

WHY Media Award Story 5th winner

Climate change and food supply by Lyudmila Stayshyunayte, Uzbekistan

Have you ever wondered what our children and grandchildren will eat in 50 years? Will we have enough water to grow life's essential crops?

Erkin Karabaev, a farmer from Yangiyul in Uzbekistan, had to sow his main crop of cotton three times this year. The spring brought rain, but cotton requires four hot, dry months. The climate has noticeably changed in Uzbekistan over recent years. Some crops do not manage to ripen and others dry out. This year the seasons have shifted by 15-20 days.

Tatiana Spektorman, head of the Transboundary Monitoring Department at the Centre of Hydrometeorological Service of Uzbekistan (Uzhydromet) notes that: "All 78 meteorological stations functioning in the republic's territory register a tendency to warming. On average the climate has warmed by two degrees over the last 60 years in Uzbekistan and we expect increased frequency of both very wet and extremely dry periods. Such precipitation changeability will intensify droughts and aggravate droughts, soil salinity and degradation of soil quality." According to official sources, these changes may result in agricultural production reductions of 10-15% and will threaten the country's food security, especially for the low-income populations in rural areas where family budgets are directly connected with the production of food.

Adaptation The hydro-economic policy of Uzbekistan is aimed at rational water use, effective and reliable water management, provision of guaranteed water supply to the population, the introduction of drip irrigation technology that allows reduction of water consumption for irrigation, night irrigation, carrying out forestation of fields and broadly popularizing water saving. Additionally, steps are being taken to adapt the country's agriculture to changing climate conditions, with increased areas for cultivation of wheat, rice, vegetables and cucurbitaceous crops and reduced dependence on cotton.

Human health In Uzbekistan, climate change is mostly affecting human health through heat waves, natural disasters, contaminated and polluted air, and lack and contamination of water. These factors cause risks of diarrhoeal, respiratory, kidney and circulatory diseases and can lead to a lack of micro and macro nutritional elements, especially in children and women. Work is being carried out on improvement of relevant legislation for the healthcare system, introduction of appropriate technologies, and strengthening of health system capacities, including the development of warning and prevention systems, taking into consideration other countries' experiences and WHO recommendations. Specific work by various national and international organizations includes projects to introduce sustainable water purification technologies, general water supply improvement, provision of quality drinking water to the whole population and enhancing sanitation. Huge rehabilitation work is also being implemented in the Aral Sea region - an immense area of natural catastrophe - with participation of international donors.

Mitigation Recognizing the urgency of the climate change problem and the necessity of taking urgent measures in mitigation of its consequences and adaptation of the national economy, Uzbekistan joined the United Nations Framework Convention on Climate Change in 1993 and ratified the Kyoto Protocol in 1999, as well as joining a number of other conventions, agreements and protocols. About 30 laws and 350 regulatory instruments have been adopted over the last 18 years that regulate environment protection issues.

Full Story Follows

‘Climate change and food supply’ by Lyudmila Stayshyunayte of Uzbekistan.

Have you ever thought of what our children and grandchildren will eat in 50 years? Will we have enough water to grow life’s essential crops?

Erkin Karabaev, a farmer from Yangiyul, Uzbekistan had to sow his main crop of cotton three times this year. The spring brought rain, but cotton requires 4 hot, dry months. The climate has noticeably changed in Uzbekistan over recent years. Some crops do not manage to ripen and the others dry out. This year the seasons have moved by 15-20 days.

The emerging situation is commented upon by Tatiana Spektorman, head of the transboundary monitoring department of the Atmosphere, Surface Water and Soil Pollution Monitoring Service at the Centre of Hydrometeorological Service of Uzbekistan (Uzhydromet):

“All 78 meteorological stations functioning on the republic’s territory register a tendency for warming. On average the climate has warmed 2 degrees over the last 60 years in Uzbekistan. The precipitation changeability has intensified, its daily maximum has increased as well. Natural calamities such as mud flows and floods are expected to happen more often. However, we expect the growing frequency in both very wet and extremely dry periods. In fact, the Republic of Uzbekistan experiences water shortages so the precipitation changeability causes drought intensification which aggravates water deficiency, soil salinity and degradation to a larger extent”.

