

**THE REGIONAL ENVIRONMENTAL CENTRE FOR  
CENTRAL ASIA**

**CHANGE. GROWTH. DEVELOPMENT**



**2001-2016**

**CAREC PERFORMANCE REPORT:  
15th ANNIVERSARY ISSUE**

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FOREWORD BY CHAIRMAN OF CAREC  
BOARD OF GOVERNORS



**Dr. Mukhammet Durikov,**  
*Chairperson of CAREC Board of Governors*

**The Board of Governors wishes CAREC team  
continued success in its future endeavours!**

Dear ladies and gentlemen!  
Dear colleagues and friends!

On behalf of the Board of Governors of the Regional Environmental Centre for Central Asia, allow me to greet all of you!

This year hallmarks the 15<sup>th</sup> Anniversary of CAREC's foundation. Established by the countries of the Central Asian Region in cooperation with the European Union and the United Nations Development Programme, thanks to its vigorous work CAREC has become one of the leading regional organizations of international nature, truly effective and highly reputable.

While going through different phases in its formation and development, CAREC has been exclusively guided by its mandate – serve as a regional platform for environmental cooperation, disseminate ecological knowledge as well as promote best practices on water resources and environmental governance, environmental education and climate change in Central Asia in concert with nature protection ministries, non-governmental organizations, international partners and donors.

Adoption of strategically important corporate documents – Change Concept, Strategic Development Plan and Concept for Cooperation with NGO's – contributed to the organization's further recognition by national and regional partners and, likewise, the international community.

Thanks to building highly professional staff, institutional and technical capacities, CAREC has been successfully progressing as a bedrock for regional cooperation instrumental in facilitating collaboration and networking amongst regional agents. The Centre works closely with the International Fund for Saving the Aral Sea and its executive bodies – Interstate Commission for Water Coordination and Interstate Sustainable Development Commission – enabling joint interventions to tackle environmental challenges faced by the region.

CAREC's Anniversary is not only a worthy occasion to celebrate and a long-awaited milestone in its evolution, but also a unique opportunity to reflect upon its 15 years of work and set out new goals and objectives in performing its regional mission.

CAREC Board of Governors is highly and sincerely committed to CAREC's efforts and is eager to further support the Centre in its striving towards enhancing corporate professionalism at all levels and becoming an effective environmental knowledge hub in the Central Asian Region!

## FOREWORD BY CAREC EXECUTIVE DIRECTOR

From a community of environmentalists  
to a successful cooperation platform



**Dr. Iskandar Abdullaev**  
Executive Director  
of CAREC

This year, the Regional Environmental Centre for Central Asia celebrates its 15<sup>th</sup> Anniversary. Today, our organization established by the countries of Central Asia jointly with the EU and UNDP is a vivid and successful institutional framework capable of addressing environment and sustainable development issues based on the principles of cooperation and partnership. CAREC was established to foster collaboration among nations and sectors: governmental, non-governmental and business. *The need for such a platform in the region stemmed from serious environmental challenges and extreme dependence of the counties sharing the region on natural resources.*

During 15 years of its operation, CAREC was able to achieve a series of successes that made it a robust and potent organization. Firstly, the Central Asian countries – who are all CAREC founders – managed to formulate its clear mandate and objectives. Secondly, the Centre was able to attract professionals who were not only genuinely devoted to their work, but also firmly believed in saving the environment, the individuals who held true to the ideals and principles of environmental protection and harmonious interaction with nature. They were the ones who forged first corporate programs and projects. *Subsequently, CAREC has been engaging these who care about environment in our region.*

CAREC has worked its way up from a community of dreamers to a well-defined entity currently implementing a whole spectrum of initiatives with sophisticated scope and approaches, yielding not only required project-specific outcomes but also enhanced capacities of project partners, public mind shift, and innovative environmental solutions. ***CAREC embodies Central Asia's transformation from a community of consumers to an association of nations and responsible members of the international community.***

In the course of these 15 years, CAREC went through many transformations, including of qualitative nature. The organization has been maturing and evolved, primarily, thanks to accumulation of knowledge and building its expert potential. Professionalization and institutional capacity building are the key drivers and underpin CAREC's success. Moreover, development of sustainable and long-term synergies with national and international partners allowed the Centre to expand its professional network. ***Systemic and sustainable partnerships on local, national, regional and international levels are the cornerstones of CAREC's accomplishments.***

In its operation, CAREC is zealously committed to high quality, efficiency and transparency. By building its own capacity and this of its partners, the Centre promotes responsible partnership and due attention to national priorities of Central Asian countries. The organization bridges national and regional aspects of sustainable development and environmental protection with corresponding global agendas. *CAREC is considered the champion in promoting the interests of Central Asia within international processes and, vice versa, in mainstreaming new knowledge and innovations in the region.*

As of today, CAREC represents a well-established, successful and professional agency with highly competent staff. It became an integral element of environmental protection and sustainable development efforts in the world and Central Asia, if not a driving force behind these processes in the region. Within the framework of its programs, projects and other applied interventions, CAREC strengthens and promotes collaboration among the communities and nations of the Central Asian Region, the value of which lies in its sustainability, durability and mutual benefits. *As was envisioned by its founders, CAREC has indeed become and continues to serve a regional venue for pragmatic, result-oriented and strategic partnerships among Central Asian countries on sustainable development and environmental protection.*

# 1



MISSION AND VISION



**Figure 1.** CAREC's integrated approach

Awareness CAREC possesses a unique mandate – conferred by five Central Asian states – with the mission of assisting them in addressing national- and regional-level issues in the area of environment and sustainable development. In this context, the Centre establishes and maintains platforms for multinational, multiagency and multistakeholder dialogues and attracting new knowledge and technologies.

In order to fulfill its mission, CAREC adheres to an integrated approach as shown in Figure 1. below.

Based on its key principles of operation – sensible use of resources and opportunities to promote the interests of concerned states and the region, openness to cooperation, professional and ethical behavior, development of in-house competencies and expertise, and regular internal quality control – CAREC aims to become a knowledge hub on sustainable development and enhance its role as a regional cooperation platform in Central Asia.

# 2

## DEVELOPMENT DYNAMICS 2001–2016. MAIN STAGES



INNOVATIONS, EDUCATION, RESEARCH, SHARING OF EXPERIENCE, FORGING KNOWLEDGE PLATFORMS, READINESS TO FACE CONTEMPORARY CHALLENGES AND RESPOND TO COUNTRIES' NEEDS – ALL THESE SERVE AS EVIDENCE OF THE NEW STAGE OF CAREC'S DEVELOPMENT AND THE EVOLVEMENT OF APPROACHES CAREC USES IN ITS WORK.

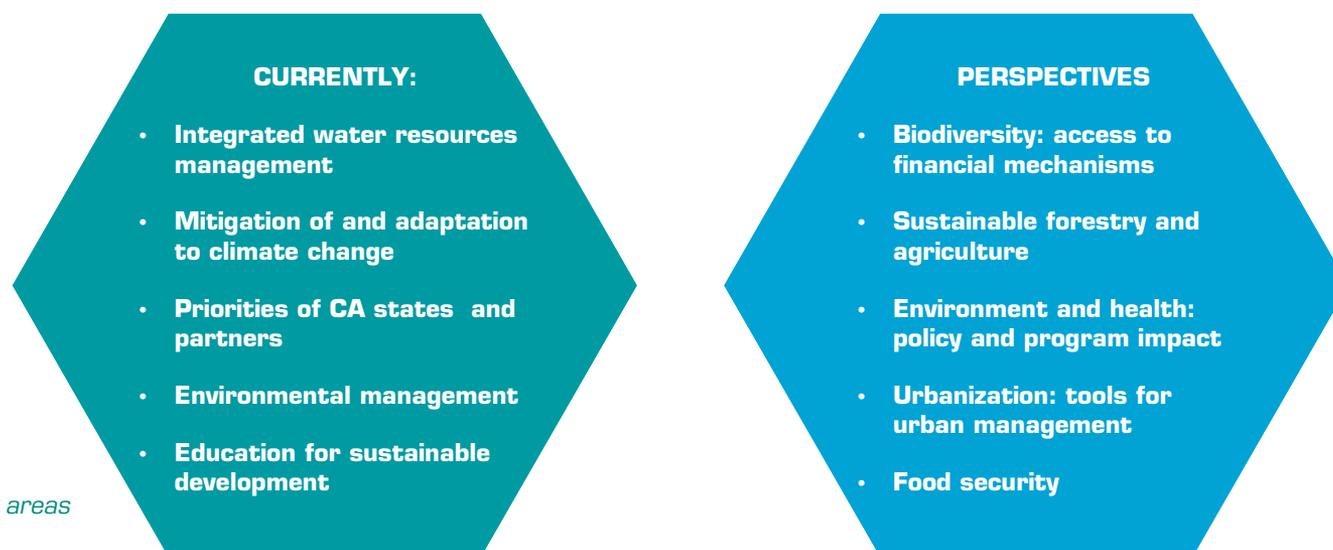
Advancing regional cooperation and supporting sustainable growth in Central Asia over the past 15 years, CAREC has been constantly evolving and moving ahead. At each stage of its development, the Centre has been performing most urgent tasks, for instance, aiding and facilitating the development and professionalization of eco-NGO's, bringing knowledge and "green" technologies to the region, establishing partnerships among environmentalists, etc.

CAREC is growing, transforming, building its capacity and learning with every new partner, project, meeting, conference, training or field mission. Exactly such an approach has become the core principle of the Centre's operation and the foundation of its further progression.

THE 15 YEARS LONG CAREC HISTORY MAY BE CONDITIONALLY DIVIDED INTO THREE MAIN PHASES:



*Figure 2. Three phases of CAREC development*



*Figure 3.  
CAREC thematic areas*

Mr. Bulat Yessekin, CAREC's first Executive Director, significantly contributed to overall organization's development. From 2001 to 2006, CAREC not only went through its initial formation phase but also found its niche regionally as well as internationally. The number of projects had been steadily growing, and the small grant program for NGO's – that subsequently transformed into the Public Initiatives Support Program – was successfully implemented.

CAREC was honored to serve as the Secretariat of the 5<sup>th</sup> "Environment for Europe" Ministerial Conference and draft the joint Central Asian strategic platform for water and environment cooperation. Furthermore, the Centre made an essential input into the work of the World Summit on Sustainable Development in Johannesburg, Pan-European Ministerial Conference on Environment in Kyiv and Asian-Pacific Ministerial Conference on Environment and Development in Seoul.

The organization became one of the main drivers of environmental initiatives in Central Asia as well as actively contributed to their development.



