**Transboundary water issues in a macro-regional context: the Danube basin**

**11-12 September 2013, Budapest**

Hungarian Academy of Sciences:1051 Budapest Széchenyi István tér 9

**Joint Stakeholder Conference within the framework of the Pillar „Protecting the Environment” of the European Union Strategy for the Danube Region**

**Summary and outcomes of the conference**

The conference was successfully held with 300 registered participants from many Danube countries. High level statements were presented from speakers from Hungary, Slovakia, Romania, Bavaria, Bosnia and Herzegovina and the European Commission; participants were coming from Slovakia, Austria, Ukraine, Moldova, Germany, Croatia, Bosnia, Italy and Hungary. The representatives of major international, regional and local water and environmental organisations were also present, such as the UNECE, the European Commission, the ICPDR, the IDM, the REC, the Sava Commission, the ASEM, the Slovak Water Research Institute (VUVH) and the JRC. Representatives of many scientific institutions as well as environmental and water consultants and experts also participated at the event.

**The EUSDR provides a comprehensive cooperation platform for macro-regions**

*“Innovation, new models and new strategies, as well as methods to improve the knowledge base and incorporate the contribution of science and innovation to the Strategy”*

Mr. Balázs Medgyesy, the Government Commissioner of the EU Danube Strategy chaired the high level session on the first day and highlighted that the aim of the conference is to provide an *overview about scientific results and innovative methods* which are essential to the implementation of the water-related goals of the EU Strategy for the Danube Macro-region. He stated that the EUSDR provides a *comprehensive cooperation platform for macro-regions*; builds on a legal context, provides a complex framework to coordinate, enhance and implement strategies in a multi-sectoral and transnational context and also for *the first time it offers an opportunity for alignment of funding with cohesion policy instruments and other potential sources*. To grasp the opportunities and potentials such a comprehensive framework provides participating countries and partners must make the best use of existing frameworks of cooperation and best practices as well as to find the innovative tools, models to complement them. This is essential in the policy and administrative aspect of the river basin management as well as in providing a solid foundation of applied science, monitoring and techniques to upgrade and implement river basin management strategies.

**The Danube is a transcontinental waterway**

*“The Danube Research Institute will continue co-operating”*

The General Secretary of the Hungarian Academy of Sciences, HE Tamás Németh pointed to the history of the Danube and its importance in the region, emphasising that it is a *transcontinental waterway and mentioned the recent scientific research initiatives* in the Academy in relation to the Danube. He stressed the important role of the Academy’s Danube Research Institute and offered the assistance of the Institute for further cooperation.

**Our Danube Region Strategy has lead us to wider frameworks of cooperation**

*“This strategic cooperation conveys the message of Central European solidarity”*

HE Enikő Győri, Minister of State from the Hungarian Ministry of Foreign Affairs mentioned that *transboundary cooperation is necessary for the preservation and sustainable exploitation of water*. She recalled that Hungary’s rivers and catchment areas extend beyond the borders of our country, so we *need to develop close cooperation with our neighbouring countries* in order to cope with the environmental hardships like flooding or drought, and also to find sustainable ways of water management. She pointed that during the Hungarian EU Presidency the EU Danube Region Strategy was adopted, which finally created a European framework for regional water policy. Ms. Győri stated also that *our Danube Region Strategy has lead us to wider frameworks of cooperation and noted that e*nvironment pollution and climate change are such global challenges that require responses based on the transboundary cooperation of several countries and experts from various continents. She further called the attention *to the upcoming Water Summit that will also be hosted by Hungary on 8-11 October in Budapest.*

**Water is a natural resource that cannot be supplemented with anything else**

*“It is necessary to apply sustainable methods in order to preserve the status quo and for the sake of developing water management innovations”*

HE Zoltán Illés, Minister of State from the Hungarian Ministry of Rural Development welcomed the possibility for environmental innovations and pointed out that *water is a resource that cannot be supplemented with anything else,* reminding the audience that the cause of most conflicts are the lack or the not appropriate distribution of resources. Mr. Illés also mentioned that since water as natural resource bears special importance, it is necessary to apply sustainable methods in order to preserve the status quo and for the sake of developing water management innovations. Mr Illés finally reflected on the *Hungarian coordinative role for water quality and environmental risks* in relation to the Danube Strategy.

**Macro regional and inter-sectoral cooperation is crucial**

*“Sustainable land use, efficient water and land management, protection of biodiversity and flood prevention is necessary*.”

HE Vojtech Ferencz, State Secretary from the Slovak Ministry for Environment further welcomed the conference and stressed that we have to pay *attention to the conservation and sustainable use of the ecosystem*, including the management of riparian forests and the protection of the regional biodiversity. He reminded that we need to *further strengthen the dialogue between the conservation sector and other sectors and industries* and pointed that we have to look not only at water quality and quantity, but also at the collection and treatment of wastewater. Mr. Ferencz emphasised that the Danube is an international river and it is important that all ground and surface waters along its basin, as well as their biodiversity and ecosystems are equally protected by all countries involved. This requires *sustainable land use, efficient water and land management, protection of biodiversity and flood prevention*. He mentioned that the Slovak Republic is looking to make environmental protection a stronger priority in other sectors, relying mainly on the EU Danube Strategy in conjunction with the Europe 2020 objectives and the 7th European Action Plan and that the Slovak Republic *considers horizontal-vertical cooperation crucial*, especially in the priority areas of the Danube Strategy aimed at restoring and maintaining water quality, environmental risk management and the protection of biodiversity and air quality.

**Member States must take the Danube Strategy into account as they plan the next generation of programmes under regional policy for 2014-2020**

*“Smart and sustainable growth for the Region is to be ensured, joint monitoring of water quality, development of common databases and common river modelling systems and other coordinated measures are needed for effective, sustainable and joint policy making”*

Mr. Normund Popens, the deputy Director General of the Directorate General Regional & Urban Policy, European Commission pointed that the Danube Strategy is demonstrating that *by working together, we can have a far greater impact* than if we try to tackle problems in isolation and mentioned that when dealing with water management, *the macro-regional approach is self-explanatory*, since water does not recognise borders and its management requires strong coordination and cooperation across the countries. He stressed that there are indeed some challenges that need to be addressed to assure a successful implementation in the future, such as sustainable leadership and strategic planning from the Danube countries and regions; EU Member States need to incorporate the Strategy into the new generation of programmes for Regional Policy 2014-20; adequately staffed and financed structures need to be in place nationally to deliver the Danube Strategy priorities and that we need to strengthen the Strategy’s contribution to Europe 2020 and ensure there is more focus on results. Mr. Popens emphasised that *one of the key recommendations is that Member States must take into account the Danube Strategy as they plan the next generation of programmes under regional policy for 2014-2020*. He stressed devoting a significant part of the programmes to the aims of the Danube Strategy which themselves reflect our more focused priorities and those of Europe's growth agenda and advised *to ensure a balance between future water demand and supply for the entire Region, and thus a smart and sustainable growth for the Region, joint monitoring of water quality, the development of common databases and common river modelling systems are needed for effective, sustainable and joint policy making.*

Mr. Popens emphasised the *promising experiences* of the Danube Strategy and mentioned the recent flooding events that require cooperation of the countries, just as the innovation programs do. He asked to *pay attention to the on-going programming process* and reflected on the *importance of the partnership agreements* and highlighted that we shall use opportunities and science to *channelize the scientific results with the alignment of funding*.

