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## Press Release

by the Regional Eastern Europe Fire Monitoring Center (REEFMC)  
Regarding the Wildfires in and near the Chernobyl Exclusion Zone (CEZ) – 3-10 April 2020

**Last update: 10 April 2020**

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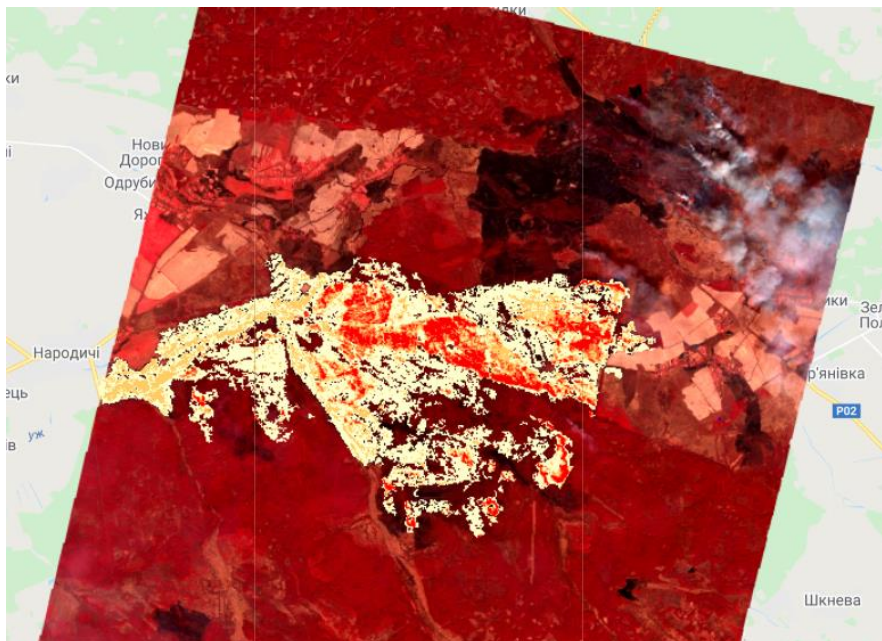
*Published on the websites of*

REEFMC: <https://nubip.edu.ua/en/reefmc>

GFMC: [https://gfmc.online/globalnetworks/seeurope/SEEurope\\_1\\_radio.html](https://gfmc.online/globalnetworks/seeurope/SEEurope_1_radio.html)

## Information on Chernobyl Wildfires – 10 April 2020

During 6-9 of April the area affected by wildfires in the Western part of the CEZ increased accordingly to preliminary assessment to approximately 4 000 ha, and total burnt area near Narodychy Poleskii reached 12 000 ha (the area will be additional confirmed) (Fig.1).



**Fig.1.** Fire that is burning near Narodychy-Poleskii cities in the Western part of the Chernobyl Exclusion Zone (CEZ). By 10 April 2020 total area reached up to 12 000 ha. Image: PlanetScope, acquisition date and time 2020-04-08 T09:08:30

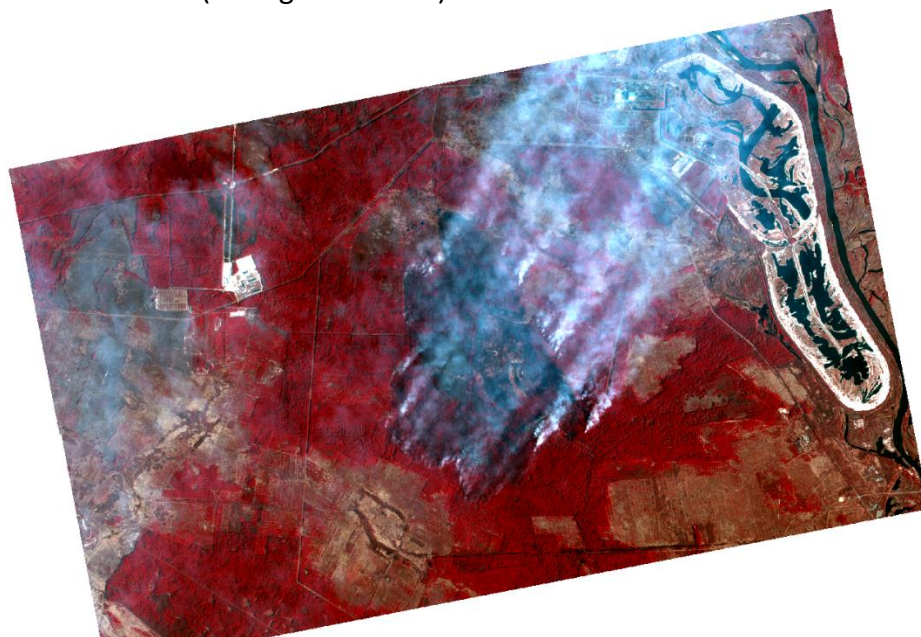
The GFMC and REEFMC are partners of and providing advisory support in landscape fire management to:



