

# WATER YEARBOOK: CENTRAL ASIA AND AROUND THE GLOBE



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## Content

List of Abbreviations	
Preface	8
Section 1. 2020 Calendar of Events	11
Section 2. Water Management Situation in the Aral Sea Basin	21
2.1. Water-Related Situation in the Amu Darya and the Syr Darya River Basins	22
2.2. Monitoring of Changes in the Water Surface Area of the Large Aral Sea and the Amu Darya Delta	23
2.2.1. Water Supply to the Amu Darya Delta and the Large Aral Sea	24
2.2.2. Dynamics of Changes in the Open Water Surface and Wetland Area of Eastern and Western Parts of the Large Aral Sea	25
2.2.3. Lake Systems of the Amu Darya Delta	25
2.3. Expeditions on the Exposed Bed of the Aral Sea in 2019-2020	27
Section 3. IFAS and Other Regional Organizations in Central Asia	33
3.1. International Fund for Saving the Aral Sea	34
3.1.1. Implementation of initiatives of the Presidents of CA States voiced at XII Summit of the Heads of IFAS Founder-States.	34
3.2. Executive Committee of IFAS and its National Branches	34
3.2.1. Executive Committee of IFAS	34
3.2.2. Regional Center of Hydrology	35
3.2.3. Executive Directorate of IFAS in Kazakhstan	36
3.2.4. IFAS Agency for Implementation of the Aral Sea Basin and GEF Projects	37
3.3. ICWC of Central Asia	38
3.3.1.ICWC meetings	38
3.3.2. Activities of ICWC Executive Bodies in 2020	40
3.4. ICSD of Central Asia	45
3.5. Regional Environmental Center for Central Asia	46
Section 4. Bilateral Water Cooperation between the Countries of Central Asia	49
4.1. Kazakhstan – Kyrgyzstan	50
4.2. Kazakhstan – Tajikistan	51
4.3. Kazakhstan – Turkmenistan	51
4.4. Kazakhstan – Uzbekistan	51
4.5. Kyrgyzstan – Tajikistan	53
4.6. Kyrgyzstan – Turkmenistan	53
4.7. Kyrgyzstan – Uzbekistan	53
4.8. Tajikistan – Uzbekistan	54
4.9. Turkmenistan – Uzbekistan	55
Section 5. Key Water Developments in the Countries of Central Asia	57
5.1. Kazakhstan	58
5.2. Kyrgyz Republic	64
5.3. Tajikistan	70
5.4. Turkmenistan	75
5.5. Uzbekistan	81

Section 6. United Nations and its Specialized Agencies	93
6.1. General Assembly	94
6.2. Security Council	100
6.3. Secretariat	101
6.4. United Nations Development Program	101
6.5. UN-Water	106
6.6. UN Economic Commission for Europe	107
6.7. Economic and Social Commission for Asia and the Pacific	109
6.8. United Nations Regional Centre for Preventive Diplomacy for Central Asia	109
6.9. World Meteorological Organization	110
6.10. International Fund for Agricultural Development	111
6.11. United Nations Educational, Scientific and Cultural Organization	111
6.12. Food and Agriculture Organization	113
6.13. International Law Commission	115
6.14. International Court of Justice	115
Section 7. International Water Organizations and Initiatives	117
7.1. Asia Water Council	118
7.2. Geneva Water Hub	118
7.3. Global Water Partnership	119
7.4. International Commission on Irrigation and Drainage	120
7.5. International Network of Basin Organizations	121
7.6. Inter-Islamic Network on Water Resources Development and Management	122
7.7. International Water Management Institute	122
7.8. International Water Resources Association and World Water Congress	123
7.9. Stockholm International Water Institute and World Water Week	124
7.10. World Water Council	124
Section 8. Activities of International Partners in Central Asia	127
8.1. Asian Development Bank	128
8.2. Asian Infrastructure Investment Bank	128
8.3. European Bank for Reconstruction and Development	129
8.4. European Union	130
8.5. German Society for International Cooperation	131
8.6. Organization for Economic Cooperation and Development	132
8.7. Organization for Security and Co-operation in Europe	133
8.8. Swiss Confederation (SDC and SECO)	134
8.9. United States Agency for International Development	135
8.10. World Bank	136
Section 9. Water Education	139
9.1. Higher Education Institutions (HEIs) and Professional Development Centers	140
9.1.1. Kazakhstan	140
9.1.2. Kyrgyz Republic	142
9.1.3. Tajikistan	144

