International Conference of the Eastern Europe, Caucasus and Central Asia Network of Water Management Organizations (EECCA NWO)

"Cultural and Educational Issues Related to Water Management in the EECCA Countries"

February 9-10, 2016

Almaty, Republic of Kazakhstan

REPORT

Organizers:

CONFERENCE

The key topics for discussion were:

- Water and culture;
- Water and civilization;
- Water and ethics;
- Water and education.

The Executive Secretary of EECCA NWO Prof. V.A. Dukhovniy opened the Conference.

The welcome speeches were delivered by:

- P.A.Polad-Zadeh, President, EECCA NWO (in form of a video message)
- D.P.Putyatin, Director, Department of Land Reclamation, Ministry of Agriculture, Russian Federation
- B. Libert, Regional Advisor for Environment, UNECE
- A. Chevelev, Officer-in-Charge of UNESCO Almaty Cluster Office
- E.Tardieu, Deputy Secretary General of International Network of Basin Organizations

Further, the following reports were presented:

Prof. V.A.Dukhovniy - Water and ethics in the modern world

B.Libert - International conventions as a display of water ethics

E.Tardieu - COP21 and INBO initiative “Paris Pact on water and adaptation to climate change in the basins of rivers, lakes and aquifers”

V.I.Sokolov - Moral and ethical aspects of the society commitment to water security

A.D.Ryabtsev - Regional water strategy at present stage of water development in the Aral Sea Basin

Prof. N.B. Prokhorova - The role of Water Museum in educational and cultural space

Acad. B.M.Kizyaev - Environmental and social aspects related to water use in the Russia’s regions

Prof. V.A.Stashuk - Water resources in Ukraine: history and present-day

N.Kim – UNESCO-IHP activities: from global to regional perspectives

Prof. D.V.Kozlov - Innovative system of water education in the era of ambitious education and science reforms in Russia

O.I.Eshtchanov - Monitoring results of ASBP-3: water management actions to the benefit of EECCA

Ye. Simonov - New Silk Road – risks and opportunities for water sector

Prof. M.Yu.Kalinin - Experience in developing curricula for the postgraduate course on integrated water resources management as part of the EU Tempus Program

N.P. Mamataliev - Adoption of Integrated Water Resources Management in curricula of the Kyrgyz National Agricultural University named by K.I.Skryabin

M.Ya.Makhramov - Water and civilization

A.R.Uktamov - Construction of interstate main canals in the Syrdarya river basin and their current conditions

A. Tairov - About activity of the Intersectoral Work Team on hydrological risks

D.Dadobayev - Education for integrated water management and improved water use in the Republic of Tajikistan

The President of EECCA NWO Acad. **P.A.Polad-Zadeh** underlined in his video message that the present day set a number of institutional challenges to overcome at the national level. These were the right to water and the value of water. Each user should have a legally enforceable right to water. Moreover, water should have its value.

He paid attention to the fact that since 1990 no large hydraulic structure had been built in Russia to improve lives of people and enable better performance.

"Undoubtedly, the time is not far off when international relations, and moreover, challenges for the leadership in the world would be focused around possession of freshwater rather than that of oil and gas.

In the XX century, huge investments were made in land reclamation and water sectors in the former united country. All this has been performing well still. However, life does not stand still and new challenges arise. Climatologists warn about significant changes in climate and, consequently, in water resources. To a larger extent, this would affect the regions that already experience water scarcity. The problem will be aggravated through demographic challenges, demand for import substitution, and deterioration of earlier built hydraulic structures. Therefore, we must anticipate these processes.

In this context, I think it necessary to appeal to the leaders of our countries for early elaboration of the Master plans for integrated water use and agricultural land reclamation, at least, by 2030 and better by 2050.

At the same time, particular attention should be paid to complete solution of transboundary water problems inside our commonwealth. I would like to remind you that we have proven records of implementation of related projects", said P.A.Polad-Zadeh.

Director of the Department for Land Reclamation at the Russian Federation's Ministry of Agriculture **D.P.Putyatin** in his speech informed about the initiative of the Ministry to establish a Coordination Council for reclamation of agricultural land at the CIS Intergovernmental Agro-industrial Council. Enhancement of cooperation among the CIS member-states would be the key for the development of agroindustry and achievement of food security in these states. From the transboundary perspective of available water and land resources, this synergy would help to address very important issues related to soil fertility, preservation and expansion of reclaimed land areas, etc.

It is expected that the Coordination Council would be a venue for meaningful dialogue and experience sharing, including in the area of specifications, design, construction and rehabilitation, operation of land reclamation systems and hydraulic structures, and water supply systems. As a separate area of activity, it is proposed to consider capacity building in this area.

