Russian Nuclear Boomerang : Risks of Global Consequences

Oleg Bodrov

NGO Green World chairperson

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DECOMMISSIONS
DISMANTLING OF OLD NUCLEAR POWER PLANTS

ЗЕЛЕНЫЙ МИР
GREEN WORLD

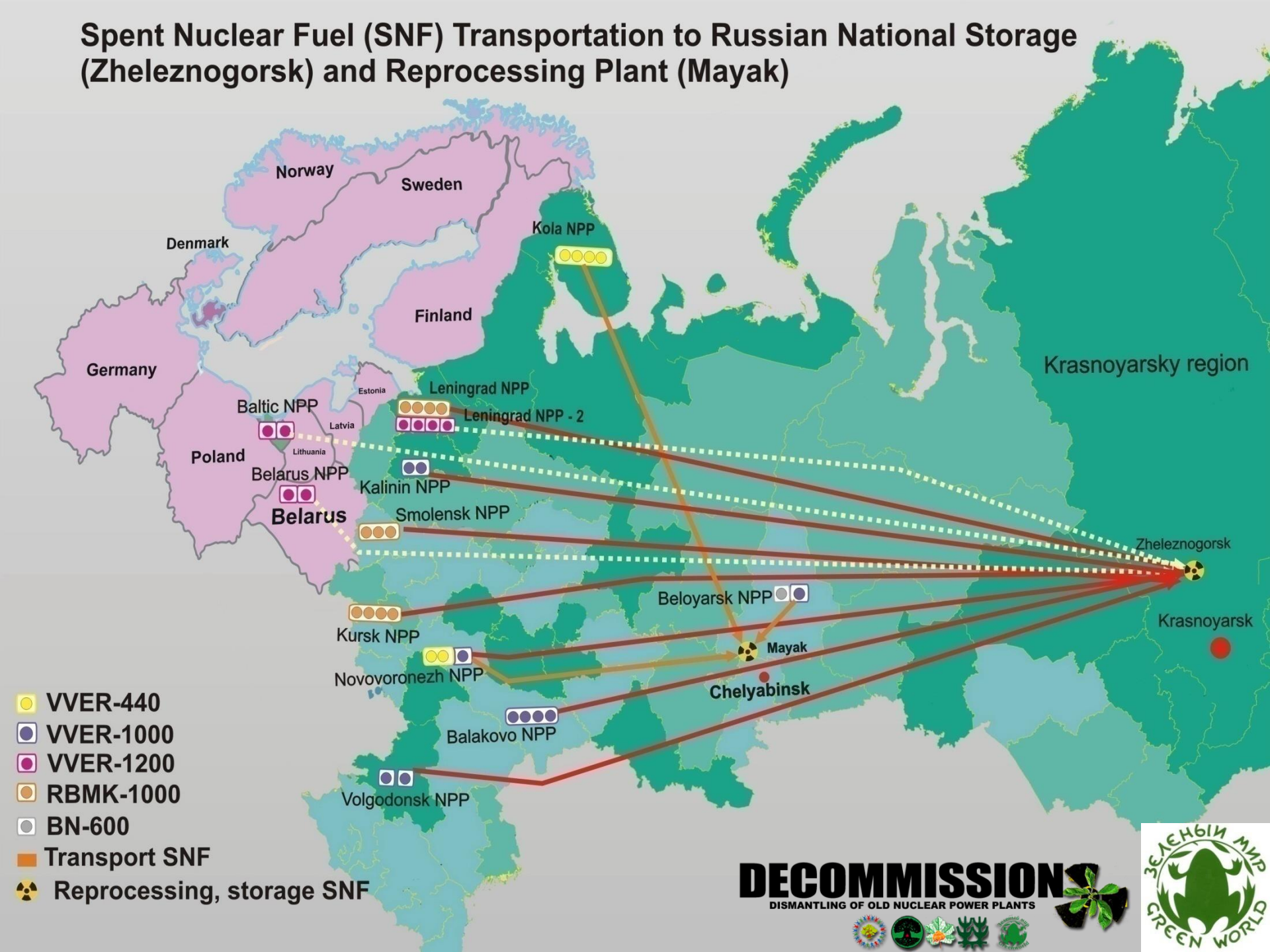
Nuclear Trend

32 =>34 reactors

Sweden	12 -	2	=	10
Germany	6 -	6	=	0
Russia	8 + 6	+2	=	15
Finland	4 + 1	+1	=	6
Lithuania	2 – 2	+1?	=	1?
Belarus				2

