



RRADEW

Resilience to Radiological Events  
in Wartime

## WP3 – Case studies

# WP3 - 4 CASE STUDIES



Case study 1  
Ukraine

ISPNNP/NRCRM, LU

Case study 2  
Republic Czech

USB

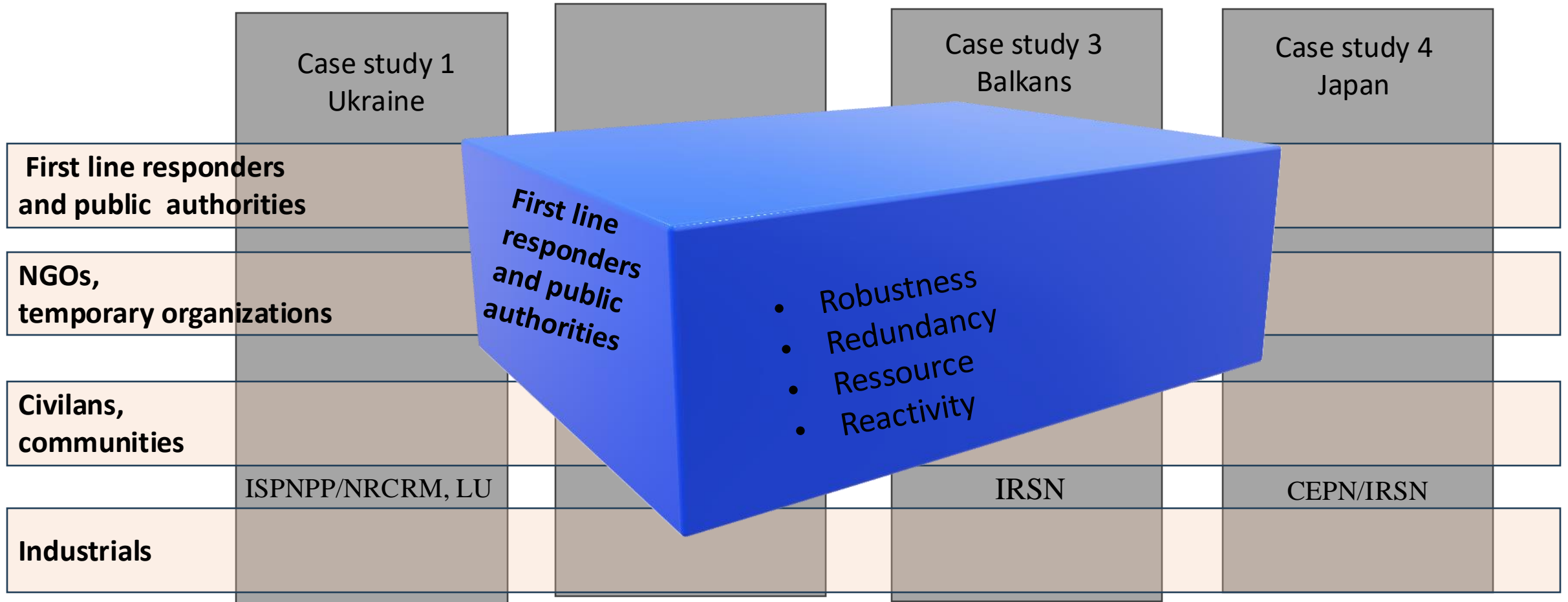
Case study 3  
Balkans

IRSN

Case study 4  
Japan

CEPN/IRSN

# 4 CASE STUDIES



# Czech Republic

USB



**Robustness:** The ability to maintain functionality without degradation, ensuring organizational integrity and continuity.



**Redundancy and Agility:** Coordination and cooperation of systems or interchangeable functions to preserve continuity in case of disruption.

