

THE REGIONAL STRATEGY FOR DROUGHT RISK MANAGEMENT AND MITIGATION IN CENTRAL ASIA FOR 2021-2030

POLICY BRIEF

PRIORITY AREAS:

- **Area 1:** Building the Monitoring, Risk Assessment and Drought Prevention Capacities.
- **Area 2:** Drought Mitigation, Development of Plans to Address Water Scarcity and Data Dissemination.
- **Area 3:** Capacity Building and Awareness Raising.
- **Area 4:** Regional Integration.

OVERALL GOAL

The Regional Strategy for Drought Risk Management and Mitigation in Central Asia will identify regional vulnerabilities and illuminate opportunities for drought risk management and mitigation in line with national plans for land and water resources management. The Strategy will promote regional cooperation and foster an understanding of the importance of joint actions to tackle droughts in Central Asia.

In the long-term, the Strategy will reduce the social vulnerability of countries and communities to drought. The Strategy will assist Central Asian countries in developing a proactive approach in dealing with droughts and water scarcity. Taking into account the climate and the political landscape of Central Asian countries, the strategy aims to achieve a number of other important goals, such as:

- strengthening joint actions to deal with problems related to climate change and the use of land and water resources;
- contributing to the achievement of long-term goals of social, economic, technical and institutional development;
- addressing challenges associated with climate change and, in particular, with the effects of desertification, land degradation and drought (DLDD);
- contributing to the achievement of Sustainable Development Goals (SDGs) and the priorities of the Regional Environmental Programme for Sustainable Development in Central Asia (REPSD4-CA).

HOW SERIOUS ARE DROUGHTS IN CENTRAL ASIA?

According to the World Meteorological Organization (WMO), droughts are defined as prolonged periods when precipitation is scarce or absent. The shortage of water

inhibits the day-to-day life and economic activity in areas affected by drought. Although droughts are a natural phenomenon, unsustainable use of natural resources and anthropogenic pressure on ecosystems increase their scale and exacerbate their consequences. Drought is a major factor affecting water, energy and food security in developing countries.

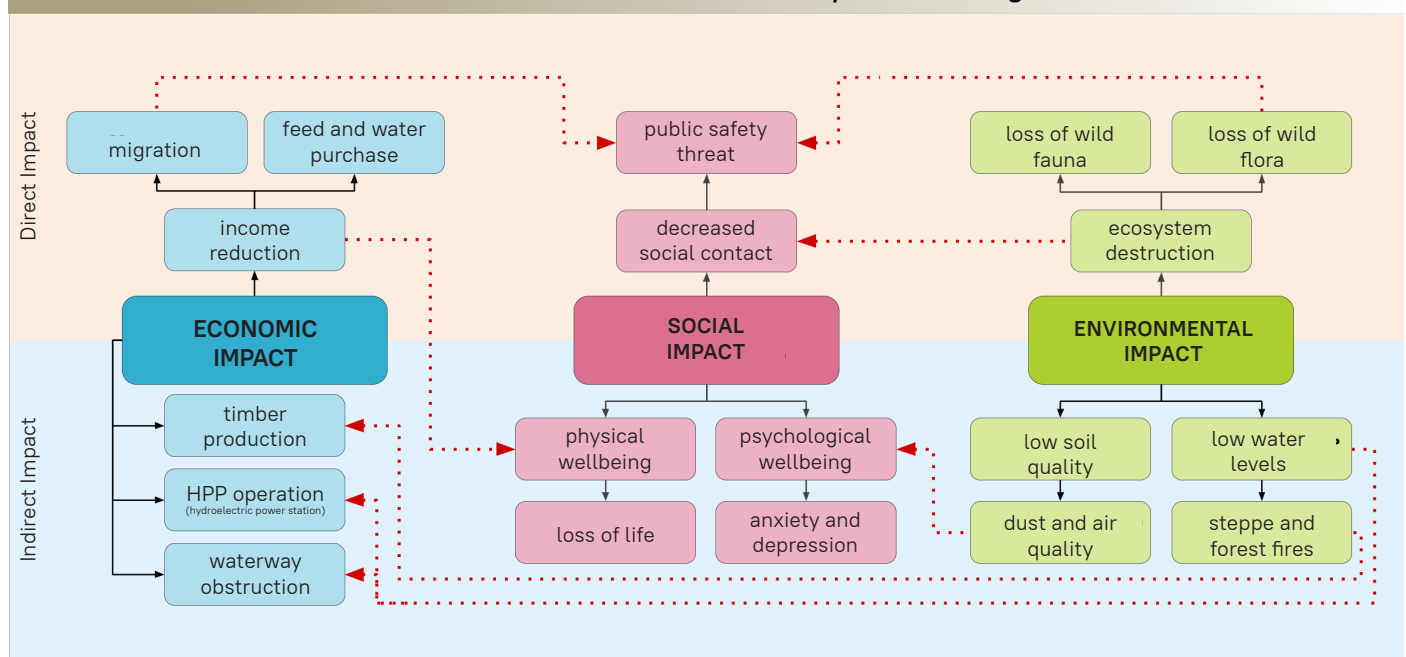
As a landlocked region with a continental climate highly dependent on agriculture and hydropower, Central Asia is particularly vulnerable to droughts. Climate change, drying up of the Aral Sea, population growth, land degradation, misuse of natural resources