*Bulat Yessekin, Executive Director of CAREC, 2001–2006*



*Talaibek Makeev, Executive Director of CAREC, 2007–2012*



*Usmonkul Shakirov, Chairman of CAREC Board of Governors, 2001–2006*



*Sergey Samoilov, Chairman of CAREC Board of Governors, 2007–2012*

Mr. Talaibek Makeev served as CAREC Executive Director during the time when the organization was shifting towards financial self-sustainability. During this uneasy period, CAREC not only accomplished its mission of rendering inter-sectoral support and assistance in addressing environmental issues of Central Asia (awareness raising, capacity building, supporting multi-sectoral dialogues and partner networks, implementation of pilot projects), but also expanded and strengthened its thematic areas. As the result, the following corporate programmes emerged: Environmental Management, Climate Change and Water Initiatives Support. In addition, CAREC continued to expand and enhance a new thematic area of Education for Sustainable Development. The Centre effectively dealt with all arising self-development challenges.

Elaboration and introduction of a feedback- and result-based cycle planning and management system, adaptation of internal procedures to current legal regulations, development and integration of new corporate rules and guidelines aimed at enhancing the overall corporate management framework became the major steps of internal corporate transformation.

Due to transition to full project-based funding and cessation of institutional funding on behalf of the European Commission, CAREC's focus shifted towards building its capacity to mobilize donor resources, including by improved quality and relevancy of project ideas and proposals, efficient use of corporate premises donated by the government of Kazakhstan, transition of country offices to self-funding with a simultaneous introduction of a single coordination and project reporting framework.

Chairs of CAREC Board of Governors, namely Mr. Usmonkul Shokirov, Minister of Nature Conservation of Tajikistan, Mr. Sergey Samojlov, Department Head with the State Nature Protection Committee of Uzbekistan, and Mr. Mukhammet Durikov (currently in office), Director of the Desert Research Institute of the State Committee for Environmental Protection and Land Resources of Turkmenistan, played a vital role in CAREC's institutional formation and policy building.

Significant contribution to CAREC's development was also made by other members of the Board of Governors, Country Office Directors, and CAREC staff and experts, including Seribek Daukei, Emil Shukurov, Maktumkuli Akmuradov, Anna Bramvel, Sestager Aknazarov, Kuralaj Karibayeva, Saidrasul Sanginov, Abdymital Chyngozhoyev, Andrey Demidenko, Alexander Nikolayenko, Batyr Ballyev, Arslan Redzhepov, Batyr Mamedov, Yekaterina Yushchenko, Alexander Poliakov, Yelena Yerzakovich, Gulzhamal Isayeva, Mariya Genina, Abduaziz Madyarov, Iskandar Mirkhashimov, Simon Charre, Malika Babadzhanova, Artur Vakhitov, Alikhon Latifi, Karl Anzelm, Azamat Khudajbergenov, Viktoria Akopova and many others.

After the end of institutional funding in 2009, CAREC had passed a long way of transformation from surviving with short-term contracts and implementing certain donor tasks to developing long-term programs, contributing to regional collaboration on promoting key international environment and sustainable development processes on the CAR level based on national and regional priorities of concerned countries.



**Figure 4**

Corporate approaches remain the same – attracting the best international expertise, methods, techniques and practices, their customization for Central Asian context, approbation, replication and public awareness raising.

In addition to international expertise, CAREC has been actively using and building regional and national knowledge base as well. In particular, 97–99% of CAREC staff are citizens of Central Asian countries and 250 local experts are engaged in project activities on annual basis.

Thematic areas of CAREC activities reflect the priorities of the countries of the Pan-European Region and Central Asia formulated under the “Environment for Europe” Process and the Central Asian Sustainable Development Initiative, including environmental management, integrated water resources management, climate change, and education for sustainable development still relevant today.

The Centre continues to develop new thematic areas like Environment and Health, Sustainable Forestry and Agriculture, and Food Security, as well as to expand its expertise on economic aspects of efficient water and land use and sustainable development funding mechanisms.



CAREC is actively operating in all Central Asian countries. Along with its headquarters in Almaty, Kazakhstan, Country Offices had been established and are operating in all Central Asian countries contributing to CAREC's regional mission, implementing national and regional projects, and assisting target countries in resolving their respective environment and sustainable development issues.

During almost the entire CAREC's history, the head office has been leading all corporate processes and pushing the organization's further development. However, the recent years saw a significant increase of the role of country offices, expansion of their staff and enhancement of their expertise as well as their involvement in coordinating CAREC's regional interventions and efforts by national partners. This has led to thematic “specialization” of the Centre's Country Offices. Thus, Kazakhstan CO is focusing on “green economy” and “green growth” concepts, whereas Kyrgyzstan CO specializes on ecosystem services, and Tajikistan CO – on climate change. Turkmenistan Country Office is actively engaged in implementing the UN Convention to Combat Desertification, and Uzbekistan CO is working on promoting renewable energy and environment-and-health agendas.

Figure 5. CAREC offices in Central Asia



#### Tajikistan, Dushanbe

CAREC Country Office in Tajikistan has been operating since 2003 with the aim of facilitating the implementation of priority national and regional environmental initiatives. Tajikistan CO is mainly focusing on climate change and adaptation, water resources and energy. The office closely cooperates with the public sector and civil society, takes part in the work of national Environmental Protection Committee, inter alia, contributed to developing the online version of the NSoER of the Republic of Tajikistan (climate change and biodiversity sections).

#### Turkmenistan, Ashgabat

CAREC Project Office in Turkmenistan operates based on the Memorandum of Understanding of April 25, 2014 between CAREC and the National Institute of Deserts, Flora and Fauna of the Ministry of Nature Protection of Turkmenistan (interagency agreement). Turkmenistan office contributes to the implementation of country-specific priority programs by carrying out projects supporting the upgrade of the UNCCD National Action Programme, developing NSoER's based on UNECE Guidelines as well as taking steps to enhance sustainable forest management.



### **Kyrgyzstan, Bishkek**

Following the establishment of CAREC Head Office in Almaty in 2001, the first Country Office started operating in Bishkek, Kyrgyzstan. In the beginning, within the framework of NGO Support Program and sustainable development education programs the Bishkek Office rendered information and technical support to NGO's and communities on environmental management and was engaged in public awareness raising on sustainable development and environmental protection.

As of today, the office actively assists and implements a whole spectrum of projects under CAREC programs, including Water Initiatives Support, Climate Change and Sustainable Energy, and Environmental Management and Policy. Currently, Kyrgyzstan CO is contributing to CAREC further progression as a regional cooperation platform, specifically by mainstreaming ecosystem services into regulations and legislation, facilitating the implementation of Cartagena Protocol on Biosafety, Rotterdam Convention, as well as extending expert assistance during drafting of National State-of-Environment Reports (NSoER) of Kyrgyzstan.

### **Uzbekistan, Tashkent**

CAREC Uzbekistan CO was established in April 2005 following the official registration with the national Ministry of Justice. During 2005–2006, the CO implemented only one project on education for sustainable development with a budget of slightly over 10K USD.

At present, Uzbekistan Country Office works on more than 7 themes, including water resources, climate change, biodiversity, energy efficiency, renewable energy, education for sustainable development, environmental impact assessment, public health and environment as well as other environment and sustainable development issues. The office also leads the development of a new CAREC thematic program – “Environment and Health”.

### **Kazakhstan, Astana**

CAREC Country Office in Kazakhstan started its work in 2014 under the Memorandum between CAREC and the Institute of Ecology and Sustainable Development (IESD) approved by the national Ministry of Environment and Water Resources (MEWR). In February 2015, the CO started its official operations in Astana. The CO ensures close cooperation and fruitful working relations with the representatives of ministries, government agencies and departments of Kazakhstan.

The activities of Kazakhstan Country Office correlate with the “Green Bridge” Partnership Program (GBPP), a global initiative proposed and launched by Kazakhstan. Currently, the CO is focusing on raising public awareness on “green economy” and “green growth” via series of workshops and educational seminars.

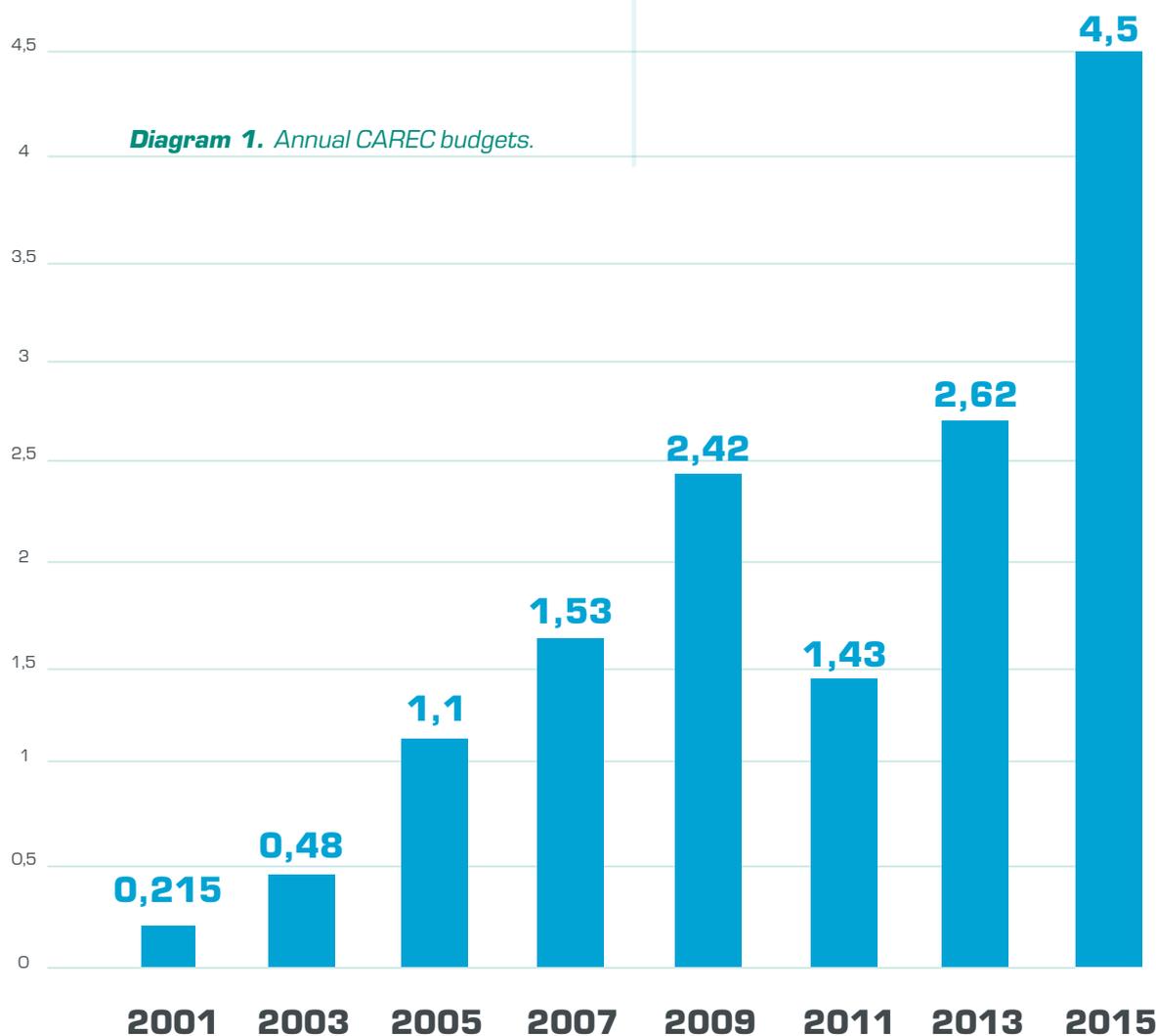


As the result of focused efforts to strengthen partnerships, improve internal performance standards, apply international corporate financial standards and requirements as well as systemic fundraising activities, CAREC was able to transform into a successful and self-funding organization capable of initiating and implementing regional initiatives and assisting the implementation of priority environmental measures in Central Asian states.