**Strong added value of the Danube Strategy: joint responses to common challenges**

*“Enhanced water cooperation across borders is indispensable”*

Ms. Marianne Wenning, the Director from the European Commission, Directorate General Environment welcomed the conference and noted that water is a precondition for human, animal and plant life as well as an indispensable resource for the economy and stressed that *the demand for water is continuously growing in the world*. She mentioned that on present trends about 40 % of global water supply is likely not be met by 2030 and that 47% of the EU water will fail to achieve good status by 2015. She called *to step up our action at all levels*. Ms Wenning also highlighted that the water sector has an important growth and employment potential: 1% increase in the growth rate of the water industry is likely to result in 10 000 - 20 000 additional jobs and pointed that the Commission has last year launched an Innovation Partnership on Water to help European stakeholders' tap into that potential.

Ms. Wenning emphasised that there is a *need to coordinate our policies to ensure water security* and a better life for all and mentioned the EU Blueprint for Water that was adopted to *stimulate efforts to reach good water status* in the countries of the EU. She claimed that there is still a lot to do and we will need to continue with our activities in the future to reach our environmental goals and stressed that *enhanced water cooperation across borders is indispensable* and thatwe have to do more to decrease the inefficient use of our water resources and pollution of surface and ground waters. She stated that in general, *water and flood management need to be better coordinated,* particularly in view of the 2015 deadline for adoption of the 2nd River Basin Management plans and the 1st Flood Risks Management Plans under the Floods Directive. Finally Ms. Wenning highlighted that *a strong added value of the Danube Strategy is that it brings together the EU Member States and non-EU countries in order to develop joint responses to common challenges.* The good thing is that there is a golden opportunity before us with the Multiannual Financial Framework for the period 2014 – 2020 just having been adopted. Those countries that are part of the Danube Strategy and that can profit from EU financial assistance *should do everything to include Danube related activities into the Partnership Agreement and more specifically the operational Programmes to be adopted early 2014.*

**Commitment of the Danube basin cooperation: need for more inter-sectoral cooperation**

*“If you want to walk fast, walk alone, but if you want to walk further, walk together”*

HEErmina Salkičevic- Dizdarević, Deputy Minister Bosnia and Herzegovina, President International Commission for the Protection of the Danube River recalled that the Danube is about 2800 kilometres long, making it the second-longest European river after the Volga. Its catchment area, the Danube River Basin, extends into the territories of 19 countries and comprises of more than 800,000 square kilometres - about 10 percent of Continental Europe that is *highly diverse*: the Danube passes a variety of cultures, landscapes and ecosystems.

She mentioned that in the early 1990ies, the main Danube countries recognized their responsibility to align their efforts in the environmental field. The main mechanisms for doing so in the area of water management are laid down in the “Danube River Protection Convention” of 1994. Today, two EU Directives, the Water Framework Directive of 2000 and the Floods Directive of 2007, also enjoy highest priority in the work of the ICPDR. She mentioned that all countries of the ICPDR, including the non-EU countries, *agreed to implement the Water Framework Directive through coordination by the ICPDR.* Further Ms. Salkičevic- Dizdarević referred to that in February 2010 the *Danube River Basin Management Plan* was *adopted* and the *Danube Declaration was signed*. This document reinforced the commitment of the Danube Basin countries for trans-boundary cooperation in water management, but also emphasised the need for more inter-sectoral cooperation. As a consequence of the Danube Declaration, the ICPDR has *increased its efforts to engage in a dialogue with different sectors.* This resulted in *concrete products* in the areas of climate change adaptation, hydropower development, inland navigation and agriculture, where sometimes conflicting interests of environment, economy and society must be brought into balance. She mentioned further that with the second implementation cycle of the Danube River Basin Management Plan starting in 2015, the ICPDR will again demonstrate that it is a reliable partner in improving waters throughout this uniquely diverse basin.

Ms. Salkičevic- Dizdarević noted finally that the ecosystems of the Danube River Basin are highly valuable in environmental, economic and social terms, and also noted that they are subject to increasing pressure and serious pollution from various sources and welcomed the cooperation among the Danube countries to overcome the environmental challenges.

**Stakeholders will need to approach the PACs with project ideas**

Mr. Wolfgang Klug from the Bavarian State Ministry of the Environment and Public Health noted the importance of cooperation in relation to the Danube and mentioned that Bavaria is also a Priority Area Coordinator (PAC) for the Danube Strategy, he specially emphasised that *stakeholders will need to approach the PACs with project ideas* as projects can still be financed in the upcoming financing period.

**Upcoming Annual Forum focuses on floods**

Ms. Olimpia Negru, Priority Area Coordinator for Environmental Risks, Priority Area 5 of the EUDSR from Romania welcomed the conference and called the attention of the participants to the upcoming event that will be the *Second Annual Forum in Bucharest on 28-29* October where the leading topic will be *flood management*.

After the high level opening remarks the session on **Policy context** started and discussion was proceeding first in relation to transboundary cooperation.

