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Green Central Asia

Enhancing environment, climate and water resilience

REGIONAL ACTION PLAN

FOR A JOINT POLITICAL DIALOGUE ON CLIMATE, ENVIRONMENT AND SECURITY

PRESENTED BY: DEUTSCHE GESELLSCHAFT FÜR INTERNATIONALE ZUSAMMENARBEIT (GIZ) GMBH

TO: GREEN CENTRAL ASIA WORKING GROUP CONSISTING OF REPRESENTATIVES OF THE ISLAMIC REPUBLIC OF AFGHANISTAN, THE REPUBLIC OF KAZAKHSTAN, THE KYRGYZ REPUBLIC, THE REPUBLIC OF TAJIKISTAN, TURKMENISTAN AND THE REPUBLIC OF UZBEKISTAN

REGIONAL ACTION PLAN

CONTEXT

With the **Green Central Asia Initiative**, the Federal Foreign Office invited its long-standing partner countries in Central Asia to engage in a political dialogue process on climate, environment and security. This Initiative bolsters the German foreign policy topic 'climate and security' within the framework of the United Nations and supports the implementation of SDG 6 (clean water and sanitation), SDG 13 (climate action) and SDG 15 (life on land). The Initiative also contributes to the efforts enshrined in the new EU Strategy on Central Asia of June 2019 which provides a new policy framework for EU engagement with the countries of Central Asia and focuses on promoting resilience, prosperity and regional cooperation.

The effects of **climate change** in the Central Asian countries Afghanistan, Kazakhstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan are already being felt and will only increase.

According to the North Eurasia Climate Centre, projections with global models provide a physically consistent quantitative picture of climate change through the 21st century. The projected changes in the Central Asian states in many cases continue the tendencies already observed, while increases in their rates as well as inter-scenario differences are accelerating by the end of the 21st century. Relative to the baseline climate (1980-1999), projected average warming for the region by 2011-2030 is 1.0-1.2°C.

This warming is accompanied by decreases in annual number of frost days, while an increase in the duration of extreme summer temperatures is projected. The most severe heatwaves in the Commonwealth of Independent States (CIS) are expected to occur in West Siberia and Central Asia. In Central Asia, winter precipitation will increase whereas summer precipitation will significantly decrease, thus fostering drought risk. Runoff is projected to decrease in Central Asian watersheds due to precipitation decrease and evaporation increase in the warm season, glacier degradation and a reduction in seasonal snow accumulation in the mountains.¹

Water management is globally among the main sectors challenged by climate change. The SDG report for 2020 states that countries continued to face growing challenges linked to water scarcity, water pollution, degraded water-related ecosystems and cooperation over transboundary water basins. So far, funding gaps and weak government systems have held many countries back from making needed advancements and, the report continues, if efforts are not substantially increased, SDG 6 targets will not be met by 2030.

Cooperation over transboundary waters has to accelerate. More than 60% of global freshwater flow comes from transboundary basins. Transboundary cooperation is a prerequisite for ecologically sound management of freshwater resources and for peaceful regional integration. Out of 153 countries sharing transboundary waters, only 17 countries reported that all their transboundary basins were covered by water sharing arrangements (2017/18). A major effort is needed to ensure that cooperation is operational in all transboundary basins.

High water stress – the withdrawal of too much fresh water from natural sources compared with the fresh water available – can have devastating consequences for the environment and can hinder or reverse sustainable development. If unmitigated, water stress can lead to water scarcity which could displace an

¹ Vladimir Kattsov with Veronika Govorkova, Valentin Meleshko, Tatyana Pavlova, Igor Shkolnik, Climate change projections and impacts in Russian Federation and Central Asia states: <http://neacc.meteoinfo.ru/research/91-change-climat21-eng>

estimated 700 million people by 2030. Central Asia registers a water stress level of 87.9% and is therefore, after Northern Africa with 102.9%, the second most water-stressed region in the world.