Organization for Security and  
Co-operation in Europe

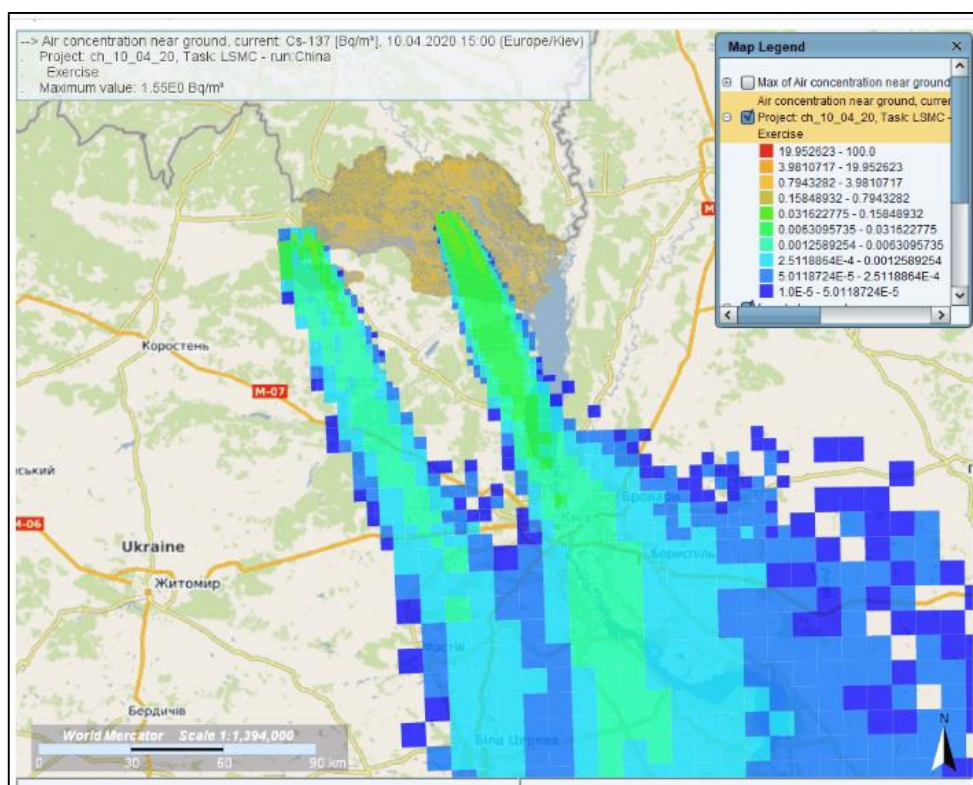


Another large forest fire started in the core zone of CEZ – near the “Red Forest” (the forest most contaminated and damaged by radiation stemming from the failure of Block No. 4 of the Chernobyl Nuclear Power Plant in 1986 (see figures below).



**Fig.2.** Large forest fire occurred 8-th of April 2020 in close vicinity of Red Forest in 10-km zone of the Chernobyl Exclusion Zone. Smoke is moving toward Belorussia. Preliminary assessment shows burned area at least 2000 ha.  
Image: PlanetScope, acquisition date and time 2020-04-09 T06:21:33

The State Scientific and Technical Center for Nuclear and Radiation Safety (SSTC NRS) of Ukraine provides forecasts of the movement of air masses potentially contaminated by fires burning in the CEZ (Fig.3.).