**Science and innovation is only possible with macro-regional cooperation**

The former Vice-Chancellor of Austria Dr. Erhard Busek, Chairman of the Institute for the Danube Region and Central Europe (IDM), Austria started the session with a title on *Science and innovation supporting macroregional development agenda*and hementioned that throughout history the benefits that this biggest artery of Europe has offered with its waters have been equally numerous as they are today. Yet, these benefits have rarely been taken advantage of in a most efficient way. Joint efforts for effective solutions to the common and sustainable utilisation of the many opportunities that this Basin carries through our countries have been rarely successful, and, very often, blocked by national interests and historically driven disagreements. Mr. Busek mentioned that *in view of the on-going global financial crisis the Danube River Basin can represent a valuable source for sustained economic development.* The potential of the Danube and its tributaries as a transport route and as a potential renewable energy production source have been quite underused in the last decades. Although, transport along the River has increased and pre-1990 figures have slowly been restored, the economic potential of the Danube is still quite low and there are still many issues that need to be solved before we are witnesses of the positive economic contributions of an effective use of the resources offered by this River Basin.  Mr Busek stressed that *science and innovation is only possible with macro-regional cooperation.* He called the attention to IDM’s new programme that brings together the Danube Universities and do research on several topics including biodiversity and referred to a new Masters Programme that the Danube Rectors Conference is holding. He *recommended for closer cooperation and advised to approach politicians with project ideas.*

**Importance of coordinated international warning systems**

Mr. Ivan Zavadsky, the new Executive Secretary of the International Commission for the Protection of the Danube River presented a topic on the *Danube basin cooperation* and referred to the Danube River Protection Convention (1994, Sofia) highlighting the cooperation mechanisms of the ICPDR with 15 contracting parties and stakeholder involvements and mentioned that *one of the most important activities of the ICPDR is the monitoring of waters including data collection, identification of issues and responses and implementation of measures.* He mentioned the on-going Joint Danube Survey, the Accident Emergency Warning System (AEWS) and underlined the importance of coordinated international warning systems and that by 2015 they aim to reach the Flood Risk Management Program for the Danube Basin.

**Water challenges in Europe and in Asia are similar**

Mr. Peng Qinghui, the Assistant to Secretary General, ASEM Water Resources Research and Development Center, China presented a topic on *the ASEM cooperation mechanisms* and highlighted that the water challenges in Europe and in Asia are similar, such as flood, drought and pollution and that there is a similar gap between water supply and demand in both continents. He *called for cooperation*, mentioning that the ASEMWater *aims to create synergies and to jointly address common water challenges*  and for that they establish a working network, strengthen exchanges and communications, set up 4 platforms for innovation share and services and facilitate dialogue of regional innovation strategies and policies, build capabilities.

**A constructive dialogue, identification of common interests and political willingness are necessary for development of cooperation**

Dr.Annukka Lipponen, Environmental Affairs Officer, secretariat of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (Water Convention), United Nations Economic Commission for Europe (UNECE) presented *on the experiences of the UNECE concerning transboundary water cooperation.* She highlighted that 38 countries and the EU are Parties to the Convention and participate actively, but the Convention is opening globally. She underlined that the *Water Convention does no replace basin agreements,* but provides as basis a model for them and a regional cooperation framework; the different cooperation frameworks are complementary. Dr. Lipponen emphasized that *the lack of inter-sectoral coordination is currently a major challenge* both on the national as well as transboundary levels. For reconciling different sectoral water uses, she suggested *to look beyond the basin, at appropriate scales, to identify additional benefits from co-management and coordination as opportunities for cooperation, and to conduct policy dialogue, building understanding and trust between stakeholders. It is also important to assess effectiveness of management measures and to coordinate their implementation. Integration of different aspects is needed, for example improving integration of groundwater into basin management*.

Dr. Lipponen concluded that despite the progress in water management and the advanced transboundary cooperation in the Danube Basin, the activities under the UNECE Water Convention provide valuable experience on specific topics to these countries (e.g. on climate change, inter-sectoral issues), and support those States that need assistance. This also holds with a view of the EU legislation’s requirements, as demonstrated by the countries that joined the EU in the latest enlargements. She added that *building trust through technical cooperation can lead into cooperation acquiring a more political dimension.* A constructive dialogue, identification of common interests and political willingness are necessary for development of cooperation. Agreements, joint bodies (commissions etc.) are key to establishment of sustainable transboundary water cooperation.

**There is a need for a Comprehensive Groundwater Utilization Plan for the Danube River Basin**

Dr. Marcel Szabó, the Deputy Commissioner for Fundamental Rights of Hungary referred to the issue of *Comprehensive utilization of groundwater resources of the Danube River Basin* and highlighted that *groundwater is often more essential for human welfare than surface waters*, serving as drinking water and means of food production and that *60% of the population in the DRB depends on groundwater sources*, mainly recharged by the Danube. He described the type of conflicts related to groundwater use as follows: technical interactions and constructions works that affect the quality of GW; water abstraction from slowly or non-renewable aquifers for industrial or irrigation purposes and exclusion of other parties of a shared resource. As a solution for the problem he pointed to *a need for a Comprehensive Groundwater Utilization Plan for the Danube River Basin* and for detailed rules for dispute settlement on groundwater issues. He also noted that the EU Strategy for the Danube Region is not about funding, it is about cooperation.

**The most successful projects are cross border/regional activities, multi stakeholder approach, framework type activities, involving stakeholders and partners**

Ms. Marta Szigeti Bonifert, the Executive Director of the Regional Environmental Centre spoke about the *Macro regional co-operation in relation to water issues: the experiences of the REC*and she highlighted the milestones of the REC operation as of 1989, noting that the most *successful projects are cross border/regional activities, multi stakeholder approach, framework type activities, involving stakeholders and partners*. She called the attention that the access to good quality water in sufficient quantity becomes fundamental to the daily lives of every citizen and to most economic activities in the region; that significant consumers are at the same time considerable sources of pollution; and that over the past thirty years, pressure on water resources has dramatically increased in variety and intensity.She noted that in order to improve, we – within the EUSDR frame- need to*strengthen further cooperation in the region*, support *activities at basin/sub-basin wide levels, provide technical assistance to improve access to good quality water; build skills and knowledge on sustainable use of water resources; assist introduction of water pollution prevention measures and to encourage research and exchange of knowledge on adaptation measures to climate change, concerning both extremes.* She further mentioned that the REC organises the Civil Forum of the Water Summit.

**The Danube Strategy can significantly contribute to the implementation of the Blueprint policy options**

Ms. Marianne Wenning, the Director from the European Commission, Directorate General Environment also presented a technical topic with a title *Blueprint to Safeguard Europe's Water Resources*and she stated that the Blueprint is the new strategy for the protection of Europe's water resources and also one of the priorities highlighted in the Commission Roadmap to a more Resource Efficient Europe. She mentioned that while there are *still knowledge gaps, our knowledge of water status and in water management has improved considerably and noted that international cooperation is particularly well developed for the bigger transboundary basins* (Danube, Rhine, Elbe); nevertheless noted also that some plans still missing and that there is an excessive reliance on exemptions and the limited monitoring does not allow to get the full picture of water status, particularly for chemical aspects, and that there is too limited use of market instruments and water pricing. She noted that 47% of the EU surface water will fail to achieve good ecological status by 2015 and that there are too many information gaps related to chemical status, therefore there are still many things to improve and we will need to continue working. She emphasised finally that *the Danube Strategy can significantly contribute to the implementation of the Blueprint policy options, in particular through ensuring correct implementation of the EU water legislation and facilitating the prioritisation of the required investments and channeling of funds to the identified challenges* and very much looks forward to the joint collaboration in this challenging exercise.