Integrated water resources management is a global framework covering policies, institutions, management instruments and financing for the comprehensive and collaborative management of water resources. Of the 172 countries that reported in 2018, 60% stated very low, low or medium-low levels of implementation. In the entire region of Central Asia, the implementation of integrated water resources management is particularly slow.²

Land degradation is a pressing concern that reaches across Central Asia and is increasingly affecting the economy and quality of life in each country. Of the nearly 400 million hectares in the region, two-thirds are drylands with extreme biophysical constraints of arid and continental climates, vulnerable to even the slightest pressures beyond their capacity and affecting local populations significantly. Each country faces unique challenges related to their landscape and agricultural demands, but across the board there are widespread losses of fertile topsoil and nutrients necessary for growth, declining productivity of crops and pastures, losses of biodiversity and habitats, increasing salinisation and deforestation, and increasing weed infestation in rangelands. Estimates are imprecise due to a lack of research to date, but degradation is observed to be extensive, ranging from 4-10% of cropped land, 27-68% of pasture land and 1-8% of forested land, in total representing 40-100% of land in each country.³ In addition, irrigated cropland in the Aral Sea Basin is highly salinised and waterlogging occurs; hence land degradation is estimated to exceed 50%.⁴

The world's reliance on **natural resources** has continued to accelerate over the last two decades. The global material footprint grew from 73.2 billion metric tons in 2010 to 85.9 billion metric tons in 2017, an increase of 17.4%.⁵ Urgent action is needed to lower our reliance on raw materials and increase recycling and circular economy approaches to reduce environmental pressure and impact.

The management of different types of waste and the maintenance of sanitation, along with the supply of drinking water and energy, public transport and communications, are the most important services for modern society. The need to live in a healthy environment is almost as great as the need for food and shelter. Therefore, proper **waste management** helps protect both public health and the environment. This does not mean that all attention should focus on waste collection and disposal because the best way to manage waste is to treat it as a resource and minimise the amount produced in the first place.

International law in its broadest sense provides normative guidelines as well as methods, mechanisms and a common conceptual language to international actors. As environmental problems pay no heed to political boundaries, numerous governments need to cooperate if they are to be adequately addressed.

The Central Asian countries are signatories to some of the main international environment instruments governing inter alia climate change, biodiversity, desertification and hazardous waste.⁶

² <https://unstats.un.org/sdgs/report/2020/The-Sustainable-Development-Goals-Report-2020.pdf>

³ The economics of land degradation - Central Asia Regional Report: Broadening land management options for improved economic sustainability across Central Asia: A synthesis of national studies, 2016 at: https://www.eld-initiative.org/fileadmin/pdf/ELD_CA_regional_report.pdf

⁴ Qadir, M., Noble, A. D., Qureshi, A. S., Gupta, R. K., Yuldashev, T., & Karimov, A. (2009). Salt induced land and water degradation in the Aral Sea basin: A challenge to sustainable agriculture in Central Asia. *Natural Resources Forum*, 33(2), 134–149. <https://doi.org/10.1111/j.1477-8947.2009.01217.x>

⁵ <https://unstats.un.org/sdgs/report/2020/The-Sustainable-Development-Goals-Report-2020.pdf>

⁶ Convention on Biological Diversity (1992), the Cartagena Protocol on Biosafety to the Convention on Biological Diversity (2000), the United Nations Framework Convention on Climate Change (1992), the Paris Agreement on

International environment treaties and agreements are likely to grow in importance as international environmental problems become more acute; therefore, it is important to help the Central Asian region organise itself and find increasingly common standards and methodologies, so it can represent itself in an international context.

