**Climate change and agriculture in Uzbekistan**

Uzbekistan has already been facing a number of problems caused by the climate change such as:

- Increase in average temperatures and an increase in the duration of the dry hot period;

- Increased frequency of droughts and extreme water shortage;

- Decrease of snow storage in the mountains and glacier retreat;

- High variability of rainfall and increase in the number of days with heavy precipitation;

- Uneven distribution of precipitation - long drought without precipitation and a single high rainfall at one time;

- Strengthening of desertification processes, and therefore decrease of lands for living and possible economic activity.

Agriculture is a key sector of the economy of Uzbekistan, and the agricultural production mainly depends on irrigated farming.

Climate change is a major challenge to agriculture in Uzbekistan, threatening to food security. The Second National Communication of the Republic of Uzbekistan to the UNFCCC showed that agriculture is one of the most vulnerable sectors to climate change in Uzbekistan.

For Uzbekistan, adaptation to climate change in agriculture is a top priority because of its great importance for the national economy and high vulnerability to climate change. In this regard, increased attention is given to adaptation measures and technologies, which would provide livelihoods to people under the ongoing climate change.

The main measures for climate change adaptation implemented in agriculture are as follow:

- Introduction of IWRM principles through the involvement of all stakeholders and linking it to land management;

- Development of legal and economic mechanisms regulating water and land relations;

- Widespread adoption of water-saving technologies; improvement of irrigation and drainage systems to reduce water losses; introduction of systems for automated control and management of water distribution;

- Improvement of soil fertility;

- Irrigated land reclamation;

- Optimization of cropping pattern, and introduction of less water-demanding, drought- and salt-resistant high-yielding varieties of crops; increasing the production of winter crops; introduction of crop rotation;

- Transition to a flexible planning system, determining the optimum volume of agricultural production;

- Raising awareness and education of careful attitude to water and land.