and insufficient environmental protection all heighten the risk and severity of droughts.

Droughts are closely linked to climate change, which is highly likely to affect Central Asia by changing the amount of precipitation and the temperature background of the region. This, in turn, will reduce the volume of glaciers and snow, crucial for forming river runoffs, and exacerbate the processes of desertification, land degradation and drought (DLDD).

The only way to slow down DLDD and achieve Land Degradation Neutrality (LDN) is to strengthen regional cooperation, which is an integral part of this Strategy.

Picture 1: Direct and Indirect Impact of Droughts



WHAT ARE THE DETRIMENTAL EFFECTS OF DROUGHTS?

According to UNCCD estimates, 40% of the world's population suffer from fresh water shortages. Central Asia's arid climate, regional population growth and the impact of climate change place water supply at the centre of water and food security. In terms of energy, Central Asia is also dependent on shared water resources, which form the basis of hydropower supply in some countries of the region. This makes the risk of droughts particularly acute for the development of the region and its security.

Central Asian economies are still largely based on agriculture, which accounts for 10-38% of GDP and provides 18-65% of employment in the countries of the region. 58% of the region's population lives in rural areas. This makes Central Asia particularly vulnerable to droughts, which can reduce

agricultural production, increase food prices and unemployment, inhibit access to markets and lower farmers' income. Reinforced by climate change, droughts can potentially have a catastrophic influence on food security by decreasing crop yields.

Droughts have a large-scale negative impact on different sectors of the economy and wide sections of the population. According to estimates of the World Bank, the 2000-2001 drought in Central Asia affected about five million people. In some parts of the region, rural population was on the verge of starvation. Some families lost up to 90% of their income, whereas total damage to Central Asia was evaluated at \$800 million.

Droughts are particularly damaging for the already vulnerable categories of people, such

as women, elderly citizens, migrants, the long-term unemployed population, disabled persons, historically marginalised communities and the residents of rural and geographically isolated

areas. The increased risk of droughts, land degradation and water shortages force rural populations to migrate to cities and contribute to social and infrastructure problems.

