Citizen Science for Radiation Monitoring During Wartime in Ukraine

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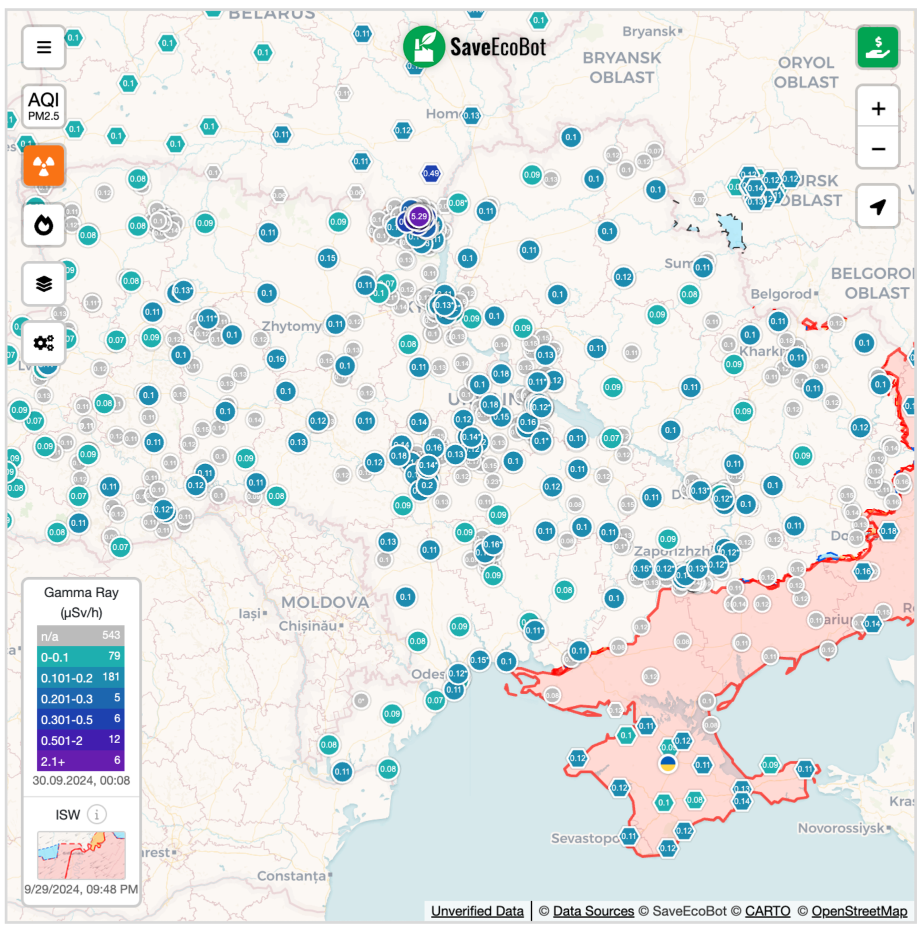
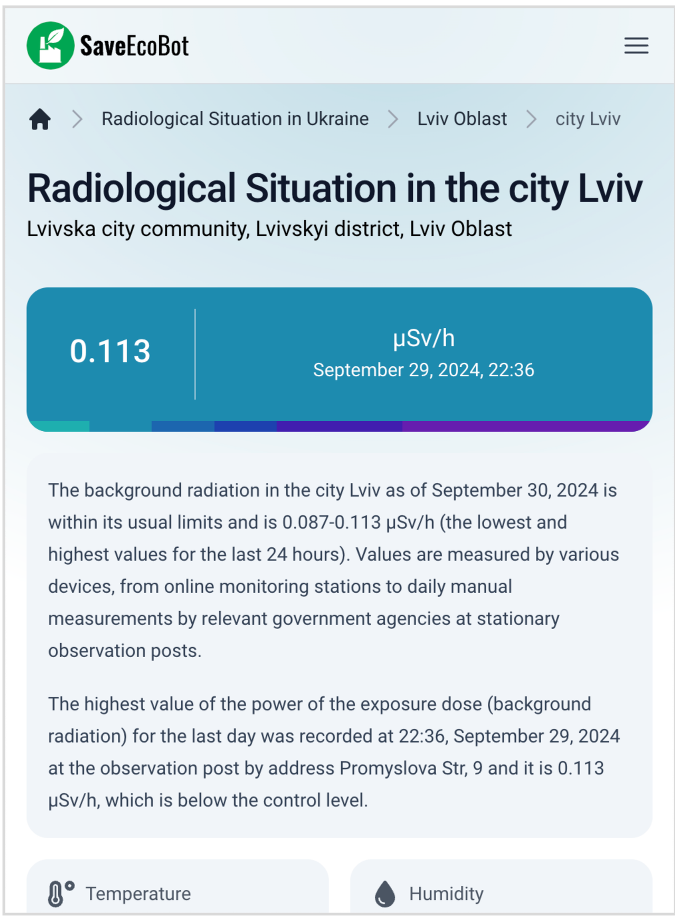
1. Background & Motivation

In 2018, SaveDnipro NGO launched an independent public environmental information system, SaveEcoBot.