Over the past year, the Centre's cooperation with the donor community has also drastically changed. In addition to active participation in competitive biddings, tenders and bilateral negotiations with sponsor organizations, CAREC became a regional partner recommended for and invited to engage in major long-term regional-level programs and projects. Presently, the general trend shows the decrease in the number of projects but the increase in their financial magnitude.



*CAREC Team, 2015*



# 3



## KEY ACHIEVEMENTS

### Promoting cross-sectoral, regional and international cooperation

CAREC actively promotes the interests of the region on major environmental issues and makes the unanimous “regional” voice heard on international platforms, such as the meetings of parties and ministerial conferences on environment and development, water resources governance, climate change, desertification, etc.

The Centre acts as a catalyst of regional processes on environment and development in Central Asia through open multilateral dialogues with regional organizations like IFAS Executive Committee and its structural units as ICWC, ISDC, RMC and RCH)

Under its mandate, the Regional Environmental Centre for Central Asia has been successfully performing its function of a platform for effective cross-sectoral, regional and international collaboration:

CAREC is constantly working on improving its performance by building its institutional, technical and human capacities. Intensive cooperation with multiple national and international partners allowed the Centre to make significant progress in the following areas:

CAREC also pioneered water management projects in small transboundary river watersheds in the region: 8 small basin councils were established on such rivers and in irrigation areas of Central Asia, 8 IWRM basin plans for transboundary rivers, including the Aspara, Isfara and Ugam were developed

With CAREC's support, 15 cities and towns of the CAR joined the EU “Covenant of Mayors – East” (CoMo East) Initiative and developed their municipal Sustainable Energy Action Plans (SEAP)

*«The Regional Environmental Centre for Central Asia plays an active role in strengthening relationships among the countries of the region».*

**Prime Minister of the Republic of Kazakhstan, Astana, 2004.**

## Promotion of innovative environmental protection tools

Drafting of national sectoral programs on low-carbon development (NAMA) for the first time in the region – on energy efficiency and energy saving in Kyrgyzstan and Uzbekistan, carbon sequestration through reforestation and afforestation in Tajikistan

Leadership in promoting the ecosystem approach in Central Asia. Currently, 6 payment for ecosystem services (PES) schemes are under implementation in the region. CAREC was the first organization in the CAR to apply ecosystem services assessment tools, mapping, and various models (General Equilibrium, SWAT, ReInvest) to assess impacts on ecosystem services

CAREC acts as a conductor of novel initiatives in the region, seeking to bring the best and most effective international practices, expertise, tools and approaches to nature conservation and sustainable use of resources to Central Asia:

Initiation and promotion of tools to develop and harmonize environmental reporting and increase accessibility of environmental data in the CAR: assessment of assessments and Shared Environmental Information System (SEIS)

Partnerships to promote Sustainable Development Goals (SDG's) in Central Asia: dissemination of knowledge, development and introduction of SDG-related training programs to national education systems

*«Today, not only scientists, but also government officials and politicians are concerned with environmental issues. As far as I know, humans played the central role in all environmental violations, and being a part of nature, we always break the limits of harmonious development. The establishment of CAREC, in my opinion, is a unique step forward in improving the relations between the man and the nature».*

**Agadzhan Babayev**, President of Turkmenistan Academy of Sciences, Associate Member of the Russian Academy of Sciences, 2004.

## Knowledge building and dissemination of information on relevant environmental issues

By constantly acquiring new knowledge, improving corporate competencies and analyzing experiences from completed and ongoing projects, CAREC has become a regional knowledge hub actively disseminating information and knowledge on sustainable development and environmental protection:

Establishment of CAREC Knowledge Hub, incorporating 4 regional information portals to share data, lessons learnt and expertise on key corporate activities, including: low-carbon development ([www.led-ca.net](http://www.led-ca.net)), energy efficiency training ([www.caeelp.org](http://www.caeelp.org)), basin organizations network ([www.riverbp.net](http://www.riverbp.net)) and “Water, education and business” (I-WEB)

Creation of unique educational resources for secondary and special secondary schools, including “Sustainable Development Goals in Central Asia”, “Green Pack for Central Asia”, “Green Pack: Glaciers of Central Asia” and “Caspian Green Pack”. More than 2,000 teachers, experts and trainers from around Central Asia and more than 50,000 secondary school and college students underwent “Green Pack” based training

More than 50,000 specialists, experts and policy-makers took part in working meetings, training sessions and workshops on environmental protection and sustainable development

Development of Bachelor and Master training courses on ecology, IWRM, energy efficiency and sustainable development that were later successfully integrated into higher and special secondary education systems of several Central Asian countries

Since 2006, CAREC annually conducts the Central Asian Leadership Program (CALP) to train young professionals from Central Asia (and since 2013, from Afghanistan) on a wide spectrum of themes, including water resources, climate change, “green” development, sustainable energy, environmental policy, etc. During the time of its implementation, more than 200 young specialists representing state environmental agencies, civil society, business and academic institutions graduated CALP and were trained on environment and sustainable development

# 4



## PARTNERSHIPS

Today environmental protection and combating ecological challenges goes beyond individual states' capacities – multilateral partnerships are key for success in addressing them. In this regard, CAREC is actively collaborating with national, regional and international agents by facilitating and supporting corresponding dialogues as well as forging conditions for exchange of information and environmental practices.

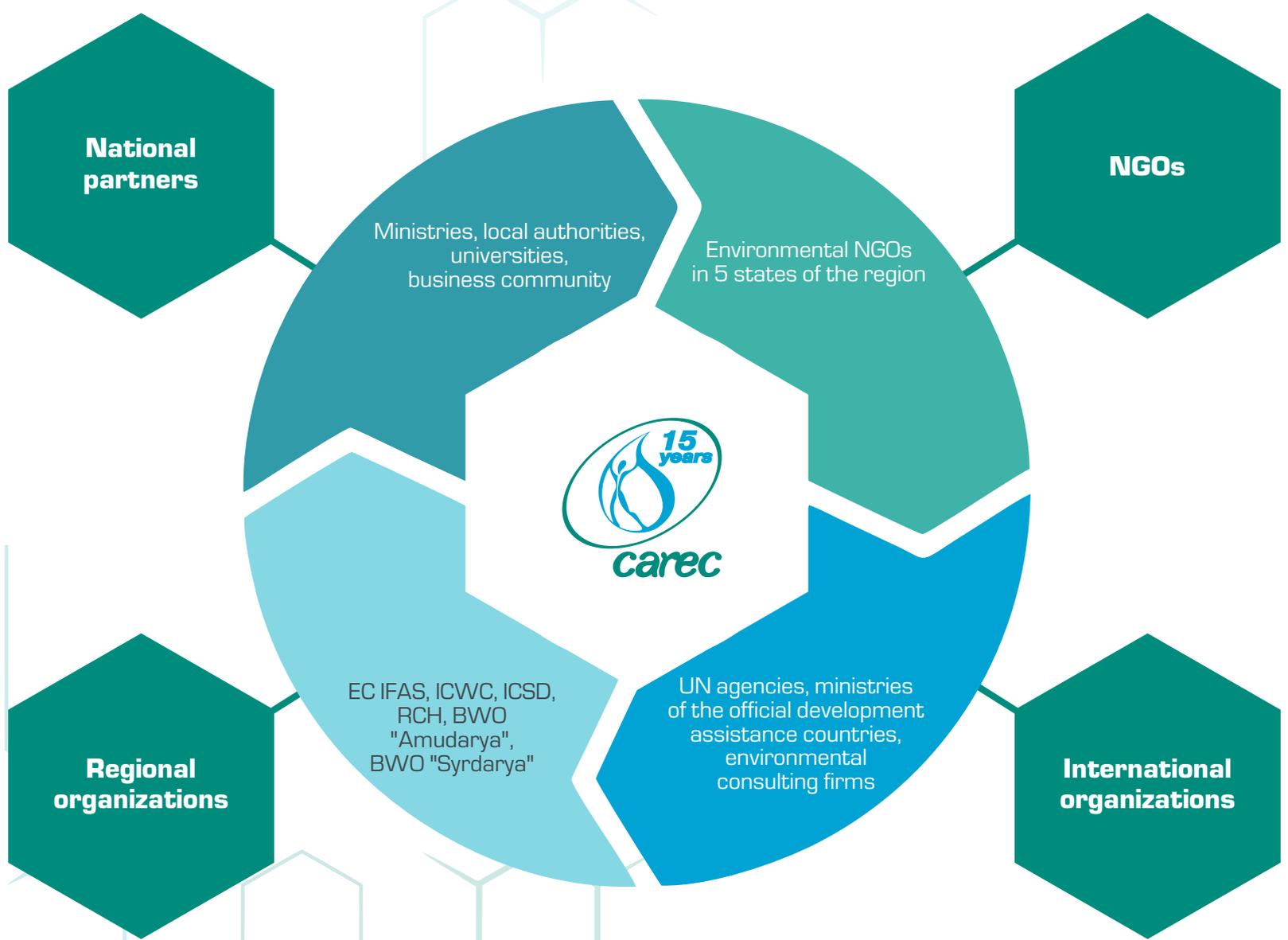


Figure 6. CAREC's collaboration with partners

# 4.1

## COOPERATION WITH NATIONAL PARTNERS

To ensure proper consideration of national priorities and to make regional efforts more effective, in addition to Central Asian NGO's, Aarhus Centres, research and business community CAREC works closely with various national partners of all five Central Asian states, including ministries, agencies and committees on environmental protection, education, agriculture, water management and energy, as well as with local governance bodies, secondary, vocational and higher educational establishments (schools, colleges, universities, training institutions).

