

Financial barriers associated with an absence of adequate funding opportunities and financing products for renewable energy.

Infrastructure barriers that mainly center on the flexibility of the energy system, e.g. the power grid, to integrate/absorb renewable energy.

Lack of awareness and skilled personnel relating to insufficient knowledge about the availability and performance of renewables as well as insufficient numbers of skilled workers.

Public acceptance barriers linked to experience with planning regulations and public acceptance of renewable energy.

Environmental barriers are connected with influence of RE on ecology (wind energy – visual, noise, problems for birds and marine mammals (offshore wind parks, hydro energy – land flood, problems for fish migration at al.).

Because the deployment of modern renewable energy is relatively recent in many countries, past initiatives for the development of RE have largely focused on the reduction of economic barriers. Trends of all these barriers overcoming in European Union countries and situation in the Republic of Belarus are discussed in this presentation.

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GREENHOUSE GAS EMISSIONS FROM THE PEATLANDS

The main factor of global changes in the XX century and nowadays is the global warming that proceeds over 100 years. The most common hypothesis about the cause of global warming is the buildup in the atmosphere of gases such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), etc., molecules that entrap a long-wavelength part of radiation from the earth's surface and create a greenhouse effect, that is contributing greatly to self-heating of the atmosphere.

Since the middle of the 18th century, atmospheric concentrations of these gas traces have increased strongly. Until the present, atmospheric carbon dioxide (CO₂) concentration has increased from 280 to 388 ppm, atmospheric methane (CH₄) concentration from 715 to 1800 ppb and nitrous oxide (N₂O) from 270 to 323 ppb. This fast rise in atmospheric concentration caused absorption of heat radiated from the Earth surface and in all likelihood contributed significantly to the 0.6°C increase of mean global temperatures. The increase in atmospheric concentration of GHGs is the main cause of anthropogenic climate change. The contribution of CO₂ to the anthropogenic greenhouse effect is 63%, that of CH₄ 18%, and that of N₂O 6%. The climate effect of the latter two gas species is mainly because of their much higher global warming potential compared to CO₂.

The world community wakes up to the important role of peatlands in the control concentration of greenhouse gases in the atmosphere. Covering only 3% of the

land surface, they store in their peat twice as much carbon as the entire global forest biomass and responsible for overproportionate 6% of global anthropogenic greenhouse gases emissions.

Belarus is one of the more important peatland countries in the world. With a total peatland area of 22,352 km² Belarus ranks 15th among all countries of the world, with respect to peatland proportion (% of the country) it ranks 20th and with respect to actual carbon stock 21st. Much higher is the score of Belarus with respect to peatland emissions; with 41 Mt CO₂ year⁻¹ Belarus is the 8th most important country in the world. In terms of total emissions per unit land area, Belarus occupies the third place third after Indonesia and Estonia with 1.99 t ha⁻¹.

In the anoxic part of the peat soil CH₄ is formed by a group of microorganisms called methanogens, which phylogenetically belong to *Archaea*. If the peat becomes oxygen-rich in deep as a result of drainage, methane oxidation dominance makes peatlands in trace run-off atmospheric methane.

Conventionally, the production of N₂O is linked to the microbial soil processes of nitrification and denitrification. Formation of N₂O is due to the fact that becomes available inorganic nitrogen such as ammonium or nitrate through mineralization peat, fertilizer application or through nitrogen sequestration. With a nitrogen debt undisturbed peat will be N₂O run-off because microorganisms are able to use N₂O as a substrate for the formation of N₂ during denitrification.

Greenhouse gases streams are measuring by the method of chambers.

In general, there are three main modifications chamber method:

- method of open dynamic cameras;
- method of static closed chambers;
- method of dynamic closed chambers.

The chamber is set on up the study area with open lower base. Greenhouse gases streams from soil are measured by the rate of variation concentration of these gases within the chamber.

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PARAZITOFUNA OF HELMINTHS OF UNGULATE INHABITANTS OF GKPU "MINSK ZOO"

Hoofed animals in zoos live in the conditions that strongly differ from natural. One of the serious reasons that negatively influence on the number of hoofed animals in zoos is the group of the diseases caused by parasites. Parazitoza reduces reproductive ability at small valuable animals that causes essential economic losses. Sick animals become a source of infection for healthy animals. Identification of parasites and monitoring them in the conditions of zoos has relevance for implementation of rational methods for prophylaxis and total healing.