9.1.4. Turkmenistan	144
9.1.5. Uzbekistan	145
9.2. Regional HEIs and Professional Development Centers	147
9.2.1. Regional Training Center at SIC ICWC	147
9.2.2. University of Central Asia (Kazakhstan, Kyrgyzstan, and Tajikistan)	148
9.3. Professional Development Courses and Trainings	148
9.3.1. Professional Development Courses and Trainings in 2020	148
9.3.2. Professional Development Courses and Trainings in 2021	149
Section 10. Science and Innovations	151
10.1. Innovations in 2020	152
10.2. Central Asia Expert Platform on Water Security, Sustainable Development, and Future Studies	154
10.3. Leading research institutes of EECCA countries	155
10.4. International Research Institutes Working on Water Issues in Central Asia	157
Section 11. Key Water Developments in the World	159
11.1. Africa	160
11.2. Asia	162
11.3. America	170
11.4. Australia and Oceania	171
11.5. Europe	172
11.5.1. Western and Southern Europe	172
11.5.2. Eastern Europe and Caucasus	174
11.6. Middle East	180
Section 12. Thematic Reviews	183
12.1. Climate Change	184
12.2. Sustainable Development Goals: Tracking the 2020 Progress in Central Asia	194
12.3. Earth Overshoot Day 2020	196
12.4. The 2020 Hydropower Development: Global Trends	196
12.5. Sardoba Dam Collapse	208
Section 13. Publications in 2020	215
Section 14. Central Asia Awards in Water-related fields	223
Section 15. Global Risks 2021	227
15.1. Risks 2021 (World Economic Forum)	228
15.2. Risks 2021 ("Eurasia Group")	231
15.3. Risks 2021 (MFA Russia MGIMO)	232
Section 16. 2021 Calendar of Events	235