CAREC Country Office in Kazakhstan (Astana), for instance, hosted by the Ministry of Energy of the RK contributes to strengthening relations with national ministries and state agencies and works hand in hand with multiple national partners like the Ministry of Energy, Ministry of Agriculture, Ministry of Foreign Affairs, Ministry of Investment and Development, Ministry of Education and Science, Ministry of National Economy, etc. Close working relations exist with non-governmental organizations and institutions such as the Association for Biodiversity Conservation of Kazakhstan, Kazakh Water Management Research Institute, Institute of Economics in Astana, multiple Kazakhstan-based universities, Institute of Health and Human, Green Academy, "Zhasyl Damu" Movement, RSE "Information and Analytical Center for Environment Conservation", Eurasian Water Centre and other organizations involved in environmental management and initiatives.



*Lecturers and participants of seminar in Turkmenistan on the project AWARE, Ashgabat 2014*



*Participants of Working Group "Promoting ecosystem services in thematic and macroeconomic programs and strategies of Kazakhstan", Astana, 2016*

*"Due to the fact that we are all inhabitants of a single natural space, it is very important for people of today from an early age to realize their inextricable link with the surrounding nature and their accountability before it. Now, in the XX<sup>th</sup> century, it should become a necessary and important factor in humans' relationship with the environment. CAREC represents the case of our civilization, in particular, our region, taking required and necessary steps with the account of current challenges and objectives. This is why CAREC's ideas are becoming increasingly recognized."*

**Chinghiz Ajtmatov, Chairperson of CAREC Advisory Council, Extraordinary and Plenipotentiary Ambassador of the Kyrgyz Republic in Benelux countries, national writer, 2004.**

CAREC CO in Kyrgyzstan is member to the working group of the State Agency for Environmental Protection and Forestry (SAEPF) under the Government of the Kyrgyz Republic, which focuses on assessing opportunities to mainstream ecosystem services in environmental legislation and regulations. NGO representatives and experts are also involved in organizing and conducting the WG activities. Regular consultations with national partners are held within the framework of the CO projects. Thus, in 2011–2014 CAREC Kyrgyzstan CO participated in the preparation of National State-of-Environment Reports. Cooperation with NGO's is also expanding. For example, the CO carries out joint activities with the Aarhus Centres, including with the ones in Bishkek City (under special agreement) and the town of Osh.



*Chinghiz Aitmatov, member of CAREC Public Council, with the members of the Board of Governors and CAREC staff, 2003*



In Tajikistan, CAREC works in partnership with the Ministry of Education and Science, Committee for Environmental Protection, Hydrometeorological Centre, Ministry of Labor, Migration and Public Employment and a number of other state agencies. The CO holds regular meetings with students and schoolchildren in Dushanbe to raise their awareness on climate change. In 2015, jointly with the national Ministry of Education and Science the CO conducted the Republican Forum of Young Environmentalists, which was attended by schoolchildren from regions and districts across the country. The International Earth Day for school students is held on regular basis in partnership with the Ministry of Education and Science, Dushanbe City Committee for Nature Protection and several NGO's. CAREC CO in Tajikistan is actively engaged in various national and international events. Thus, a CAREC representative was included in the government delegation to the 4<sup>th</sup> Meeting of the Working Group on Environmental Management and Climate Change.



*Working session of the project MONECA, Dushanbe 2015*

CAREC always appreciates the opinions of NGO's. For example, the CO discussed the draft of CAREC Development Strategy with NGO stakeholders via Tajikistan Climate Information Network (Dushanbe). The Country Office also conducted a series of TV broadcasts to raise public awareness on climate change as well as holds regular meetings with the representatives of Tajikistan local NGO's. In Turkmenistan, CAREC operates based on the MoU with the National Institute of Deserts, Flora and Fauna under the national Ministry of Nature Protection. A similar MoU with Turkmenistan's Ministry of Agriculture and Water Resources is under review and will be signed soon. The Centre's long-term partners in Turkmenistan, among others, include the State Committee for Environment and Protection of Land Resources, Ministry of Agriculture and Water resources, Forestry Administration, Turkmenistan ISDC SIC and Secretariat, National Institute of Deserts, Flora and Fauna, and the Aarhus Center, which collaborates with CAREC specifically in relation to NGO's and the private sector. As to ISDC SIC and Secretariat, CAREC assists these organizations in holding their regular meetings as well as consultations to share corporate project experiences.

In Uzbekistan, CAREC operates in collaboration with the main state environment agency – State Committee for Nature Conservation of Uzbekistan (*Goskomprirody*). With the opening of CAREC CO in Uzbekistan, cooperation with the Committee has been rapidly expanding and transformed from formal interactions into joint projects implemented under the MoU encompassing key priorities of both parties. Main prospective avenues of CAREC's cooperation with the Committee include environmental monitoring, sustainable management of nature conservation areas, water governance, biodiversity and others. Recognizing the importance of addressing water issues, CAREC also closely works with the Ministry of Agriculture and Water Resources, in particular on mainstreaming IWRM principles and capacity building for water professionals. Since 2016, CAREC CO in Uzbekistan takes part in the Sectoral Working Group on Water Management aimed to increase the efficiency of technical assistance and strengthen dialogue between development partners and state agencies.



*Certificate awarding ceremony under the Project "Protection and rational use of Sudochoye Lake System Wetlands of Ustyurt Plateau", Ravshan Fajziyev, Deputy Chairman of Uzbekistan State Committee for Nature Conservation, and George Deikun, Mission Director of USAID Central Asia, Tashkent City, 2016*

Alongside with expanding its programmatic interventions, CAREC is proactive in its engagement with other state and social partners in Uzbekistan. Thus, the Centre collaborates with the Ministry of Economy on promoting renewable energy in rural medical centers and the Hydrometeorological Services Center (*Uzhydromet*) of the Cabinet of Ministers of Uzbekistan on climate change. In addition to the organizations and stakeholders mentioned above, the CO also works closely with members of parliament, "Environmental Movement of Uzbekistan" and several academic institutions. Representatives of local civil society organizations participate in the implementation of CAREC projects, trainings, workshops, and round tables. The opinions of NGO's are taken into consideration while selecting themes and designing work plans under projects for implementation within Uzbekistan.

# 4.2

## COOPERATION WITH NGOS

CAREC highly values and strives to enhance its interactions with non-governmental organizations, which play a significant role in environmental protection and sustainable development in the region. It is important to note that ecological NGO's of Central Asia had been actively engaged in establishing CAREC as well as its further progress. NGO representatives participated in managing the Centre and contributed to its strategic development.

Facilitating involvement of environmental NGO's in promoting sustainable development in Central Asia constitutes one of CAREC's strategic objectives.

CAREC's collaboration with NGO's may be divided into two main phases:

- 2001–2009 – operation of CAREC Civil Society Initiatives Support Program. During that period, the Centre implemented 90 projects with the total budget of approximately 12 mln Euro. 90% of projects contributed to building NGO institutional capacity and supported their participation in dialogues and decision-making.
- 2010–2016 – cessation of institutional funding for CAREC and almost complete cessation of funding from major donors of NGO programs led to drastic reduction of CAREC's capacity to support NGO's.



*Representatives of CA NGO's – members of CAREC Public Council and CAREC staff, Almaty City, 2004 (CAREC photo archive)*

Despite financial constraints, CAREC continues its collaboration with environmental NGO's, and since 2010 the main interactions with them have been manifested in the involvement of NGO experts in CAREC projects, their participation in workshops, conferences and meetings (more than 70 persons per year). The audience of the annual Central Asian Leadership Program held by CAREC includes up to 30% of NGO representatives.

Establishment of the Regional Environmental Trust Fund aimed at aiding NGO's engaged in environment and development initiatives in Central Asia constitutes a necessary step to enhance cooperation with the civil sector, but the possibility of creating such a fund has not been yet determined.

Consultations with NGO's (invitations to meetings and on-line discussions) to gather insights and proposals for presentation at international dialogue platforms (COP-12, Batumi Conference, etc.)

Acknowledging the need to strengthen its ties with NGO's even more, CAREC seeks to introduce new approaches with the account of current financial trends within the donor community:

Holding meetings with partner NGO's in CAREC Country Offices to exchange information, discuss cooperation opportunities and design joint projects.

# 4.3

## COOPERATION WITH REGIONAL ORGANISATIONS IN CENTRAL ASIA

CAREC recognizes the strategic importance of reinforcing its collaboration with regional organizations in the field of sustainable development and water resources management. In order to do so, jointly with IFAS EC CAREC commenced the process of regular meetings of such organizations for them to agree on joint actions and establish reliable mutually beneficial synergies. This platform for collaboration and discussion is regularly used by the representatives of the IFAS EC, ICWC SIC and Secretariat, ISDC SIC and Secretariat, Regional Centre of Hydrology (RCH), BWO “Amudarya” and BWO “Syrdarya”, IFAS Executive Board in Kazakhstan, and Regional Mountain Centre for Central Asia.

Two meetings of regional organizations (May 25–26, 2015 and March 10–11, 2016, Almaty City, Kazakhstan) significantly contributed to strengthening cooperation among them. The first meeting allowed to design several coordination mechanisms and interaction formats manifesting the initial step towards forging a joint platform for regional organizations involved in sustainable development, environmental governance and water resources management initiatives in the CAR.

All participants of those meetings supported the EC/IFAS/CAREC initiative on holding regular forums for key regional agents engaged in SD and WRM as well as the need for their subsequent meeting with international partners. Representatives of regional organizations highlighted the necessity of creating a platform where regional partners could meet on regular basis to share their knowledge and plan joint long-term actions.

The second meeting of regional organizations aimed to strengthen Central Asian regional collaboration on WRM and environment protection via joint trainings and engagement in regional and global processes. Drafting of the “Concept for Interaction and Cooperation among Regional Organizations Involved in Sustainable Development and Management of Water Resources in Central Asia” became one of the major meeting outcomes. This document is expected to become the foundation of the future “Roadmap for Regional Organizations Joint Actions”.



*Meeting of Central Asian regional organizations, CAREC Head Office, Almaty City, May 2015*

A training for regional organizations' staff on project and financial management and information exchange (November 23–24, 2015, CAREC Head Office) became yet another step to building the capacity of Central Asian regional organizations. In total, 42 representatives of regional organizations have already participated in target meetings and workshops.