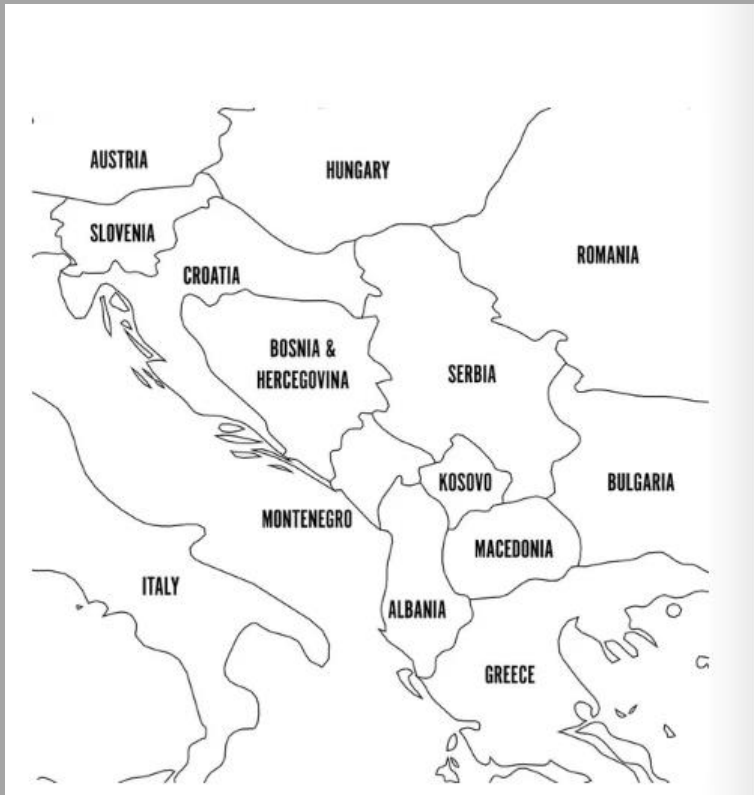


**Resources and Creativity:** Identify and prioritize essential problems, mobilize resources for a rapid and strategic resolution of crises.



**Response and Balance:** Ability to quickly manage emergencies and minimize losses while managing stress and emotions in crisis.

# Balkans War



IRSN

- 1/ Croatia → dispersion of radioactive sources. project.
- 2/ Bosnia → Public Health Institute of Republic of Srpska (PHIRS)
- 3/ Kosovo → The controversy about the depleted uranium bombs

# Investigation of orphan radioactive sources post-Balkan war.

## ✓ Reasons for the Dissemination of Sources:

- Destruction/Closure/decommissioning of industrial sites
- Trade related to the removal of road lighting
- Storage issues

## ✓ Challenges in Source Recovery:

- New owners, loss of site memory
- Poor regulatory framework (to defend economic interest)
- Role of scrap metal companies in source detection
- Fear of radioactivity / explosion for the first line responders

**Orphan Source with Undefined Use / Uncertainty**

**Emerging risk** ➔ Creative approach (bricolage, tactics...)



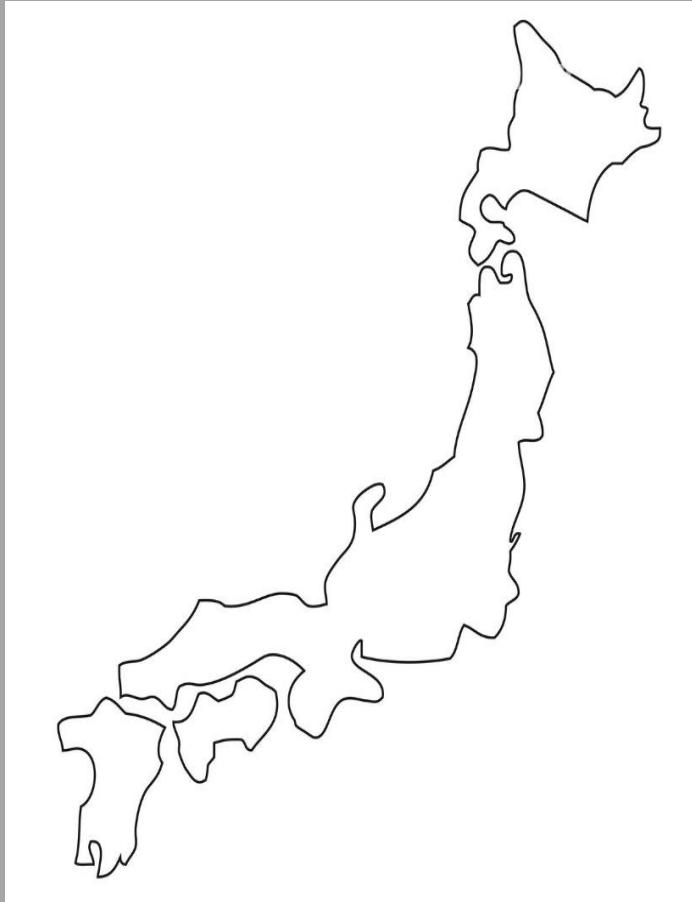
Type of Population	Number of Interviews
Experts	3
Regulators	2
Operators	1

