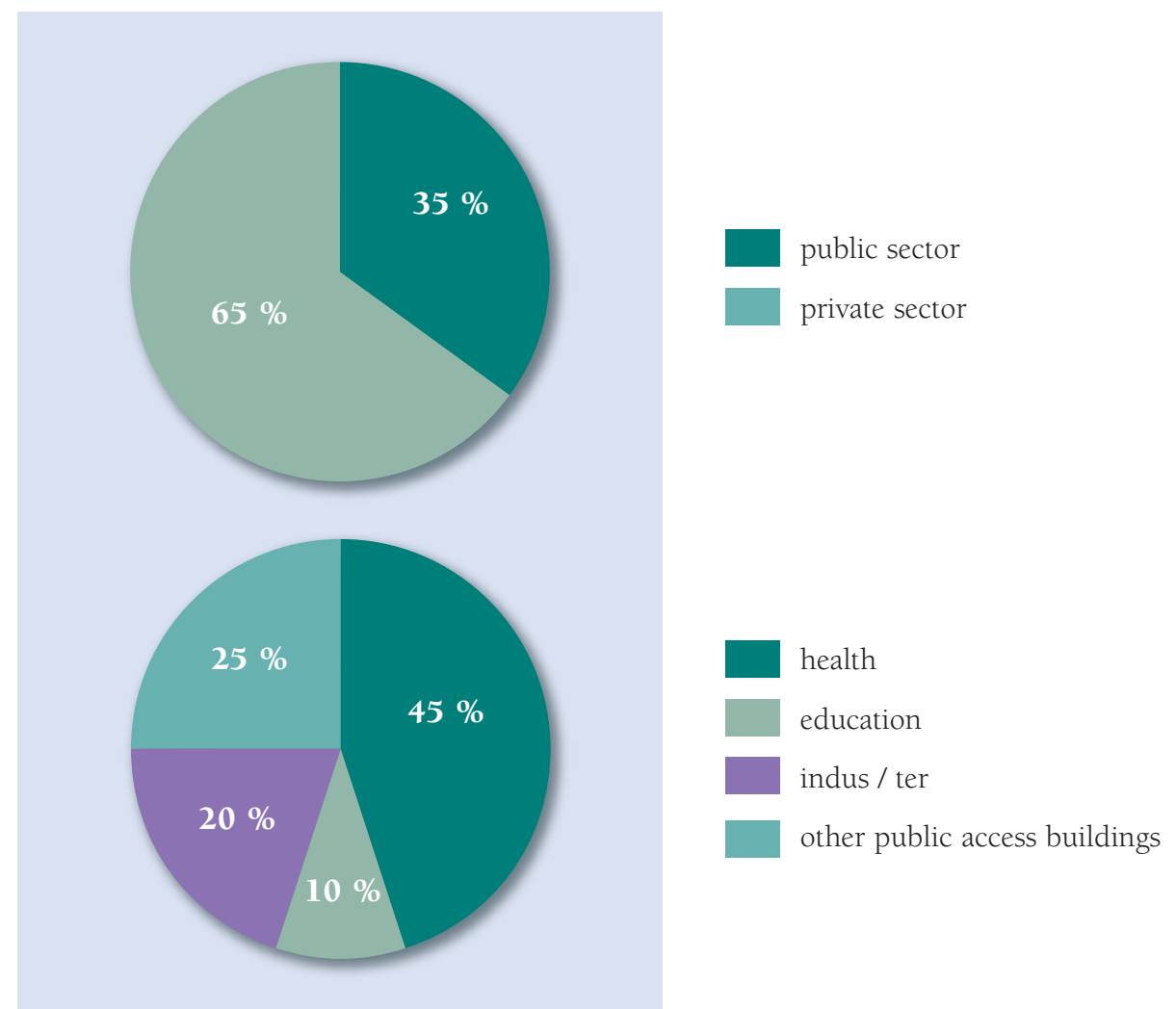


Where are they found?

Their use in dwellings has been banned since 1966. However, due to their better technical performance, they may still be used in industrial and service industry buildings and also in buildings open to the general public (hospitals for example). Currently, ISDs are no longer produced: they are reconditioned and re-used.

Do they present a health risk?

Being mainly composed of an americium source < 40 kBq, these detectors do not present a health risk for people who frequent the premises on which they are installed. However, their removal set the risk of poor handling of the detectors which have been removed (dumping, poor elimination channel or removal without precautions) require a regulatory framework.



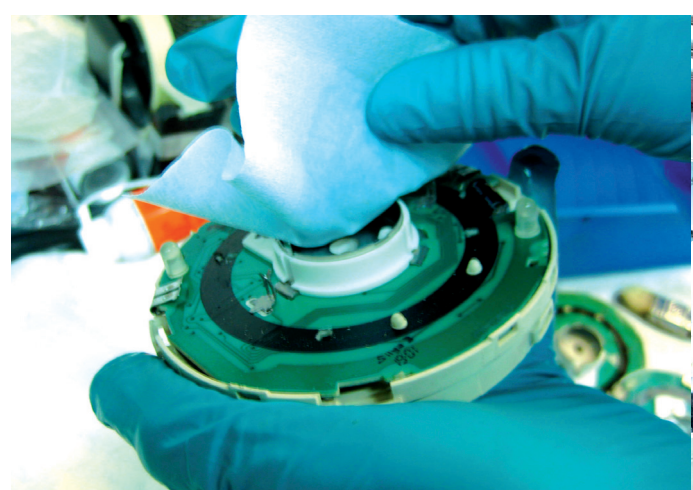
What maintenance is carried out on these ISDs?