DECOMMISSIONS
DISMANTLING OF OLD NUCLEAR POWER PLANTS

Spent Nuclear Fuel (SNF) Transportation to Russian National Storage (Zheleznogorsk) and Reprocessing Plant (Mayak)



DECOMMISSION
DISMANTLING OF OLD NUCLEAR POWER PLANTS

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RosAtom Country

Russian Nuclear Cities

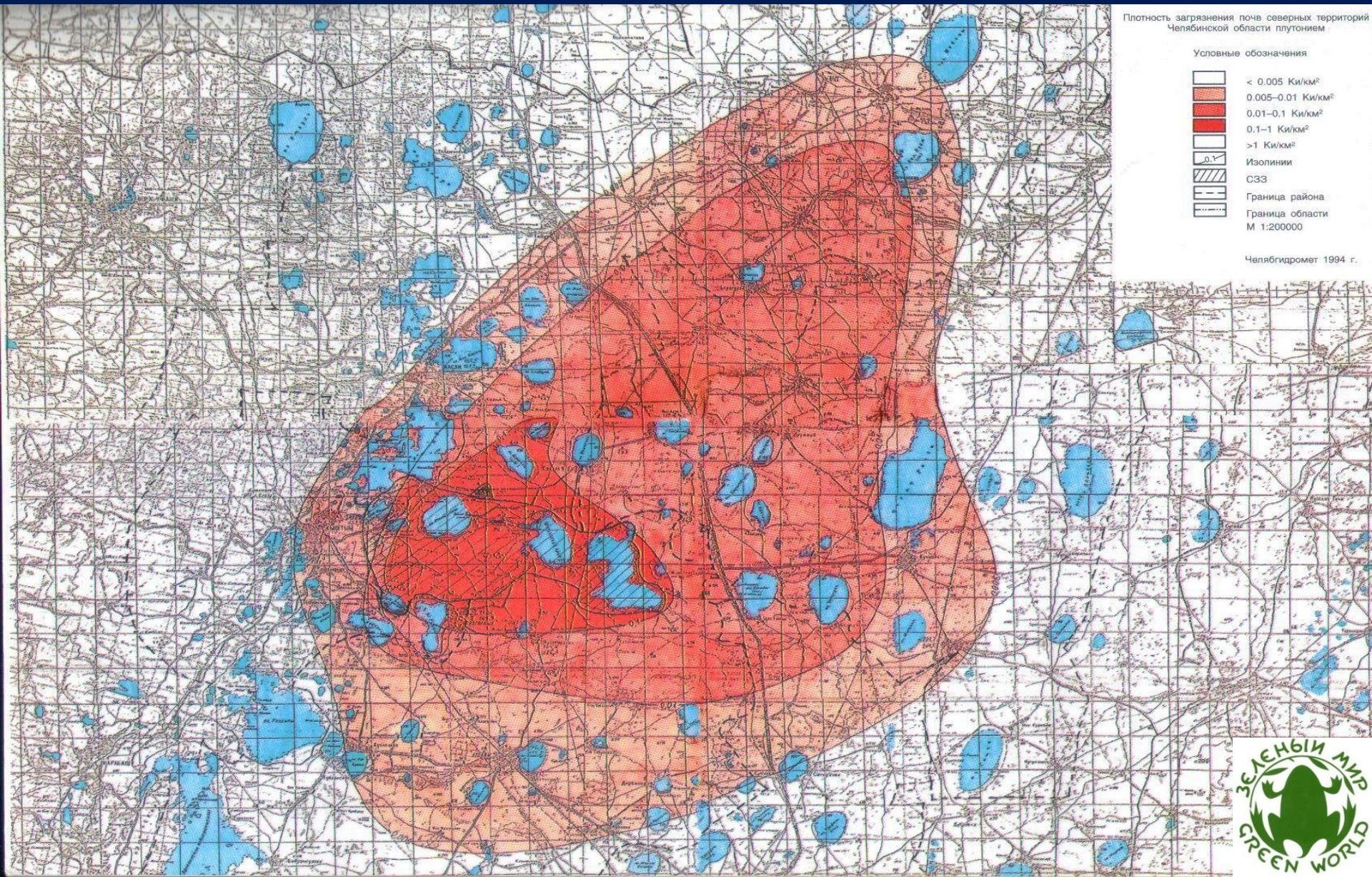
- 10 NPPs cities: **774 000** residents,

  nuclear city salary = **3 salary** of the NPPs region-location.
- 10 close nuclear cities (ZATO) = **634 000** residents