CALL TO ACTION

This Action Plan is drafted in line with the Berlin Declaration of Intent of 28 January 2020 signed by the Foreign Ministers of the Islamic Republic of Afghanistan, the Republic of Kazakhstan, the Kyrgyz Republic, the Republic of Tajikistan, Turkmenistan, the Republic of Uzbekistan and the Federal Republic of Germany. The Action Plan forms the basis of a regional political dialogue which is based on scientific data and supported by policy advice and capacity building on topics selected together. It is to be seen as a roadmap to guide the political dialogue and can – upon mutual agreement – be changed during the course of action. An initial list of topics included environmental protection, mitigation of negative impacts of the Aral Sea crisis, water, renewable energy and energy efficiency, glacier protection, biodiversity, afforestation, combating desertification, land management and sustainable agriculture.

Based on the priority topics provided by the six partner countries, the following cluster themes were defined: water management, regional strategies/assessment/modelling, disaster risk reduction, land management: eco-system-based approach/biodiversity/desertification, forestry, agriculture, greenhouse gas emissions/air pollution, cooperation on international instruments, green economy/technology transfer, waste management, eco-tourism, public awareness.

After further bilateral and multilateral discussions and meetings of the designated working group, all Central Asian stakeholders decided to select four major cluster themes for the Green Central Asia political dialogue platform. These themes derived from a long list of topics compiled by the GIZ project team in cooperation with the Federal Foreign Office from May to December 2020. In addition, consultations were held with international and regional partner organisations, such as EU, UNECE, IUCN, WB, SDC, UNDP, CAREC, USAID, NABU, EC IFAS, ICSD, etc.

To work on the cluster themes, including specific priorities, three main pillars of the overall Initiative were defined:

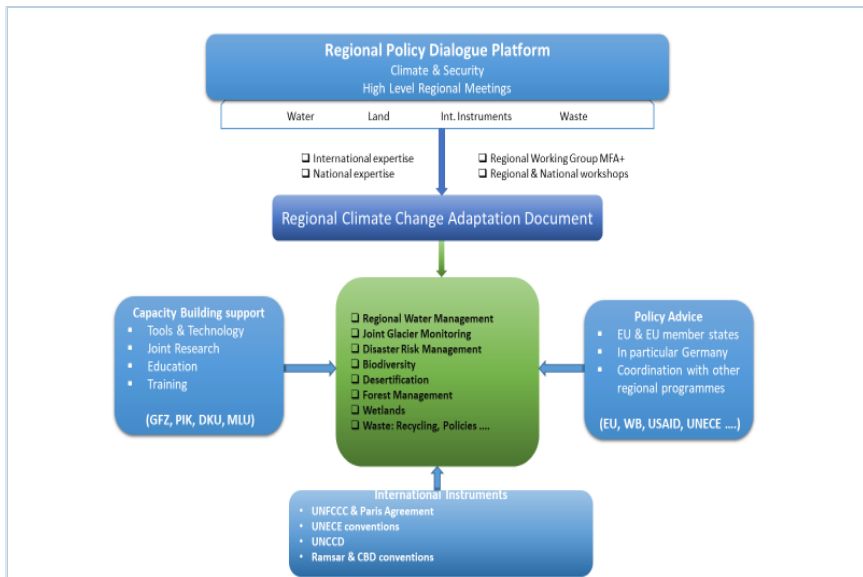
- Regional Political Dialogue,
- Joint Regional Priorities,
- Capacity Building.

These three pillars will be reflected in the political dialogue and in the elaboration of regional strategy documents and recommendations, as well as in various capacity building events. All activities and events are organised under the auspices of the Federal Foreign Office by the five partner organisations the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, the Helmholtz Centre Potsdam GFZ

Climate (2016), the United Nations Convention to Combat Desertification (1994), the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal (1989), the Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, 1991) – *with the exception of UZB*, the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (1998) - *with the exception of AFG & UZB*, and the Ramsar Convention on Wetlands of International Importance especially as Waterfowl Habitat (1971) – *with the exception of AFG & TAJ*.

German Research Centre for Geosciences, the Martin Luther University Halle-Wittenberg (MLU), the Potsdam Institute for Climate Impact Research (PIK) and the German-Kazakh University (DKU).

