

Polesie and Chernobyl as a climate change and security hotspot

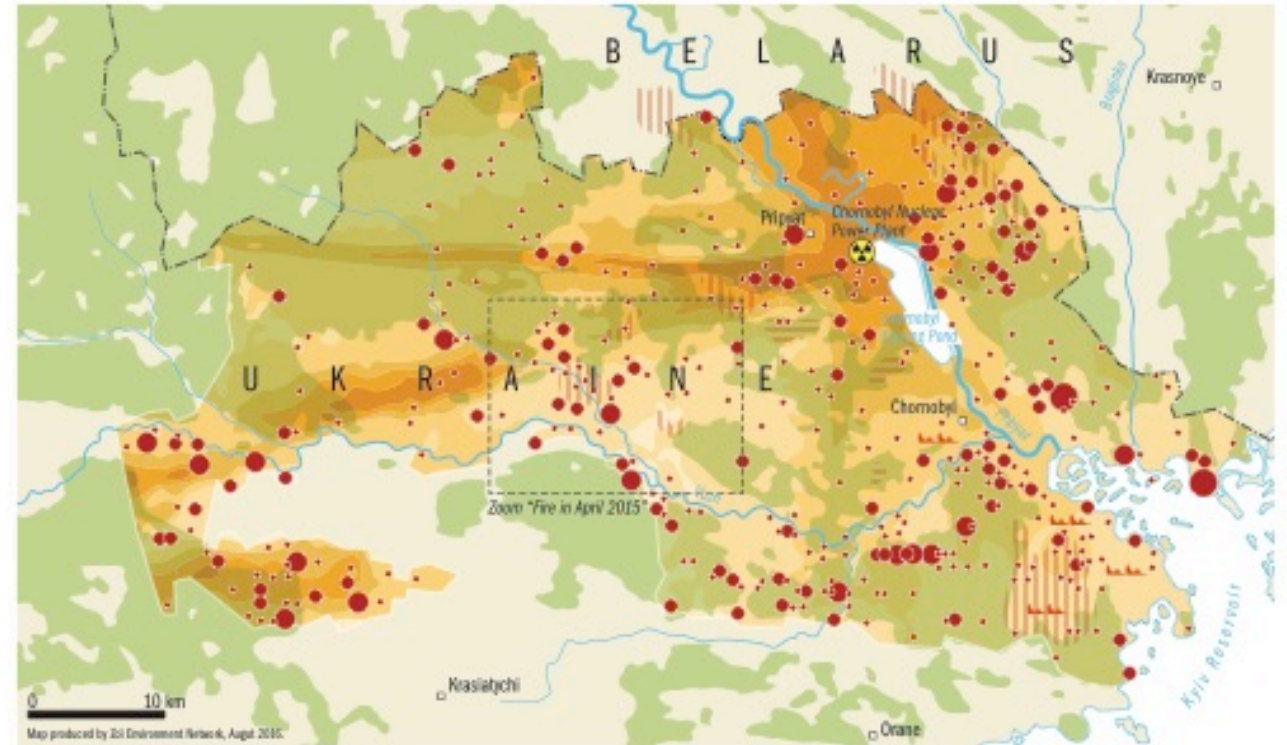
International Chernobyl Disaster Remembrance Day

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Climate change will likely bring to:

- future spread of radioactive contamination
- radioactive substances contaminate the rivers (sediments)
- droughts → increasing the dryness of the soil → creating dust that moves easily through the environment
- high temperatures and drought → increasing the risk of fires with the potential to spread radioactive contamination over larger areas → consequences for human health
- decline in forest productivity and coverage could decrease
- a high level of contamination in forest food products, such as mushrooms and berries → affects food and human health security

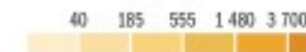


Wildfires in the Ukrainian part of the Chernobyl Exclusion Zone

Number of wildfires (1993 - 2010)

- 1 - 2
- 3 - 4
- 5 - 6
- 7

Cesium-137 (kBq/m²)