**There is close connection between DG Environment policies and the EUSDR**

The final speaker for the policy session was Mr. PéterKovács, the State Secretary of the Hungarian Ministry of Rural Development, who spoke about the *Context of EU water policies and the EUSDR*.He highlighted the international cooperation in the water sector and described the structure of the EUSDR and its connection to EU Strategy 2020. Mr. Kovács called the attention to the fact that there is close *connection to DG Environment policies* as mostof Pillar B Actions are covered by Directives of DG Environment and that most of the EUSDR Water Quality (PA 4) Actions refer to the Water Blueprint issues. He also pointed to the *connections of EUSDR to the activities of the ICPDR activities* and to the *activities of the JRC* as the later initiated a *‚Scientific support to the Danube Strategy’, which main* objectives are to gather scientific expertise and data. Mr. Kovács emphasised that the EUSDR can efficiently *contribute to reaching the relevant EU* *environmental* objectives; to reinforce the major EU policy initiatives and can promote the implementation process through the EUSDR projects; can develop the Danube Region balancing between protection of environment, sustainability and development of economy and can reach the targets of the EUSDR by promoted implementation of relevant directives and finally can encourage the non- Member States in cooperation and contribution having regard to specific circumstances of different countries.

Following the policy session different technical sessions proceeded in the topics of sharing waters, integrated river basin and international watercourse management; complex flood and drought management; drinking water protection in changing climate, sanitation and waste water treatment improvements; climate adaptation focusing on ecosystem protection and cross cutting issues and the implementation of economic instruments.

**Challenges and integrated measures**

The expert bodies of the ICPDR agreed that updating of the Danube River Basin District Management Plan (DRBMP) requires that a comprehensive study on sediment balance, on the pressures and impacts as well as on the measures needed will be performed. Details related to the sediment issues and its consequences have been assessed in the presentation of Prof.János Józsa form the Budapest University of Technology and Economics.

Dr. Ad de Roo from the European Commission - Joint Research Centre, gave presentation on the *Multi-criteria hydro-economic optimisation of water resources in Europe to support the EU Blueprint to safeguard Europe’s waters and the Danube Strategy*. Dr. Ad de Roo introduced a JRC study on challenges and solutions related water demand and supply. The aim of the study is to stimulate EU countries to increase the efficiency of water use by 2020/2030 (*e.g: Increasing irrigation water efficiency,Increasing water savings in households, Water re-use in industry/agriculture, etc*) and to explore pro’s and con’s of other options of desalination, reducing leakage from water supply, large distance water transfers between basins and water pricing. At the same time the EU countries should also reduce flood risk, if possible through natural water retention measures, they should have sufficient water for all economic sectors.

Cristina Sandu, (Institute of Biology Bucharest, Romanian Academy, International Association for Danube Research – IAD, Romania) and Gábor Guti (Danube Research Institute, Centre for Ecological Research, Hungarian Academy of Sciences, International Association for Danube Research – IAD, Hungary) stressed in their presentation that **increasing water demand of human society is one of the most important strategic questions in the 21th century.** Extensive river use to maximize the benefits from the available resources has led to an increase of river engineering and dam constructions worldwide. Damming offers several benefits for the society, but it has also a high number of negative impacts on the ecological integrity of river ecosystems. Their presentation focused on problems raised by the fragmentation and the need for restoration of longitudinal connectivity of river ecosystems. **The loss of longitudinal connectivity was one of the biggest problems** faced by the aquatic ecosystems: the fish species could not migrate anymore for spawning, feeding or nursery ground, the sediment transport was altered, the water flow changed drastically (from running to standing water), etc. One of the most dramatic examples in the Danube Region is the decline of sturgeon species: from the six native species that inhabited the Danube River Basin, one is already extinct, while the others are critically endangered. To prevent the further loss of these species and revive the remaining populations, the **Danube Sturgeon Task Force (DSTF) was established** with the support of EUSDR - Pillar II, ICPDR, IAD, WWF, and other governmental and non-governmental organizations from the Danube Basin. The **DSTF has launched the Program Sturgeon 2020** that combines environmental protection (habitat restoration, in situ research, restocking activities, preservation of genetic pool, etc) with socio-economic measures addressed mostly to the local communities living along the Danube River that used to base their existence on fishery. **A key measure envisaged by this program is the restoration of longitudinal connectivity to allow the spawning migration.** Due to the complex measures foreseen, this integrative program will require intensive cooperation with all the 11 Priority Areas of EUSDR, across the whole Danube River Basin and the adjacent Black Sea.

The brief presentation of Kovács Zs and Török A from the Pannon Egyetem – was focusing on **complex and innovative monitoring systems for river basins, by presenting new ideas concerning Early Warning Systems and toxicology testing.** These two directions of water analysis were joined together comprising a cost effective integrated system which performs sampling, analysis and toxicity testing of surface waters. The selection of appropriate sampling locations is essential to characterise water bodies while reacting on industrial or other hot spots and also keeping record of water quality in country border sections. Due to the excellent architecture of monitoring stations, data transmission and databases, together with a state-of-the-art communication system the international early warning function is also ensured. The modular structure of each monitoring station makes easy to react on varying analytical requirements, the frequency and speed of analysis results in quasi-continuous information about whole catchment areas. Excessive laboratory analysis of emerging and priority pollutants needs extreme investments and running costs of conventional laboratory networks. The innovation helps to reduce the necessary investment and other costs by pre-classifying the samples by high-tech and top sensitivity biological-toxicological methods. **As a result of such an Effect Based Monitoring only relevant samples are transported and analysed in labs.** The used effect based monitoring methods include from recombinant yeast strains through real time PCR to ecotoxicogenomic, whole genome DNA analysis as well. To make complete this set of brand new toxicology tools digital holographic microscopy can offer real-time image of for example phytoplankton taxa in surface waters. **The combination of Early Warning Systems and Effect Based Monitoring gives a new, so far unknown quality of continuous monitoring of waters.**