WATER AND ETHICS

In the key report Executive Secretary of EECCA NWO **Prof. V.A.Dukhovniy** underlined that before severe human intervention in the natural environment, the major focus of ethics have been on the rules of moral behavior, social relationships, and family relations in order to keep humanity as it was created by God. Development of business, financial relations and industry

gave birth to ethical rules in these areas. However, those did not address relations with the nature. Later on, with recognition of the holy and unique nature of water and the need to treat it carefully as a thing to be preserved not only as a means for production of goods and meeting of basic needs but for sustainable life on the Earth, absolutely new ethical rules occurred in the face of future threats. Devastating environmental degradation and, first of all, of water resources poses an existential threat.

The main tools of water ethics include:

- Key tool is a *consciousness and understanding* of the unique nature of water and its role for preservation and survival of humankind, natural flora and fauna, and for noosphere.
- *Religion*
- *Education,* which includes learning of the rules and regulations for efficient water use and management
- *Culture* with its diverse areas (literature, art, press, the cinema, folk arts)
- *Law* as a regulation tool of social relations
- *Gender* is a very sensitive tool from the perspective of moral social relations
- Mass media

Prof. Dukhovniy also stressed that interstate relations, especially in the field of water, were based on trust. Trust was defined as a will to act together. The degree of trust depends on the consistency of relations, the community of situation and history of their relations for overcoming circumstances.

Close relationships between ethics and water security were demonstrated in the presentation of the Regional Coordinator of GWP CACENA **V.I. Sokolov**.

The key dimensions of water security as formulated by ADB[1] are as follows:

- Household water security
- Economic water security
- Urban water security
- Environmental water security
- Resilience to water-related disasters

Based on the above dimensions, one may assume the following interpretation in context of general water security:

- Food security is the basis of peace
- Economic security is the basis for progress
- Environmental security (sustainability) is the basis for enough amounts of water for food security and economic security

Thus, the issues related to water security could be addressed if the humanity recognizes water as one of moral values. The moral values are understood as a system of worldview, which characterizes everything from a perspective of good and evil, happiness, justice, and love. Such characterization allows establishing the relationship between the human actions and the generally recognized system of social values and choosing the so called moral stand for further steps or actions.

Decision makers should understand that today water is a matter for diplomacy rather than a political weapon. From water perspective, there should be no enemies but only opponents in

[1] Asian Water Development Outlook 2013: Measuring Water Security in Asia and the Pacific (ADB, 2013)

the dialogue seeking for consensus. And in such water dialogue the parties must try to listen to their opponents and take their arguments into consideration.

Given that every person chooses which meaning to assign to one or another phenomenon, in part of water dialogue, first of all, we should achieve common understanding of equity or justice regarding water. Evidently, equity has many perspectives; therefore, the mutually acceptable indicators of equity should be agreed upon.

From this point of view, it is very important that the moral values be translated into legal regulations for water relations. In this context, two Water Conventions 1992 and 1997 being the frameworks of international water cooperation could serve as such regulations.

The Regional Advisor of UNECE **B.Libert** presented implementation of the above-mentioned International Water Conventions in context of water ethics. Particularly, he showed that the UNECE Convention as a legal framework tool was based on the holistic approach, which determined:

- Concept of the catchment area
- Surface and ground water and relationship with the sea where they flow into
- Transboundary impact as adverse effects on human health and safety, flora, fauna, soil, air, water, climate, landscape and historical monuments or other physical structures, as well as socio-economic conditions.

For implementation of the Convention 1992 on the Protection and Use of Transboundary Watercourses and International Lakes a number of guidance notes and recommendations was developed and published:

- Guidance on water and adaptation to climate change
- Good practices for monitoring and assessment of transboundary rivers, lakes and groundwaters
- Transboundary flood risk management: experiences from the UNECE region
- Model provisions on transboundary groundwaters
- Guide to access to information and public participation

In addition, the Implementation Committee under the Water Convention was established consisting of nine members to fulfill the following functions:

- Prevent disputes
- Hands-on assistance in any particular cases
- Procedures (advisory procedure, undertaking a Committee initiative, etc.)
- Taking measures (national implementation plan, transboundary water cooperation agreement, capacity building, financing support), recommending to the Meeting of the Parties that it takes solid steps

WATER AND CULTURE

Prof. N.B.Prokhorova, Director of RosNIIVH in her report showed the role of Water Museum opened at RosNIIVH in educational and cultural space of the city of Yekaterinburg. This Museum includes the following sections among others:

- Russia's water fund;
- Waterways (history of water development in Russia);
- Water use;
- Integrated water resources management;
- Water risks;
- Restoration and protection of the water fund;
- etc.

Prof. **V.A.Stashuk** from the "Union of Ukrainian Water Professionals" told that in Ukraine water resources have been tightly connected with its history and culture. According to the chronicle, the Slavs settled from the earliest times along the Dnepr River, in Desna and Seim basins, along the Pripyat River, etc.

At present, every year the Rivers Day is organized in the basins of Tisa, Severskiy Donets, Dnestr, and Dnepr.

Restoration of springs and river sources is in the focus now. Since the beginning of this project, about 5,000 springs and river sources have been restored.

