**Climate change, agriculture and national policy in Kazakhstan**

(Summary)

 In Kazakhstan, in the period from 1894 to 2014 temperature increased in about 2°С. It is higher than the average of global warming. In the last decades of 1971-2014 temperature is rapidly rising – for about 0,43 °С every year. In the last years the on the biggest part of Kazakhstan the number of hot days, the vegetation period, the number of flood in mountain rivers, ice jams, the number of mudflows, as well as cases of water shortage have increased. Heavy rainfalls, snowfalls, storm winds have been observed more frequently. But in the same time, the numbers of floods in the plain rivers have decreased. First of all, it is related to water level reduction in plain rivers. There is an expectation of lack in water resources in the middle of 21 century due to glacier melting in Kazakhstan.

 According to climatological forecast the average temperature can raise in 2,7-4,7 oС by the end of 21 century on the territory of Kazakhstan.

 The most climate-sensitive sector in Kazakhstan is agriculture, which is already feeling the effects of climate change. In the western regions of Kazakhstan have been more frequently observed drought, the desert comes to semi-desert, semi-desert to steppe. Further climate warming may reduce the yields of spring wheat and pastures, and have a negative impact on the productivity of livestock (especially sheep).

 In Kazakhstan responsible authority for UNFCCC (Framework Convention on Climate Change) is Ministry of Energetics represented by the Department of Climate Change, which cooperates with concerned organizations:

* RSE “Kazhydromet”
* RSE “Informational-analytical center of Environmental Protection”
* JSC “Zhasyl Damu”- department of Ministry of Energetic, which participates in projects in the field of implementation of the Kyoto Protocol.
* Foundation "Coordination Centre for Climate Change" and international organizations such as UNDP, GEF, World Bank, Asian Development Bank, GIZ, REC, IFAS, FAO and others.

In the basis of the national strategy in greenhouse gas reduction for the period up to 2030 is the goal of low-carbon development and stabilization of GHG emissions at the level of -15-20%,reduction in greenhouse gas emissions by 2030, relatively to the base year of 1990.

As part of the commitments under the UN Framework Convention on Climate Change and the Kyoto Protocol, as well as the Concept of the transition to a "green economy" Kazakhstan is working on improvement the energy efficiency of manufactures, the introduction of renewable energy sources and reduce greenhouse gas emissions.

However, till current date Kazakhstan haven’t got approved national adaptation Plan, but the project Plan (Concept) on adaptation to climate change has been developed in 2010.

Some adaptation measures are carried out at the industry level, the majority of which are aimed to adapt to the current climate.