WHY IS THE REGIONAL DROUGHT STRATEGY NEEDED

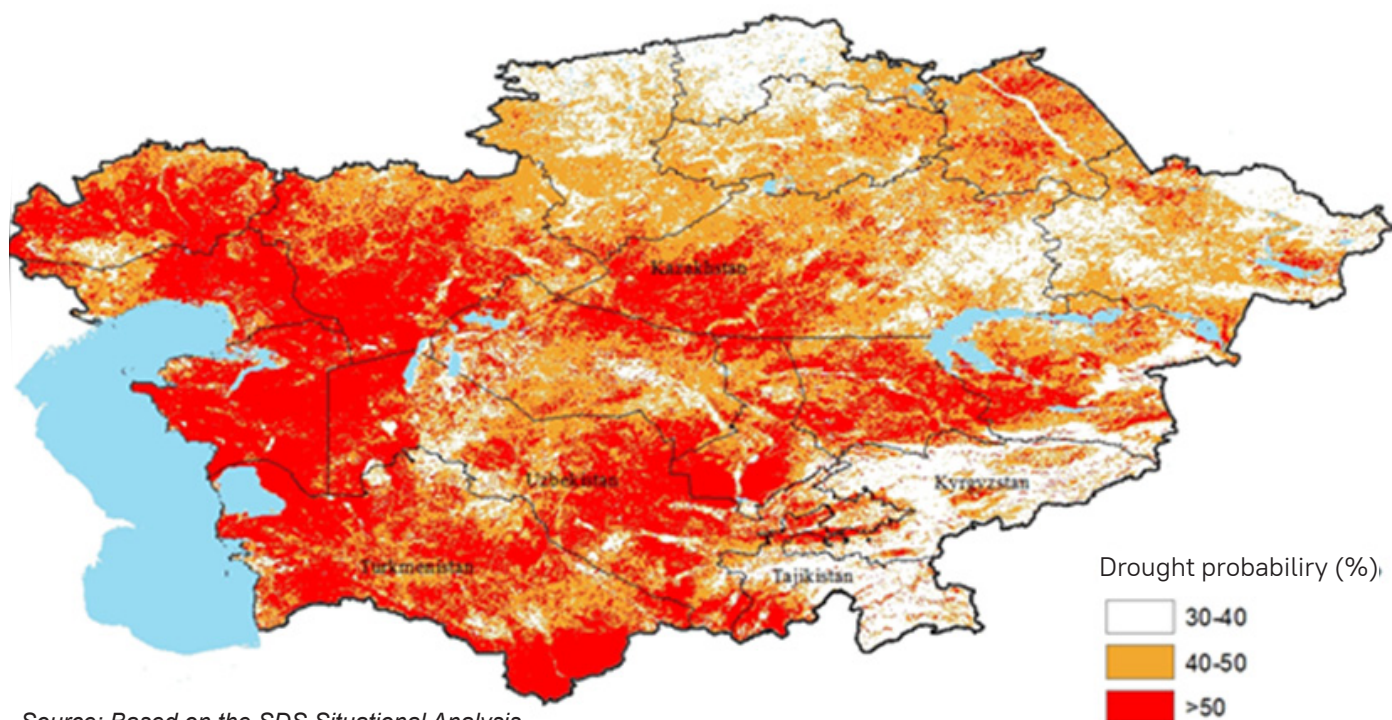
The need for regional cooperation in managing and mitigating the risk of droughts is based on the assessment of Central Asia's vulnerabilities and risks concerning water, energy and food security. Droughts have an adverse effect on the main sectors of the region's economy and its population in. Regional cooperation is all the more necessary considering the transboundary nature of Central Asia's water resources and the necessity of improving their management.

According to the Food and Agriculture Organization, droughts are a major cause of severe food shortages that causes malnutrition and hunger, especially among the vulnerable populations. Droughts negatively affect all aspects of food security, including food availability, consumption stability of supplies,

and ease of access. The negative impact of droughts on water and food supply and food price fluctuation creates cascading effects on social stability and security in the whole region. The increasing intensity and frequency of droughts and their adverse impact on agriculture and natural resources, which are one of the main assets in rural areas, will increase human mobility within the region. These concerns should be effectively addressed at the regional level.

As of today, there are no existing regional strategies or agreements on drought management or climate change mitigation and adaptation in Central Asia. Delaying coordinated drought preparedness programmes and measures further will increase the adverse impact of droughts on the region.

Picture 2. Drought probability in Central Asia



Source: Based on the SDS Situational Analysis

EXISTING ENVIRONMENTAL AGREEMENTS AND STRATEGIES RELEVANT TO DROUGHT MANAGEMENT

The countries of the region are committed to sustainable development. In the past decades, the countries of Central Asia have adopted fundamental legal acts, national strategies and programs that constitute the legal basis for

sustainable development and environmental protection. The countries have signed more than 29 international environmental conventions and more than 20 agreements, which laid the foundations for the mechanism of regional

cooperation. Some of the major documents adopted include:

- The United Nations Convention to Combat Desertification;
- The United Nations Framework Convention on Climate Change;
- The Sendai Framework for Disaster Risk Reduction 2015–2030
- The Convention on Biological Diversity.