When the fire safety system undergoes maintenance, old ISDs are removed and replaced:

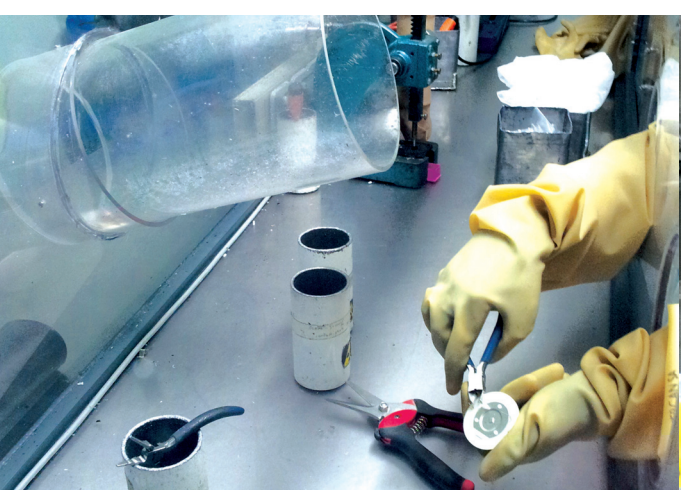
- either with non-ionizing detectors, if the facility is compatible with these technologies;
- or by other reconditioned ionizing smoke detectors.

Removed detectors are then:

- either reconditioned (removed, checked for non-contamination, refitted and tested) to be returned to facilities;
- or dismantled. The sources are then extracted and stored in a cabinet before being sent back to the supplier of the source or to the French National Agency for Radioactive Waste Management (ANDRA).



Reconditioning of detectors



Extraction and storage of the sources



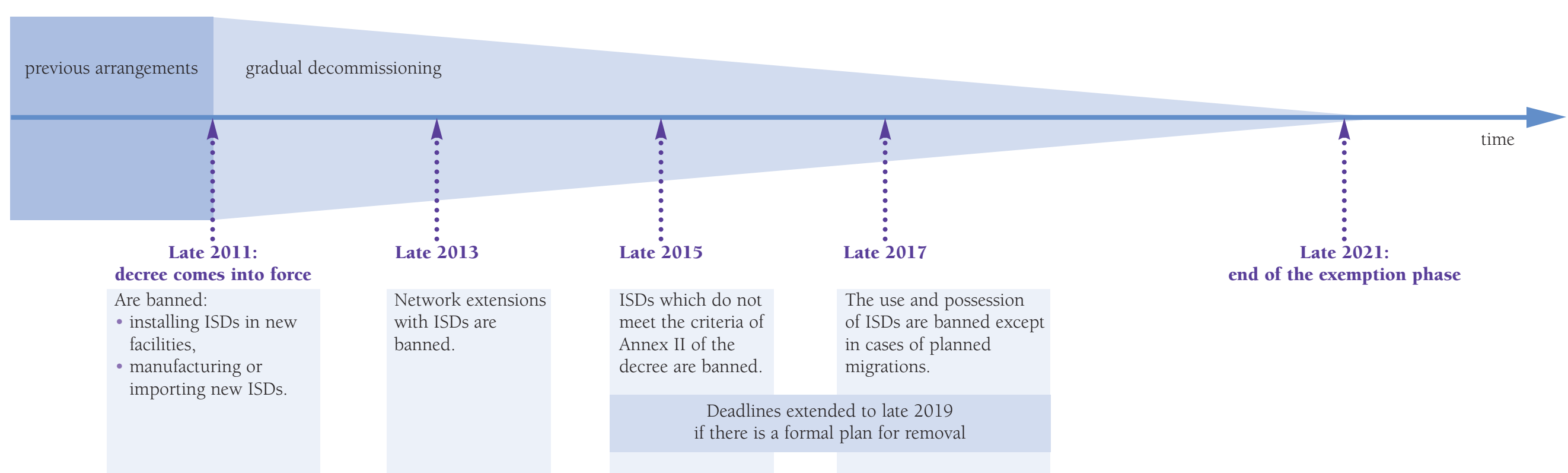
ISDs gradual decommissioning

Why?

The justification for these ISDs has been gradually challenged as thermal or optical smoke detectors have evolved, which now allow the requirements of fire safety standards and regulations to be met. Since 2002, the transposition of European Directive 96/29 into the Public Health Code has banned the intentional addition of radionuclides in consumer goods, foodstuffs and construction materials, which include ISDs.

What measures has ASN taken?

The ISDs ban cannot be implemented without transition. In this context, ASN has worked with the ministries concerned and the professionals in the field to implement an exemption allowing a gradual withdrawal over 10 years given the number of devices fitted whilst ensuring the durability of the industries involved in their recovery.



The decree submitted by ASN to the government introduces a system for monitoring the devices installed and the removals carried out to prevent any unauthorised discharge.

This proactive policy will allow waste management to be planned in a concerted and organised way.