Raimund Mair from the International Commission for the Protection of the Danube River (ICPDR) focused his presentation on the *Compatibility of environmental requirements and sectoral water needs*. Mr Mair stressed that **integrated water resources management in transboundary river basins constitutes a complex and multidisciplinary challenge due to the linkage with different sectoral policies and national priorities**. River basin commissions are established worldwide to tackle this challenge and to improve the way our waters are managed. Different ’Significant Water Management Issues’, jointly agreed amongst the Danube countries, are addressed in the plan and respective measures are currently implemented, addressing organic, nutrient and hazardous substances pollution, next to hydromorphological alterations. In addition, the ICPDR is active to ensure the sustainability of infrastructure development by outreach activities with specific sectors. The ‘Joint Statement on Inland Navigation and the Ecology’ or the recently adopted ‘Guiding Principles on Sustainable Hydropower Development in the Danube Basin’ are examples for integrative processes, aiming to ensure that environmental requirements are taken into account from the beginning. Efforts are also taken to ensure a coordinated implementation of the EU Floods Directive towards sustainable flood risk management, considering climate change adaptation. Mr Mair also highlighted that with the EU Danube Strategy (EUSDR) a new window of opportunity has opened to further strengthen cooperation on environmental issues in the Danube basin. The compatibility of environmental objectives and sectoral water needs requires integrated management and exchange between different water-related sectors. This asks for coordination of activities not only between the ICPDR and the EUSDR, but also amongst relevant Priority Areas within the EUSDR in order to ensure a sustainable development of the Danube River Basin

The Sava river basin is a major drainage basin of the South-Eastern Europe and the second largest Danube sub-basin by area, while the Sava river is the biggest Danube tributary by discharge. The transboundary water management in the Sava basin is based on the Framework Agreement on the Sava River Basin (FASRB), whose implementation is performed by four countries (Slovenia, Croatia, Bosnia and Herzegovina, Serbia) and coordinated by the International Sava River Basin Commission (ISRBC).

Dejan Kometina, Secretary of the **ISRBC highlighted in his presentation that the overall objective of the FASRB is to ensure transboundary water cooperation in order to provide conditions for sustainable development of the region within the Sava basin.** Accordingly, the FASRB implementation process couples the water and aquatic ecosystem protection with the protection against hazards (i.e. floods, droughts and accidents involving water pollution) and development issues (e.g. navigation, river tourism). Using the ISRBC as a platform for cooperation, **the countries have jointly defined priorities and agreed on a joint vision and programme for sustainable development of the region**. The EU Strategy for the Danube Region (EUSDR) is perceived as an appropriate framework for the implementation of the joint programme in the period 2014-2020, given that the overall objectives of EUSDR and FASRB (i.e. sustainable development of the region they refer to), as well as their basic principles (e.g. “3 no’s”), are identical. The ISRBC projects are fully in line with the EUSDR priorities, already agreed on subregional level and complementary to the activities performed on a regional, Danube level. Therefore, there is a high potential for synergy, as the implementation of the ISRBC projects within the EUSDR framework can contribute to an effective implementation of both EUSDR and FASRB.

Chaired by Ms Olimpia Negru, priority area coordinator of EUSDR PA5 a session was dealing with **complex flood and drought management issues**. Presentation was given about a Hungarian-Ukrainian joint Upper-Tisa flood management development program (hydrologic and hydraulic modelling) by Lajos Illés from VIZITERV Environ Kft/ELCOM Kft.-Hydroinform Kft. Experiences of current flood events were outlined in three different presentations by András Csík, Hungarian Hydrological Forecasting Service of General Directorate of Water Management, Hungary, János Józsa, Budapest University of Technology and Economics and by Zoltán Melicz, Eötvös József College, Baja. Ms Olimpia Negru and Péter Bakonyi (PA5 coordinators) summarised at the end of the session the contribution and opportunities of the EU Danube Region Strategy in relation to the Flood and Drought Management.

Following the flood and drought issues a session was devoted to the **significance of drinking water protection, to sanitation and waste water treatment improvements, to climate adaptation and to the implementation of economic intruments.**

Gerhard Kuschnig introduced the CC-WaterS, project on Climate change and impacts on water supply. CC-WaterS was a project conducted between May 2009 and April 2012 and funded by the European Union. **More than one hundred scientists from nine south- east European countries collaborated in this project**. Climate change affects fresh water resources and may have significant influence on public drinking water supply. Land use activities exert pressure on water resources and will change according to climate change. Climate change impacts on the availability and safety of public drinking water supply as well as on land use activities were identified and evaluated.

Following the presentation of Gerhard Kuschnig, Istvan Bogárdi and Laszlo Perger introduced the **CCWaterS follow-up project (CC WARE),** a project for Mitigating Vulnerability of Water Resources under Climate Change. Objectives of the project include: 1. Characterization and mapping of vulnerability for the SEE region, 2. Management options for mitigating vulnerability and 3. Development of transnational strategy for national/regional action plans. Vulnerability includes physical impacts that will be brought about by climate change but also hydrological/geographical and socio-economic aspects. Vulnerability is characterized by an index,VI that expresses water quantity and quality as well as socio-economic conditions in an integrated way. VI is able to compare and rank vulnerability nationally over SEE, and form the basis of analyzing mitigation actions and developing transnational strategy for national/regional action plans. Out of the various models for water resources vulnerability assessment, for the present purpose, Composite Programming is used because of its ability to consider and integrate completely different indicators (e.g. physical vs. socio-economic). It also represents a compromise between mathematical sophistication and ease of use. Depending on available data vulnerability may be represented by: 1. direct use of the three main indicators (quantity, quality and socio-economics), 2. forming indirect indicators that reflect the key factors influencing the main indicators, and 3. combination of direct and indirect indicators. Four management options for mitigating vulnerability are considered: land use change, ecosystem services, improving water use efficiency and economic incentives for water management. The development of a transnational strategy for national /regional action plans will compare vulnerability indices reflecting the various management options.

Csaba Haranghy (Water Works of Budapest) explained in his presentation **how river engineering can influence the water supply of large cities giving and example of the water supply in Budapest**. Following the presentation of Csaba Haranghy, an integrated solution for waste water treatment in small settlements and rural areas was presented by Adrienn Clement from the Budapest University of Technology and Economics. The presentation gave **a comprehensive overview of the sanitation problem of small settlements**, together with numerous possibilities of treatment methods and their physical implementation. The initial problem arises from the settlement structure of agro-industrial regions of many countries resulting in large proportion of untreated waste water and substantial diffuse pollution of ground water and surface water. It was shown that conventional „concrete based” sewerage systems are less appropriate technically and catastrophic from financial point of view. The effect of loads caused by untreated waste water on water quality was also demonstrated. The core idea is a multi-criteria evaluation method with all the small scale water treatment equipment on one side, and a large number of ambient and social and economy parameter on the other side. With the multi-criteria evaluation method joined with GIS ambient and social database the most suitable small scale waste water treatment equipment was determined and shown on a country map. **As a major contribution to the reduction of water use and waste water amount a source separation scheme was presented, defining descriptive categories of yellow, brown and grey water and their possible paths within a rural/agricultural household and environment.**

The last three presentation were also parsed actual problems related to climate change (introduced by Sándor Szalai, Szent István University) as well as related to the significance of ecosystem services introduced by Zoltán Simonffy. From the Corvinus University of Budapest Gábor Ungvári raised several questions related to the combined objectives of efficiency, fairness and cost recovery and initiated an important professional discussion as also a starting point towards to further stakeholder meetings.

