



INFRASTRUCTURE DEVELOPMENT AND POLLUTED AREAS

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Polluted soil seminar

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SCOPE

- **MAIN SOURCES OF SOIL AND GROUNDWATER POLLUTION IN LATVIA**
- **INFRASTRUCTURE DEVELOPMENT AS ONE OF THE GREATEST RISKS**
- **POLICIES, LEGISLATION AND REGULATIONS**
- **COLLECTION OF INFORMATION AND DATA BASES**
- **SHARING OF RESPONSIBILITIES**
- **GREATEST HOT SPOTS IN Riga region**
- **EXPERIENCE AND RESULTS OF CLEANUP**
- **AVAILABLE RESOURCES**

MAIN SOURCES OF SOIL AND GROUNDWATER POLLUTION IN LATVIA

- **GENERALLY RATHER GREEN COUNTRY – OFTEN IS RANKING AMONG FIRST TEN IN THE WORLD**
- **TRANSPORT INFRASTRUCTURE AND LOGISTICS – OLD HISTORY**
- **LONGLY STANDING FRONTLINES DURING TWO WORLD WARS IN LATVIA**
- **FORMER SOVIET INDUSTRY BEFORE 1990**
- **FORMER SOVIET AGRICULTURE BEFORE 1990**
- **FORMER SOVIET MILITARY BASES**
- **NO PROBLEMS WITH CONTROLLED AND REDUCED ECONOMY AFTER 1990 – WITH IPPC DIRECTIVE IN INDUSTRY AND NITRATES DIRECTIVE IN AGRICULTURE – pollution reduction more than 50%**
- **TRANSPORT IS BECOMING GREENER, LOGISTICS HAVE BEEN OPTIMISED**
- **FORMER SOVIET TIME MUNICIPAL WASTE DISPOSALS, SEWAGE TREATMENT OR SEWAGE SLUDGE HANDLING NEEDS MORE THAN DECADE TO BE COMPLETELY REVISED AND IMPROVED**

INFRASTRUCTURE DEVELOPMENT AS ONE OF THE GREATEST RISKS

IF:

- this infrastructure or parts belongs to third countries
- if this infrastructure is been built during wartime
- if this infrastructure is becoming old but still in use
- if polluted territories are sold cheap and with no restrictions for use

MOST POLLUTED INFRASTRUCTURE IN LATVIA:

- Some parts of Riga Port and Liepaja Karosta channel
- Former military airbases in Rumbula and Lielvarde
- Fuel reservoirs' for military and transport purposes

Latvian Railway does not belong to the most polluted areas: 4 polluted areas, 24 potentially polluted areas and two areas excluded from the list of potentially polluted areas: 30 areas in total

Carriages park mostly belongs to third countries and Baltic States can not sufficiently combat leakages and pollution during transportation

Crud oil and diesel fuel pipelines are old and leakages happens often

POLICIES, LEGISLATION AND REGULATIONS

- Environmental Protection Policy instruments since 1994 recognizes soil and groundwater pollution as one of the local problems often in connection with infrastructure**
- Historical pollution or military occupation and soviet economy memories still is a problem**
- Contemporary pollution is strictly limited by existing legislation like: Environmental Protection Law, Pollution Law, Regulations on Polluted and Potentially polluted areas, On soil and ground quality, On surface and groundwater quality etc.**
- There are plenty of sector oriented regulations (like transport)**
- There are specific regulations on use of EU Structural co-financing to combat historical pollution**
- Latvian railway can be proud having the Railway Environmental Policy Planning since 2000 with regular evaluation of results and with new plan 2009 -2015.**

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COLLECTION OF INFORMATION AND DATA BASES