According to the Second National Communication of the Republic of Uzbekistan under the UN Framework Convention on Climate Change the decrease of water resources and soil fertility caused by climate change as well as complicated demographic situation may lead agricultural production deficiency by 10-15% and will threaten the country’s food security. This may cause nutrition disorder problems especially for the low-income population in rural areas where family budgets are directly connected with the production of food.

Taking into account existing water problems and climate change forecasts the hydroeconomic policy of Uzbekistan is aimed at rational water use, effective and reliable water management, provision of guaranteed water supply to the population and many other important aspects.

According to Sharifjon Kuchkarov, head of department for water resources balance and water economizing technologies development at the Ministry of Agriculture and Water Economy of the Republic of Uzbekistan they managed to reduce the annual water consumption for irrigation of 1 hectare of cultivated lands from 13.6 thousand cubic meters a year to 10-11 cubic meters over the last 15-20 years.

The ministry is actively working on the introduction of drip irrigation technology in some regions of the republic that allows reduction of water consumption for irrigation. They encourage supervision of night irrigation, carry out forestation of fields and broadly popularize water saving. However, there is still much to do in this sphere due to lack of financing.

There are some steps taken by the government in adaptation of the country's agriculture to changing climate conditions as well. In particular, they are taking measures on the increase of areas for cultivation of wheat, rice, vegetables and cucurbitaceous crops and reducing cotton fields. These steps bring some positive results. Plus they select new kinds of cotton growths and grain crops adopted to climate changes and resistant to diseases and pests. Again, there is much to do on adapting agriculture in the republic since weather conditions are extremely changeable. There is lack of financing and the technological base requires upgrading.

As regards the correlation between health and climate change in Uzbekistan the latter is mostly affecting human health through heat waves, natural disasters, contaminated and polluted air, lack and contamination of water. These factors cause risks of acute enteric infections and diarrheal diseases, respiratory diseases, kidney, cardiovascular and circulatory diseases, a lack of micro and macro elements .Especially in children and women.

A scaled work in this relation is carried out on improvement of legislative base in healthcare system, development of warning and prevention system taking into consideration other countries' experience and WHO recommendations. Numerous national and international organizations work on introduction of water purification technologies, water supply improvement, provision of population with quality potable water and observance of sanitary norms.

Anatoliy Khudayberganov, the main specialist in nutrition hygiene of the Ministry of Health of the Republic of Uzbekistan, National WHO coordinator on nutrition problems, Doctor of Medicine, Professor explained about many projects and measures. These include the reduction of usage of salt in the country, and in the Republic of Karakalpakstan in particular. Besides, he highlighted the activities within implementation of the WHO 2nd European Action Plan on healthy nutrition and food security in Uzbekistan.

Recognizing the urgency of the climate change problem and the necessity of taking urgent measures to mitigation of its consequences and adaptation of the national economy Uzbekistan joined the United Nations Framework Convention on Climate Change in 1993 and ratified the Kyoto Protocol in 1999 as well as joined a number of other conventions, agreements and protocols. About 30 laws and 350 regulatory legal acts have been adopted over the last 18 years that regulate environment protection issues. Tens of bodies, organizations and projects aiming at environment protection were established, hundreds of Internet portals opened. 15 places in the Legislative

Chamber of the Oliy Majlis of the Republic of Uzbekistan were given to deputies elected by the Ecological Movement of Uzbekistan. Uzbekistan is the first republic of the region that established its national body on introduction of the Clean Development Mechanism in the republic.

At the result of environment protection activity in the country the hazardous substance emission into atmosphere reduced by 2.1, contaminated sewage escape also reduced over the last 20 years. National strategy reduction of greenhouse gases' emission is being carried out. Huge rehabilitation work is implemented in the Aral Sea region - the immense area of natural catastrophe with participation of international donors.