Close nuclear city (ZATO) salary = **2 salary** of the ZATO region-location.

- Population of 20 Russian nuclear cities = **1%** of Russia

Plutonium registered 100 km from “MAYAK”



Health Condition Near MAYAK reprocessing facilities

- 22 000 km2 contaminated by Sr-90, Cs-137, Pu-238, 239;
- More 500 000 victims;
- Cancer cases doubled over the past twenty years and reached 400 cases per 100 thousand people. (40 % more than in Europe);
- The number of congenital anomalies of children has reached 52.3 per 1,000 births in 2010. It is 55% more than in all Russia.

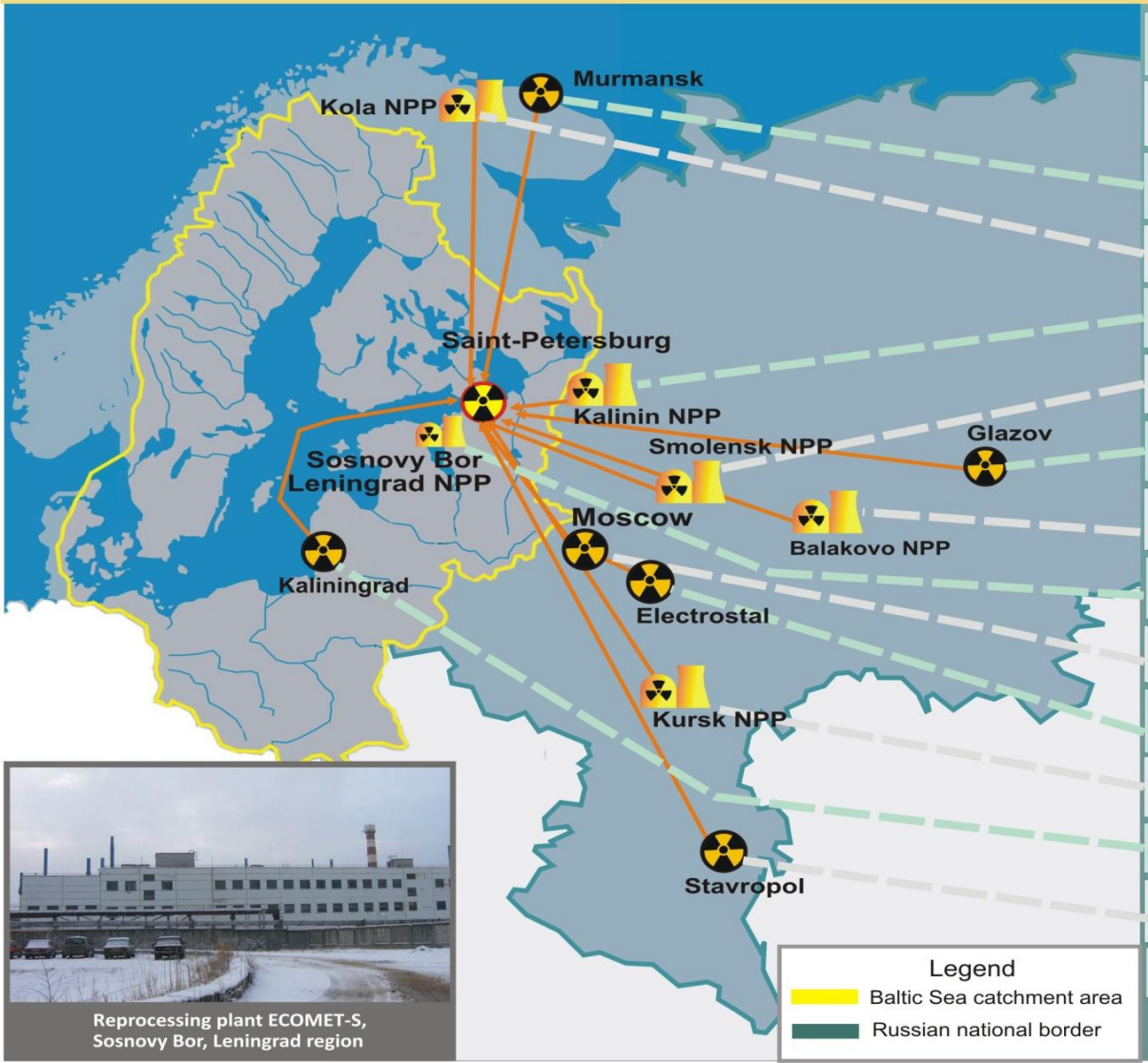