### List of Abbreviations

ACN	Academic Community Network
ADB	Asian Development Bank
AIIB	Asian Infrastructure Investment Bank
ALRI	Agency for Land Reclamation and Irrigation (Tajikistan)
ASB	Aral Sea Basin
ASBmm	Aral Sea Basin model
ASBP	Aral Sea Basin Program
AWC	Asia Water Council
BISA	Basin Irrigation System Administration
BWA	Basin Water Authority
BWO	Basin Water Organization
СА	Central Asia
Calpesd	Central Asian Leadership Program of Education for Sustainable Development
CAREC	Regional Environmental Centre for Central Asia
CDW	Collector-drainage water
CIS	Commonwealth of Independent States
CMC ICWC	Coordination Metrological Center of ICWC
CSTO	Collective Security Treaty Organization
CTWC	Chu-Talas Water Commission
DWRLR	Department for Water Resources and Land Reclamation at the Ministry of Agriculture, Food Industry and Land Reclamation (Kyrgyzstan)
EBRD	European Bank for Reconstruction and Development
EC IFAS	Executive Committee of IFAS
ECOSOC	UN Economic and Social Council
ED IFAS	Executive Directorate of IFAS
EECCA NWO	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations
	Eastern Europe, Caucasus, and Central Asia Network of Water Management
EECCA NWO	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations
EECCA NWO	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment
EECCA NWO EIA EIB	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank
EECCA NWO EIA EIB ESCAP	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific
EECCA NWO EIA EIB ESCAP EU	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union
EECCA NWO EIA EIB ESCAP EU FAO	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations
EECCA NWO EIA EIB ESCAP EU FAO GCF	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS GIZ	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit)
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS GIZ GWP	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit) Global Water Partnership
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS GIZ GWP ICID	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit) Global Water Partnership International Commission on Irrigation and Drainage
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS GIZ GWP ICID ICSD	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit) Global Water Partnership International Commission on Irrigation and Drainage Interstate Commission for Sustainable Development of Central Asia
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS GIZ GWP ICID ICSD ICWC	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit) Global Water Partnership International Commission on Irrigation and Drainage Interstate Commission for Sustainable Development of Central Asia Interstate Commission for Water Coordination of Central Asia
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EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS GIZ GWP ICID ICSD ICWC IFAD	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit) Global Water Partnership International Commission on Irrigation and Drainage Interstate Commission for Sustainable Development of Central Asia Interstate Commission for Water Coordination of Central Asia International Fund for Agricultural Development International Fund for Saving the Aral Sea
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS GIZ GWP ICID ICSD ICWC IFAD IFAS IFCA	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit) Global Water Partnership International Commission on Irrigation and Drainage Interstate Commission for Sustainable Development of Central Asia Interstate Commission for Water Coordination of Central Asia International Fund for Agricultural Development International Fund for Saving the Aral Sea Investment Fund for Central Asia
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS GIZ GWP ICID ICSD ICWC IFAD IFAS IFCA INBO	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit) Global Water Partnership International Commission on Irrigation and Drainage Interstate Commission for Sustainable Development of Central Asia Interstate Commission for Water Coordination of Central Asia International Fund for Agricultural Development International Fund for Agricultural Development International Fund for Saving the Aral Sea Investment Fund for Central Asia International Network of Basin Organizations
EECCA NWO EIA EIB ESCAP EU FAO GCF GDP GEF GIS GIZ GWP ICID ICSD ICWC IFAD IFAS IFCA INBO ISDB	Eastern Europe, Caucasus, and Central Asia Network of Water Management Organizations Environmental Impact Assessment European Investment Bank Economic and Social Commission for Asia and the Pacific European Union Food and Agriculture Organization of the United Nations Green Climate Fund Gross Domestic Product Global Environment Facility Geographic Information System German Agency for International Cooperation (Gesellschaft für Internationale Zusammenarbeit) Global Water Partnership International Commission on Irrigation and Drainage Interstate Commission for Sustainable Development of Central Asia Interstate Commission for Water Coordination of Central Asia International Fund for Agricultural Development International Fund for Agricultural Development International Fund for Central Asia International Fund for Central Asia International Network of Basin Organizations Islamic Development Bank

IWRA	International Water Resources Association
IWRM	Integrated Water Resource Management
KR	Kyrgyz Republic
MAEP	Ministry of Agriculture and Environmental Protection (Turkmenistan)
MEGNR	Ministry of Ecology, Geology and Natural Resources (Kazakhstan)
MFA	Ministry of Foreign Affairs
MPHSTF	UN Multi-Partner Human Security Trust Fund for the Aral Sea region in Uzbekistan
MWM	Ministry of Water Management (Uzbekistan)
NASA	National Aeronautics and Space Administration
NHMS	National Hydrometeorological Services
NGO	Non-governmental organization
OECD	Organization for Economic Cooperation and Development
OIC	Organization of Islamic Cooperation
OPEC	Organization of the Petroleum Exporting Countries
OSCE	Organization for Security and Co-operation in Europe
RCH	Regional Center of Hydrology
REAP	Regional Environmental Action Plan for Central Asia
REP4SD-CA	Regional Environmental Program for Sustainable Development in Central Asia
RES	Renewable Energy Sources
RK	Republic of Kazakhstan
RMCCA	Regional Mountain Centre of CA
RT	Republic of Tajikistan
Ruz	Republic of Uzbekistan
RWG	Regional Working Group
SCO	Shanghai Cooperation Organization
SDC	Swiss Agency for Development and Cooperation
SDG	Sustainable Development Goal
sic icsd	Scientific-Information Center of the Interstate Commission for Sustainable Development
SIC ICWC	Scientific-Information Center of the Interstate Commission for Water Coordination
SIWI	Stockholm International Water Institute
SPECA	Special Program for the Central Asian countries
UN	United Nations
UNDP	United Nations Development Program
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNESCO-IHP	UNESCO's Intergovernmental Hydrological Program
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	UN General Assembly
UNIDO	United Nations Industrial Development Organization
UNRCCA	United Nations Regional Centre for Preventive Diplomacy for Central Asia
UNSC	UN Security Council
UN SPAS	UN Special Program for the Aral Sea Basin
USAID	United State Agency for International Development
VNR	Voluntary national review
WB	World Bank
WCA	Water Consumer Association
WHO	World Health Organization
WMO	World Meteorological Organization
WUA	Water User Association
WWC	World Water Council