# Japan CASE STUDIES



Experts

Evacuees



Medical Staff

Public authorities



Type of Interview	Category of Interviewed Actors	Number of Interviews Conducted
Health Professionals	Medical practitioners, radiology experts	5
Local Authorities	Mayors, municipal officers	3
Community Representatives	District chiefs, community leaders	4
Public Health Officials	Nurses, public health experts	4
Agricultural Sector	Farmers, agricultural advisors	3
Institutional Representatives	Government and emergency response officials	2
Citizens	Residents, evacuees	6
Disaster Response Experts	DMAT members, crisis management consultants	2



# Mission

## 14-24 October 2024

### Fukushima Prefecture







# The evacuee section

The resilience of Fukushima evacuees reveals a **spatial and social reconfiguration**, where returning is not just about risk assessment but a **negotiation of place, identity, and daily life** in a transformed landscape.





# Ukraine

## First-Line Responders

- How do first responders maintain readiness under continuous stress and evolving (nuclear) threats?
- Are regular drills, course training and past experience (e.g., Chernobyl) are implement to ensure effective response?



ISPNPP/NRCRM, LU

## Hospitals and NGOs

- What are the most effective ways to educate the public on radiation risks and emergency response?
- Ethic : stay for the commun good / personal life
- How can institutions support their staff emotionally and logistically in high-risk environments?

## Civilians and Local Residents



- How do populations react to cascading risks?
- How do previous experiences shape public reaction, communication with residents in emergency perception, and understanding of risks ?
- How can participatory monitoring initiatives (e.g., Safecast) enhance local resilience?
- Where do people seek information and support during complex emergencies?
- How can authorities and community networks improve public trust and response effectiveness?

## Experts

- How can environmental monitoring be maintained despite war-related disruptions?
- What strategies ensure the reliability and accessibility of radiological data?
- What role do experts play in bridging the gap between technical risk assessment and public awareness?

# The Emergence of Experts in Wartime Nuclear Crises : the case of Ukraine

- Experts in Ukraine have played a crucial role in resilience by reframing risks, bridging scientific expertise with operational action, and activating cross-sector collaborations.
- Beyond explaining radiological issues, they structure threats, mobilize networks, and adapt response strategies to ensure that resilience extends beyond the immediate emergency.



	Case Study 1	Case Study 2	Case Study 3	Case Study 4	Milestone
	Ukraine	Czech	Balkans	Japan	DRAF REPORT ON
First line responders	Capacity building and ressources allocation  Measurement Dosimeters for Field Use	Preparedness personnel	Fear of radioactivity v/s explosion	Institutional orders  Organizational regulation  Individual initiatives	CEPN/NRCRM, LU, ENSOSP, ISPNNP, KIT, APA, USB, IRSN
NGOs, Hospitals, temporary organizations	Engagement of new or unexpected stakeholders Infrastructure for rapid response Risk management and personal sacrifice	Education, course training	New stakeholder taken unexpected emergencies  Risks taken / sacrifice	Evacuation orders  Logistical Challenges  Burden of individual responsibility	USB/CEPN, ISPNNP, KIT, IRSN
Communities	Perception of threats,  Information access, monitoring, training, anticipation involvement	Community involvement,  Impact related to past experience ;  link with the NPP	Information access, envt monitoring, perception/ propaganda (depleted uranium)	information access, dose measurement, health impact +  Social life	IRSN/CEPN, USB, ISPNNP, KIT, UA
Industrial Experts	Become scare ressources  Challenges faced  Biographical change	Interaction, communication with the communities	Scare resources	Scare ressources  Challenges faced  Biographical change	IRSN/CEPN, ISPNNP, USB, NRCRM, LU
	M18, ISPNNP, NRCRM, LU	M18, USB	M18, IRSN	M18, CEPN / IRSN	M 25, DELIVERABLE Final synthesis IRSN

Thank you for your attention...