

Innovating the Chernobyl Landscape: Environmental Assessment for Remediation and Management

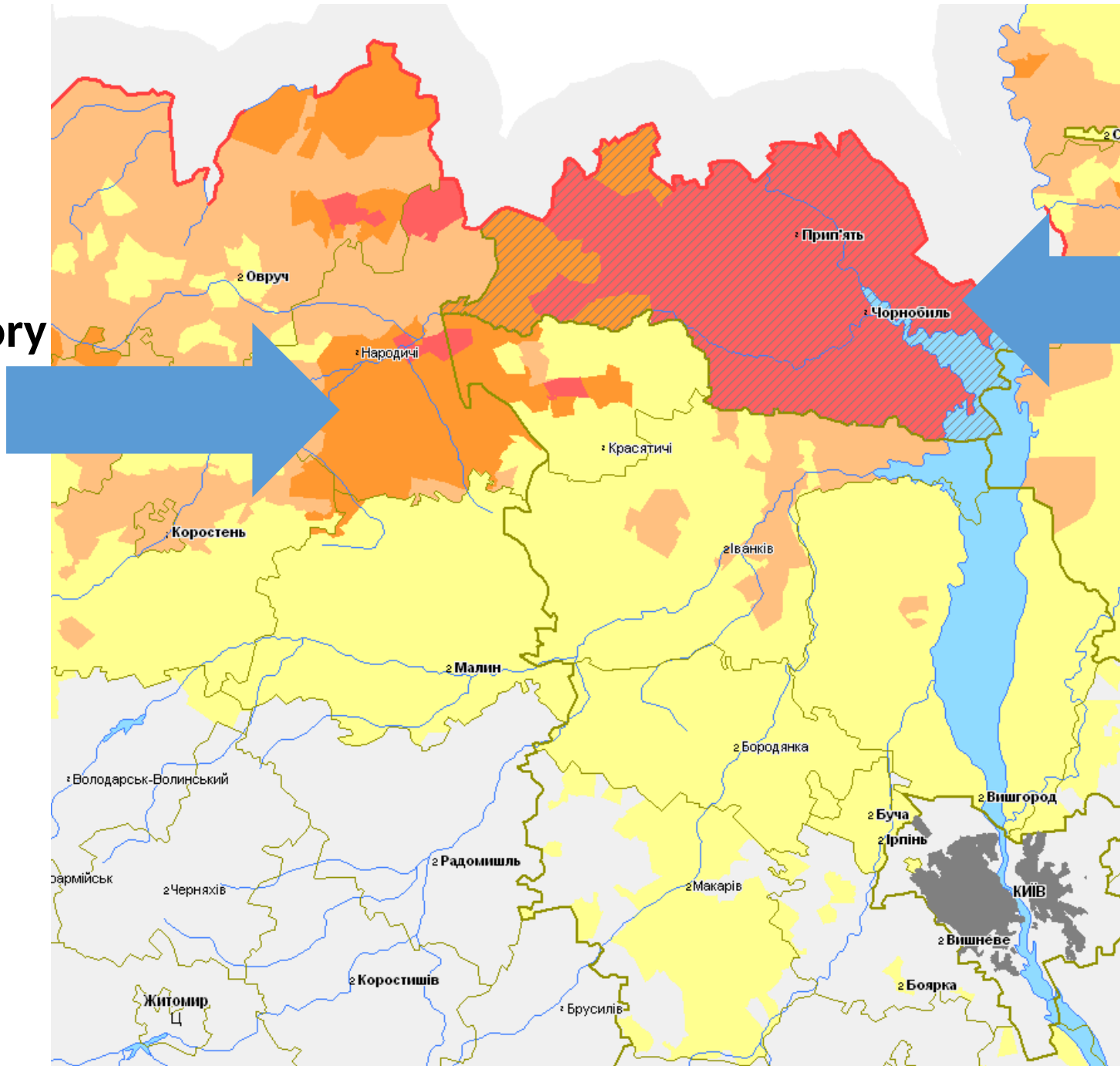
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Экоцентр



**Zone of obligatory
resettlement**



**Chernobyl
Exclusion
Zone**

2270
km²

**Chernobyl Biosphere
Reserve**

Map from Chernobyl Atlas

Potential re-classification of land

- Groundwater contamination and risk – with Dmitri Bugay
- Protocol for assessment of lands for agriculture – with Valery Kasparov group
- External and internal radiation risk to farm workers – Portsmouth Uni
- Stakeholder and residents' concerns about re-zoning – Deborah Oughton; Yevgeniya Tomkiv