WATER AND CIVILIZATION

Environmental and social perspectives of water use in the Russia's regions were addressed in the presentation of Acad. **B.M.Kizyaev**, Director of VNIIGiM. He underlined that the water use issues had a multifactor character in Russia and related to:

- Economic problems:
  - imperfect economic mechanisms for national water management, water use regulation, and water saving and protection encouragement;
  - poor investment in the water sector;
  - high water intensity of industries, etc.
- Engineering problems:
  - deterioration and aging of basic production assets;
- Environmental problems:
  - non-uniform distribution of surface and ground water in space;
  - deterioration of surface water quality;
  - natural and human induced pollution of groundwater;
  - over-abstraction of river runoff and groundwater, etc.

M.Ya. Makhramov, Director of BWO Amudarya showed in his report the relationship between water resources and human civilization. The scientists have noted long ago that all ancient civilizations originated along big rivers and in their valleys, such as Tigris and Euphrates, Nile, Indus and Ganges, Yellow River and Yangtze, Amudarya, Syrdarya and many others. Those rivers played a very important role in lives of people in terms of farming and trade.

People constructed irrigation structures along the rivers but this required common efforts of local tribes rather than of single person or family. Thus, the nations living in river basins from their early existence had strong benefits for civilization development and progress.

Earlier civilizations were characterized by systems for artificial irrigation of agricultural land through channels. By using these channels, people diverted water from the rivers to moisture soil and reduce the risk of droughts and floods. Moreover, construction of channels in the north of tropical regions helped to avoid water logging.

Another feature of ancient civilizations, as many researchers note, is that they occurred in the regions with limited water resources. This limited nature of water encouraged them to seek for efficient technologies and take restrictive measures as a way to save and protect water.

Thus, everyone should understand that water is a strategic resource which predetermines the future economic situation in the countries. And it is time to think whether our future generation will have enough water or not.

The presentation of Mr. **A.Uktamov** from BWO Syrdarya was dedicated to construction of the interstate main canals in the first half of XX century in the Syrdarya basin and their present status.

One of dramatic and important developments in the Fergana Valley was the construction of the Big Fergana Canal (BFC) in 1939. For this construction more than 180,000 people were mobilized for work-for-the-nation and the canal was completed as early as in 45 days. 18 million cubic meters of land (stones, sand, and clay) were dug manually with shovels, grub hoes and other implements on hand. The headwork had the eight bays with vertical lift gates and the total capacity was 100 m^3/s. The total length of the canal was more than 300 km to irrigate land in Kyrgyzstan, Tajikistan, and Uzbekistan. In 1953-1962, BFC underwent large reconstruction and the head flow rate was increased from 100 to 150 m^3/s. By present, all mechanical equipment was replaced along the canal and automated water measurement was implemented at its headwork.

The headwork constructed in 1889 to divert water into the Dustlik canal in the middle reaches of the Syrdarya River is still operational. It represents cultural and historical importance as the structure that was created by engineers more than 125 years ago. Its maximum capacity is 130 m^3/s. The structure has 14 bays with vertical lift gates. In 1948, a new headwork was constructed to divert water for irrigated land in Uzbekistan and Kazakhstan. Its maximum capacity is 230 m^3/s or 100 m^3/s more than that of the old headwork.

WATER AND EDUCATION

The representative of the UNESCO Almaty Cluster Office **N. Kim** showed in the presentation the International Hydrological Programme (UNESCO-IHP) as a platform for water research, education, and capacity building. Water education is considered in the Programme as the key element of water security. The main programme priorities are:

- Enhancement of higher water education;
- Improvement of professional education of water engineers;
- Water education for children and youth;
- Raising awareness about water issues with the help of mass media and local communities;
- Education for transboundary water cooperation.

With the help of the UNESCO Almaty Cluster Office a training module on Integrated Water Resources Management was developed and adopted by academic institutions in Kazakhstan.

The principles of innovative system of water education in Russia were highlighted in the presentation of Prof. **D.V.Kozlov**, Vice-Chancellor of the Russian State Agrarian University. To a large extent, development in Russia depends on capability to solve water, land reclamation, and environmental problems in the XXI century.

The key element of development is the human resources, primarily, professionals who are able to deal efficiently with environmental and technological challenges. Irrespective of reforms in the Russian professional education and science sectors and based on international experience, the professional development system for water management and land reclamation should be founded on the following ideas and principles of effective modern education:

- consistent and reasonable public policy in the area of water and land reclamation;

- appropriate institutional, organizational, and financial conditions for adoption of advanced technologies and methods;
- development of education as a part of social development;
- integration of science, education, and industry;
- innovative and future oriented research as a base for preparation of water professionals at present;
- water education should be based on existing framework of higher and secondary education in Russia;
- integrated approach to fostering professionals in water management and land reclamation;
- life-long education.