After the 2022 Russian invasion, official radiation data in Ukraine often became unavailable or censored. Citizens needed transparent access to radiation information, especially near Chornobyl and Zaporizhzhia NPP, because of the ZNPP occupation, constant attacks on the Ukrainian energy system, and fake news about radiation.

2. The SaveEcoBot System





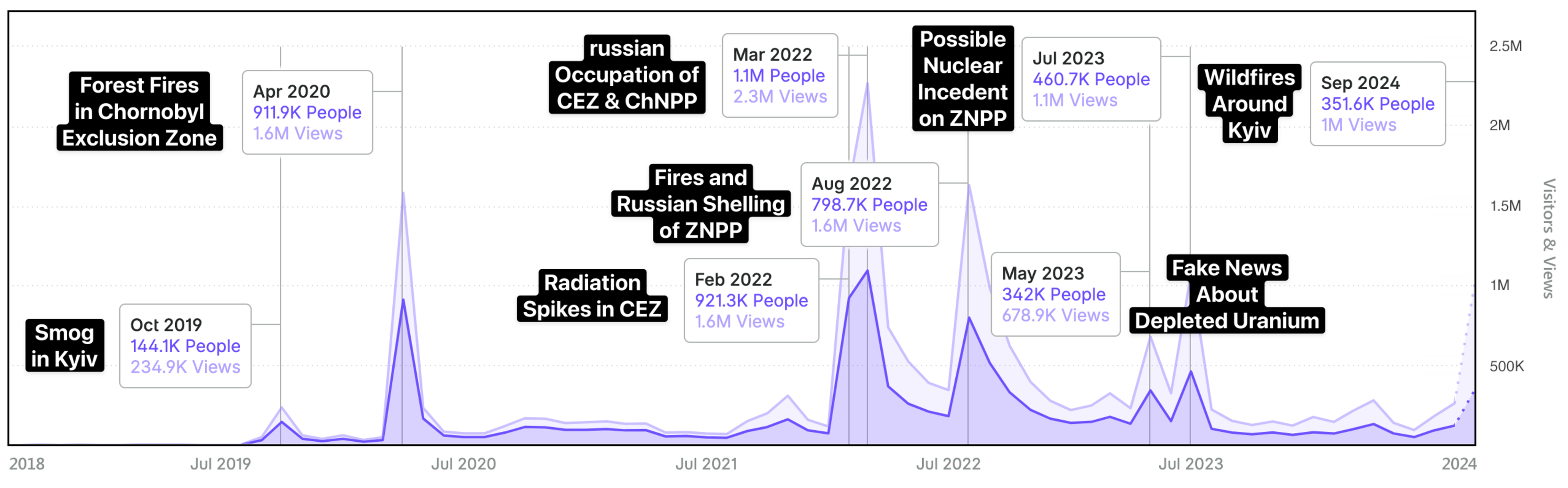
The system aggregates diverse sources of environmental open data from open government sources, citizen sensors, and partners, offering real-time updates on air quality, fire data, and radiation levels through an accessible public website with maps, cities pages, chatbots, and API.

3. Citizen Science Network

Over 100 public automatic radiation monitoring devices across Ukraine have been successfully deployed, including Mount Pip Ivan (2028 m), Chornobyl Exclusion Zone, in front of Zaporizhzhia NPP, near front-line and liberated areas.

4. Impact

Since 2022, SaveEcoBot has reached over 10 million users, becoming one of the world's largest citizen-driven radiation data sources not only during wartime, but anywhere.



5. Lessons & Future Work

Citizen science ensures data resilience during conflict. Open data builds trust and transparency.

Next steps include certification of the citizen-science radiation monitoring devices in Ukraine, expansion of the sensor network, and integration of automated anomaly detection.

6. International Partners

Partnerships with uRADMonitor (Romania), SURO (Czech), Safecast (USA, Japan), Windy.com (Czech), Greenpeace CEE, BfS (Germany), and Blues Inc (USA).

uRADMonitor global environmental monitoring network SAFECAST SÚRO GREENPEACE blues Bundesamt für Strahlenschutz Windy

7. Institutional Partnerships & Support

SaveEcoBot collaborates closely with the Ministry of Environmental Protection and Natural Resources of Ukraine, State Agency for Exclusion Zone Management, State Nuclear Regulatory Inspectorate of Ukraine (SNRIU), SSE Ecocenter, State Scientific and Technical Center for Nuclear and Radiation Safety of Ukraine (SSTC NRS), Czech National Radiation Protection Institute (SURO), German Federal Office for Radiation Protection (BfS), and local administrations.

These partnerships demonstrate transparency and show how citizen data complements state monitoring systems.

8. Acknowledgements & Thanks

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