Countries of Central Asia have been adapting integrated approaches to sustainable land management (SLM) and efficient use of land and water resources. All five countries of the region support the Land Degradation Neutrality Target Setting Programme implemented by the United Nations Convention to Combat Desertification (UNCCD).

One of the latest documents of regional significance is the Regional Environmental Programme for Sustainable Development in

Central Asia (REP4SD-CA) 2021–2030. This document is the basis for regional cooperation in sustainable development. The integration of the Regional Strategy for Drought Risk Management and Mitigation in Central Asia into REP4SD-CA will contribute to the improvement of the socio-economic and environmental situation in the region and help Central Asia achieve SDGs.

The countries of Central Asia have the necessary legislative basis to effectively tackle droughts and climate-change related challenges. However, proactive actions as well as regional initiatives, guidelines and standards are required in the field of climate change adaptation and disaster risk reduction. More specifically, there is a pressing need for the development of a regional climate change adaptation strategy and disaster risk reduction strategy.

Table 1. Drought probability in countries of Central Asia

Country	Drought Probability					
	30-40%		40-50%		50% or more	
	%	mln. ha	%	mln. ha	%	mln. ha
Kazakhstan	21.3	57.7	28.5	79.2	26.2	70.9
Kyrgyzstan	24.7	4.9	13.2	2.6	4.5	0.9
Tajikistan	19.3	2.7	12.1	1.8	15.5	2.2
Turkmenistan	10.1	4.8	22.8	10.6	55.1	26.5
Uzbekistan	19.8	8.9	29.5	13.2	40.1	18
Total		79		107.4		118.5

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Based on the situation analysis, the following directions are proposed to help reduce the risks and consequences of drought and water shortage periods in the context of the region, and serve as a basis for working out the tasks reflected in the REP4SD-CA in the context of droughts and in the UNCCD supported activities.

Area 1: Building Capacity for Monitoring, Risk Assessment and Drought Prevention: As monitoring and forecasting of hydroclimatic and meteorological phenomena is the domain of hydrometeorological services in the region, it is necessary to upgrade the material and technical capabilities of national hydrometeorological services in each country and implement innovative solutions for drought monitoring and forecasting. In its initial stage, this could be based on publicly available databases, and involve calibration and testing in pilot areas, but should be supported by national and regional hydroclimatic and meteorological data. Development of a drought monitoring and early warning system for Central Asia, will improve decision-making in the planning and risk management with regards to drought impacts on food and water security in the region.

Area 2: Drought Mitigation, Development of Plans to Address Water Scarcity and Data Dissemination: Due to variability in precipitation patterns and dynamics, as well as reduced flows of glacial melt-

water, climate change and increasingly extreme weather events are expected to have an adverse impact on the capability of the existing drinking water infrastructure to provide a stable water supply.

Area 3: Capacity Building and Awareness Raising: It is important to raise awareness of the rural population (including women) on climate change adaptation and efficient farming practices. It is important to increase their involvement and participation in decision-making processes for area development, as they play an important role in passing on the knowledge gained to their children. In the long run, this may lead to behavioral changes both in specific rural communities and in the whole region.

Area 4: Regional Cooperation: Given the transboundary nature of drought impacts, cooperation between the countries of the region is critical not only to reduce the pressure on the environment and minimize factors affecting security and stability of the region, but also to carry out proactive joint actions on climate change adaptation and management of adverse natural phenomena associated with climate change.

Measures taken by the Central Asian countries' governments at the regional level to introduce the principles of rational and sustainable use of natural resources, restore degraded lands, combat desertification and preserve biological diversity must be enhanced. Implementation of such measures may involve integration of priority projects of the 4th Aral Sea Basin Program (ASBP-4) and REP4SD-CA objectives, with a special emphasis on mitigating the drought impact on Central Asian economies, into projects and initiatives of international development partners. Special consideration should be given to monitoring, forecasting and countering droughts, dry winds and water shortage periods.



Disclaimer:

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United Nations
Convention to Combat
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