**Network of CzechRad mobile gamma radiation detectors in Poland – infrastructure for detailed spatial area mapping of dose rates, hotspot identification, and detection of radiation events related to warfare**

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Spatial mapping of environmental variables is essential for gaining a comprehensive understanding and identifying spatial patterns, particularly in fragmented zones with exceptionally high values resulting from natural conditions or human activities, such as the deposition following the Chernobyl accident. This can be achieved through multiple measurements or by using multiple devices.

This article presents the initial results of the CITISTRA (Citizen Measurements as a Complementary Radiation Monitoring Strategy in Threats Due to Armed Conflict or Natural Disasters) project, implemented in Poland. The primary goal of the CITISTRA is to establish a network of CzechRad detectors (Geiger-Müller detectors) designed and manufactured in the Czech Republic by the National Radiation Protection Institute (SÚRO). These detectors are equipped with a GPS module and an SD card, enabling simultaneous recording of measurement data and location. The mobile infrastructure created by this project can supplement official monitoring systems and provide rapid local radiation data in the event of armed conflict or natural disasters. Another important outcome of the project will be the visualization of the ionizing radiation dose rate in the project areas, which will offer better resolution than currently achieved by the set of 58 stationary early detection stations used for monitoring the country's radiation situation. In May 2025, the distribution of 200 detectors began across an area of 84,000 km² in southeastern Poland. Measurements of the dose rate have already started and will continue for 12 months in mobile mode. All obtained data are going to significantly expand the existing SAFECAST open dataset released under Public Domain license. The analyses conducted within CITISTRA will complement the results obtained through existing geostatistical methods, allowing us to develop new tools for characterizing and identifying current and future hotspots.

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