Regional political dialogue



To give the political dialogue direction and aim, the Green Central Asia partners agreed to draft a regional climate change adaptation document with a view to providing recommendations on further necessary joint actions to limit projected human-caused changes in mean climate and climatic impact drivers in the Central Asian region.

Green Central Asia is a platform designed to provide scope for enhanced coordination of green German activities in the region of Central Asia. It aims to create a better understanding of climate and security by providing a policy platform for exchange and ultimately by

coordinating regional policies as well as by exchanging best practice and best available techniques. Synergies are sought with other activities of German government organisations such as the Federal Foreign Office, the Federal Ministry for Economic Cooperation and Development (BMZ), the Federal Ministry for Environment, Nature Conservation and Nuclear Safety (BMU) and the Federal Ministry of Education and Research (BMBF). At the same time, Green Central Asia invites other international stakeholders to participate and feed in their knowledge, experience and activities to bolster this regional dialogue on climate, environment and security.

Joint Regional Priorities

These topics form an integral part of the regional policy dialogue which will be organised through annual high-level meetings as well as through different working group meetings for the partner MFAs and respective line ministries dealing with climate change, environment and water.

1. Climate change impact on regional water resources management
 - a. Regional water management based on the principles of IWRM and basin planning with a focus on climate change adaptation and mitigation (EU examples Rhine, Danube, Elbe)
 - b. Glacier and GLOF monitoring and forecast models
 - c. Disaster risk management: drought and flood early warning and forecasting
 - d. Data management and exchange: remote sensing, GIS, MODSNOW, 18 remotely operated multi-parameter stations (ROMPS) in Central Asia providing information through the Sensor Data Storage System (SDSS) hosted at the Central-Asian Institute for Applied Geosciences (CAIAG) in Bishkek/Kyrgyz Republic
 - e. Water-energy nexus – mutually acceptable mechanisms of water-energy cooperation/ Renewables

2. Climate change impact on land management
 - a. Agriculture – implementation of tools and projections, learning materials and practical training courses for science and national authorities with a focus on agricultural land and water use in particular water use efficiency, drought monitoring and crop yields
 - b. Biodiversity – regionally coordinated national conservation strategies for the creation of protected areas; joint methodology on assessing flora and fauna
 - c. Bridging the gap between knowledge and policy: academic – think-tank – policy making exchange in CA – with a special focus on land degradation and desertification
 - d. Coordination on transboundary protected areas in CA, including forest management
 - e. Wetland conservation

3. Cooperation in and contribution to international instruments such as
 - a. UNFCCC and Paris Agreement
 - b. Selected UNECE conventions
 - c. Biodiversity Convention
 - d. Convention on Combating Desertification
 - e. Ramsar Convention et al.
 - f. Green financial instruments – Green Climate Fund

4. Waste management
 - a. E-waste in CA: assessment – creation of legal framework
 - b. Processing/Recycling – PPP in waste management – discussion of best practice
 - c. Circular economy

Capacity Building

Capacity building workshops will be organised according to discussions with and requests of national partners; they include training on new tools (modelling, forecasting) and pertain to the selected theme clusters and specific regional priorities. Timelines, operational information and a list of capacity building events are available in the annex.

OBJECTIVE

The overall goal of the Green Central Asia Initiative is to prevent conflict and strengthen transboundary cooperation on climate impacts in Central Asia.

Based on this Joint Action Plan, regional political dialogue on questions of environmental and climate-related security risks has been established.

The political dialogue has generated a regional Climate Change Adaptation Document.

