

sound treatment can be used as a pretreatment for sewage sludge, but it doesn't disintegrate lignocellulosic material.

The analysis shows that each of the methods of pretreatment has its advantages and disadvantages, therefore optimal and universal method for the all kinds of substrates does not exist, but the pretreatment can significantly increase the biogas yield and should be developed and improved in the future.

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THE DIRECTIONS OF IMPROVING OF INTEGRATION POLICY IN ENVIRONMENTAL MANAGEMENT IN THE REPUBLIC OF BELARUS

Different countries have different approaches in solving environmental problems. In Belarus, the assessment of sustainable development, environmental safety and rational use of natural resources is mainly viewed in five directions: forest resources and their use, conservation of biological diversity of species, including protected areas and biological reserves, energy efficiency, control of industrial emissions, greenhouse effect and the destruction of the ozone layer.

One of the pressing environmental problems in Belarus is rational use of forest resources. As you know, the forest in Belarus carries out a number of vital functions. It not only serves as raw material for the wood processing industries, but plays an important role in the formation of the atmosphere and climate, ensures the preservation of watersheds, soils, and biodiversity of species. In a broad sense, forest is a holistic set of trees and plants, soil, animals, microorganisms and other natural ingredients that compose the internal relations between each other and communicate with the external environment.

In the process of photosynthesis, forests absorb carbon from the atmosphere and convert it into biomass. Conserving this "fuel", forests replace the consumption of carbon with the oxygen and give it back to the atmosphere. Besides photosynthesis, forest ecosystems emit carbon by decomposing organic matter. The source of the decomposition is the vital activity of animals, fungi, bacteria and plants. In the primary forests the production of oxygen and carbon emissions is very balanced. These forests are holders of the conserved carbon in the form of plant biomass, deadwood, litter and soil humus, and this storage by itself can not cause the "greenhouse effect."

Forests are subject to various influences of violation as deforestation and continuous violent use of forests, fires, outbreaks of pests, soil contamination and windfalls. These effects lead to an imbalance, loss of carbon stocks and emissions of carbon dioxide into the atmosphere.

The solution for such problems as afforestation, disorders, burns and felling might be in reforestation and placement of young mixed forests. Such actions will eventually lead to the alignment of the carbon-oxygen exchange through the accumulation of biomass and carbon stock replenishment storage with the release of oxygen into the atmosphere. But if the damaged target areas will be changed into the land of use for the agriculture purposes we will not be able to receive the compensation of losses. It is highly important to preserve the original purpose of the forests and implement reforestation programs on the damaged areas. It is also necessary to find the balance between the increments of forest grounds and agricultural lands.

According to the data of the National Statistical Committee of the Republic of Belarus on the issue of afforestation and reforestation, the cutting of the main use forests has not increased for the last 7 years, but unfortunately we can note, that the area of "new forest" decreased. We also see a very low increase in forest planting in Brest and Grodno regions, which have the same indicators observed for over 5–7 years and can be noted as the territory with the lowest increment of the afforestation. Activities to restore the afforestation in these areas would allow us to increase the level of absorption of carbon dioxide from the atmosphere and extent compensation of the increasing allocation of CO₂ from other sources. These measures would contribute to the fulfillment of certain obligations of the Republic of Belarus to the international community in the framework of the Paris agreement.

In current conditions the main task for the environmental activities in Belarus should be in the sustainable management of forest resources, in careful and conscious attitude to forest wealth excluding its unsustainable exploitation and degradation. By fulfilling the obligations of Paris agreement, Belarus should reach the optimum rate of deforestation, perform forest preservation at an acceptable level (neither too high and unsustainable and neither too low – especially where we see the unbalanced age group mix of trees); integrated environmental approaches into forestry policy, including Eco-certification and carbon sequestration. With this approach to environmental management in the forestry sector eventually we can reach a considerable reduction of the environmental threats that entail climate change and the "greenhouse effect".