

# New approach to sewage sludge and plastic selection and recycling in Taurage/Lithuania

**Presenter** 

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#### The sewage sludge in Taurage used not only for producing energy, but as a crop fertilizer





#### The new approach to sewage sludge in Taurage (1)



- At the moment company provides services for two towns Tauragė and Skaudvilė and for 31 villages in the region;
- 95 % of the water provided is in exclusively good quality, because it comes from deep underground wells;
- "Taurages vandenys" is responsible for more than 320 kilometers of water supply and sewage pipes network;
- It provides services for more than 30 thousand citizens.



### The new approach to sewage sludge in Taurage (2)

What do we need to know?

- In "Taurages vandenys" sewage plants around 800 tonnes of sewage sludge accumulates every year and more than 4 tonnes every day. This results that company has to clean about 5000 - 8000 cubic meters of sewage every day.
- If it will not be used as an energy source or fertilizer, such amount of sludge should be taken to local landfils. Luckily the company had found a way to receive benefit from the sludge and recycle it.
- If sewage sludge would be left in open reservoirs it will exhaust methane, which accelerates global temperature rising 20 times more than  $CO_2$ .





Deposit system in Lithuania allowed to minimize littering problem and accelerated recycling



# The new approach to plastic selection in Taurage/Lithuania (1)



- In 2016 the deposit system was launched in Lithuania and it solved dozens of these problems the system could be also called one of the best examples of circular economy;
- In this case, the virgin or primary materials would be saved, so as the CO2 emissions from producing new packages. Europeans would live in cleaner environment.





# The new approach to plastic selection in Taurage/Lithuania (1)

- Citizens return around 90 percent of plastic bottles and aluminum cans that retailers had released into the market, after doing this they receive 10 euro cents deposit.
- During last year, if we would count piece by piece, Lithuanians have returned more than 2 billion plastic bottles, aluminum cans and glass bottles in total. Bottles that can be returned to so-called taromat, has a special "D" sign on them and a code.
- In 2020 citizens of small Lithuanian town Taurage had returned 4,3 million of PET bottles, 3,68 million of aluminum cans, more than 350 thousands glass bottles and 1500 items from steel.
- In the words of "Deposit system administrator" the same can that is returned to taromat, could be standing on a shelve full of drink in just 60 days.



# **Company in Tauragė contributes to cleaner oceans**





### The new approach to recycling in Taurage/Lithuania (2)

- European waste directive states that at first we should avoid making waste as much, as possible. If you are carrying on with the activity that produce some waste – they should be reused. If there's no possibility for that neither – recycled. If the waste cannot be recycled, then at least they can be incinerated to create energy.
- Norwegian company "Nofir" collects various gear from fisherman and fish farms and recycles discarded nets or - if it is not impossible - utilizes them in a proper way. Big division of this company operates in Lithuanian town Taurage





### The new approach to recycling in Taurage/Lithuania (2)

Some nets and also ropes, steel parts, metal chains, plastic tubes (used in fish tanks) can be recyled. Those are not hazardous waste, although few years ago "Nofir" received official permit to treat impregnated parts of the nets, which are covered in copper oxide hazardous material.

What is the process of recycling fishing nets?

- In the Taurage plant discarded nets are weighted, analyzed;
- Illuminating nets with infrared rays;
- Washed with a high pressure water stream and then dried;
- Sorted into the waste that is appropriate for recycling;
- In the sorting process floats, various parts of the net, details of stainless steel or ropes are picked out and given to companies that use them while making their textile products or even clothing.







# Thank you!