CAREC regularly collaborates with regional organizations by way of inviting them to projects as experts and sub-contractors. In 2015, 9 such experts rendered services within the framework of CAREC initiatives to the amount of more than 23,000 euro. 16 additional meetings with regional organizations were held to discuss the progress in relation to corresponding MoU's and Joint Action Plan.



*Second meeting of regional organizations, Almaty 2016*

In order to improve awareness and coordination, CAREC circulated the 2016 schedule of CAREC events among all regional organizations. Based on the ISDC request, CAREC supported the upgrade of ISDC website and participation of one of the national delegations of ISDC member-states in its June 2015 meeting (total award of 20,000 USD). ICWC SIC acted as a partner within the framework of the Project “Stakeholders Partnerships in Collaborative Policymaking: Fostering Transboundary Cooperation on Small Watersheds in Central Asia” (funded by the USAID) and performed works under its GIS-component (cost of rendered services, more than 37,000 USD).

Regional organizations stress the need for joint engagement in global and regional hydro-climatic and ecological processes and are supporting Central Asia's participation in global climate agendas, including within the framework of such events and initiatives as “Towards Paris 2015”, “Post-Paris Actions Towards 2020”, environmental collaboration (“Environment for Europe”), Efe Ministerial Conference in Batumi (June 2016), and Stockholm Water Week (September 2016). Regional organizations also endorsed the idea of holding the annual Water Climate Forum as well as the need to maintain and expand the regional knowledge base, exchange information on innovative technologies, issue joint publications on best practices and many other proposals.

# 4.4

## PARTICIPATION IN GLOBAL PROCESSES AND INTERNATIONAL COOPERATION

In addition to continual strengthening of its strategic linkages with regional organizations, CAREC has been also building long-term cooperation with international partners acknowledging the importance and supporting environmental protection and sustainable development in the region, like the European Union, UN institutions (UNESCO, UNEP, UNECE, UNDP, UNESCAP, GEF SGP), Regional Environmental Centre for Central and Eastern Europe (REC), OSCE Centres, GIZ, ICARDA, SDPI, ODI, IAMO, Goethe Institute, the governments of the UK, Germany, Ireland, Italy, the Netherlands, Norway, USA (via USAID), Switzerland, Sweden, as well as international business (“Samsung Electronics Central Eurasia” LLP, Coca-Cola, Chevron, AGIP, BG-Group, etc.). CAREC was established within the framework of the “**Environment for Europe**” (EfE) Process and throughout all years of its operation has been actively participating in it and attracted its partner NGO’s and experts from Central Asia. Today,

CAREC has changed its approach and is focusing on training partners on participation in the EfE Process events, including the 8<sup>th</sup> EfE Ministerial Conference in Batumi, with the aim of making the Central Asian regional voice unanimous, coherent and strong. To achieve this, in 2016 CAREC held national consultations on EfE in Central Asian countries to meet with regional organizations as well as facilitated thematic discussion at ISDC meetings. The results of such national consultations allowed forging a shared regional vision on the EfE Process with its subsequent presentation in Batumi. In addition, a side event (“Greening the economy and sustainable development in Central Asia: achievements and steps forward”) will be held in the course of the 8<sup>th</sup> EfE Ministerial Conference jointly with regional and international organizations.



*Regional training on green growth for sustainable development held jointly with UNESCAP, Astana City, 2016*

As part of the preparation for the upcoming process “Environment for Europe” in Batumi, CAREC held a series of national consultation dialogues and thematic discussion at the **ICSD meeting** Ashgabat.

Promotion of UN SDG's constitutes another process of influencing environmental policy in the CAR. CAREC has been actively supporting and facilitating it, as currently Central Asian countries are at the stage of nationalizing SDG's and reviewing their mid- and long-term strategic national priorities.

**Efforts in relation to international environmental agreements and conventions** are becoming an increasingly important sphere of CAREC's activities. The Centre aids the implementation of several environmental conventions in the region, in particular, the UN Framework Convention on Climate Change. Jointly with national partners, CAREC held a side event at Paris Climate Change Conference (COP 21) to present the corresponding regional vision "Climate Change in Central Asia: Opportunities for Joint Actions".

Within the framework of the UN Convention to Combat Desertification (UNCCD), CAREC not only conducted consultations with partner NGO's and presented the regional vision at COP-12 (Ankara, 2015), but also published the first in Central Asia target regional report, assisted Turkmenistan in drafting its national report under the UNCCD as well as contributed to mainstreaming the UNCCD Strategy into Turkmenistan National Plan to Combat Desertification.

The Centre also offered its platform to coordinate the implementation of Ramsar Convention in Central Asia as well as to exchange information on disaster risk reduction.



*Regional training "Green" growth of SDGs in cooperation with UN ESCAP, Astana 2016*



*High-level Forum on "Covenant of Mayors-East"*

In addition to its efforts under global agreements and conventions, CAREC is also vigorously supporting Central Asian countries within the framework of **global climate processes** with the aim of establishing a dialogue platform to collaborate with international organizations in formulating a common regional vision with the account of global climate commitments. Thus, in 2009, the Centre's team jointly with the Government of Germany, UNEP and several national partners – Uzhydromet and Turkmenistan Ministry of Nature Conservation -- held a series of regional workshops and meetings to prepare Central Asian countries for Copenhagen COP. In 2012 in Almaty, CAREC held a preparatory meeting with the representatives of Central Asia and a subsequent side-event at the International Conference on Sustainable Development (Rio+20). The event aimed to inform other stakeholders on the progress of Central Asian countries towards low-carbon development, transition to "green economy" and the linkages between these processes and sustainable development.

Preparations for 2015 Paris COP started early in the year, when in cooperation with the Asia-Pacific Climate Change Adaptation Network (APAN) CAREC conducted a regional conference on climate change funded by the Japanese Ministry of Environment. The conference final document identified priorities on adaptation, mitigation and capacity building shared by all countries of the CAR. The interim meeting of the representatives of Central Asian countries and CAREC was held June 3, 2015 in Bonn as part of the 42<sup>nd</sup> Meeting of UNFCCC Subsidiary Bodies. There, the Centre presented its regional vision in relation to Central Asian countries' capacities towards Paris Conference and reiterated its commitment to regional dialogue.

CAREC is actively involved in both global and regional ESD processes. The centre regularly contributes to presentation of Central Asian countries' interests to the international community and is a member of global networks:

UNECE ESD

global "International network of UNESCO Chair teachers on reorienting teachers training to address sustainable development challenges",

global network on "Agreement on higher education within the framework of the Rio + 20 Declaration".



*Joint CAREC/Central Asian countries side event at the UNFCCC CoP in Paris, December 2015*

The November 2015 CAREC Regional Conference constituted a logical continuation of the regional process initiated by the Centre to prepare for the new Global Climate Change Agreement on the eve of Paris COP (the so-called "Paris Process in Central Asia"). The conference's main objective was to provide a regional platform to share information and experience on countries' commitments on adaptation and reduction of greenhouse gas emissions by 2030 under the Intended Nationally Determined Contributions (INDC), analyze the efforts of Central Asian countries on "greening" their economies, promoting low-carbon development and climate resilience, as well as to prepare the stakeholders for the upcoming COP.

The outcomes of the “Paris Process in Central Asia” allowed Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan representatives to participate in the side-event (December 4, 2015) at Paris COP and inform the international community on national policies and innovative practices in the area of low-carbon development and adaptation in Central Asia. On December 13, 2015, the Paris Climate Change Agreement was adopted and signed by 175 states, including Central Asian countries (signed on April 22, 2016).

CAREC has also contributed to promoting the 2005–2014 UN ESD Decade (UNESCO), UNECE ESD Strategy and Global Action Program (GAP) in the CAR in 2015 through a series of international meetings, UNECE workshops and trainings on ESD in Central Asia held jointly with UNESCO and UNECE.



*Participants of the second meeting of the regional working group of the project “IWRM in small transboundary river basins of Central Asia”, Bishkek 2014*



*CAREC Executive Director speaking at the 7th World Water Forum,*

For more than 14 years now, CAREC has been supporting various stakeholder platforms. The Centre is a member of the International Network of Basin Organizations as well as the Global Water Partnership Network. Since 2007, CAREC regularly participates in World Water Forums and the annual World Water Week in Stockholm. The Centre is also taking part in meetings of parties and several working groups under the Helsinki Convention on the Protection and Use of Transboundary Watercourses and International Lakes. A new website ([www.riverbp.net](http://www.riverbp.net)) was designed and launched by CAREC specifically with the aim of preserving and disseminating WRM knowledge and building partner organizations' capacities. Strategically, its goal is to unite existing basin organizations into a single network and ensure continual exchange of experience and knowledge.

Promotion of such novel tools as online blogs, consultations and discussions on various aspects of environmental protection through thematic CAREC websites has proved to be an effective way of strengthening cooperation and building mutual trust among the nations of the region.



## LEADERSHIP AND CAPACITY BUILDING FOR SUSTAINABLE DEVELOPMENT IN CENTRAL ASIA

Enhancement of cross-program cooperation and multidisciplinary linkages among programs constitutes one of the most significant CAREC achievements fostering better coordination of internal corporate processes as well as more effective liaising with international and national partners. The multidisciplinary approach highly depends on the development of leadership tools and building the capacities of decision-makers, especially young professionals engaged in environmental protection and sustainable development. Who will be making environmentally sensible decisions tomorrow? How can we preserve the unique ecosystems of our region for future generations? Who will be promoting Sustainable Development Goals and implementing the 2030 Agenda in Central Asia? What should we do now to ensure that? Answers to these and many other questions depend on all of us and our actions today.

### **Annual Central Asian Leadership Program on Education for Sustainable Development**

The Central Asian Leadership Program (CALP), which targets the region of Central Asia including Afghanistan, is a bright example of successful cross-sectoral and cross-program collaboration. CALP has been dynamically expanding year by year improving and adapting to the needs of concerned countries and target groups. This is why it is interesting, recognized and endorsed by national partners, donors and the public. To date, this is the only regular program on environmental capacity building for sustainable development in Central Asia for state, business and civil society representatives ensuring comprehensive understanding of sustainable development issues. CALP was designed based on the achievements and lessons learnt of the Central Asian Young Leaders Programme (2006–2008) and the Leadership Program of Tonji University.



*Lecturers of the 6<sup>th</sup> CA Leadership Program, representatives of OSCE, UNEP and CAREC, September 2015*

CALP focuses on water resources and other water-related issues, climate change, “green growth”, food security as well as promotion of “green” development in everyday life, corresponding practices, behavior, attitudes and environmentally friendly decisions throughout the whole Central Asia.

