Emergency response UNCCD to drought and desertification in Belarus

June 17, Belarus has widely observed the Desertification and Drought Day, a global event which commemorates the entering into force of the UN Convention to Combat Desertification back in 1996.

Why land degradation and drought are important topics for Belarus? The warming and prolonged vegetative period caused by climate change bring new opportunities for agriculture, forestry and local people, but more it demonstrates the vulnerability of the land and the need for urgent actions to preserve land fertility.

Where do you think these photos were taken?

Photo Plytkevič: Arable lands in Gomel Region of Belarus affected by sands storms, April 2020

No, this is not African or Arabian Desert. This is the Republic of Belarus, a country in the center of Europe with a typical Central European climate and 40% forest-covered area. Belarusians gently name their country "blue -eyed " for a large number of lakes, more than 10,000.

The impact of climate change has now reached Belarus which used to be safe and unharmed by desertification and drought. The average temperature in January 2020 was 1.1 degrees Celsius, which is 5.5 degrees Celsius above the climatic norm. This is the warmest January in the history of weather observations in the country.

In the south of the country, Belarusian Polesye, is a unique wetland landscape, a home of many endangered species of birds and animals. Polesyan mires are transit corridor offering a safe and food-rich stop for many migratory birds. The region is also important cultural heritage for local people including language and local traditions. Here in Polesye, the cultural self-identity of local people is closely intertwined with its nature, landscapes, mires and the assets the ecosystems provide for people, like fresh water, timber, berries, and peat for fuel. Now, large part of Polesye is exposed and affected by climate change, suffering from increasing drought and water scarcity.

According to the Institute of Nature Management of Belarusian Academy of Sciences, due to increased pace of climate change agro-climatic zones have been shifting northwards 19 km per year. Under business as usual scenario in 30 years the whole territory of Belarus will be covered by fundamentally new agro-climatic zones. There is still time to adopt to the changing climate and the key measure is to protect and keep the available moisture.

At the midst of planting season in April 2020, Gomel, the southern region of the country had a record low amount of rain - only 7.9 mm, which is 19% of the norm. Last year, precipitation in this area was not much higher - only 12 mm. Spike in forest fires has been

recorded during the last three year with 17 cases of fires in 2017 and 121 fires in 2019. At the same time, about 45% of Gomel region is within radioactive zone contaminated by Chernobyl catastrophe. Combustion of peatland located in the radioactive zone represents a particular threat to public health since it increases the transfer of radionuclide to the healthy land.

Photo Plytkevič: Tractor plowing dry soil before planting potatos, Gomel region, Belarus , April 2020

That is the reason why the Government of Belarus jointly with the UNCCD have chosen Gomel region to run ecological rehabilitation of 2000 hectares of drained peatlands. With correct application of technological measures, in about 10 years the hydrological regime will be restored near two cities Khoyniki and Kalinkovichi, reducing the risk of increasing forest fires.

In the meantime, the residents of the affected area share their concerns: *We thought 2018 was a disaste , but it happened again and even worse. Last year, it was hot and no rain but we needed water to irrigate every day. Where we were supposed to take it from - wells, ponds, river were getting shallow and dry. We don't expect anything good this year neither. There was no snow in the winter, the rivers were without ice, there was no high water during the spring. We have never experienced this before. We though, climate change happens somewhere out there, but its happening right here and brining drought, fires and bad harvest.*

Such weather anomalies have become commonplace and have led to a decrease in soil moisture which affects soil fertility of agricultural land. There is a lot at stake here, for the country as a whole and livelihood of local communities.

For natural ecosystems and particularly wetlands, climate change has irreversible adverse effects. Scientists call Belarusian mires "lungs" of Europe - 12.3 %of the country is covered with peatlands, compared to 3.4% on average in the world.

One of the main functions of mires in Belarus is to regulate and maintain a favorable regional hydrological regime for the sustainable functioning of natural ecological systems and to ensure the preservation of water resources by accumulating fresh water reserves (more than 7 billion cubic meters) in the mires, providing water supply to rivers and lakes.

As a result of climate change, peat mining, drainage of mires and intensive agricultural development of drained land have now created significant areas of disturbed degraded peatlands. Hundreds of thousands hectares of dried peatlands can lead to large-scale and prolonged peat fires, similar to the fires which hit Belarus in 2002 and Russia later in 2010.

Agricultural production is important economic sector in Belarus accounting for 16% of the country's GDP, exports of food products and agricultural raw materials exceed $5 billion (more than 16% of the total exports of the Republic of Belarus). About 22% of the population lives in rural areas and 9% are employed in agriculture, forestry and fisheries.

Disrupted peatlands are also significant sources of carbon dioxide emissions into the atmosphere.

Figure 1 Degraded peatlands Ostrovo (Smorgon Rayon) ***Alexander Kozulin***

Recognizing the threats and the need for urgent measures, Belarus in December 2019 enacted the Law on the Protection and Use of Peatlands.

The enforcement of the Law will support the country's efforts to achieve land degradation neutrality under the UNCCD, the status when no land is lost due to degradation at bottom line. This will include the restoration of at least 10,000 hectares of disturbed peatlands. By restoring peatland ecosystems the country will contribute to the Paris Agreement with a national pledge

of reducing greenhouse gases emissions by at least 35% by 2030, biodiversity conservation and Ramsar

Since 2018, the UNCCD supports the efforts of the Government of Belarus in peatlands rehabilitation through Greening Drylands Partnership, an initiative funded by the Government of South Korea. During the period of 2018-2019, about 1000 ha of degraded peatlands were rewetted in Mogilev region, in the south-east of Belarus. Sustainability of the rehabilitation measures is grounded in the strong partnership built between local authorities, forestry department and local community.

The second phase of the project will continue the application of rewetting techniques, will improve monitoring, forecast and early warning of fires on peatlands and will assess CO2 removal from the rehabilitated sites. The project will contribute to the goal of reducing the impact of climate change on the sustainable development of the economy and protecting the well-being and health of the country's population. To promote progress towards this goal, the aim of the project is to improve the living standards of the local population of the Gomel region by strengthening their capacity for sustainable management and the use of natural resources through the restoration of drained peatlands and other related activities.

Secondary rewetting and re-naturalization of Belarusian peatlands will provide a number of ecosystem benefits. First of all, the level of ground water will be raised and as a result, reducing droughts through freshwater accumulation. By preventing further mineralization of peats the soil carbon will be locked in the rewetted areas and CO2 will be further removed from the atmosphere. Rewetted peatlands can sustain biodiversity richness including economically important biological resources such as cranberries. Another important factor is development of ecological tourism focused on the recreational potential of mires.

Currently, team of Belarus experts jointly with the UNCCD Global Mechanism is developing the gender-responsive transformative project to rewet 33,000 ha of degraded peat- and mirelands achieving multiple benefits at scale.