

# Obsolete pesticides stockpiles and potential solutions for them: experience from BElarus

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# General overview

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- Belarus is a party to the Stockholm Convention;
- Prepared national plan on SC;
- 2 GEF projects on POPs;
- Ministry of the Environment is a focal point.
- State inventarization;
- Public monitoring.

# General overview

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Obsolete pesticides in Belarus are located in:

- Storages;
- Underground burial sites;

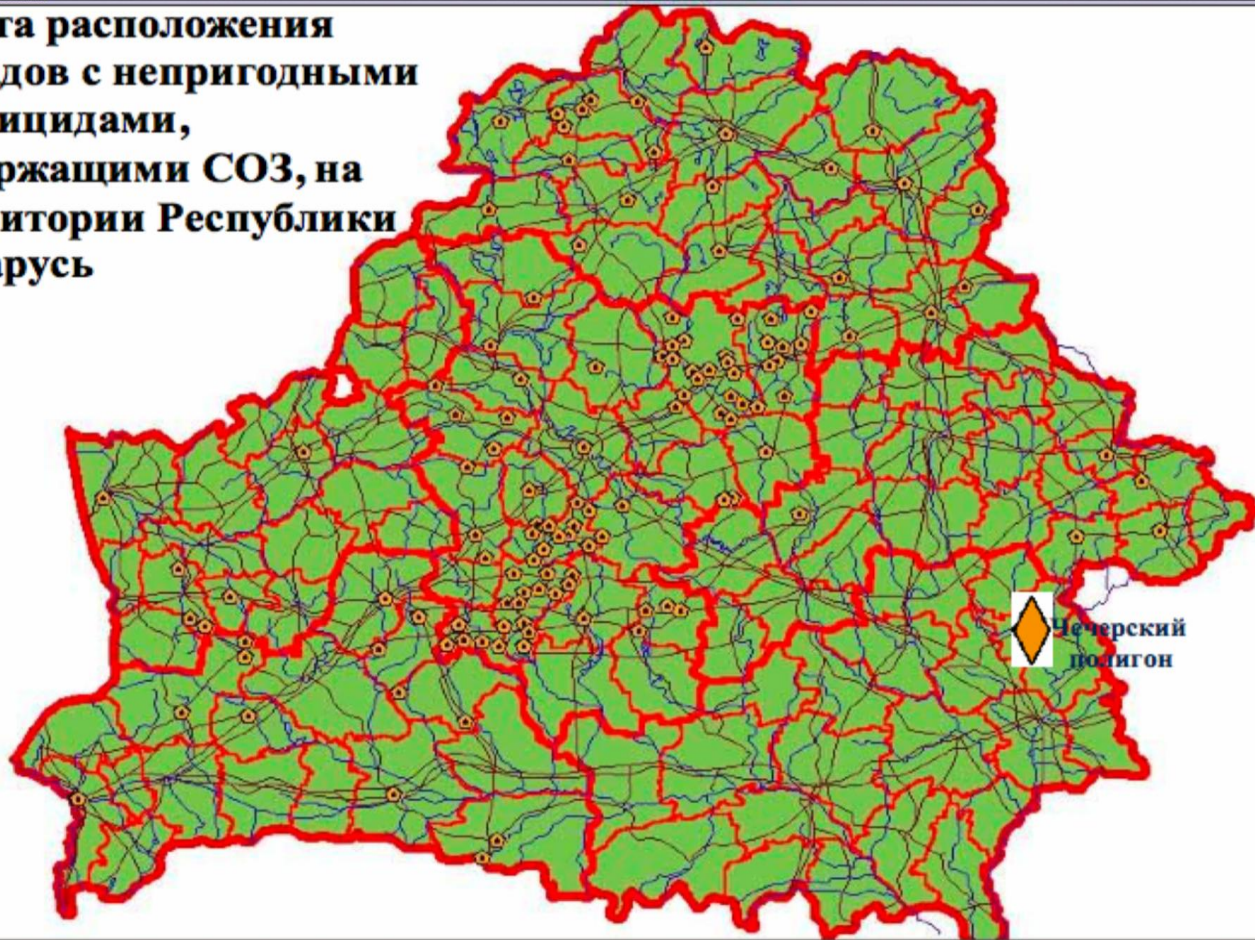
# Situation overview

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- ❑ On 01.01.2011 – 7359,835 tonnes of obsolete pesticides in Belarus;
- ❑ 2832 tonnes (39%) are stored in 159 storage places of agricultural farms;
- ❑ 2824,706 tonnes (38%) are buried in 6 underground tombs;
- ❑ 1703,126 tonnes (23%) are transported to HW landfill in Gomel region during 1999-2010 years;

# Location of pesticides places

**Места расположения  
складов с непригодными  
пестицидами,  
содержащими СОЗ, на  
