

IMPACT OF CLIMATE CHANGE ON WATER RESOURCES MANAGEMENT IN UZBEKISTAN

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Abstract: This article discusses the impact of climate change on water management in Uzbekistan and the basics of water management and planning with the participation of stakeholders. The information is also intended for researchers, science teachers and a wide range of professionals interested in water management and efficient use in Uzbekistan.

Keywords: water resources, climate change, temperature, management, guidance, need, precipitation, snowfall, strata, water flow.

Water resources management must ensure that the needs of society and nature for water of the required quality and quantity are met on a regular basis in all areas of space and time - on an operational, annual, multi-year and long-term scale. In other words, water management is about maintaining a balance between water resources and the needs for them.

Global warming is affecting all aspects of water resources management in Uzbekistan, from urban and agricultural water supply to flood management and aquatic ecosystem protection. Rising temperatures,

loss of snow cover, increasing and frequency of flood events, and rising sea levels are the main effects of climate change, which has a broad impact on water resources management. Reducing emissions from climate change is an important step we need to take, but water resources managers and elected officials must now act to adapt to the effects of global warming that have already occurred or are imminent.

To fully understand the concept of water resources management, it is necessary to pay attention to its broad and narrow content. Water management - in the broadest sense - is the full range of political, legal, socio-economic, technological and other functions for the use and protection of water resources. In the political, social, economic and legal spheres of water management, activities are carried out with the participation of all participants of the water complex, ie water consumers and water users, which lead to fair, efficient and environmentally friendly results.

Climate change can affect many areas where water resources managers play an active role. The key is to change the observed temperature and precipitation regimes, increasing the global sea level and its associated effects.

The increase in temperature is expected to vary depending on the amount of precipitation and low snowfall. Such a shift in precipitation affects the origin and timing of runoff, which results in less runoff from spring snowmelt and more runoff from winter rainfall, especially from high or mountainous areas. These shifts have already been noted in some parts of Uzbekistan.

Precipitation changes are expected to vary across Uzbekistan, with some areas receiving more and others less. There may also be changes in the seasonal pattern and extreme levels of precipitation. Depending on the location, these possible changes are a cause for concern as droughts and

floods, which have been identified experimentally, will occur more frequently and will be more severe in future climatic conditions.

Sea levels change over time, mainly in response to global climate change. In the twentieth century, the world average sea level rose to an average of 1.7 ± 0.5 mm / year, a figure that was slightly higher between 1961 and 2003. Recent climate studies have noted global warming during the twenty-seventh century and predicted that global warming will continue or accelerate in the twenty-first century and possibly beyond. Changes in sea levels affect the coastal and estuarine regions, the erosion of sandy beaches increases, and saline water seeps into the coastal and estuarine layers. All or all of these changes can occur gradually or suddenly. The temporary onset of such changes is important for future action.

Many water supply sources are already isolated, water quality has deteriorated and is often insufficient to support endangered species. Climate change is exacerbating water problems, leading to water shortages for people and the environment, and making it increasingly difficult to meet the needs of both. Currently, implementing measures to improve water quality and supply, protect aquatic ecosystems, and improve flood management not only makes sense, but early action will help reduce the future impacts associated with climate change. Today, even if greenhouse gas emissions are reduced, there is already overheating in the “pipeline” that will cause additional effects. Adaptation is not a solution to climate change, but given the importance of our water resources, urgent action is needed to prevent social impacts.

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