The continuation use of the landfill near Borisov, Minsk region

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Structure of the talk

- Message box
- Research methodology
- Characteristics of the object
- Examples of EU practices
- Solutions
- Results and Benefits
Problems?
The most dangerous landfill by environmental risks in Belarus

Benefits?
• Dissolution of environmental pollution;
• Using of land for recreation activities;
• A favourable aesthetic impact

So What?
• Operated 45-50 years, old and worn out;
• Not equipped with environmental structures;
• 1st place in Belarus by hazard on the basis of quantitative ecological risk assessment for the landfill;

Issue
The continuation use of the landfill (near Borisov, Minsk region)

Solutions?
• Landfill is would be closed with reclamation
• Creation of forestry object after reclamation

• Emissions from fires at the landfill like a significant threat to the health;
• Adverse aesthetic impact
Research methodology

- A first method that was used in research is a abstracting and brief survey of a research articles, thesis, reviews, conference proceeding, and internet research.

- In the following part of research were used methods such case study, analyze and synthesis.
Characteristics of the object (1)

**Location:**
At 2,3-2,5 km on east from the city
The nearest residential properties are at 400-500 m
The distance to Berezina river is about 3.2 km

**Size:** 22,28 Ha

**Type:** Mound overlapping by quarry

! Takes 1st place for environmental risk among all landfills of Belarus!

**Sources:**
Lysuho, Yarmoshyna, 2011
Belarusian Research Center “Ecology”, 2014
Characteristics of the object (2)

The volume of waste accumulated over 1350 thousand m³

Buried annually more than 160 thousand m³ (87.5 thousand tons) of waste

! About 6-8% of the total volume of wastes are ecologically dangerous!

Emissions from frequent fires on landfill are a serious threat to public health

Source:
Belarusian Research Center “Ecology”, 2014
Characteristics of the object (3)

The area is not suitable for the safe disposal of waste

No impervious screen and other environmental facilities

! Ground water depth is only 0.4 m!

In use for 45-50 years (the average estimated lifespan is 15-20 years)

! The urgent need for a new and closing of old landfills!

Source: www.ecoinfo.by
Solutions (1)

1. The closure of the landfill and carrying it to another site;

2. Remediation and reuse of a degraded and dangerous area;

3. The creation of impervious screen, construction of hydraulic, gas-drainage structures and other environmental facilities;
Solutions (2)

4. The application of technological layers and potentially fertile soils;

5. Restoration of fertility, the renewal of the biota.
Examples of EU practices

Normannenstraße landfill, Emden, Germany

Operated from 1949 until 2005

In 2006 was organized plan for restoration of the site that include three core aspects:

- games area;
- the wetland and the marsh landscape;
- a natural auditorium will provide a focal point for events.

Source: www.sufalnet4.eu
The San Giuliano landfill, Venice, Italy

Operated from 1945 until 1995

In 1988-90 an international tender was launched for remediation and reuse of a degraded, dangerous area and realization of an urban park for the inhabitants.

The San Giuliano urban park was open to the Public on 8th May 2004.

It has become a major recreational park, covering 68 hectares

Source: www.sufalnet4.eu
Giant’s Park landfill, Belfast, UK

The landfill operated from the 1970s until 2007 and covers approximately 130 hectares.

A master plan for the site has been approved, including 80 hectares of parkland (including sporting fields, a festival area, a trail network and a natural habitat precinct) plus a 50 hectare waste/recycling precinct.

The estimated cost of redevelopment is £70 million.

Source: www.sufalnet4.eu
Results and Benefits

1. Creation of forestry object
2. Dissolution of environmental pollution
3. Using of land for recreation activities
4. A favorable aesthetic impact
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Questions?

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