территории Республики  
Беларусь**



# Obsolete pesticides

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- From 2832 tonnes of pesticides in storages, 95% are re-packed;



# Local storage in Kolyadichi



# Storage in Logoisk district

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# Public role

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- ❑ We think that official figures on quantity of pesticides are lower than in reality;
- ❑ Public monitoring of pesticides shows undiscovered amounts of pesticides;
- ❑ State program doesn't include awareness-raising component for local people;

# Public role

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# Public role



# What has to be done?

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- ❑ To transport all obsolete pesticides from storages to a centralized hazardous waste facility in Gomel region;
- ❑ To transport obsolete pesticides to final destruction facility (not available in Belarus);
- ❑ To strengthen the informational work among local population.

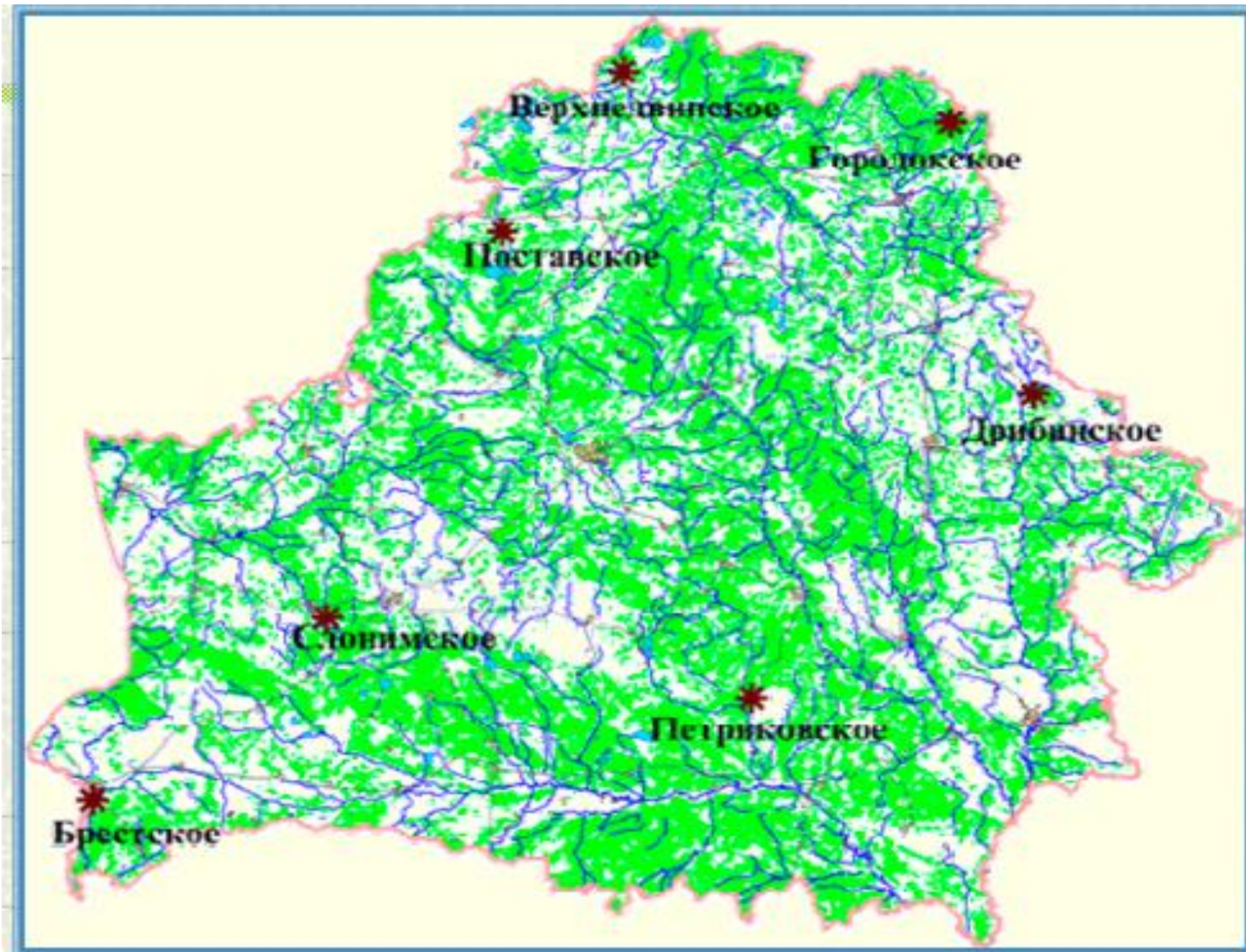
# Location of burial sites of pesticides