Ynisei River contamination

(V. Khiznyak, nuclear regulatory inspection, Krasnoyarsk, 1994)

- **Contamination of the Yenisei River man-made radionuclides** from ZATO Zheleznogorsk above natural background can be detected on 1,500 km.
- **Pu** content to 140 times above background levels.
- It is possible that some areas of **Yenisei have contamination that may be classified as radioactive waste.**

ECOMET-S Continue a Radioactive Scrap Metal Accumulation in the Baltic Sea Region

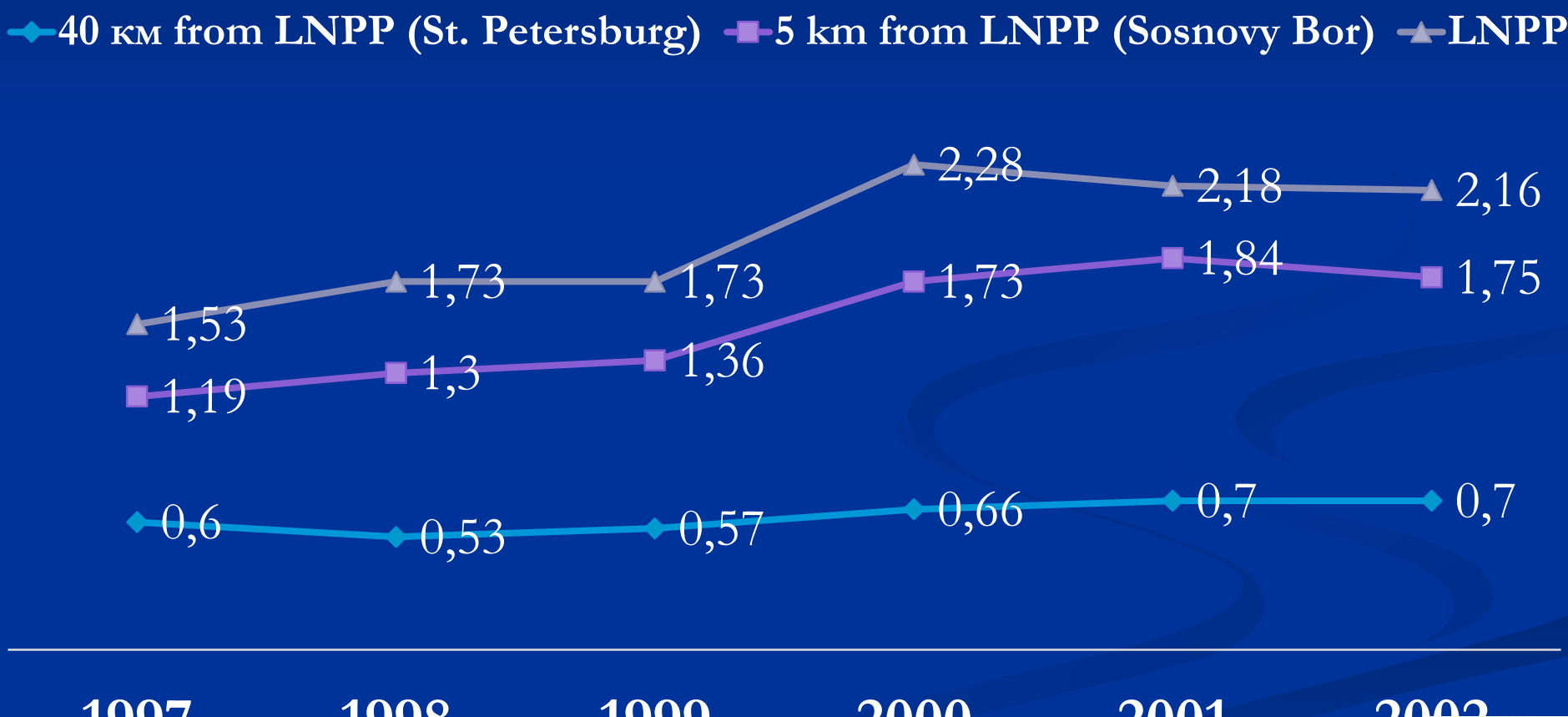
Radioactive Scrap Metal Accumulation in the Baltic Sea Region (JSC Ecomet-S)