### Preface

### Dear readers!

We are pleased to present the fourth edition of our Water Yearbook. The year 2020 has been defined by the COVID-19 pandemic. Lockdown and self-isolation affected our daily life and changed communications and information flows. Within weeks, work, studies, meetings and communication of most of us have moved to an online space and made the humankind even closer to the information society. Despite the pandemic, the water sector kept functioning in the Central Asian countries and all over the world as reflected in the Yearbook.

The High-Level Conference "Green Central Asia" as part of the implementation of the new EU Strategy for CA and Afghanistan, the Central Asian Conference on Climate Change, the International Conference "Give Life to Aral", the Symposium "Ecological Restoration and Management of the Aral Sea", and the Regional Conference "Silk Road of Knowledge" were the important events shown among others in the 2020 Calendar.

In 2020, ICWC members met at its regular meetings in the online format on 10 April and 24 November. New members were appointed to represent Kazakhstan, Tajikistan, and Turkmenistan in ICWC. The executive bodies of ICWC and ICSD and the regional organizations continued working on water and environmental matters. In late 2020, under the chairmanship of Tajikistan, IFAS set to work on the regional dialogue on institutional and legal improvement of the Fund and the implementation of ASBP-4 (IFAS and Other Regional Organizations in Central Asia).

The Central Asian Presidents exchanged on bilateral or regional partnership via telephone calls. Cooperation was maintained within the framework of the Chu-Talas Water Commission, working groups on water management (Kazakhstan/Uzbekistan), Commission on Environment Protection and Water Quality in the Syr Darya River Basin and other water-related arrangements (Bilateral Water Cooperation between the Countries of Central Asia).

SIC ICWC together with the International Innovation Center for the Aral Region (IICAR) under the President of Uzbekistan conducted the second expedition on the exposed bed of the Aral Sea from 28 May to 26 June 2020. The results of the first and second expeditions (2019-2020) are described in section on Water Management Situation in the Aral Sea Basin.

As usual, the Yearbook presents key water developments in the CA countries, activities of the United Nations and its specialized agencies, international water organizations and initiatives, as well as activities of international partners in the region. Particular attention is paid to water related events in Africa, Asia, America, Australia and Oceania, Europe and Middle East. Such topics as capacity building in the region and activities of leading research institutes in the EECCA countries are updated in the sections dedicated to Water Education and Science and Innovations, respectively.

In addition to annual updates on climate change and SDGs progress, this year Thematic Reviews reflect on global hydropower development in 2020 and the Sardoba dam collapse. The later event had a devastating effect on both Uzbekistan and Kazakhstan but also illustrated cohesive work of two countries in dealing with its consequences. In its final sections, the Yearbook contains information about key publications, Central Asia water awards, risks in 2021 and 2021 water calendar.

We would like to thank for all contributions made to this edition of the Yearbook in response to our requests. Special thanks are due to the United Nations Regional Center for Preventive Diplomacy for Central Asia and the Organization for Security and Co-operation in Europe for their financial support.

Last but not the least. When the 2020 edition of the Yearbook was nearing completion, our Leader, Mentor and Visionary Professor Viktor Dukhovniy passed away. He will be forever missed but his legacy will remain strong.

Editorial team

August 2021