For implementation of the above listed ideas and principles, an innovative system of water education should be developed. Such system should have the following characteristics among many others:

- comprise new forms of institutional, financial, and methodological control in water and land reclamation education, with account of both local tasks and federal priorities;
- correspond to the global level of research and innovations in water management and land reclamation;
- integrate relevant Russia's economic sectors and higher and supplementary educational institutions in order to create and maintain common education standards, form new professional development profiles, and maintain high level of professional skills and knowledge through the feedback from concerned sectors and businesses;
- be based on new methods for formation of individual professional profile through student mobility inside the national training system and life-long learning;
- implement modern technologies of education, including e-learning;
- allow using academic mobility of lecturers from partner educational institutions, their knowledge and experience, as well as career guidance and material and technical basis of partnering educational institutions for more flexibility of general educational process;
- allow using advanced local and international practices, innovations and newest technologies in education;
- adapt curricula to continuously changing demands of the society as relate to water and land reclamation sectors.

Prof. **M.Yu.Kalinin,** Chairman of the Association of river guardians "Eco-Krones" shared the experience in the development of a new training course on integrated water resources management for Master degree students as part of the EU-Tempus Programme. The training manual "Water resources management" (authors: M.Kalinin, Belarus, and F.Stolberg, Ukraine) was prepared within the project. The prepared manual in form of a course of lectures was tested in two Kazakhstan's universities in 2014. Later on, the topics on the safety of hydraulic structures (big dams) and environmental problems in the Aral Sea basin were included in this course of lectures as important for the Central Asian region.

Director of the SIC ICWC Kyrgyz branch **N.P.Mamataliev** showed in his presentation the results of work on incorporation of the Integrated Water Resources Management subject into curricula of the Kazakh National Agrarian University. This training course was developed on the basis of the IWRM-Fergana Project. The Project was implemented in the regions of Kyrgyzstan, Tajikistan, and Uzbekistan in 2000-2012 with the support of the Swiss Agency for Development and Cooperation.

The representative of ICWC Secretariat **D.Dadobayev** told about the environmental education program undertaken in Tajikistan. The objectives of the program:

- solve regional priority issues of environmental education;
- support existing and promote new initiative in the area of environmental education in Central Asia;
- establish sustainable connections and knowledge and experience sharing in environmental education between educational institutions in Central Asia;
- develop generally accessible databases for environmental education;
- adopt up-to-date teaching aids and manuals on environmental education; etc.

GLOBAL CHALLENGES

Deputy Secretary General of the International Network of Basin Organizations (INBO) **E.Tardieu** presented the initiative “Paris Pact on Water and Adaptation to Climate Change in the basins of rivers, lakes and aquifers” led by INBO at the occasion of the COP21 in Paris.

It is well-known that climate change will increasingly affect freshwater. Many of the main food production regions in the world are projected to become more drought-affected. The projected increase in air temperature will lead to decreased river runoff. Some very important regions (the Mediterranean, south of Latin America, north of Brazil, west and south of Africa) will become drier. And demographic, economic, and environmental effects of climate change will, probably, be substantial. Therefore, it is very important to initiate adaptation measures in water management in light of such changes.

In this context, the INBO Secretariat initiated the Paris Pact on Water and Adaptation to Climate Change in the basins of rivers, lakes and aquifers. Particularly, the Pact is aimed to make stakeholders aware that climate change (is already affecting) and will affect water governance and that respective strategies and action agenda should be adapted in this context. The Pact has been signed already by more than 322 organizations, among which:

- 34 international organizations 13 transboundary basin organizations,
- 8 regional basin networks of INBO,
- 243 main signatories in 54 countries,
- 64 ministries and public water agencies.

The EECCA NWO Secretariat prepared the Russian version of the Paris Pact and was among the first signatories.

E.A.Simonov from the Rivers without Boundaries Coalition presented the China Program of actions against the system-wide environmental crisis: land degradation, water exhaustion in the north and west, eco-riots of people, and eco-migration from the degradation-affected areas. To fight this crisis, the Law on environmental protection was revised thoroughly in January 2015. In April 2015, the PRC State Council adopted the "10 Measures for Protection of Water" Plan. The Plan makes provision for the achievement of environmental security in the country, the improvement of environmental quality, and the enhancement of energy efficiency. However, greening in China has side-effects, such as export of environmental impact to neighbors, outside placement of factories, which location in China is not desirable for any reasons, migration of redundant labor forces from agricultural, forestry and other sectors.

The Chinese water policy is also expected to change. Earlier, China preferred not to discuss the protection and use of shared rivers with its neighbors, while, with the growth of investments in the production capacity of riparian countries, this policy could change. This is

indicated by the fact that 12 Chinese officials came to the Meeting of the Parties of the UNECE Water Convention in November 2015 as compared to 0-1 representatives at the past meetings.