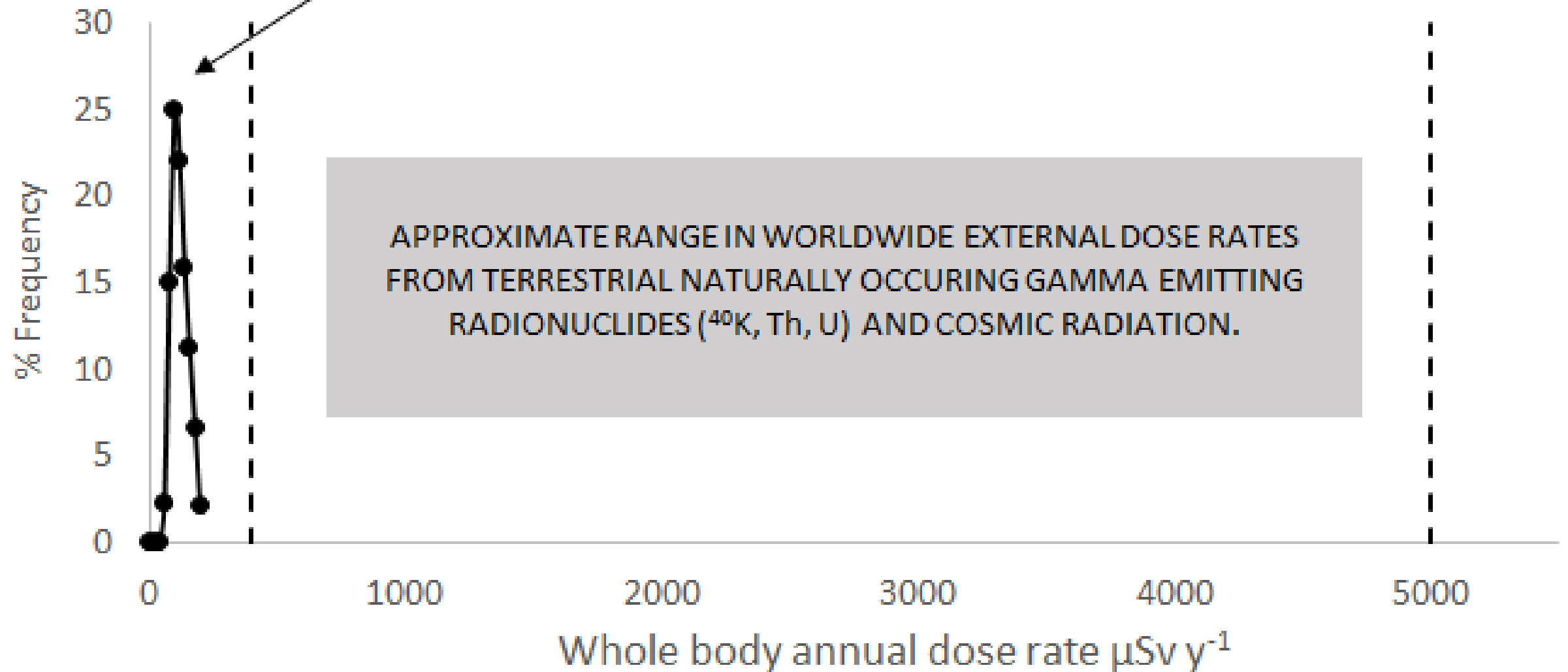
Monte Carlo risk assessment

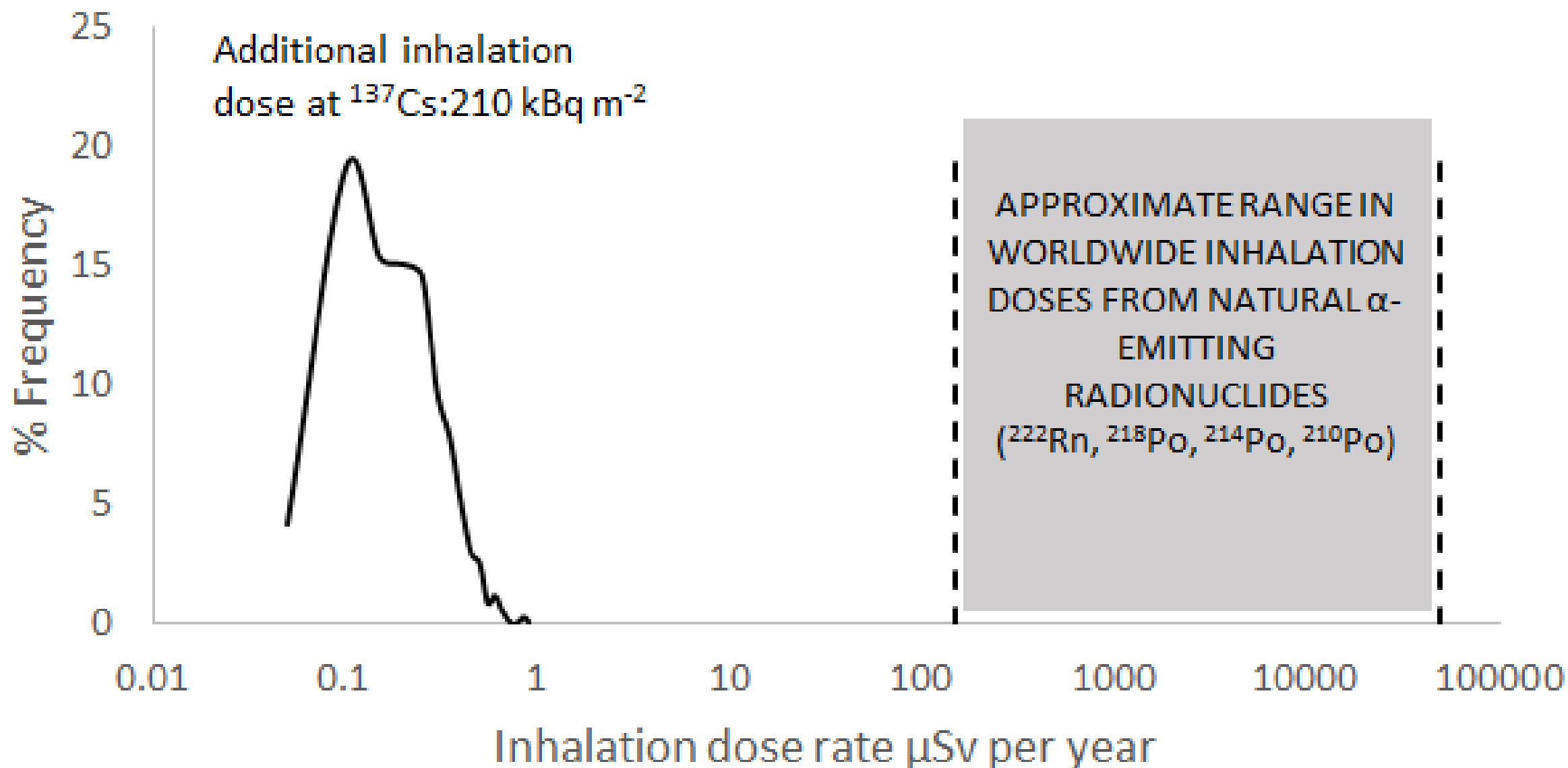
- Dose to farmer/farm worker for typical agricultural work on 100 ha of land
- Includes external, inhalation and skin dose. Skin dose and dose to reproductive organs considered separately (very low).
- External and inhalation dose calculated by Monte Carlo modelling

A

External dose; ^{137}Cs

iCLEAR

Additional external dose
to farm worker from ^{137}Cs 

BInhalation dose - ^{137}Cs , ^{90}Sr , ^{238}Pu , $^{239+240}\text{Pu}$, ^{241}Am 

Attitudes to the change in land-use



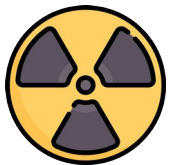
Workplaces
Local budget
Development of the area