The full conference presentations are available at the website: <http://groupspaces.com/WaterQuality/pages/stakeholder>

**CONFERENCE PROGRAMME**

**DAY 1. Wednesday 11/09/2013**

**High level session**

CHAIR: Balázs Medgyesy Government Commissioner of the EU Danube Strategy

10.00 AM HE Tamás Németh, FM, General Secretary of the Hungarian Academy of Sciences

10.07 AM HE Enikő Győri, Minister of State, Ministry of Foreign Affairs

10.14 AM        HE Zoltán Illés, Minister of State, Ministry of Rural Development

10.21 AM        HE Ing. Vojtech Ferencz, State Secretary, Ministry of Environment, Slovak Republic

10.28 AM        Normunds Popens, European Commission, Deputy Director General of the Directorate General Regional & Urban Policy

10.35 AM Marianne Wenning, Director, European Commission, Directorate General Environment

10.42 AM HEErmina Salkičevic- Dizdarević, Deputy Minister Bosnia and Herzegovina,

President International Commission for the Protection of the Danube River

10.49 AM        Wolfgang Klug, Bavarian State Ministry of the Environment and Public Health

10.56 AM        Olimpia Negru, Priority Area Coordinator Priority Area 5 Romania

Session 1. **The policy context** **-- 11.00-13.00 AM**

CHAIR:HEErmina Salkičevic- Dizdarević, President International Commission for the Protection of the Danube River

**a) Transboundary cooperation**

11.10 AM **Science and innovation supporting macroregional development agenda**

Former Vice-Chancellor of Austria Dr. Erhard Busek, Chairman of the Institute for the Danube Region and Central Europe (IDM), Austria

11.20. AM **The Danube basin cooperation** Ivan Zavadsky, Executive Secretary, International Commission for the Protection of the Danube River

11.30 AM **The ASEM cooperation mechanism**s Peng Qinghui, Assistant to Secretary General, ASEM Water Resources Research and Development Center, China

11.40 COFFE BREAK

12.10 AM **The experiences of the UNECE concerning transboundary water cooperation**

Dr.Annukka Lipponen, Environmental Affairs Officer, secretariat of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, United Nations Economic Commission for Europe (UNECE)

12.20 AM **Water protection and human rights in the Danube basin**

Marcel Szabó, Deputy Commissioner for Fundamental Rights

12.30 AM **Macro regional co-operation in relation to water issues: the experiences of the REC,** Marta Szigeti Bonifert, Executive Director, Regional Environmental Centre

12.40AM **b) Water Framework Directive, Urban Waste Water Treatment Directive, Floods Directive: setting the scene**

Marianne Wenning, Director European Commission, Water Marine Environment & Chemicals Directorate D,

12.50 AM **c)** **Context of EU water policies and the EUSDR**

PéterKovács, State Secretary, Ministry of Rural Development, Hungary

13.00-14.10. LUNCH

Session 2. **Challenges and integrated measures**

14.10.-16.30 PM CHAIR: András Báldi, General Director of the **Centre for Ecological Research,**

Hungarian Academy of Sciences

**Sharing waters, integrated river basin and international watercourse management**

Sediment issues and consequences in the Danube river – Józsa J., H. Habersack (Budapest University of Technology and Economics - University of Natural Resources and Life Sciences - Water Research Institute, VUVH, Slovakia)

The Water Blueprint hydro-economic assessment for European regions (European Commission Joint research Centre, - Dr. Ad de Roo, Italy)

Longitudinal continuity for international watercourses – Cr. Sandu, Gúti G. (International Association for Danube Research - MTA **Ecological Research**)

Complex and innovative monitoring system for river basins - Kovács Zs. - Török A., (Pannon Egyetem - OKI)

Compatibility of environmental requirements and sectoral water needs including navigation, agricultural domestic and industrial water use –R.Mair, I. Liska (International Commission for the Protection of the Danube River)

Transboundary water management in Sava River Basin focusing on sediment and biodiversity issues – Dejan Komatina, Secretary of the International Sava River Basin Commission Secretariat (Slovenia and Sava Commission Countries)

**DAY 2. Thursday 12/09/2013**

10.00 -11.20 AM CHAIR: Olimpia Negru, Priority Area Coordinator PA5 Romania

* + - * 1. **Complex flood and drought management**

The Hungarian-Ukrainian joint Upper-Tisa flood management development program, hydrologic and hydraulic modeling– Lajos Illés-Zoltán Tóth-János Szabó (VIZITERV Environ Kft.-ELCOM Kft.-Hydroinform Kft.)

Experiences of current flood events

Hydro-meteorological antecedents of 2013 flood – Ákos Horváth (Hungarian Meteorological Service) and András Csík (Hungarian Hydrological Forecasting Service of General Directorate of Water Management, Hungary)

The contribution of science to the operative flood management - Prof. János Józsa (Budapest University of Technology and Economics)

Training of flood managers – Zoltán Melicz, (Eötvös József College, Baja)

The contribution and opportunities of the EU Danube Region Strategy in relation to the Flood and Drought Management - Péter Bakonyi and Olimpia Negru (PA5 coordinators)

11.20-11.45 AM COFFE BREAK

11.45-12.45 AM CHAIR: Florian Ballnus, Priority Area Coordinator PA6 Bavaria

* + - * 1. **Drinking water protection in changing climate**

CC WaterS: a model for water supply management measures - G. Kuschnig (Vienna Waterworks)

CC WARE: mitigating vulnerability of water resources in a changing climate – L. Perger, I. Bogárdi (NeKI- Eötvös Loránd University)

* + - * 1. **Sanitation and waste water treatment improvements**

Deployment and upgrade of urban waste water treatment in the context of the River Basin Management- Cs. Haranghy (Water Works of Budapest)

Integrated solutions for waste water treatment in small settlements and rural areas – A. Clement (Budapest University of Technology and Economics)

* + - * 1. **Climate adaptation focusing on ecosystem protection and cross cutting issues**

Regional climate modelling and coordinated policy responses – S. Szalai (Szent István University)