Reprocessing plant ECOMET-S, Sosnovy Bor, Leningrad region

Radioactive Scrap Metal (RSM) Producer		
Name of the Company	Distance from RSM producer to reprocessing plant (km)	Amount of transported RSM (tones)
FGUP SevRAO, Murmansk Region	1300	40.6
Kola NPP, Poliarnyje Zori, Murmansk Region	1100	900
Kalinin NPP, Udomlya, Tver' Region	460	600
Smolensk NPP, Desnogorsk, Smolensk Region	1000	2200
Chepetsk Mechanical Plant, Glazov, Udmurtia Region	2100	215.2
Balakovo NPP, Balakovo, Saratov Region	1700	3000
Leningrad NPP, Sosnovy Bor, Leningrad Region	3	10879
Russian Research Centre KURCHATOV Institute, Moscow	710	205.7
Elemash, Electrostal', Moscow Region	770	15.0
Kursk NPP, Kurchatov, Kursk Region	1300	2955
Kaliningradmorneft' (oil company), Kaliningrad region	1000	7.0
Rosneft Stavropol'neftegaz NK (oil company), Stavropol' Region	2200	19,4
Total		21035

Percent of Genetically Aberration of Pine Tries Seeds Near LNPP



Conclusions

1. **To lobby the equal environmental and public participation standards** for the export-import operations of nuclear electricity and technologies.
2. **To lobby Russian ratification of** Espoo Convention and to sign the Arhus Convention.
3. **To stop spent fuel rods** transportation between regions and countries. The regions (countries) - consumers of nuclear electricity must be responsible for the long time spent fuel storage.

THANKS!

Oleg Bodrov, +7 921 74 52 631

e-mail: bodrov@greenworld.org.ru

NGO Green World, Sosnovy Bor,

International Decommission NGO Network,

Coalition Clean Baltic

www.decomatom.org.ru www.greenworld.org.ru

Finland, Hanhikivi -1 NPP

Fin Government (18.09.2014) 10 pro, 7 against. NO sanction (Prime Minister)

Fin Parliament: 115 pro, 75 against

Type: VVER – 1200 , 1150 MWe.

Location: Pyhajoki , Baltic Sea (Bothnian Bay), Hanhikivi cape

Time frames:

- start of the construction 2018
- start of the operation - 2024

Motivations: Export electricity

Investments: Fennovoima (Euro 1.6 bn.)+ Rosatom (6.5 bn.)

Fresh fuel : JSC TVEL (monopoly 10 years), fresh fuel after reprocessing SNF

Nuclear and Radioactive waste: Russia?

Belarussian NPP

2 x VVER 1200, under construction

Location: Ostrovets, Grodno Region, Vilia

Time frames:

- started of the construction 2015
- Start of the operation - 2018-2020

Motivations:

- Stop import Russian gas
- Export electricity to neighbour countries,
- To get "nuclear status" for the Belarus,

Investments: Rus credit $10 bn.

Nuclear and Radioactive waste: Russia

NUCLEAR KAZAKHSTAN

Plans for nuclear electricity generations:

Setember 26, 2014 Rus –Kaz memorandum about the construction of NPPs:

VBER -300 ? + VVER – 1200?