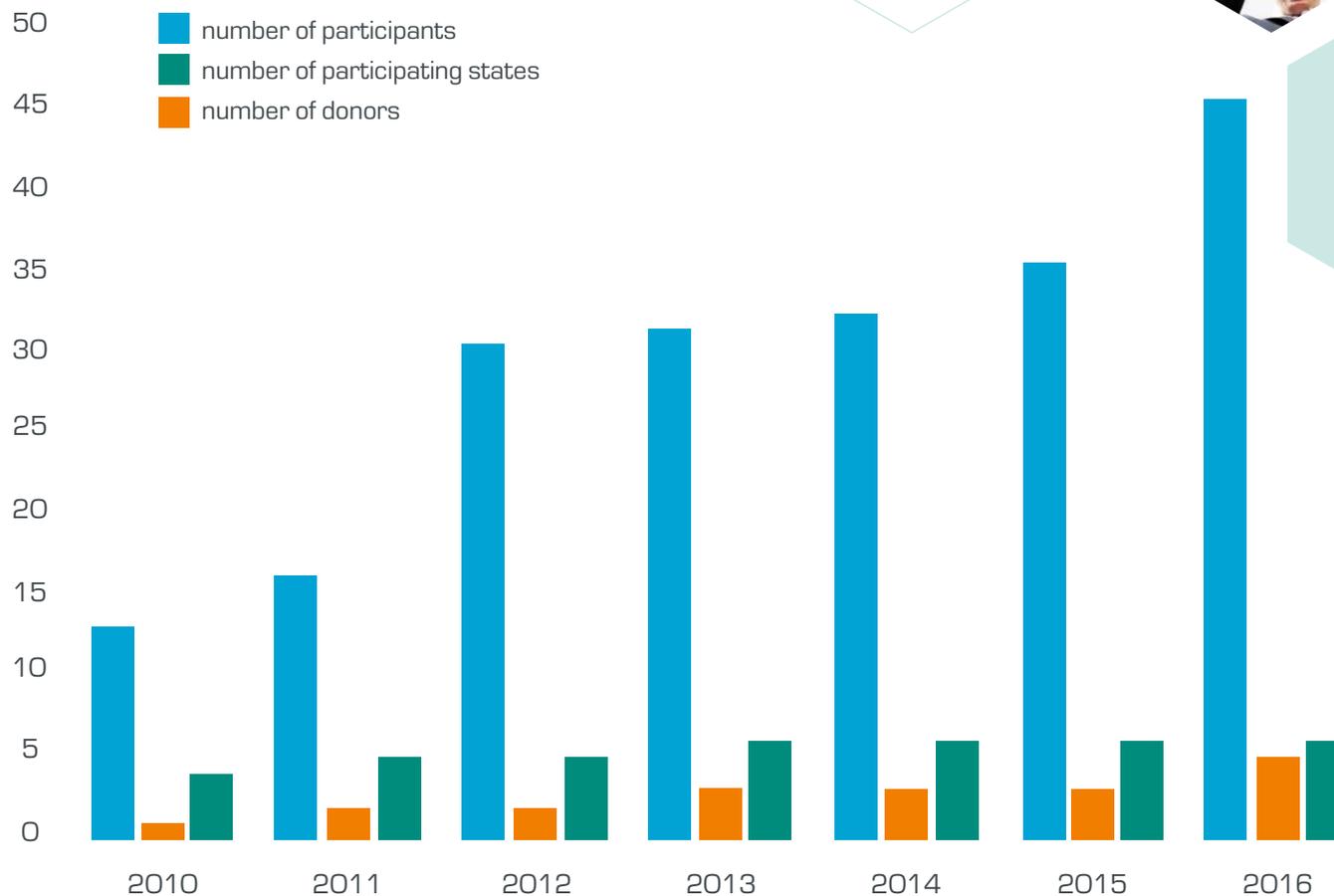
Today, **about 200 CALP alumni** are actively engaged in environmental protection activities working in government agencies, international organizations, NGO's as well as individual environment and development project in all Central Asian states and Afghanistan. CALP donors and partners include UNEP, Government of Norway and the OSCE Program Centre in Astana, Kazakhstan. Since 2016, USAID and the European Commission also support the Program. It is expected that **by 2020 CALP network will consist of more than 350 graduates** – the future leaders in the field of environment and sustainable development of the region.

Best example of intersectoral and inter-program activities of CAREC can be the Central Asian Leadership Programme (CALP) which targets Central Asian countries and Afghanistan.

## EDUCATIONAL AND TRAINING PROGRAMS, COURSES AND MODULES

Modern society needs professional environmental leaders, decision-makers, teachers, experts and trainers with advanced knowledge, skills and competencies to implement SDG's and to mainstream "green" approaches and principles in education and social life.

Jointly with national partners, CAREC has been rendering a lot of attention to developing and promoting novel learning models, such as online courses, webinars and workshops. Training-of-trainers, transfer of educational modules and programs to state training and capacity-building centers for government officials are all good ways of ensuring subsequent applied use of accumulated corporate knowledge.



**Diagram 2.** CAELPSD development dynamics, 2010–2016

CAREC HAS DEVELOPED AND PUT INTO PRACTICE MULTIPLE INNOVATIVE TRAINING PROGRAMS, MODULES AND TOOLS:

“Energy efficiency and sustainable development” optional course at K. Satpayev Kazakh National Technical University (with the support of Chevron and GEF/SGP (2009–2011))

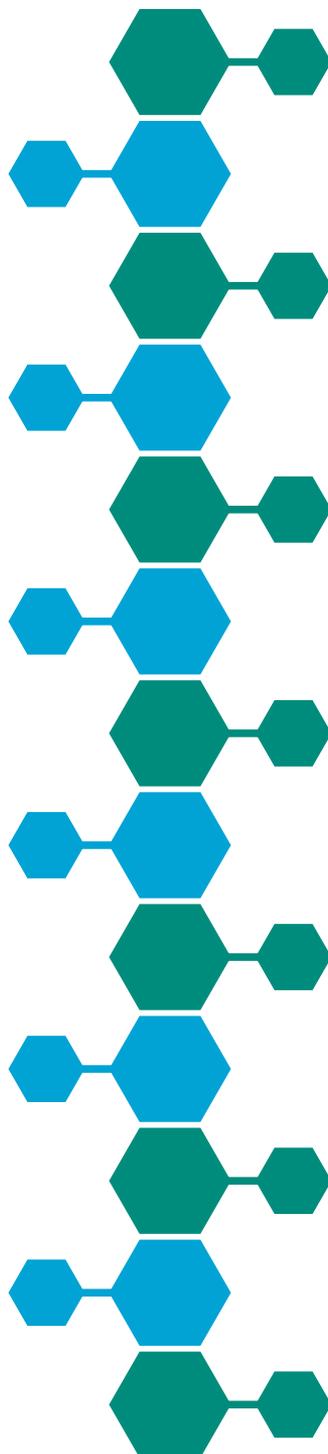
A new Master course on integrated water cycle management (IWCM) appraised in three pilot universities in Kazakhstan under the EU TEMPUS Project “I-WEB” (Water, education and business), including an IWCM Manual and Glossary for the higher education system of Kazakhstan

As of today, more than 500 participants from Central Asian countries participated in trainings and workshops on low-carbon development, climate change and sustainable energy

more than 100 best practices and technologies on renewable energy and energy efficiency gathered and posted on [www.caeelp.org](http://www.caeelp.org) Information and Educational Portal

More than 1,000 specialists in the sphere of water resources use and protection were trained on IWRM principles, basin planning, and efficient use of water resources

More than 90 specialists from ministries, departments and statistics agencies gained knowledge and skills on elaborating 36 environmental indicators as per UNECE recommendations as well as drafting NSoER's based on environmental indicators and Shared Environmental Information System (SEIS)



“Environment and sustainable development” mandatory course for Bachelor students in the Republic of Kazakhstan (with the support of the OSCE Centre in Astana (2008–2010))

“Environmental protection and sustainable development” innovative course for secondary vocational and technical education establishments (appraised at the TPCIP pilot college in Uzbekistan, with the support of Samsung (2015–2016))

“Green Pack: Glaciers of Central Asia” and “Caspian Green Pack” designed in cooperation with REC (2010–2013)

In 2015, more than 300 participants (policy-makers, professionals and experts on climate change and sustainable energy) took part in regional-level events under the Paris Process in Central Asia

CAREC was one of the first organizations in the Central Asian Region to launch capacity-building and awareness-raising activities targeting government officials and academia on SDG's, and is now developing a special SDG Academic Course and Training Module (2015–2016)

The Basin Planning Manual was developed; currently, the corresponding online course is under development

More than 31,000 people (representatives of local authorities, professionals and rural communities in Kazakhstan, Kyrgyzstan and Tajikistan) gained knowledge on ecosystem approaches and received practical recommendations on their implementation

# 6



## KNOWLEDGE AND INNOVATIONS

More recently, CAREC has been increasingly utilizing scientific and research approaches, validating and implementing innovative solutions on environmental protection and sustainable development as well as executing more research-oriented projects enabling the Centre to progress as a knowledge hub and to strengthen its own and partners' expertise.

# 6.1

## EXPANDING CORPORATE EXPERTISE

CAREC is a pioneer in Central Asia in a number of areas of environmental protection, including drafting of national low-carbon development programs based on NAMA (Nationally Appropriate Mitigation Actions). In 2014, in consortium with DIW Econ and thanks to the financial support of German Government, the Centre assisted and facilitated drafting of NAMA-based programs (Kyrgyzstan, Tajikistan and Uzbekistan). All of them target reduction of GHG emissions by way of enhancing energy efficiency and introducing energy saving measures (Kyrgyzstan and Uzbekistan) and carbon sequestration through reforestation and afforestation (Tajikistan). In Tajikistan, CAREC managed not only to utilize the available national expertise and analyze relevant data to formulate the national low-carbon development program, but also drafted the carbon sequestration methodology on quantity assessment based on country-specific direct and indirect factors. In 2015, this national program was selected for further funding by NAMA Facility Fund.



*Training on water management for residents of Ugam Village (Kazakhstan) by lecturers from West Virginia University (USA) and CAREC experts, 2014*

CAREC is also an innovator in basin planning on small transboundary rivers of Central Asia. Before all, the Centre successfully developed a common approach to drafting basin action plans. The unique Basin Planning Manual (considering specific conditions in Central Asian countries) and the Training Module “Five Steps to Basin Planning” were developed and tested in 6 small pilot basins. The Manual and the overall CAREC approach to drafting river basin plans are the corporate flagship tools successfully utilized under various projects, including for strengthening synergies.

