**CLIMATE CHANGE AND AGRICULTURE IN MONTENEGRO**

Montenegro took over the UN Framework Convention on Climate Change January 2007 and the Kyoto Protocol was ratified in March 2007. According to status of Montenegro under the Convention and Kyoto Protocol, Montenegro did not have the obligation to reduce emissions of greenhouse gases. As a member of the Convention, Montenegro has an obligation to prepares reports on inventory of greenhouse gases. Until now two reports on climate change were done. Reports are very important contribution to the decision making process during the preparation or adoption of policies and measures, not only in the environmental sector, but also in other related sectors, such as energy, transport, industry, tourism, agriculture , water management, forestry and waste management.

Monitoring and evaluation of climate indicate that the climate of Montenegro changed as a result of global climate change. The clearest indicators are: a significant increase in air temperature, increase in sea surface temperature and mean sea level, changes in extreme weather and climate events (frequently extremely high maximum and minimum temperatures; more frequent and longer heat waves; more frequent drought; a higher number of forest fires; often storms during the colder half of the year; reduced number of consecutive days with rain and days with heavy rainfall; increasing intensity of rainfall; decrease in the total annual snowfall (Source: Second National Communication of Montenegro on Climate Change, 2014).

Agriculture is one of the most vulnerable sectors in terms of climate change, because the agricultural production is directly dependent on climatic factors. In the Strategy of development of agriculture and rural areas 2015-2020 stated that Montenegro belongs to one of the regions that will suffer the negative consequences of climate change on population health, economic development, availability of natural resources, food production and so on. At the same time, as a developing country, Montenegro has no significant share in the global pollution of the atmosphere.

Due to the relatively large forest areas and teritory coverage with vegetation, Montenegro contributes to the stabilization of carbon dioxide shere in the atmosphere. The main sources of methane (CH4) are livestock (methane emissions due to enteric fermentation of animals contribute 36% of the total emission of methane into the atmosphere) and organic waste (anaerobic decomposition of organic waste by methanogenic bacteria). The main source of nitrous oxide (N2O) is due to the use of manure and mineral fertilizers in agriculture. For the emission of nitrous oxide, the agricultural sector is responsible for 97% of total emissions.

Climate change could have a negative impact on fertility of the soil. Because of high temperatures there is the risk of extreme drought, and because of the large amount of rainfall there is possibility for erosion of soil. Most climate change will mostly be reflected in the use and availability of water, as it may cause a reduction in the annual amount of water for agriculture, due to decreasing the summer rain.

Sector of agriculture generating a large amount of plant and animal origin waste. The absence of a system for collecting of agricultural waste (with the exception of some individual households), resulting with uncontrolled emission of greenhouse gases. In relation to climate change, and in accordance with EU directives on waste management, Montenegrin Law on Waste Management prescribing obligation of creating the Program for disposal of biodegradable waste which includes agricultural waste. This program identify measures for reducing the amount of biodegradable waste disposed, including the measures of recycling, composting, the production of biogas and materials and/or energy processing, to ensure that the amount of biodegradable municipal waste which is disposed at the landfill reach a level of 35% of the total mass of biodegradable waste produced in 2010.