* + - * 1. **Implementation of economic instruments**

Combine objectives of efficiency, fairness and cost recovery – G. Ungvári (Corvinus University of Budapest)

Translate ecosystem services into social benefits – Simonffy Z. (Budapest University of Technology and Economics)

**13.45 AM Closing remarks**

LUNCH offered

**BIOS in order of the speeches and presentations**

**OPENING SESSION and POLICY SESSION:**

**Balázs Medgyesy**

**Government Commissioner of the EU Strategy for the Danube Region, Hungary**

Balázs Medgyesy is a Hungarian agrarian economist. He graduated from the Faculty of Economic and Social Sciences of the Gödöllő University of Agricultural Sciences. Following graduation his research in the University focused on resource economics and integration of environmental, sectorial and economic policies. He served as the Head of the Department of International Affairs and European Integration in the Ministry for Environment from 1998. He was appointed as the permanent state secretary of the Ministry for Environment in 1999. After managing the establishment of the state agency for energy efficiency and renewable energy („The Energy Centre” Energy Efficiency, Environment and Energy Information Agency) he was the managing director of the agency. He also pursued a career as a consultant on energy and environment. He served as a state supervisor on authorization issues at Staff of State Commissioner controlling the MAL following the red mud disaster. Effective 1st of January 2012 he was appointed as the Government Commissioner responsible for the coordination of the public administration on the EU Strategy of the Danube Macro-region.

From 1997 to 2012 he was a lecturer at Corvinus University on the subjects regional policy, regional planning and modelling and regional environmental policy. As part as his academic career he was guest lecturer in a number of universities, including Pázmány Péter Catholic University, Szent István University and Századvég School of Politics on the strategic, European and international dimensions of environmental and sectoral policies.

**Tamás Németh**

**General Secretary of the Hungarian Academy of Sciences**

Tamás Németh is an agricultural engineer. He started his professional work at NEVIKI in Keszthely and from 1977 he continued his work at the MÉM. In 1981 he went to the USA for a one year trainee period. Between 1983 -1997 he worked at the MTA Soil and Agrochemical Research Institute (MTA TAKI) and he became the Scientific Deputy Director in 1991. He acts as the Director of MTA TAKI since 1997.

**Enikő Győri**

**State Secretary for European Affairs in Hungary, Ministry of Foreign Affairs**

Enikő Győri is a Hungarian economist. She graduated from the Budapest University of Economic Sciences (*Corvinus University of Budapest*) Department of International Relations. Following graduation she focused her researches on public policy and she participated on the training for civil servants organised by the École Nationale d’Administration (ENA, Párizs) in Budapest. Later on she continued her researches and finished her PhD at the Budapest University of Economic Sciences focusing on International Relations. Between1992-1999 she worked as a Senior Advisor at the EU Affairs Committee of the National Assembly. Enikő Győri acted as the Ambassador of Hungary in Rome between 1999-2003. Since 2004 she is a lecturer at the Department of ELTE LAW as well as manager of the Free Europe Center. Since 2003 she acts as the chief of staff in the National Office (Fidesz fraction, EU working group). Between 2009-2010 she was a Member of the European Parliament and since 2011 she is the Secretary of State for EU Affairs.

**Zoltán Illés**

**Minister of State, Ministry of Rural Development**

Zoltán Illés is a chemical engineer graduated at the Technical University of Budapest, Hungary. Following graduation his research in the University focused on analytical chemistry. Within his researched he analyzed the influence of pesticides on soil bacteria to determine which caused least damage to the soil ecosystem (Doctoral Thesis). Later on as a Post-doctoral Associate, in Yale University he used HPLC system for analyzing pesticide and heavy metal content of water and soil samples. In 1990 he served as a Deputy State Secretary of the Hungarian Ministry of Environmental Protection. Between 1991-1994, he acted as a Senior Advisor to the Ambassador of the European Communities (EU) at the Delegation of EU in Budapest. Between 1994-1995 he worked as an Executive Director at the Hungarian Environmental Management Training Center Environmental management, consultancy and training. Between 1995-1996 he won Fulbright-Humphrey Scholar at UNC-Chapel Hill and Duke University. He was teaching environmental policy and management and lecturing about Eastern-European environmental issues at Duke University and at UNC-Chapel Hill. Moreover he was working at Kenan Institute and cooperating with U.S. EPA on promotion of American environmental businesses in Eastern Europe taking courses in Fugua Business School (Duke University) and Kenan-Flager Business School (UNC-Chapel Hill). Between 1994-2003 he was the vice-president of the ruling political party (Fidesz). In the period between 1998-2010 he fulfilled several chairmanships and membership role. He was a member of the Hungarian Parliament for three terms, chairman of the Committee for the Environment of the Hungarian Parliament, chairman of the Serbian-Hungarian Friendship Committee and vice chairman of the Croatian-Hungarian Friendship Committee in Hungarian parliament. He was also the vice-Chairman of the Committee for the Environment of the Hungarian Parliament. Since 1997 he is an Associate Professor at the Central European University (CEU), Budapest; Department of Environmental Sciences & Policy and Visiting Professor at the Eötvös Loránd Tudomány Egyetem (ELTE) in Budapest. Since 2005 he is a Visiting Professor at the Szent István Egyetem, Gödöllő; Program on Field of Environmental Science & Management.

In 2010 he became the State Minister for Environmental Affairs.

**Ing. Vojtech Ferencz**

**State Secretary, Ministry of Environment, Slovak Republic**

Ferencz Vojtech is an economist. He graduated from the University of Economy in Bratislava, Faculty of Business Economy, Kosice. His academic title is "Philosophiae Doctor". Between 1995-2005 he worked as a Factory Manager, Financial Director at VSS Košice. In 2007 he became a General Director of the Strategy Section at the Ministry of Economy of the Slovak Republic, Bratislava and in 2010 he worked for the Slovak Water Management Enterprise as a Deputy Director for Economy. Since 2012 he is a Secretary of State at the Ministry of Environment of the Slovak Republic.

**Normunds Popens**

**Deputy Director General for Implementation in the Directorate General Regional and Urban Policy of the European Commission**

Normunds Popens is currently Deputy Director General for Implementation in the Directorate General Regional and Urban Policy of the European Commission in charge of overseeing the implementation of structural and cohesion fund programmes in EU member states and candidate countries. Before joining the European Commission in March 2011 he has occupied several posts in the Latvian diplomatic services. Notably from 2007 till 2011 he was a Permanent Representative of Latvia to the EU. Before that he dealt with European affairs as Undersecretary of State of the Latvian Ministry of Foreign Affairs. He has been also responsible for the issues of foreign trade and transatlantic relations and has worked as an Ambassador in Norway, Iceland and in the USA as a diplomat.