COOPERATION IN THE CENTRAL ASIAN REGION

The Board Chairman of the Kazgiprovodkhoz Institute **A.D.Ryabtsev** presented the evolution of international water organizations (IFAS, ICWC) in the region. The contributing factors of transboundary water cooperation in Central Asia are:

- **economic**: difference in economic development of the countries; different priorities in foreign trade; uncoordinated tariff policy when settling accounts for energy resources and their transportation; lack of a mechanism, in agreements, for compensation of damage by the parties resulted from non-fulfillment of obligations when water availability changed, etc.;
- **natural**: the effects of global climate change will be particularly prominent in the region under conditions of arid climate;
- **anthropogenic**: rapid population growth, industrial and agricultural pollution, water losses, still old technologies applied in irrigated farming, etc.;
- **growing water consumption by Afghanistan** under achievement of certain political stability would result in reduced water availability in the lower reaches of Amudarya River.

The Regional water strategy (RWS) was elaborated within the first Aral Sea Basin Program (ASBP) to reconcile national requirements and rights for water for the long-term with the regional requirements of aquatic ecosystem conservation.

At the current stage of relations between the Central Asian countries, new RWS need to be elaborated to incorporate institutional, legal, financial, managerial, and technological mechanisms.

At the national level, those include but not limited to:

- Adoption of measures for water saving and efficient water use in economic sectors and preservation of natural aquatic ecosystems.
- Reconstruction and rehabilitation of water infrastructure.
- Reduction of unit water use in industry, agriculture, and energy sectors.
- Application of up-to-date water treatment and water conservation technologies and incentives for their widespread use.
- Modernization of old and construction of new gauging stations to improve water measurement and monitoring.
- Better water financing.
- Capacity building.

At the regional level:

- Initiation of IWRM implementation on a regional scale.
- Reformation of national water laws and water agencies in CA countries for their harmonization and coordination.
- Development and signing of a common 'institutional' agreement to replace current numerous regional legal acts, provisions, rules, and procedures.
- Possible establishment of a new regional Cooperation Organization for the Aral Sea Basin (COASB) instead of IFAS.
- Potential establishment of the International Water and Energy Consortium as a mutually acceptable market-driven mechanism in the water-energy field.

O.I.Eshtchanov (IFAS Executive Committee) presented the monitoring results of the third Aral Sea Basin Program (ASBP-3). This monitoring was prepared on the basis of the information submitted by IFAS founding states, international and donor organizations and indicated to a growth in number and budget of ASBP-3 Projects over 2011-2015.

According to monitoring, at present 192 projects are implemented with the total budget of US$ 2,305.25 million. These projects include 74 regional projects and 118 national projects

All IFAS founding states carry out programs aimed at water conservation, restoration and development of Prearalie (Aral Sea coastal area), integrated water resources management, agricultural diversification, etc. Particular attention is paid to Pearalie, development of infrastructure and improvement of living conditions there. The work on reclamation of land is also ongoing.

The activity of the intersectoral working group on geohazards was presented by senior researcher of the Kazakh Institute of Geography **A.Z.Tairov**. The intersectoral working group (IWG) was formed in Kazakhstan in 2012 within the framework of the GIZ project "Adaptation to Climate Change through Sustainable Resource Management and Cross-border Cooperation for Disaster Prevention in Central Asia". The IWG comprises 11 organizations in its membership, including Kazakh National University, KazHydromet, Kazakh Committee for Water Resources, Regional Hydrological Center of IFAS, Central Asian Regional Environmental Center, etc.

The main tasks of IWG:

- expertise on prevention of geohazards in Kazakhstan and Central Asia;
- analysis of water-related disasters, elaboration of risk mitigation approaches and their communication to decision makers;
- given the transboundary context, regular coordination of elaborated approaches among the countries.
- Establishment of IWG in other CA countries.

IWG Kazakhstan on transboundary monitoring and early warning of geohazards has found an optimal work format: regular joint work meetings that bring together representatives of various public agencies and research institutions. In the medium term, given initiative could raise protection of local communities and have a positive effect on interstate agreements.

Finally, the Conference adopted the resolution.

RESOLUTION

INTERNATIONAL CONFERENCE OF EECCA NWO

"CULTURAL AND EDUCATIONAL ISSUES RELATED TO WATER MANAGEMENT IN THE EECCA COUNTRIES"

The participants of the International Conference "Cultural and Educational Issues Related to Water Management in the EECCA Countries" met in Almaty on the 9th of February 2016 within the framework of the Network of Water-Management Organizations from Eastern Europe, Caucasus, and Central Asia (EECCA), *have discussed* urgent cultural and educational issues on the four key topics:

- Water and culture;
- Water and civilization;
- Water and ethics;
- Water and education.