- Investigation of former soviet military bases started in early 90-ties by involvement of NATO experts with focus on risks and pollution (detailed investigation of Liepaja Karostas channel, Rudbarzu missiles base, Rumbula and Lielvarde military airbases, polluted industrial areas)
- Specific investigations like ES PHARE Project on obsolete pesticides or GEF Project on POPs where carried out at the end of 90-ties
- Governmental Regulations No 483 from 20th November 2001 „On investigation and registration of polluted sites” forms the system and ended with working database
- Investigation was carried out by The Regional Environmental Protection Boards and supervised by “Vides projekti” Ltd during 2000-2007.
- Database of Polluted and potentially polluted sites: www.lvgma.gov.lv, contains professional information and register of more than 3500 sites, with 2600 sites recognized as potentially polluted and 239 as polluted

SHARING OF RESPONSIBILITIES

- Soviet militaries and industrialists are gone
- Russia does not recognize any responsibility
- Former organizations and entrepreneurs are gone
- New owners after privatization are running only parts or much smaller businesses and can not take responsibility to treat all historical pollution

Latvian Railway has not gone and is doing a lot towards better services and environment

State is responsible for human health and environment in general

Municipalities are responsible for soil and groundwater quality and polluted sites evaluation during physical planning and development planning

All developers are responsible for environmentally sound and contemporary management

GREATEST HOT SPOTS IN Riga region

- **Former Rumbula military airbase with floating oil products at the territory more than 14,6 ha and more than 10000 m² polluted soils. Limited treatment is ongoing since 1997 firstly to stop filtration to the River Daugava**
- **Polluted Riga territories in Milgravis and Sarkandaugava with floating oil product layer more than 1 m is involved in cleanup exercises since 1995 to stop firstly filtration to the River Daugava**
- **Former soviet tank's repairing factory in 92 Matisa str. With floating oil in groundwater and Pb concentration 40 times exceeding limits. Treatment of 10000 m² soil will cost at least 2,5 milj LVL**
- **Cekule former depository of ammunition at the 240 ha area with old explosives even at 4 m depth. Partial cleanup in 1994 - 1999. Full recovery will cost more than 15 mil LVL**
- **Latvian railway:**
 - **railway wagon park „Vagonparks’ ‘ at Raznas str. with floating oil products**
 - **Depo Zasulauks with floating oil products**
 - **Riga Locomotives depot at Krustpils str 24 with floating oil products , recovery initiated by Latvia Railway**

EXPERIENCE AND RESULTS OF CLEANUP

- Real cleanup during decades has been reached in Rumbula and Lielvarde airbases and in the Riga Northern Part Milgravis industrial area using Danish Environmental Agency, Latvian Environmental Fund, Riga Municipality and private co-financing
- Detailed investigations followed by technological proposals for recovery were made in Incukalna acid tar ponds, Olaine liquid hazardous waste storage, Jelgava Cosmo plant hazardous waste disposal and in some other sites
- Common is step by step approach firstly closing the source and later reducing the effects – soil and groundwater pollution. In some cases prevention of groundwater further pollution might need actions at the distance from the polluted area, if pollution is causing risks to the drinking water resources (like River Gauja in Incukalna).
- Common approach is insulation with limited cleanup as full treatment and recovering costs too much. We have no examples of full recovering and there are no plenty of them in the western countries as well as.

AVAILABLE RESOURCES

- First discussions with IFI were not very successful as followed many consultancies and miserable actions
- Later some bilateral technological cooperation started with Nordic countries
- After joining EU some co-financing for cleanup projects can be attracted from EU KF, nevertheless financial period till 2013 has strictly limited co-financing and only most polluted areas can be cleaned: Incukalna acid gudron ponds, Olaine liquid waste storage, Jelgavas Cosmos industrial waste disposal, Liepaja Karostas channel. Other projects will wait after 2014.g.
- Full set of hazardous waste management system since 2009 allows to solve some specific issues
- Open EU market offers better and cheaper investigation in some specific issues like POPs, Dioxines, PHB etc.
- Open EU market and transportation allows to better and cheaper and environmentally soundly utilize many substances like PHB etc.
- Insurance as an effective tool for future

**THANK YOU FOR ATTENTION.
LET' S MAKE WORLD CLEANER!**

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