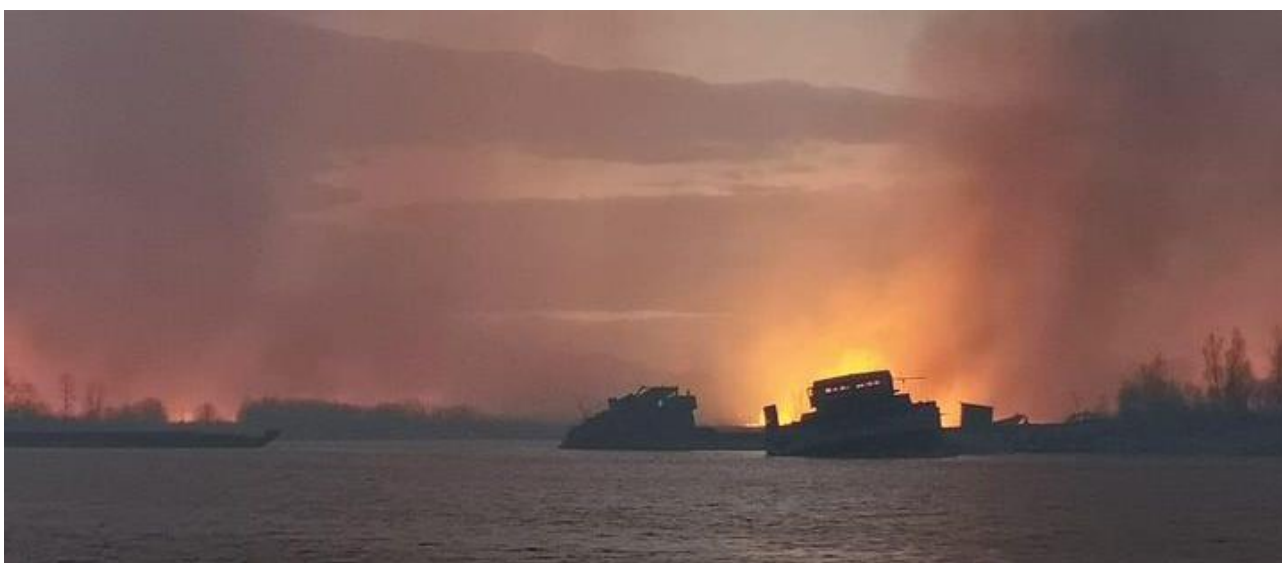


**Fig.3.** Large SSTC NRS model of smoke spread from CEZ on 10 and 11 April 2020. Please visit the English version of the SSTC NRS website:

<https://sstc.ua/news/prognoz-peremishennya-potencijno-zabrudnenogo-atmosfernogo-povitrya-zumovlenogo-pozhezhami-v-chzv-na-10-11-kvitnya>



A few photos from the ground visualize the generation and transport of fire smoke from the CEZ:



Photos: Denis Vishnevskii

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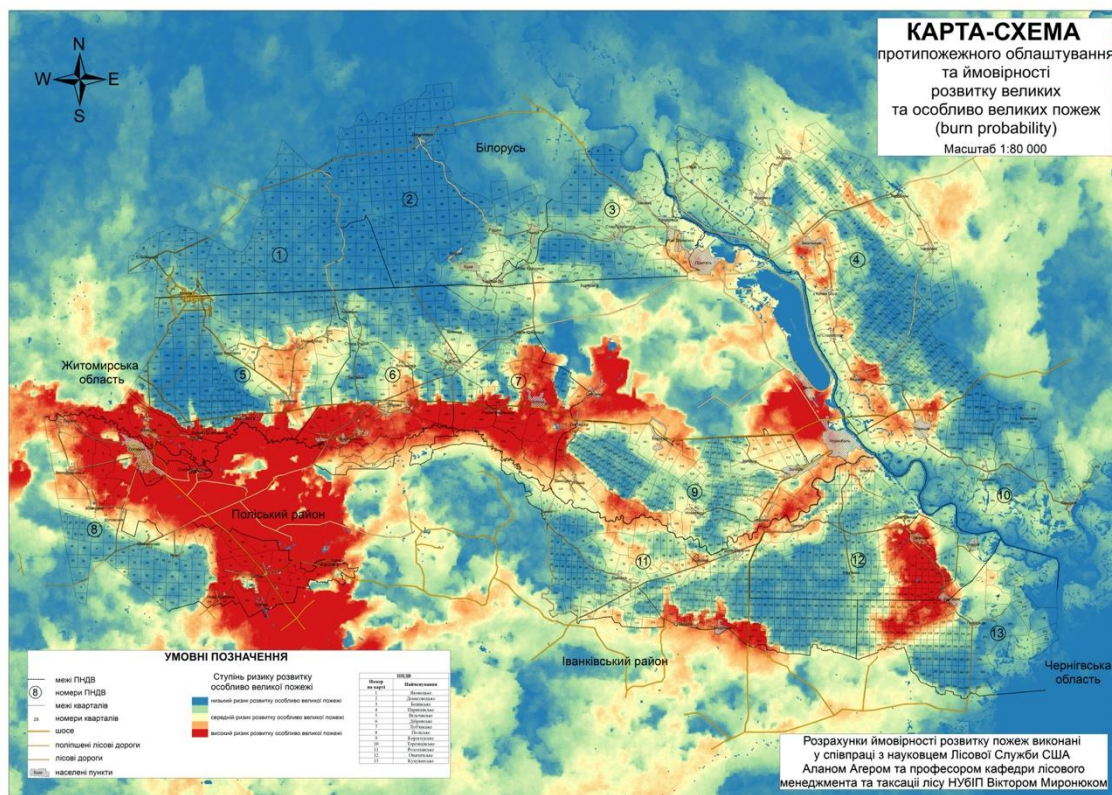
### **Below – Earlier Press Release of REEFMC of 5 April 2020**