STAKEHOLDERS & PARTNERS

Afghanistan	Kazakhstan	Kyrgyz Republic	Tajikistan	Turkmenistan	Uzbekistan	Germany
<ul style="list-style-type: none"> Ministry of Foreign Affairs National Water Affairs Regulatory Authority (NWARA) NEPA (National Environmental Protection Agency) 	<ul style="list-style-type: none"> Ministry of Foreign Affairs Ministry of Ecology, Geology and Natural Resources Ministry of Emergencies 	<ul style="list-style-type: none"> Ministry of Foreign Affairs, External Trade, and Investments of the Kyrgyz Republic Ministry of Economy and Commerce of the Kyrgyz Republic Ministry of Natural Resources, Environment and Technical Supervision of the Kyrgyz Republic (including the Agency for Hydrometeorology under the MNRETS of the Kyrgyz Republic) Ministry of Agriculture of the KR (including SAWR under the MoA KR) Ministry of Energy of the Kyrgyz Republic Ministry of Emergency Situations of the Kyrgyz Republic Ministry of Education and Science of the Kyrgyz Republic National Academy of Sciences of the Kyrgyz Republic 	<ul style="list-style-type: none"> Ministry of Foreign Affairs Committee for Environmental Protection under the Government of Tajikistan Meteorological Agency of the Committee for Environmental Protection under the Government of Tajikistan Ministry of Energy and Water Resources 	<ul style="list-style-type: none"> Ministry of Foreign Affairs Ministry of Agriculture and Environmental Protection State Committee for Water Management 	<ul style="list-style-type: none"> Ministry of Foreign Affairs Ministry of Water Resources State Committee on Ecology and Nature Protection Uzhydromet 	<ul style="list-style-type: none"> Federal Foreign Office (AA) Federal Ministry for Economic Cooperation and Development (BMZ) Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)

Regional partners: IFAS, ICSD, CAREC

International partners: EU, UNFCCC, UNECE, UNESCO, UNDP, WB, ADB, SDC, USAID, international instruments

Civil society partners: IUCN, NABU, Central-Asian Institute for Applied Geosciences (CAIAG) in Bishkek, Kyrgyz Republic

ANNEX – PROCESS AND OPERATIONS

The table below lists all envisaged and planned activities of the Green Central Asia Initiative from June 2021 to March 2024 and reflects the selected main priority topics. At the proposal of the working group and upon mutual understanding, additions/changes can be added as necessary.

GREEN CENTRAL ASIA DIALOGUE PLATFORM															
Afghanistan, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, Uzbekistan – Germany – International Stakeholders															
Topic	Measure	Timeframe												Resources	
		2021		2022				2023				2024			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
REGIONAL POLICY DIALOGUE															
High-level dialogue	High-level meetings														GIZ, AA, CA States (CAS)
Medium/working-level dialogue	Bilateral talks on the preparation of the action plan														GIZ
	Second MFA working group meeting														GIZ
	Regular working group meetings														GIZ, AA, CAS
Regional Climate Change Adaptation Document	Drafting process with bilateral and multi-lateral meetings, including regular MFA working group meetings ⁷														GIZ, GFZ, MLU, PIK, CAS, experts (int./regional); input from UNECE (recommendations from EPRs et al.), IUCN

⁷ Cooperation with CAREC organised regular meetings of parliamentarians and MFAs of the CA region

	Presentation of document at conference														GIZ, CAS
JOINT REGIONAL PRIORITIES															
Topic	Measure	Timeframe												Resources	
		2021		2022				2023				2024			
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
	Study tour to Germany														GIZ
Climate change impact on regional water resources management	Glacier monitoring, modelling – coordination and cooperation in Central Asia														Coordination with UNESCO GLOF project, SDC and others, GFZ
	Discussion on mutually beneficial water energy mechanism ⁸														GIZ, PIK, GFZ
	Climate Risk Management in Central Asia														BMZ regional project
	Climate sensitive IWRM, i.e. Amu Darya riparian talks; groundwater aquifers; cooperation framework of the Convention on the Protection and Use of Transboundary														GFZ, BMZ regional water management project, UNECE

⁸ Supported by **climate projections**, including aspects of hydro and solar power

