

Alternative Sanitation Eco-solutions implemented in Belarus «Easy to do, Easy to use!»

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Project «Ecotoilets for Belarus»
support
Coalition Clean Baltic

- **Global goal of project:**

Improvement of a condition of water resources of a river basin Neman by decrease in organic pollutions from the households in countryside

The project started
2009, March

Main Ideas:



- **Ecological Solution – Cheap Solution**
- **Easy to do, easy to use**
- **Many situation – One approach**

The main objective of our project was to develop ET-technologies specially adapted for

- social
- economic
- ecological
- mentality conditions of Belarus.

Criteria: The 3 criterias was defined for social, economic, mental conditions of Belarus.

- **Cheaply**
- **Availability and local manufacture of making parts**
- **Gender aspect**

This have been considered by developed of models ET

Eco-solutions: Three models of Eco-toilets was developed and tested

- **Simple ET**
- **Portable ET**
- **Capital ET**



Simple ET

- Rebuilding most popular type of toilet in a belorussian countryside (a toilet with a cesspool) to the ET with division of an urine and excrements.
- The cost of the rebuilding with use of local materials is about 9 euros (without working costs).
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- Allows to exclude pollution of subsoil waters, to improve sanitary-and-hygienic conditions (the comfort, an unpleasant smell). Also simplicity of service and the further recycling of a wastes in own garden.



coast – 9 EUR

Simple ET

Notes:

- We aspired to make this toilet as much as possible cheap. The plastic bottle from water (5 l) has been used as a dividing element . The tank from a old washing machine has been used as tank for excrements.
- The total cost of rebuilding is about 9 EUR, but it is possible will reduce cost to 6 EUR!



coast – 9 EUR

Portable ET (2 models)

- Compact model for usage inside the house
- Absence of a smell without necessity of the device of compulsory ventilation;
- Simplicity of service;
- The weight of full tank comfortable for service by women.



Portable ET (model 1)

- We have developed the variant of the dividing device with elements which can be bought in any belorussian shop of householders goods. This is model for hand-made.
- This portable variant is intended for use in any premises, therefore it was important to make absence of a smell. It is often difficult to make ventilation in a usual room. We have tried to make the water lock that the urine smell did not go away from tank. Attempt it has appeared successful.



coast – 15 EUR

Portable ET (Model 2 - Compact)

- This model has been specially developed for the women living in a countryside and requiring as much as possible simple and comfortable toilet. An overall objective - toilet service should not be heavy. Therefore we used a usual bucket-toilet for gathering of excrements (weight at filling - about 10 kg), the small canister for an urine (weight at filling - 10 kg) and simple element for division of an urine and excrements

coast – 12 EUR



Portable ET (Model 2 - Compact)

- For find easy and simple solution we try many variants of parts (pipes, tanks, separate element and connectors) for this model. Any woman or child can made and use this toilet by own hands. Its very important.



Capital ET

- Separately located building with the big capacity for excrements
- Does not demand frequent service.



Capital ET

- We use maximum cheap garbage and second-hand materials



Second-hand – 50 EUR



Garbage – 0 EUR



Capital ET

- This Toilet **not finished now**, and we have not test results about this model



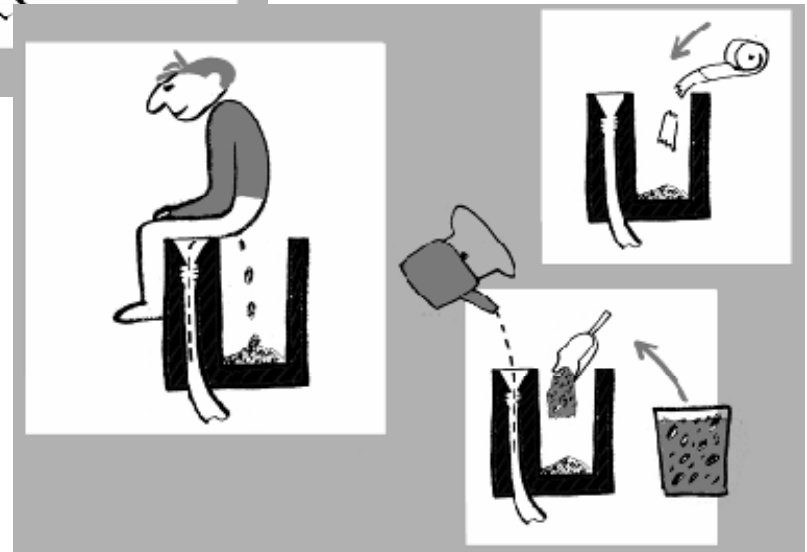
coast of TOILET SYSTEM - about 80 EUR

Instruction for ET

- We create maximum simple picture instruction in black&white colors

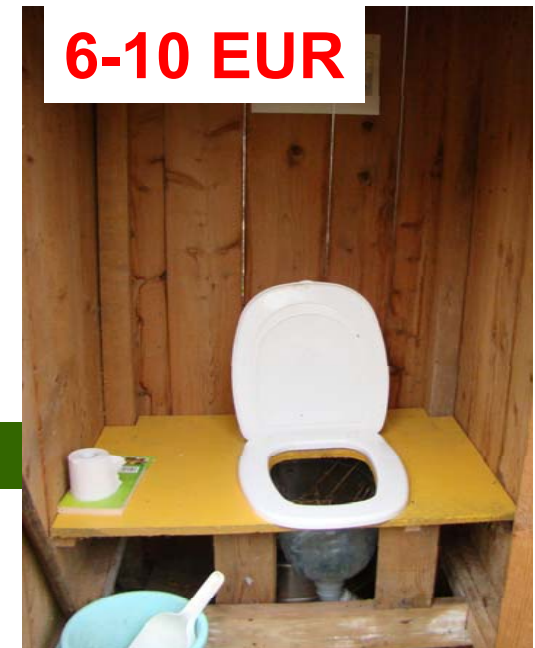


FRAGMENTS OF INSTRUCTION



Results by Criterias: **Cheaply**

- The cost of **rebuilding** toilet with a cesspool to **Simply and New Portable** toilet
6-15 EUR.



Results by Criterias: **Cheaply**

- Cost of **Capital ET** depends from used materials.
- Toilet System 50-200 EUR.
- Toilet house 100-500 EUR



cost of TOILET SYSTEM - about 80 EUR

Results by Criterias: Availability and local manufacture of making parts

- The variant of the dividing device with elements which can be bought in any belorussian shop of householders goods. This is model for hand-made.



Results by Criterias: **Gender aspect**

- The Portable toilet has been developed in 2 variants, one specially for women) does not demand carrying over of heavy tanks at service (to 10 kg)



RESUME

**Ecosolutions can be
easy, cheap and comfortable,
but...**

First problem: Awareness of users and owner

Second problem: Culture stereotypes

*«Problems is not in our toilets –
problems in our minds»*

M.Bulgakow



Thank you for attention!