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# Location of burial sites of pesticides

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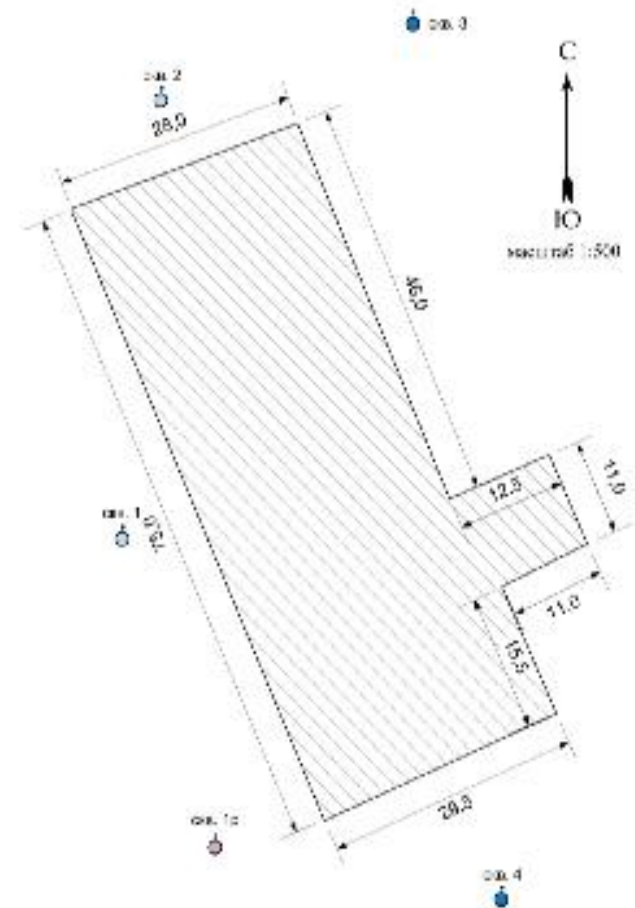


# Postavy burial site

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# Gorodok burial site



Условные обозначения

- об. 1р разделение участка, пробуренная в 2005 г.
- об. 1.2 наблюдательные скважины, сооруженные в 2006 г.
- об. 3.4 наблюдательные скважины, сооруженные в 2007 г.