Please note that the threat of radiation in the early days of the fire episode was lower than on 10 April 2020

Since 2007, REEFMC has been actively working with agencies of Ukraine and international partners (the Global Fire Monitoring Center [GFMC] by sponsorship of the Council of Europe's Major Hazard Agreement and the Organization for Security and Cooperation in Europe [OSCE], and the US Forest Service) over increasing preparedness and safety and capacity of fire management in terrains contaminated by radionuclides in the Chornobyl Exclusion Zone (CEZ) [1]. In April and

August 2015 two major wildfires inside the CEZ burned around 15.000 ha. The emissions of these fires resulted in aerial transport of radionuclides beyond the CEZ borders [2].

Based on the dedicated activities of REEFMC and partners, including the support by US Forest Service, a number of recommendations and guidelines have been developed between 2016 and 2018, aimed at improvement of individual protection of firefighters, strategies and tactics of fire management in contaminated terrain. Among other, a burn probability map of CEZ and vicinity was developed that can be used by firefighting services to prevent fires and provide a fast fire response (the map is available on the website of REEFMC) (Fig. 1) [3, 4, 5, 6].



**Fig. 1.1** Distribution of the burn probability index across the CEZ and firefighting infrastructure. REEFMC: S. Zibtsev, V. Myroniuk, V. Bogomolov, O. Soshenskiy (2020).

Area of the fire on 3-5 of April 2020 has high burn probability and high radionuclide contamination (Fig. 2) between Narodychi city, the Drevlianskiy Nature Reserve and the CEZ. The area affected by fire has no maintained road system and is hardly accessible for firefighting brigades.

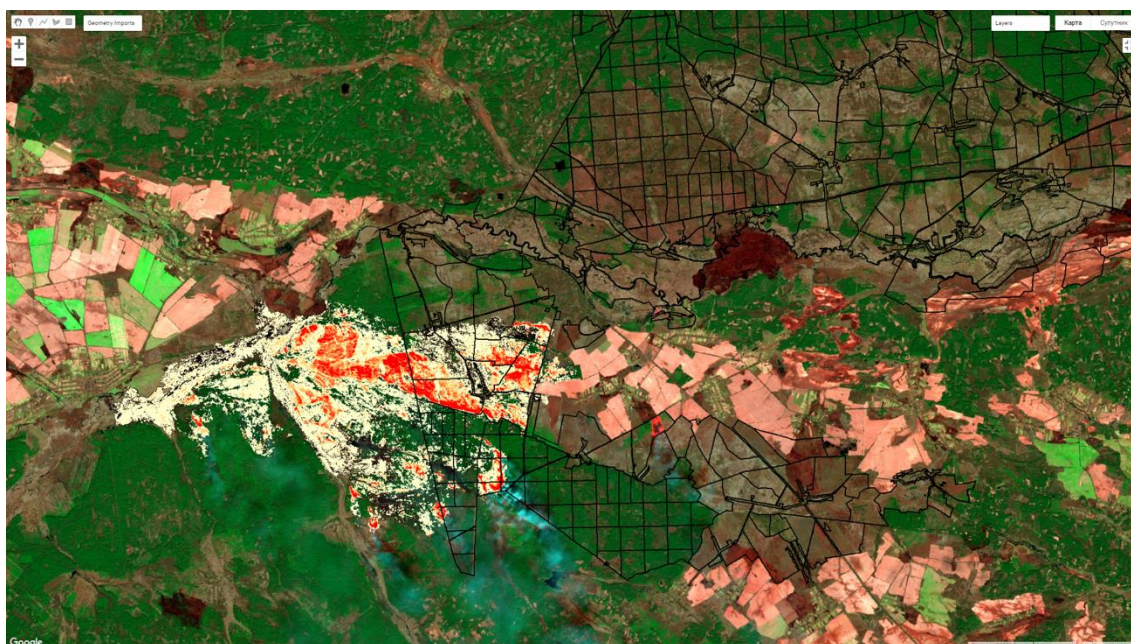
The fire started at the western Chornobyl radioactive contamination path, bordering with Narodychi city and the Uzh River floodplains (Fig. 2) at around 17:00 / 18:00 h on 3 April 2020, probably because of intentional or unintentional grasslands / pasture burning, under west direction wind with speed 3-5 m/s.