The participants *have agreed* that:

- Water is a common social and natural resource, which first must be used for meeting drinking and household needs, nutrition and food production (irrigated agriculture), energy needs, for ensuring health, diet, livelihoods and well-being of population, especially of vulnerable people, for meeting environmental demand, and conserving and developing flora and fauna.
- Water should serve the purpose of mutually beneficial cooperation and by no means should become a cause of conflict. Any meeting of interest related to quantity and quality of water between interested sides should be decided on the base of mutual respect. The principles of international water law should be followed.
- Water is the nature's gift, without which no life is possible on the Earth. Everyone has the right to life and, hence, to natural water. Therefore, in no circumstance, water in the open natural water bodies (oceans, seas, lakes, and rivers) can be considered as a commodity, although it has the economic value.
- Equitable and reasonable access to water for each is an ethic, moral, and legal right guaranteed by the State in quantity, which meets the physical standards and the most advanced technologies.
- Each user must practice water saving by avoiding its wastage, protecting quality of water in the sources from pollution and deterioration, timely covering costs related to water production and conveyance in the pipeline network.

While underlining that maintenance of professional community, information exchange and dissemination of best practices through EECCA NWO is of high importance, the participants *made mention of the Network work progress* in 2015, including:

- issue of Network's information collections and scientific publications (www.eecca-water.net),
- extension of the knowledge base on CAWater-Info portal (www.cawater-info.net/bk/rubricator.htm) as part of the system of uniform tools for implementation of IWRM that are adapted to specific conditions of water management in river basins with different water stresses in arid and semi-arid zones of EECCA countries,
- participation of EECCA NWO members in international events, including in the 13th "EUROPE-INBO 2015" International Conference on the Water Framework Directive Implementation (Thessaloniki, Greece), the 9th International Conference "The Rivers of Siberia and the Far East" (Irkutsk, Russia), the 66th Meeting of the ICID International Executive Council and the 26th European Regional Conference "Innovate to Improve Irrigation Performance" (Montpellier, France), and the 7th Meeting of the Parties of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Budapest, Hungary).

The participants *believed it necessary* to make deeper efforts for:

- implementation of the long-term Program aimed at equitable distribution of transboundary water, efficient use of freshwater in economic and social sectors, control of water pollution, and this should become a state duty from ethical and humanistic perspectives and the civil duty of every water user; enhanced exchange of information focused on dissemination of knowledge and best practices accumulated in the EECCA countries;
- training in the key areas contributing to improved water management (IWRM, water use technologies, information-communication systems (ICS), international water law, water diplomacy) in form of both conventional training courses and e-learning;
- development of (regional and national) knowledge hubs for assistance to water users at various hierarchical levels;
- promotion of ethically underpinned management and use of water resources;
- upbringing of future "water leaders" among young professionals (primary focus);
- promotion of Youth Water Parliament;
- involvement of basin organizations in the Network's activity.

In context of the mentioned above, the participants *thought it necessary* to deepen activity of the Network by:

1. Keeping submitting on regular basis the information on national events in the area of water management and information on new publications, software, methodologies and training materials in order to raise awareness among water professionals and encourage water sector development in EECCA.
2. Enhancing cooperation with national focal points of international networks and organizations, such as Global Water Partnership (GWP), International Commission on Irrigation and Drainage (ICID) and others.

The participants *proposed* to organize the next Network's conference in 2017 on the theme "River basin management problems in context of climate change", including:

- transboundary river basin cooperation,
- sustainable water management and implementation of information-communication technologies (ICT) at basin level,
- adaptation of water management to climate change and anthropogenic impact,
- water-food-hydropower-environment nexus,
- SMART technologies in the water sector,
- water supply and sanitation.

Finally, the participants *thanked* UNECE and GWP CACENA for support and assistance provided to the Network, including in organization of this Conference. The participants thanked the Russian Government for the long standing support of EECCA NWO.

The participants also *appreciated very much* the assistance rendered by the Kazgiprovodkhoz Institute in preparation and organization of the Conference.

ROUNDTABLE

The below issues were addressed in the second day agenda:

- election of new Network President
- election of new Board of Directors
- discussion

Upon request of Acad. P.A.Polad-Zadeh, he was relieved of his post as the President of EECCA NWO.

Based on the decision made during the roundtable, he was assigned the rank of Honorary Network President.

Prof. **D.V.Kozlov**, Doctor of Engineering Science, Vice-Chancellor of the Russian State Agrarian University named by K.Timiryazev was elected as the new Network President.

The Board Chairman of the Kazgiprovodkhoz Institute **A.D.Ryabtsev** was elected as the Deputy of the Network Executive Secretary.

The composition of the Board of Directors is given in Annex 3.

The roundtable was dedicated to 50 years since initiation of the Land Reclamation Program in USSR. The newly elected President D.V.Kozlov read the opening statement of the Honorable President P.A.Polad-Zadeh. In this statement he showed the important contribution that the Program made during 20 years since 1966 to food security in Russia and most of CIS countries. He also underlined huge investments in land reclamation and compared them with the present level.

Prof. N.K.Kipshakbaev, Prof. P.I.Kovalenko. A.D.Ryabtsev, D.Seitimbetov, and Prof. V.A.Dukhovniy also took the floor and spoke about the role of the Program in the development of irrigation and drainage and stressed that, unfortunately, the developed areas and scale of irrigation remained only in Uzbekistan, Turkmenistan, and Belarus, while decreased critically in Russia, Ukraine, and Kazakhstan. The speakers also underlined the importance of science, technology, and industrial base under present status of water and land reclamation sectors in the CIS countries.