Location:

- Kurchatov (Irtysh river) – close nuclear city near Semipalatinsk test site
- Balkhash lake

Time frames:

start of the construction 2018

Start of the operation - 2023-2024

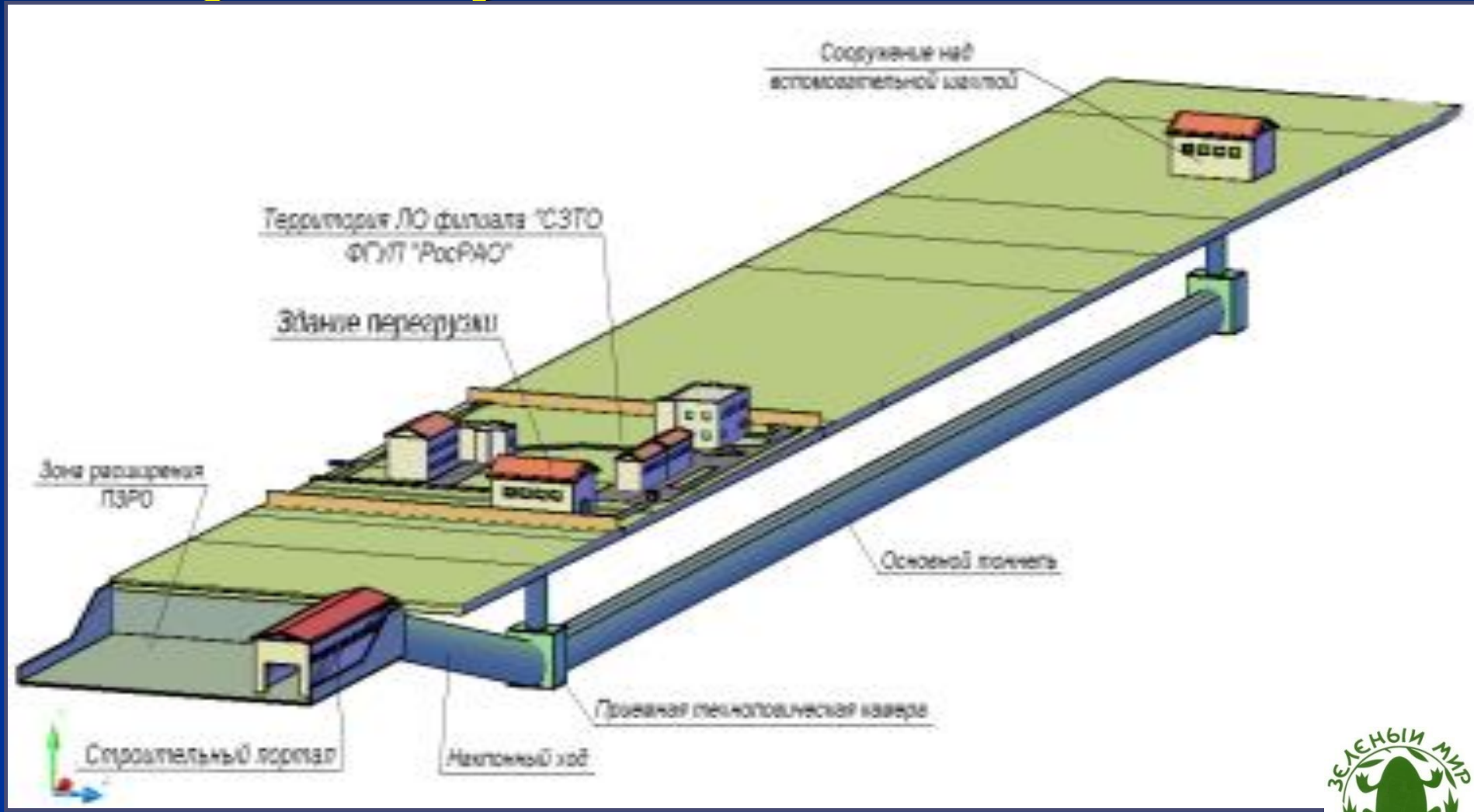
Motivations:

- To get "nuclear status" for the Kazakhstan,
- Export electricity to Russia, Kyrgyzstan, south part of Kazakhstan

