

Forest fires in the exclusion zone around the Chernobyl power plant, radioactivity levels in t

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plant, radioactivity levels in the rest of the country are currently normal

The Ukrainian nuclear safety authority declared it. The ISIN Nuclear Emergency Center has started the analysis of forecasting the atmospheric dispersion of the cloud.

Based on the measurements performed, both in the areas affected by the fires and in the city and region of Kiev, the levels of environmental radioactivity remained within the natural fluctuations that, for each place, can register. Only close to the lines of fire in the areas of the fires, there were levels of attention of the concentration in the air of Cesio-137, however much lower than the allowed limits. This was announced in a disclosure through the IAEA USIE system, the nuclear safety authority of Ukraine.

The concern that these events, however not uncommon, arouse among the population is linked to the possibility that organic matter present in an ecosystem strongly characterized by high radioactive contamination, burning, may release radioactivity, typically Cesio-137, which over time has accumulated.

As regards the forecast of the evolution of the cloud, consisting of the fumes released by the fire and potentially containing radioactive contamination, the State Scientific and Technical Center for Nuclear and Radiation Safety (SSTC NRS) of Ukraine has made estimates regarding the possible radiological impact on the city of Kiev, about 100 km from the fire area, confirming the very low level of contamination that could affect that area.

The ISIN Nuclear Emergency Center also started the forecast analysis of the atmospheric dispersion of the cloud produced by the fire, which initially moved southwards towards the city of Kiev, then veered west; currently, it shows a decidedly eastward evolution. In any case, the high dilution that the radioactivity possibly present in the cloud would undergo in its evolution over the territory, together with a quantity of released radioactivity which can be assumed to remain limited, as evidenced by the radiometric findings, allow us to believe that the situation is not dangerous to the health of the population and the environment.

According to the National Emergency Service of Ukraine, the fire broke out on the afternoon of April 4 near the village of Volodumurivka (Kotovske Forestry), involving at least 20 hectares of forest within the exclusion zone. Following the intervention of firefighting aerial vehicles, on 6 April the expansion of the fire was contained. However, mainly thanks to the wind, the flames spread again and, at 14:00 on 7 April, they covered a 35 hectare area. Radiometric control has been intensified throughout the forbidden area, as reported by the State Agency for the management of the exclusion zone.

The exclusion zone, which extends for 30 km around the Chernobyl power plant, was ordered by the Ukrainian authorities in the aftermath of the 1986 accident, as the heavy radioactive fallout suffered led to exposure levels still higher than those for which is allowed to stay.

ISIN continues to monitor the situation, including through any information that may be made available through the international emergency circuits. In addition, in collaboration with ARPA Lombardia, which participates with its own laboratory in the network of highly sensitive European laboratories, the observation of any instrumental findings that may become available on a European scale will continue.

Below are the possible institutional sources of information on the outcomes of the evolution of fires and radiometric controls:

State Emergency Service of Ukraine:

https://www.dsns.gov.ua/ [1]

State Nuclear Regulatory Inspectorate of Ukraine:

http://www.snrc.gov.ua/nuclear/uk/index [2]

The State Exclusion Zone Agency:

http://dazv.gov.ua/[3]

The State Scientific and Technical Center for Nuclear and Radiation Safety (SSTC NRS):

https://sstc.ua/ [4]

State Specialized Enterprise «Ecocenter» (radiation monitoring of the Exclusion Zone):

http://www.srp.ecocentre.kiev.ua/MEDO-PS/index.php?lang=UKR [5]



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In the images, the estimates of the distribution of the integrated concentration in the air for the days from 4 to 6 April and for the days from 7 to 9 April, following hypothetical radioactive releases.

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- [1] https://www.dsns.gov.ua/
- [2] http://www.snrc.gov.ua/nuclear/uk/index
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- [5] http://www.srp.ecocentre.kiev.ua/MEDO-PS/index.php?lang=UKR