For the first time in Central Asia, the Centre developed and applied several water-related payment for ecosystem services (PES) schemes within the framework of its ES-specific projects. Ecosystem services mapping and economic valuation efforts are currently underway. Pilot PES models are undergoing development and application in different CA countries.

CAREC's progression as a knowledge hub entails deployment of new approaches to decision-making based on cutting-edge modeling tools. This approach manifests the first step in ensuring communication and science- and knowledge-based decision-making, which, in its turn, will allow guaranteeing sustainability of target solutions and strategic stability of planning and state-allocated subsidies.

The Centre was also able to develop and test a joint approach to water quality monitoring in transboundary rivers of Central Asia, including a roadmap on enhancing collaboration on water quality management based on a synthesis of techniques applied in different Central Asian countries. This allowed to conduct joint monitoring of water quality on the Talas River between Kazakhstan and Kyrgyzstan as well as to gather the water quality data that had been missing for the last 20 years.

“Low-Carbon Development of Central Asia” ([www.led-ca.net](http://www.led-ca.net)) – promoting the principles of energy efficiency and renewable energy

“Educational Portal on Energy Efficiency in Central Asia” ([www.caeelp.org](http://www.caeelp.org)) – a platform to accumulate and disseminate materials on best energy-efficient practices

CAREC Knowledge Hub ensures efficient management and sharing of knowledge. The Hub incorporates the following 4 thematic websites

“Eurasian Basin Management Portal” ([www.riverbp.net](http://www.riverbp.net)) – supporting water specialists on basin management issues and exchange knowledge, information and approaches

“Water, education and business” – the I-WEB TEMPUS website ([www.iwebtempus.kz](http://www.iwebtempus.kz))

Application of modern learning models is gaining momentum via online courses, webinars and workshops. Currently, a special Basin Planning Online Course is in the works. Moreover, capacity-building activities cease to be merely sporadically implemented on project-to-project basis. CAREC's new projects are designed to incorporate training-of-trainers as well as transfer of training modules and programs to state training and capacity-building centers. This approach will allow systemic dissemination of knowledge across CA countries and addressing the lack of qualified personnel, not to mention development of a single approach to information presentation and, consequently, common understanding of WRM challenges.



*Study tour for public officers of Central Asian states across European countries, Austria 2015*

CAREC has been long working on developing and harmonizing environmental reporting as well as ensuring accessibility of environmental data in the region based on the Shared Environmental Information System (SEIS) and Assessment-of-Assessments tools.

Several completed projects helped to improve the availability of environmental data in Central Asia in a manner so as to ease such data integration into SEIS. To facilitate the process, national consultations, workshops for experts and government officials and dialogues on data availability and access, including indicators, statistics and environmental reports, were conducted and a regional SEIS working group was established. A “Brochure on SEIS in Central Asia” and an “Analytical Review of SEIS Implementation in Central Asia” were published to raise target awareness among the public and professionals.

# 6.2

## FACILITATING KNOWLEDGE-BUILDING AND IMPROVING PARTNER COMPETENCIES



*A US study tour on environmental farming for representatives of Central Asian state and public organizations, 2014*



Ability to study and learn new things is one of the features of professional organizations. In this regard, CAREC considers its every partner as an exceptionally valuable source of novel knowledge, which can be used for effective self-development and corporate training. The Centre is also always willing and ready to share its own knowledge and competencies with partner organizations. CAREC intends to continue promoting partner capacity building and mutual intellectual enrichment. Thus, the Centre conducts various trainings, workshops and study tours on WRM, capacity-building for transboundary basin organizations, low-carbon development and energy efficiency, upgrading the educational sector, etc.

In this context, cooperation with regional organizations is rendered a high priority. To facilitate successful fulfillment of obligations assumed under regional organizations' agreements, on November 23–24, 2015 CAREC held a training on project and financial management, reporting, communication tools, cooperation with donor community for effective resource mobilization. In the course of the training, CAREC's corresponding experiences were presented using applied materials and examples. According to participants' feedback, the training was very useful as currently donors set high requirements in relation to project management, financial reporting and the quality of project implementation.

The Project “Innovative Samsung Academy” is yet another example of successful collaboration of state, public and business organizations. It was implemented in 2015–2016 in Uzbekistan with the support of following partners: Environmental Movement of Uzbekistan, Samsung Electronics and Tashkent Professional College of Information Technologies. The Project led to the establishment of a training center to teach TPCIT students to repair digital devices, including fitting it with necessary equipment. Every year about 250 college students will be studying there, which will provide them with an opportunity to obtain technical skills currently in high demand on the labor market. The innovative course “*Environmental protection and sustainable development*” for secondary vocational education was developed under the project as well.

The Project “Innovative Samsung Academy” is closely tied with environmental conservation due to the fact it is based on the so-called “reduce–reuse–recycle” approach. By building technical capacities and professional competencies to recover broken mobile devices, the Project will contribute to prevention of excessive consumption of natural resources. Thus, the Innovative Samsung Academy Project serves a good example of successful collaboration of business, NGO’s and academia in achieving the three key goals of sustainable development – social, economic and environmental resilience.

The Project “Raising Environmental Awareness to Enhance Partnership between the European Union and Central Asia” (AWARE) funded by the EU is another example of close cooperation and fruitful exchange of experience. The project’s main objectives included raising awareness on the principles of reverse/recycled water supply and promoting the principles of sustainable consumption and production, specifically on small and medium–sized enterprises (SME) in Central Asia.



*Study hall of Innovation Academy of Samsung, Tashkent 2016*

The project “Innovation Academy Samsung” is the best example of CAREC’s collaboration with business community, NGOs and educational institutions



*Representatives of Samsung Electronics, Environmental Movement of Uzbekistan, Tashkent Professional College of Information Technologies and CAREC are opening the Innovative Samsung Academy, Tashkent City, 2016*

The project research showed that Central Asia is home to many positive examples of SME’s integrating “green” and eco–friendly production technologies helping them not only to get commercial benefits but also to remain committed to doing “green business”. Demo and study tours organized by CAREC for SME and Mass Media representatives as well as the Central Asian “green business” competition encourage private companies to raise their eco–friendliness and to use natural resources more efficiently.

More than 90 representatives of CA Mass Media also took part in a series of workshops and master classes, where they shared their experiences on how to better cover environmental issues and promote environmental awareness. This joint initiative resulted in drafting a brochure “Additional Information for Central Asian Journalists on Covering “Green Economy” Issues in the Media” and a special glossary for reporters “Central Asia: Introducing Reverse Water Supply and Reducing Pressure on Water Resources”.

# 6.3

## MAINSTREAMING SCIENTIFIC AND RESEARCH APPROACHES AND INNOVATIONS

By adopting a new development strategy, CAREC assumed the trend of **continual development of its research capacity**. Year by year, in collaboration with the leading world universities and research centers CAREC is implementing more and more research projects based on advanced forecast and GIS models.

The Centre is becoming a true knowledge hub striving to deploy most advanced calculation and modeling tools to support effective management of natural resources. Application of the ecosystem approach in decision-making requires innovative solutions to assess ES's relevance and significance for national and regional economies.



*Participants of the 6th Central Asian Leadership Programme on environment for sustainable development, Almaty 2016*



*National meeting of partners within the research project of the PRISE initiative, Dushanbe, April 2016*

Thus, within the framework of one of its ES-specific projects CAREC tested a series of tools widely applied internationally, i.e. General Equilibrium, water resources and soil assessment (SWAT), and investment (ReInvest) models.

In 2014–2015, in collaboration with the Minnesota University CAREC conducted a research based on general equilibrium and mathematic algebraic models to assess the value of water for a target country. The research's second objective was to analyze the opportunities of using acquired data to develop measures aimed at improving the use of natural resources in the pilot region (Turkestan District of South Kazakhstan Region).

The economic modeling allowed drawing several scenarios of the region's development based on an output model, which could be subsequently utilized for local- and national-level planning. Economic valuation of ecosystem services is a challenge requiring development of a methodology, which would take account of project specifics and needs, including goals, objectives and geographic context. ES-specific projects allowed to implement and customize several methodologies for ES economic valuation and mapping, develop thematic guidelines as well as fine-tune most advanced valuation models to CA conditions.



*Transferring water management equipment to Aspara River under USAID/ CAREC project, Kyrgyzstan, June 2014*

SWAT and ReInvest models to assess water and land resources were applied jointly with the partners from the Minnesota University to model water and land use in the pilot area of Aral Syr Darya Basin. The scenarios suggested by the two models reflected the current situation on using water resources and the options of developing irrigated agriculture and crop rotation and, likewise, allowed to assess several ways of the region's development based on introducing crop substitution practices, applying best fertilizer application practices and using subsidies.

Currently, in collaboration with national partners and international experts from PRISE (Pathways to Resilience in Semi-Arid Economies) CAREC team is conducting another research project "Migration, remittances, adaptation and resilience to climate change in arid and semi-arid regions of Senegal and Tajikistan".

The research aims to determine the role of migrants and the contribution of private investment (remittances) to climatically sustainable development of development of households in three regions of Tajikistan. Simultaneously, the project's science-based approach serves as a foundation for drawing policy proposals ensuring sustainable development of the country, especially of areas highly vulnerable to climate change. The innovation of this research project – which will continue until 2019 – lies in considering *migration as an opportunity to adapt to climate change* as well as generating new knowledge on how to make economic development of arid and semi-arid countries more resilient to climate risks. To date, CAREC's team has already designed the necessary methodology and identified several pilot areas to launch it on the household level.