# Slonim burial site

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# Petrikov burial site

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# State monitoring

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- ❑ Pesticides are leaking to the environment from all underground storages;
- ❑ POPs pesticides (DDT and isomers, GCCG, endrin, geptachlor) are presented in all media: soil, ground and underground water, as well as atmosphere air (smell);
- ❑ Most problematic are ground waters: increase of concentration after 2007 (3-6 MPC);

# State monitoring

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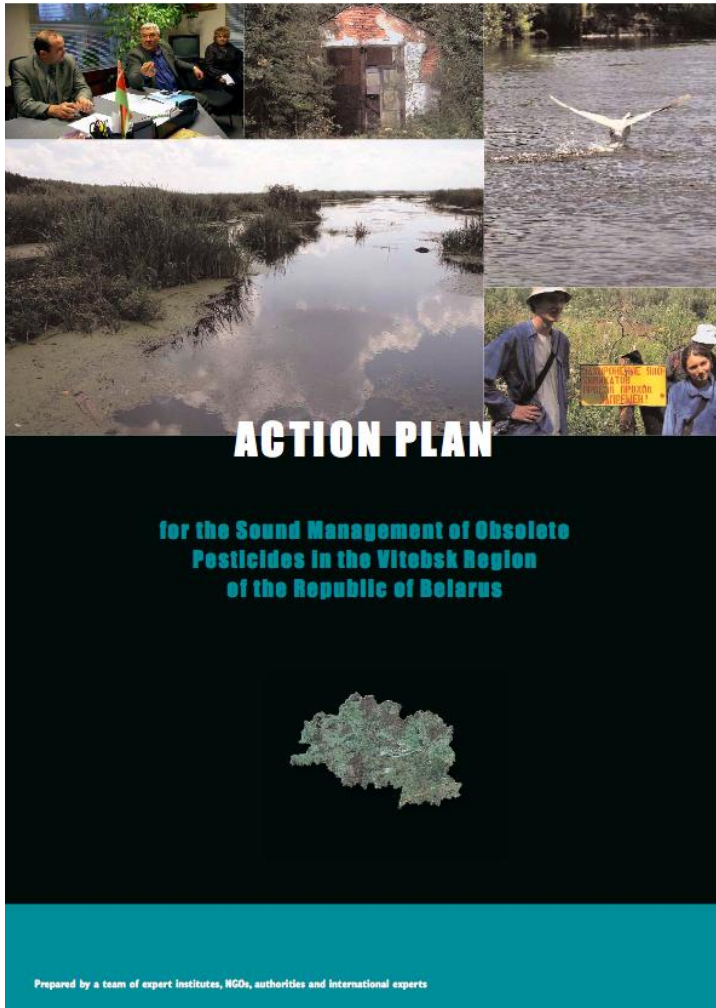
- Before 2007:  $1 \cdot 10^{-6}$ - $1 \cdot 10^{-5}$  mg/l;
- After 2007: up to  $1 \cdot 10^{-3}$  mg/l;
- In 2009-2010: concentration of lindane exceeded 0.1 mg/l in underground water near some of burial sites;
- 4,4-DDD – 0,349 mg/l;
- All underground storages are ranged according to environmental hazard;
- Present technical activities on storages do not solve the problem.

# Public role

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- Underestimated quantity of pesticides in burial places;
- Awareness-raising activities among local people;
- Raising the issue of some of the burial places;

# Verchedvinsk burial place



- The issue was raised by NGOs: several years of campaigning led to several infrastructural projects on improvement of the situation on that burial place.

# What has to be done?

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- ❑ Opening of burial places, re-packaging of pesticides and contaminated soil, transporting to the long-term storage or utilization facilities;
- ❑ Incapsulation of existed burial sites;
- ❑ More detailed local environmental monitoring;

# References

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- ❑ Obsolete pesticides in Belarus and their environmental impact, S.Kuzmin, Belarussian Scientific Centre "Ecology", Minsk, 2011;
- ❑ Materials of FRI/CES public monitoring, 2005-2010;



# Thank you for attention!

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