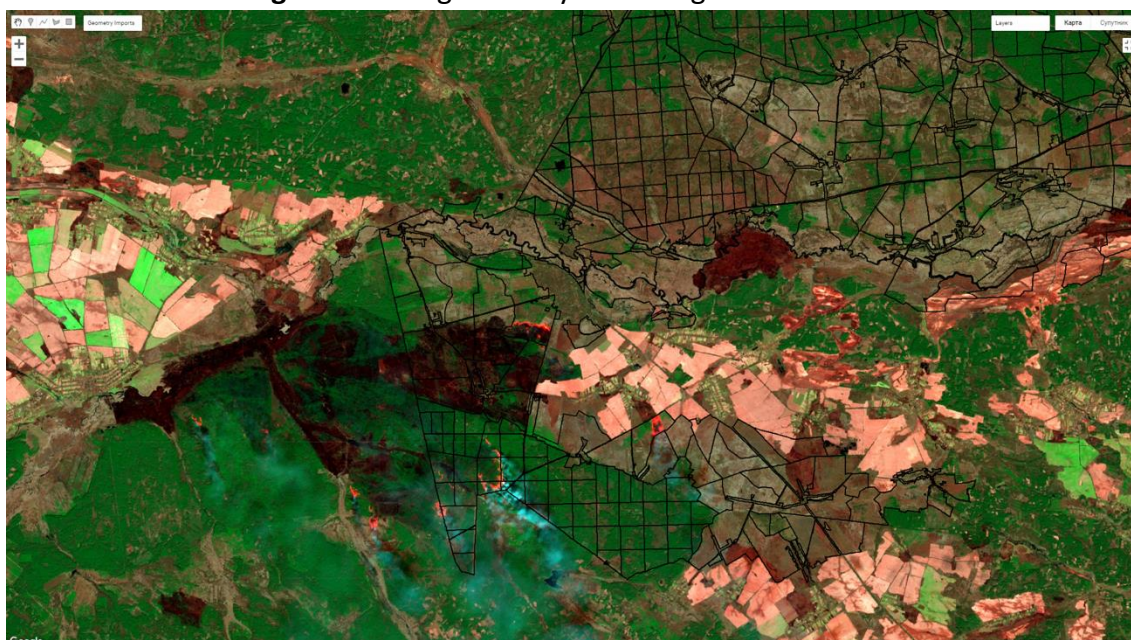




The fire moved across the territory of Drevliansky Nature Reserve towards villages Kotovske and Ragivka on northeast mainly along the left-bank part of the Uzh River floodplain with access to fallows covered by natural renewal of pine and birch, which increased the intensity of burning. The fire moved along the Zvizdal river as well and continued to move towards active farmlands located at the western part of Ragivka village, where it was extinguished or stopped (Fig. 4 and 5). Fig. 4 illustrates a new fire (field burn, which moved to the CEZ), that was ignited by residents of Ragivka on 5 April, despite the fact that a large fire occurred nearby, which was suppressed by fire with.