	Watercourses and International Lakes (Helsinki, 1992) for parties to the convention including the Protocol on Water and Health													
Climate change impact on land management and biodiversity	Biodiversity: regionally coordinated national conservation strategies for the creation of protected areas; joint methodology on assessing flora and fauna													GIZ, NABU, IUCN; liaison with GCF on support by readiness fund
	Discussion – coordination on transboundary protected areas in CA													GIZ, IUCN, NABU
	Development of drought monitoring tool for Aral Sea Basin preparation of the specification of a drought forecast system in the Aral Sea Basin													MLU-GFZ, GIZ, including Hydromet services, national UNCCD contact points, WMO, Global Water Partnership, IFAS
	Bridging the gap between knowledge and policy: academic – think-tank – policy making exchange in CA – with special focus													GIZ, GFZ, MLU, PIK, DKU, CA think-tanks and scientific community

	on land degradation and desertification													
Cooperation in and contribution to international instruments	Ramsar Convention: Reviving regional initiative for CA													CAREC, IUCN, GIZ
	National conservation strategies – preparation for registering Ramsar sites													IUCN, GIZ
	Espoo Convention on Environmental Impact Assessment (UNECE)													UNECE, GIZ
	Aarhus Convention (UNECE)													UNECE, GIZ
	Convention on the Transboundary Effects of Industrial Accidents (UNECE)													UNECE, GIZ
Waste management	E-waste in CA: assessment – creation of legal framework													GIZ with support of the Federal Environment Agency
	PPP in waste management – discussion of best practice													GIZ with support of the Federal Environment Agency

CAPACITY BUILDING

Topic	Measure	Timeframe												Resources
		2021		2022				2023				2024		
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	
Climate change impact on regional water resources management	Tashkent Water Security Lectures ⁹													GFZ-MLU
	MODSNOW – seasonal water availability assessment training for BWO Amudarya													GFZ
	MODSNOW – seasonal water availability assessment training for BWO Syrdarya													GFZ
	Tajikistan Follow-Up Meeting to CAWa-Edu Workshop in 2018													MLU-GFZ
	Summer School 2021													GFZ-MLU-DKU, CAS
	Ecosystems, Society and Economics of the Region of Aral (ESERA) capacity building component (awareness raising): Aral Sea Summer School for Young Water Leaders													DKU
	ESERA – research component: Scientific													DKU

⁹ Materials will be made available at www.greencentralasia.org

	research on Ecosystems, society and economy in the northern Aral													
	International School of Green Business Eco-Talk													DKU
	Silk Road of Knowledge Conference: Science meets green policy													DKU
	Training for civil servants on Water Governance and climate security in Central Asia													DKU
	IWRM Master programme													DKU
	Online training workshop – Satellite precipitation estimation and applications for scientists and government officials in Central Asia													DKU
	Kyrgyzstan River Discharge Training													GFZ
	Uzbekistan Training on ROMPS station operation													GFZ
	Training for Hydromets/university professors/local scientists on climate data acquisition, climate data handling, analysis and visualisation													PIK
	Training for journalists/policy makers on general topic of													PIK

	Climate Modelling, Climate Impacts in CA													
	Training for Hydromets/university professors/local scientists Hydrological modelling for impact assessment of climate change on water resources on a river basin scale													PIK
	Workshop on climate impact and cooperation strategies for NGOs													PIK
	Scientific visits of local scientists to PIK (4 persons per year in total) on hydrological, climate and agricultural modelling ¹⁰													PIK
Climate change impact on land management	GIS Training – basic operations and application in hydrology													GFZ
	R programming language for data processing and visualisation													GFZ
	Python programming language for data processing and visualisation													PIK

¹⁰ Due to travel restrictions organised online

ACTION PLAN SIGN-OFF

The undersigned accept this Action Plan as described above.

Print First and Last Name	Title	Signature	Date.
Print First and Last Name	Title	Signature	Date.
Print First and Last Name	Title	Signature	Date.
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Print First and Last Name	Title	Signature	Date.
Partner (Printed Name)	Partner (Signature)		Date.
Print First and Last Name	Title	Signature	Date.