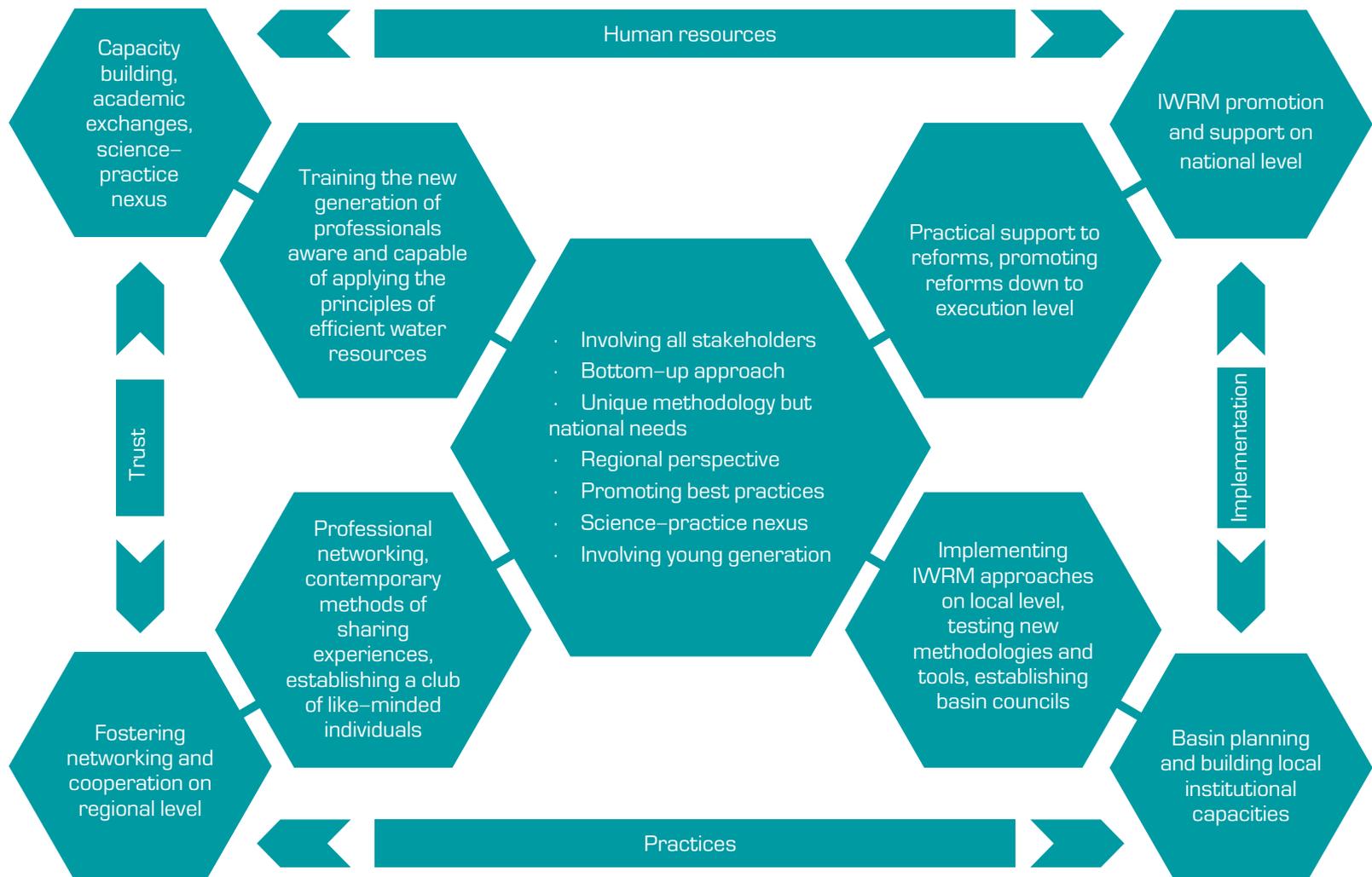


*National meeting of partners within the research project of the PRISE initiative, Dushanbe, April 2016*



*Demonstration of the equipment in the Maylybay channel of the Aspara river, Kyrgyzstan 2014*

For example, in the field of water resources management CAREC uses the “bottom-up” methodology and approach, i.e. the Centre acts only as a facilitator of local basin planning and promoting IWRM. This is a novel approach already yielding good results. The planning process includes identification of challenges and developing an action plan to address them. The process is entirely based on earlier research and incorporates a comprehensive baseline assessment of a pilot area (state of environment, social and economic development of the region, legal assessment) as to opportunities for basin planning. This approach allows to clearly identify specific issues and, thus, to develop reasonable and knowledge-based measures to tackle them. Science-based decision-making ensures basin planning sustainability and, therefore, facilitates the process of improving the situation in a given region via implementing the region-specific basin plan.



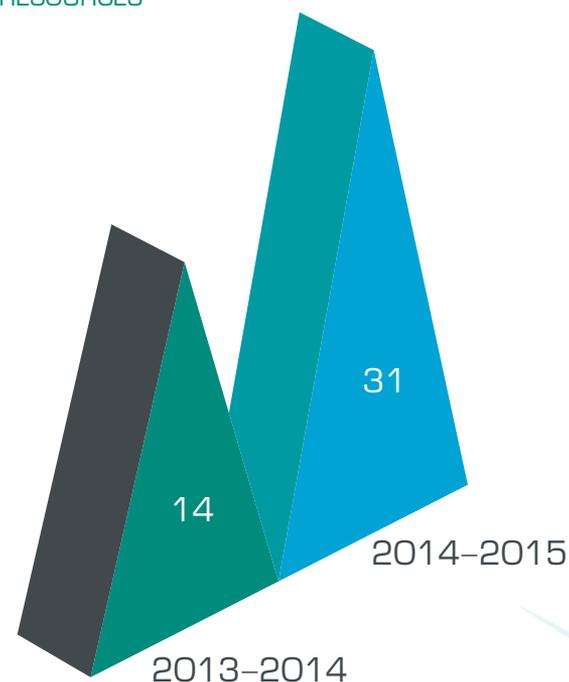
**Figure 7.** CAREC approaches and methods in supporting water initiatives

In order to develop its corporate research capacity, CAREC actively facilitates and builds expert networks. In 2013, the Academic Community Network of Central Asian countries was established to foster sharing of knowledge, experience, and methodologies on WRM-related educational programs. In the course of their activities, network members supported Master students participating in the CAREC-held competition of research projects to conduct their studies, shared their experience on engaging students in applied and field investigations, as well as reviewed the corresponding experiences of foreign universities, including these in the United States.

CAREC also supports the development and application of innovations on automated water accounting and disseminates such new technologies on local level, for example, by installing a fully automated water-measuring station on the transboundary Aspara River to prevent water disputes and conflicts among local community members.

Every year, the competition of water-related research applications is becoming more and more popular among Master students of Central Asian countries. Since 2013, 18 research proposals have been supported and the number of applications increased from 14 in 2013–2014 up to 31 in 2014–2015. In 2016–2020, it is planned to invite students from Afghanistan to participate in the competition also.

### COMPETITION OF STUDENT RESEARCH APPLICATIONS ON WATER RESOURCES



**Diagram 3.** Number of competitive student research applications



*Joint cleaning of the channel of the river Isfara, 2016*



*Tractor obtained within the project upon the decision of members of small river basins, Isfara river*



## OUTLOOK TO FUTURE

### Transition from a cooperation platform to a knowledge hub

Global transformations have created unique opportunities to enhance cooperation on sustainable development and environmental protection. New knowledge, methods and information have become more accessible and closer to users. The public is intensively using the information space for effective environmental management. The changes taking place in the region, such as *strengthened role of the state in environmental protection, transformation of economic development models in Central Asian countries and global processes require CAREC to also change its approaches and principles of work.*

Globalization, new challenges and the need for new and more sustainable solutions in the area of environmental protection require us not only to implement projects, but also to accumulate and disseminate knowledge. Therefore, since 2013 CAREC began to shift from a purely project implementation organization to becoming a knowledge hub on sustainable development and environment. *The main elements of this transformation include building a self-learning organization, strengthening partnerships and setting up an effective management system. CAREC already elaborated and implemented the corresponding Change Concept.*

Such a shift requires systemic and structural changes in performance. Most importantly, CAREC is not changing its mission and role as a regional cooperation platform. Transition to knowledge hub does not alter the organization's status and objectives, but its approaches to corresponding efforts. Building, utilizing and disseminating knowledge has become a prerequisite of successful operation in modern context. CAREC attracts new knowledge, is a source of knowledge and has direct access to local expertise. *Therefore, systematization of knowledge and its dissemination among partners based on innovative approaches constitute CAREC's essential functions and aims. This is the most important part of 2020 CAREC Strategic Development Plan.*

The 2020 CAREC Strategic Development Plan stipulates not only for expansion of thematic areas, but also for building methodological, instrumental and institutional preconditions for establishing a knowledge hub. To date, CAREC has launched a knowledge portal, several training websites and other knowledge dissemination tools. Regular educational trainings, Central Asian Leadership Program and corporate publications testify to the Centre's transition from conventional to innovative activities and approaches. *At this stage of societal development, successful partnerships have to be based on the principles of mutually beneficial exchange of information and knowledge.*

As a Knowledge Hub, CAREC will focus on generating new knowledge, deploying modern approaches in mainstreaming and transmitting data and information, promoting innovative approaches to knowledge application. Being a platform of cooperation among different social sectors, CAREC will also contribute to mutual exchange of knowledge among these different sectors. Particular attention will be also paid to preserving knowledge – both national and international – generated within the framework of programs and projects. Utilization of cutting-edge tools like modeling, IT, remote sensing and GIS will become an integral element of all CAREC interventions. *Knowledge will be the key to tackling severe sustainability and environmental challenges, which Central Asia still faces today.*



## APPENDICES

### List of abbreviations and acronyms

APAN	Asia–Pacific Adaptation Network	IFAS	International Fund for Saving the Aral Sea
AWARE	Raising Environmental Awareness to Enhance	IT	information technologies
EU	CA Partnership	IWCM	integrated water cycle management
CA	Central Asia	IWRM	integrated water resources management
CALP	CA Leadership Program	MONECA	Environmental Monitoring in Central Asia
CAR	Central Asian Region	MoU	memorandum of understanding
CCSE	Climate Change and Sustainable Energy	NAMA	Nationally Appropriate Mitigation Actions
CO	country office	NGO	non–governmental organization
COP	Conference of Parties	ODI	Overseas Development Institute
DIW Econ	German Institute for Economic Research	OSCE	Organization for Security and Cooperation in Europe
IFAS EC	Executive Committee of the International Fund for Saving the Aral Sea	PES	payments for ecosystem services
EMP	Environmental Management and Policy	PPP	public–private partnership
ESCAP	Economic and Social Commission for Asia and the Pacific	PRISE	Pathways to Resilience in Semi–Arid Economies
ESD	Education for Sustainable Development	RCH	Regional Centre of Hydrology
EU	European Union	REG	regional environmental goals
FOEN	Federal Office for Environment of Switzerland	RMC	Regional Mountain Centre
GEF SGP	Small Grants Program of the Global Environment Facility	SDPI	Sustainable Development Policy Institute
GIZ	German Society for International Cooperation	SEAP	Sustainable Energy Action Plan
IAMO	Leibniz institute of Agricultural Development in Transition Economies	SEIS	Shared Environmental Information System
ICARDA	International Center for Agriculture Research in the Dry Areas	SIC	Scientific Information Center
ISDC	Interstate Sustainable Development Commission	TEMPUS	Trans–European Mobility Programme for University Studies
ICWC	Interstate Commission for Water Coordination	UN	United Nations
		UNCCD	United Nations Convention to Combat Desertification
		UNDP	United Nations Development Programme
		UNECE	United Nations Economic Commission for Europe
		UNEP	United Nations Environment Programme
		USA	United States of America
		WIS	Water Initiatives Support



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