ANNEXES

Annex 1

Agenda

Conference venue:
Kazgiprovodkhoz Institute, Almaty, Seyfullin Avenue, 434

Day 1 - 9 February 2016 - Conference

The Conference topics:

- Water and culture;
- Water and civilization;
- Water and ethics;
- Water and education.

Opening speech by Prof. V.A. Dukhovniy, Executive Secretary of NWO EECCA

Welcome

- P.A.Polad-Zadeh, President, NWO EECCA
- Ye.N.Nysanbayev, Vice-Minister of Agriculture, Republic of Kazakhstan
- D.P.Putyatin, Director, Department of Land Reclamation, Ministry of Agriculture, Russian Federation
- B. Libert, Regional Advisor for Environment, UNECE
- E.Tardieu, Deputy Secretary General of INBO
- Chevelev, Officer-in-Charge of UNESCO Almaty Cluster Office

Reports

Prof. V.A.Dukhovny, Director SIC ICWC, Executive Secretary of NWO EECCA	Water and ethics in the modern world
B.Libert, Regional Advisor for Environment, UNECE	International conventions as an expression of water ethics
E.Tardieu, International Network of Basin Organizations	COP21 and INBO initiative “Paris Pact on water and adaptation to climate change in the basins of rivers, lakes and aquifers”

V.I.Sokolov, Regional Coordinator, GWP CACENA	Moral and ethical aspects of the society commitment to water security
A.D.Ryabtsev Director, Kazgiprovodkhoz	Regional water strategy at present stage of water development in the Aral Sea Basin
N.B. Prokhorova, Director, FGUP RosNIIVH	The role of Water Museum in educational and cultural space
B.M.Kizyaev, Director, VNIIGiM	Environmental and social aspects related to water use in the Russia's regions
V.A.Stashuk "Union of Ukrainian Water Professionals"	Water resources in Ukraine: history and present-day
N. Kim UNESCO Almaty Cluster Office, Kazakhstan	UNESCO IHP activities: from global to regional perspectives
D.V.Kozlov Russian State Agrarian University by K.A.Timiryazev, Institute of Environmental Engineering named by A.N.Kostyakov, Russia	Innovative system of water education in the era of ambitious education and science reforms in Russia
O.I.Eshtchanov EC IFAS	Monitoring results of ASBP-3: water management actions to the benefit of EECCA
Ye. Simonov "Rivers without boundaries"	New Silk Road – risks and opportunities for water sector
M.Yu.Kalinin, Association of river guardians "Eco-Krones"	Experience in developing curricula for the postgraduate course on integrated water resources management as part of the EU Tempus Program
N.P. Mamataliev Kyrgyz branch of SIC ICWC	Adoption of Integrated Water Resources Management in curricula of the Kyrgyz National Agricultural University named by K.I.Skryabin
M.Ya.Makhramov, Head, BWO Amudarya	Water and civilization
A.R.Uktamov BWO Syrdarya, Uzbekistan	Construction of interstate main canals in the Syrdarya river basin and their current conditions

Balgabayev N.N. KazNIIVH, Kazakhstan	Capacity building in the water sector
A. Tairov, Institute of Geography, Kazakhstan	About activity of the Intersectoral Work Team on hydrological risks
I. Saidov, ICWC Secretariat	Education for integrated water management and improved water use in the Republic of Tajikistan
Presentations by representatives of Azerbaijan, Armenia, Georgia, and Turkmenistan	

Discussion

Day 2 - 10 February 2016 - Roundtable

dedicated to 50th Anniversary of the State Program for Land Reclamation and Water Management approved by the USSR Government.

Annex 2

List of participants

February 2016, Almaty, Kazakhstan

	Name	Organization	Country
1.	A.D.Ryabtsev	Kazgiprovodkhoz	Kazakhstan
2.	M.Bekniyaz	Kazgiprovodkhoz	Kazakhstan
3.	D.Seitimbetov	Kazakh Committee for Water Resources	Kazakhstan
4.	N.K.Kipshakbayev	Kazakh branch of SIC ICWC	Kazakhstan
5.	Yakhiyaeva K.	Kazakh branch of SIC ICWC	Kazakhstan
6.	Yelyubaeva M.	Kazakh branch of SIC ICWC	Kazakhstan
7.	A. Tairov	Institute of Geography	Kazakhstan
8.	K.A.Anzelm	GU "South Kazakhstan HGME"	Kazakhstan
9.	A. Chevelev	UNESCO Almaty Cluster Office	Kazakhstan
10.	N.Kim	UNESCO Almaty Cluster Office	Kazakhstan
11.	I.A.Petrakov	Expert on national water law	Kazakhstan
12.	S.M.Mukataev	Expert	Kazakhstan
13.	M.Vorobieva	CAR@WAN Network	Kazakhstan
14.	A.G.Ray	CAR@WAN Network	Kazakhstan
15.	V.Mustafina	CAR@WAN Network	Kazakhstan
16.	L.B.Shabanova	Eurasian Water Center at the Ministry of Energy	Kazakhstan
17.	Baltabayev	Bauer	Kazakhstan
18.	P.Peter	Bauer	Kazakhstan
19.	A.K.Kenshimov	ED IFAS in Kazakhstan	Kazakhstan
20.	Ye.M.Kalibekova	KazNAU	Kazakhstan
21.	S.S.Ayazbaev	OOO “Great Steppe World”	Kazakhstan
22.	Ye. Simonov	“Rivers without boundaries”	China
23.	D.P.Putyatin	Ministry of Agriculture	Russia
24.	N.B. Prokhorova	RosNIIVH	Russia