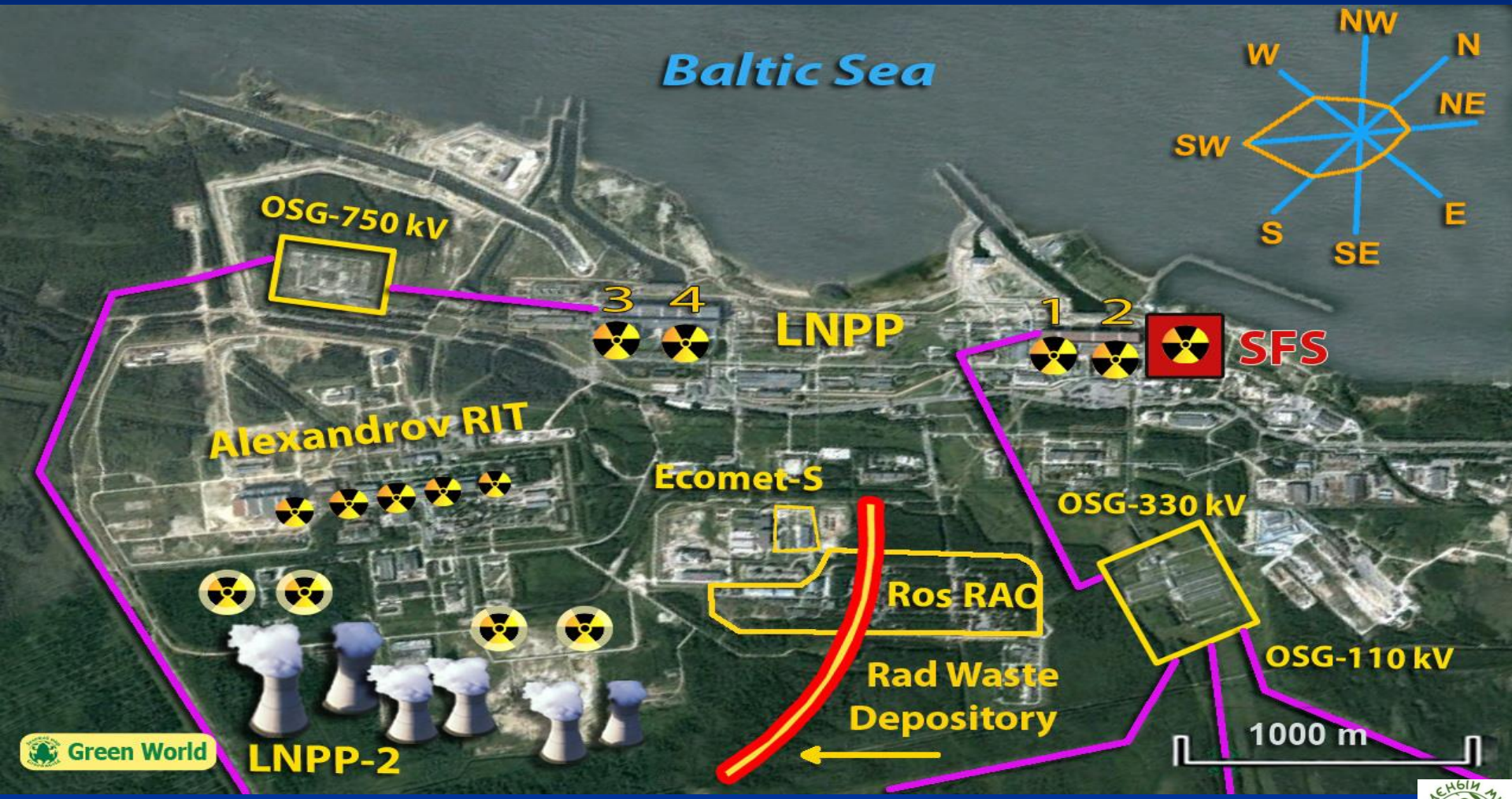
Investments: Rus + Kaz ?

Nuclear and Radioactive waste: Russia? Semipalatinsk test site?

Planned Radioactive Waste Depository 800 m from Baltic Sea



Nuclear Site 40 km West from SPb.



Risk of Stability for Nuclear Electricity Transmission to Finland

Contamination of seas and oceans by Cs -137 (01.01.2000)