Land is a valuable resource



Villages would feel more alive



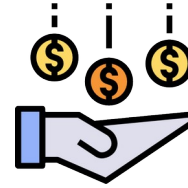
Land is cleaned up

If

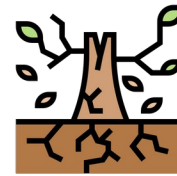


Independent experts are involved

FOR



Ordinary people won't benefit from it



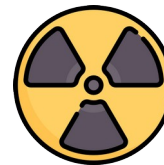
Land exhaustion



Excessive use of pesticides



Use of pastures and gathering activities
could be forbidden

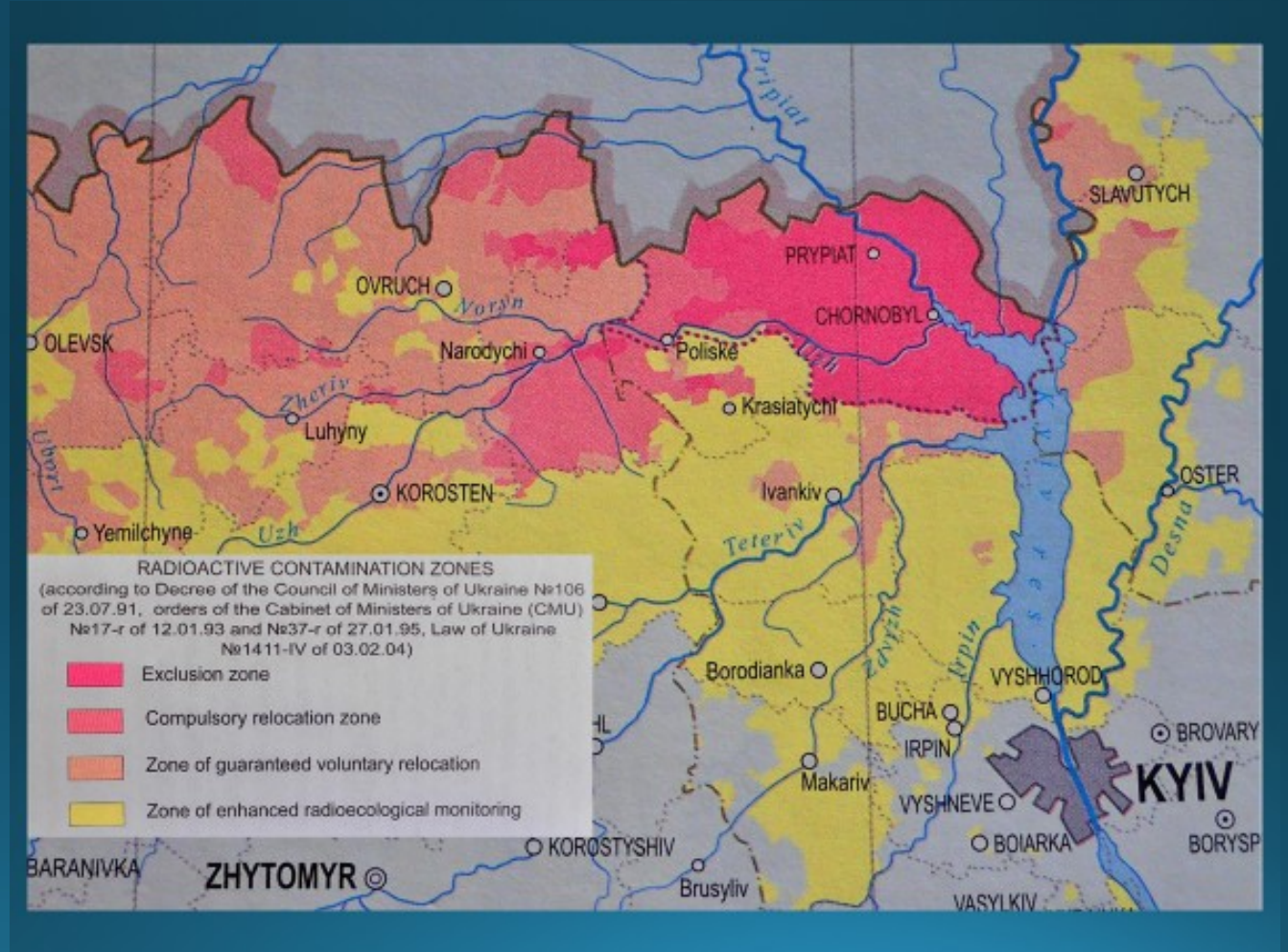


Land is contaminated

AGAINST



2017-2018 Experiments



The Chernobyl Spirit Community Interest Company



- A UK based Social Enterprise in which 75% of profits will go to support communities affected by Chernobyl
- ATOMIK Spirits made from crops from Chernobyl affected areas of Ukraine
- Spirits now selling online in the UK at www.atomikvodka.com
- £30,000 so far donated to support Ukraine



The Chernobyl Spirit Community Interest Company



Donations to
Narodychi High
School

Summary

- International radiation protection science is clear that areas outside the main exclusion zone are very low risk
- Crops can be grown safely in most (possibly all) areas
- Re-classification of “contaminated” land should have begun many years ago
- Need to ensure that a clear protocol is followed to give confidence in the process
- Need to ensure that local people benefit from re-classification