- Forest
- Dead forests (pests)
- Crown fires (1992)
- Reed fires



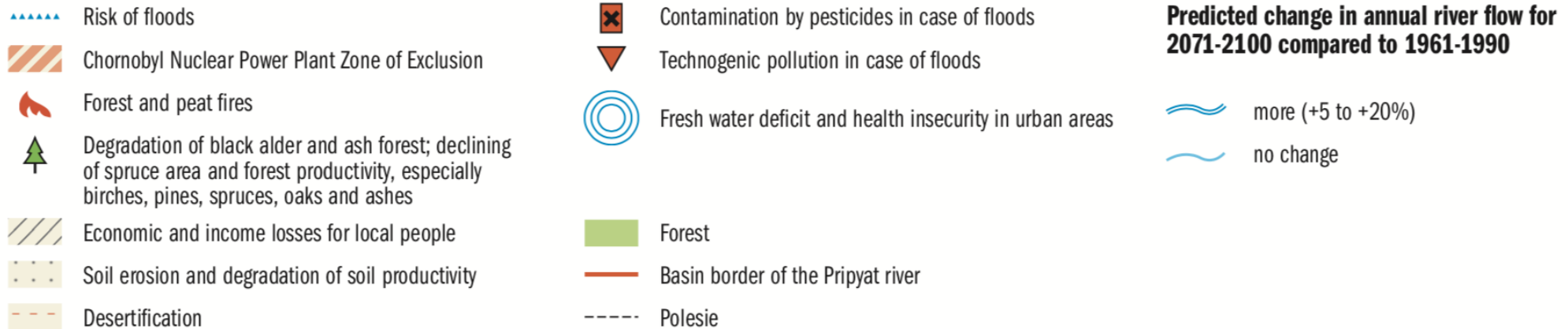
Fire in April 2015 – the biggest fire since 1992

Fire severity:

- Low (5 110 ha)
- Moderate-high (1 060 ha)
- Moderate-low (4 320 ha)
- High (420 ha)



Polesie and the Pripyat river



Hotspot	Political, socioeconomic and environmental conditions and trends	Climate change hazard	Security implications	Security risk: 2030/2050-2100	Adaptive capacity
<p>Polesie and Chornobyl</p>	<p>Cross-border region</p> <p>Low population density, and mostly rural population</p> <p>Change in natural landscapes due to reclamation</p>	<p>Increase in adverse weather events</p> <p>Frequent droughts</p>	<p>Human health insecurity</p> <p>Economic insecurity</p> <p>Water insecurity</p> <p>Land degradation, losses in biodiversity, and natural heritage, including increased fire risks and degradation of forests</p> <p>Growing risks of climate-related disasters in Polesie</p>	<p>High/High</p>	<p>Low in Chornobyl</p> <p>Medium in Polesie</p> <p>Positive changes of agriculture efficiency</p>

Hotspot	Security implications and risks related to climate change	Recommendations	Target group
Regional/transboundary hotspots			
Polesie and Chornobyl	<p>Human health insecurity</p> <p>Economic insecurity</p> <p>Water insecurity</p> <p>Land degradation, losses in biodiversity, and natural heritage, including increased fire risks and degradation of forests</p> <p>Growing risks of climate-related disasters in Polesie</p>	<p>General</p> <ul style="list-style-type: none"> • Develop modelling, mapping, monitoring and forecasting of hydrometeorological and hazardous events to support preparedness and to provide a system of timely early warning • Conduct programmes on prevention of forest, agricultural and peat fires in contaminated areas, provide constant monitoring, and strengthen local capacities for responding to fires • Adapt leading sectors to climate change to avoid economic losses and increase resilience • Conserve and restore water bodies and support biological diversity • Monitor invasive species of flora and fauna • Conduct preventive measures and strengthen capacities to prevent peat fires • Promote and provide state and private insurance schemes for climate-related risks • Provide training and capacity-building for decision-makers and staff in local administrations and other relevant authorities on climate change in all related areas • Develop and implement comprehensive public awareness campaigns on climate change and security implications and adaptation measures <p>Industry</p> <ul style="list-style-type: none"> • Renovate and modernize industrial facilities and processes in light of green and low-carbon economy developments, apply new climate-smart technologies and practices, and promote sustainable development <p>Health</p> <ul style="list-style-type: none"> • Consider appropriate measures within the health care sector with special attention to potential radiation risks and increasing temperatures 	<p>Governmental institutions, local authorities, environmental agencies</p> <p>Particularly, ministry of agriculture, energy, industry, health care systems, hydrometeorology, forest and water services</p> <p>International organizations and donors</p> <p>Non-governmental organizations, civil society</p>