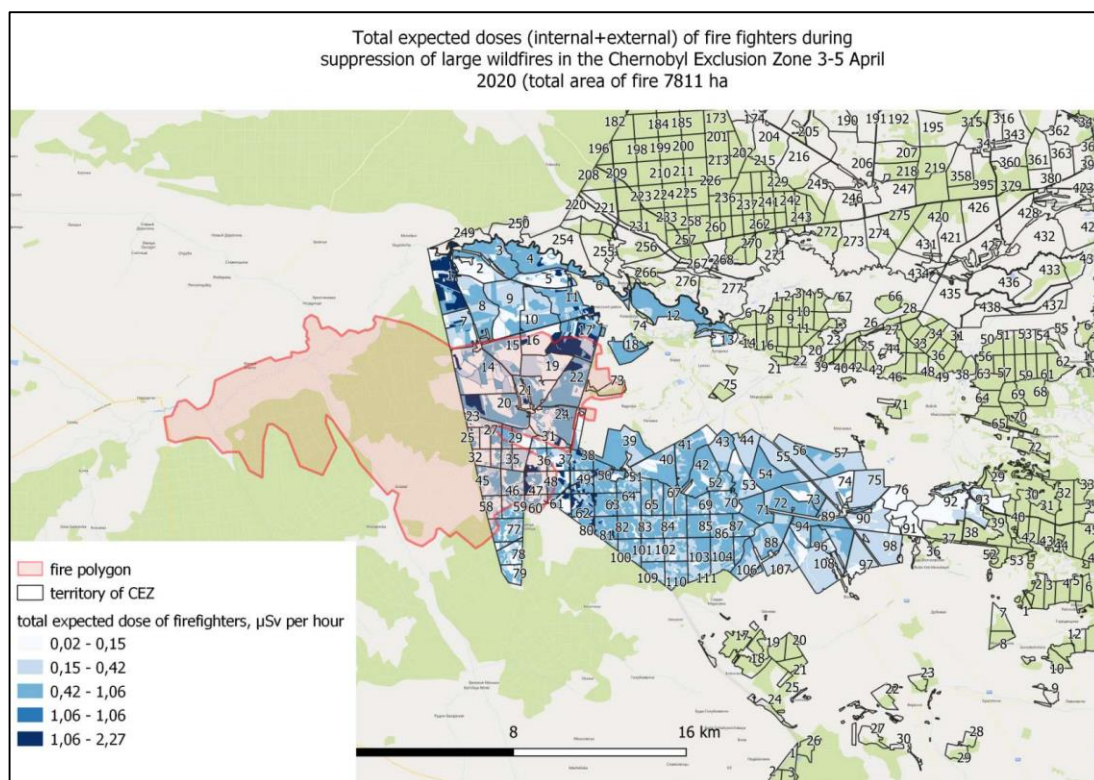
**Fig. 4.1** Burning intensity according to dNBR index



**Fig. 5.1** Territory affected by fire on 3-5 April 2020 as of 5 April. According to satellite data the overall area burned is 7811 ha, including 2398 ha of the CEZ and 4914 ha of Drevlianskii Reserve.



Total expected doses of firefighters during one hour of suppression are in range from 0,2 to 2,27 microsievert (Fig. 6). As most part of fire burned grasslands with relative low temperature migration of radionuclides with smoke has local scale.



**Fig. 6.1** Total expected doses (internal + external) of fire fighters during one hour of suppression on fire line of fire 3-5 April 2020.



**Fig.7.1** Aerial view of the fires burning through an intermix of grasslands and forested lands. Photo: State Emergency Service of Ukraine.

## Consequences on health and security of firefighters and the public

In the early stage the main fires burned on grasslands, with a low- to medium intensity. According to earlier research the aerial transport and deposition of radionuclides is limited to the immediate vicinity of the fires. Thus, in that stage they represented a threat to firefighters and not to the populated areas in the downwind direction. In the following days the fires moved to forests damaged by the failure of the Reactor Block 4 of the Chernobyl Nuclear Power Plant in 1986.

### References:

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5. Burn probability map of the CEZ: [https://nubip.edu.ua/sites/default/files/u184/karta\\_burn\\_probaility\\_vb\\_14-01-2020\\_1.jpg](https://nubip.edu.ua/sites/default/files/u184/karta_burn_probaility_vb_14-01-2020_1.jpg)
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7. Planet Team (2017). Planet Application Program Interface: In Space for Life on Earth. San Francisco, CA. <https://api.planet.com>