	Name	Organization	Country
25.	D.V.Kozlov	Russian State Agrarian University	Russia
26.	B.M.Kizyaev	VNIIG&M	Russia
27.	I.Yu.Kudryashev	Trade mission of Russ.Federation in Kazakhstan	Russia
28.	Ya.E.Pulatov	IVPGE of Academy of Science	Tajikistan
29.	D.Dadobayev	ICWC Secretariat	Tajikistan
30.	A.E.Mukumov	Ministry of Agr. and Water	Uzbekistan
31.	O.I.Eshtchanov	EC IFAS	Uzbekistan
32.	V.A.Dukhovniy	SIC ICWC	Uzbekistan
33.	G.V.Stulina	SIC ICWC	Uzbekistan
34.	I.F.Beglov	Secretariat EECCA NWO	Uzbekistan
35.	V.I.Sokolov	Secretariat GWP CACENA	Uzbekistan
36.	M.Ya.Makhramov	BWO Amudarya	Uzbekistan
37.	A.R.Uktamov	BWO Syrdarya	Uzbekistan
38.	M.Abduraimov	GWP Uzbekistan	Uzbekistan
39.	A.Ovsepyan	GWP Armenia	Armenia
40.	E.Mesropyan	GWP Armenia	Armenia
41.	N.Tchkobadze	NGO	Georgia
42.	G.Gadjimetov	Saf Su	Azerbaijan
43.	B.Libert	UNECE	Switzerland
44.	V.A.Stashuk	“Union of Ukrainian Water Professionals”	Ukraine
45.	P.I.Kovalenko	expert	Ukraine
46.	M.Yu.Kalinin	Association of river guardians “Eco-Krones”	Belarus
47.	K.Musabaeva	GWP Kyrgyzstan	Kyrgyzstan
48.	N.P. Mamataliev	Kyrgyz branch of SIC ICWC	Kyrgyzstan
49.	E.Tardieu	INBO	France
50.	F.Brikke	GWP	Sweden

Annex 3

Board of Directors of EECCA NWO

	Name	Organization	Country
1.	D.V.Kozlov *President*	Russian State Agrarian University	Russia
2.	P.A.Polad-Zadeh *Honorary President*	OAO "Vodstroy"	Russia
3.	V.A.Dukhovniy *Executive Secretary*	SIC ICWC	Uzbekistan
4.	D.A.Ryabtsev *Deputy Executive Secretary*	Kazgirpovodkhoz	Kazakhstan
5.	S.R.Ibatullin	expert	Kazakhstan
6.	N.K.Kipshakbayev	Kazakh branch of SIC ICWC	Kazakhstan
7.	A.P. Polad-Zadeh.	OAO "Vodstroy"	Russia
8.	N.B. Prokhorova	RosNIIVH	Russia
9.	N.A.Sukhoy	Union of Russia's water and land reclamation professionals	Russia
10.	B.M.Kizyaev	VNIIGiM	Russia
11.	Ya.E.Pulatov	IVPGE of Academy of Science	Tajikistan
12.	O.I.Eshtchanov	EC IFAS	Uzbekistan
13.	I.F.Beglov	Secretariat EECCA NWO	Uzbekistan
14.	V.I.Sokolov	Secretariat GWP CACENA	Uzbekistan
15.	M.Ya.Makhramov	BWO Amudarya	Uzbekistan
16.	M.Abduraimov	GWP Uzbekistan	Uzbekistan
17.	A.Ovsepyan	GWP Armenia	Armenia
18.	N.Tchkobadze	NGO	Georgia
19.	G.Gadjimetov	Saf Su	Azerbaijan
20.	D.Basandorj	GWP Mongolia	Mongolia
21.	V.A.Stashuk	Union of Ukrainian Water Professionals	Ukraine
22.	P.I.Kovalenko	expert	Ukraine
23.	M.Yu.Kalinin	Association of river guardians "Eco-Krones"	Belarus
24.	N.P. Mamataliev	Kyrgyz branch of SIC ICWC	Kyrgyzstan
25.	A.K.Kenshimov	ED IFAS in Kazakhstan	Kazakhstan

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