**Marianne Wenning, Director,**

**European Commission, Water Marine Environment & Chemicals Directorate D,**

Marianne Wenning is currently Director for 'Quality of Life, Water & Air' in DG Environment of the European Commission. In this capacity she is overseeing the implementation and enforcement of an extensive body of environmental legislation with regard to air quality, industrial emissions, water & marine issues and industrial accidents and works towards the further integration of environmental and sustainability aspects into other Community policies.

Ms.Wenning has been working for the European Commission, DG Environment, since 1992. Her experience in developing and implementing environmental policies, cutting across also areas such as transport, agriculture, regional, industrial, research and development policies includes the economic aspects of environmental policy, programme-management in Asia as well as negotiations at European and international/UNECE level in particular with regard to the Kyoto, the Montreal and the Gothenburg Protocols.

**Ermina Salkičevic- Dizdarević**

**Deputy Minister Bosnia and Herzegovina,**

**President International Commission for the Protection of the Danube River**

Ermina Salkičevic- Dizdarević is an economist. She graduated at the University of Sarajevo, Faculty of Economics in 2002 focusing on international economics. In 2001 she studied at the Georgetown University in Washington DC. In 2002 she started her professional life as a Project Coordinator Project Assistant/Interpreterat at ASYCUDA – UNCTAD. Since 2012 she is a Deputy minister of Foreign Trade and Economic Relations of Bosnia and Herzegovina. In 2013 she acts as the President of the International Commission for the Protection of the Danube River.

**Dr. Erhard Busek**

**Chairman, Institut für den Donauraum und Mitteleuropa,**

**Former Vice Chancellor of Austria**

Dr. Busek began his professional career as legal advisor to the association of parliamentarians of the Austrian People's Party. He then served in a number of administrative positions, including Secretary-General of the Austrian Federation for Trade and Commerce, Secretary-General of the Austrian People's Party, Deputy-Mayor of Vienna, Minister of Science and Research, Minister of Education, Vice Chancellor of Austria, Special Representative of the Austrian Government for the Enlargement of the European Union and Special Coordinator of the Stability Pact for Southeastern Europe. Currently he is Chairman of the Institute for the Danube region and Central Europe (IDM), President of the Vienna Economic Forum (VEF), Coordinator of the Southeast European Cooperative Initiative (SECI) and Jean Monnet Professor ad personam.

**Ivan Zavadsky,**

**Executive Secretary ICPDR**

Mr. Zavadsky has almost 30 years of experience in transboundary waters management, working first for the Slovak Government in different senior management position in the fields of environment and water management, then since 2001 he managed two UNDP/GEF regional projects in the Danube River Basin and Black Sea region assisting 17 countries in implementation regional convention such as the Danube River Protection Convention and the Black Sea Convention. From 2007 until mid-2013 he worked for the GEF Secretariat, where he was responsible for the GEF International Waters focal area. Since August 2013 he works in the Permanent Secretariat of the ICPDR as Executive Secretary to this Commission.

The ICPDR is an international organisation, established through the Danube River Protection Convention of 1994. Its 15 contracting parties include all major countries of the Danube River Basin. The ICPDR’s work is based on the activities of expert groups, comprising of delegates from members and observer organisations. In total, almost 300 national experts, mostly from ministries, water management authorities and other public bodies contribute to the work of the ICPDR in areas such water quality monitoring, joint actions on water quality control, flood protection, etc. The ICPDR serves as a platform and mechanism for Danube countries to implement the EUWFD and EFD at the basin scale level.  ICPDR is strongly anchored in the EU DS, where collaboration and joint actions has been already established and are growing further.

**Peng Qinghui**

**Assistant of Director General of the Secretariat of**

**ASEM Water Resources Research and Development Center**

Mr. Peng Qinghui works under the framework of ASEM (Asia-Europe Meeting) in China, Changsha, in the Center that was officially established in ASEM Summit 8 in August, 2010. His research is focusing on the ASEM cooperative mechanism in water between Europe and Asia.

**Dr. Annukka Lipponen, Environmental Affairs Officer in the secretariat of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes at UNECE**

Dr. Annukka Lipponen has been working as an Environmental Affairs Officer in the secretariat of the Convention on the Protection and Use of Transboundary Watercourses and International Lakes at UNECE in Geneva, Switzerland since 2009. Her main duties focus on assessment of transboundary waters. Earlier in her career she worked as a programme specialist in the Division of Water Sciences at the United Nations Educational, Scientific and Cultural Organization (UNESCO) in France; as a responsible officer for UNESCO’s natural sciences programmes in Central Asia based in Kazakhstan; and as a researcher at the Finnish Environment Institute.

**Marcel Szabó**

Dr. Marcel Szabó is the chair of the European Law Department of the Faculty of Law and Political Sciences at the Péter Pázmány Catholic University in Budapest. Furthermore he works as the Hungarian Deputy Commissioner for Fundamental Rights responsible for the protection of the interests of future generations. Earlier Mr. Szabó was a visiting fellow at the Lauterpach Research Centre for International Law in Cambridge, as well as the Centre for European Legal Studies in Cambridge too. His publications include: The EU under Public International Law: Challenging Prospects, in The Cambridge Yearbook of European Legal Studies (Ed.: Catherine Barnard), 2007-2008, vol. 10, Oxford and Portland, Oregon: Hart Publishing, 303-343.

**Marta Szigeti Bonifert,**

**Executive Director, REC**

Ms. Szigeti Bonifert earned her masters of business administration from the Katz Graduate School of Business from the University of Pittsburgh with a focus on strategy and human resources. She has a degree in management from the International Management Center of Central European University and has a bachelor of science in psychology/biology from the University of Kuwait. She has spent 12 years working for the environment in various capacities at organisations such as the Environment Institute and the Environment Ministry in Hungary. Before joining the REC, she spent 10 years in business working for multinational companies in various senior roles ranging from head of human resources to commercial director for the CEE region at companies.

The Regional Environmental Center for Central and Eastern Europe (REC) is an international organisation with a mission to assist in addressing environmental issues. The REC fulfils this mission by promoting cooperation among governments, non-governmental organisations, businesses and other environmental stakeholders, and by supporting the free exchange of information and public participation in environmental decision making. The REC was established in 1990 by the United States, the European Commission and Hungary. Today, the REC is legally based on a charter with over 30 signatories. The REC has an office network in 17 countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, the former Yugoslav Republic of Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia, Slovenia, Turkey. The head office is located in Szentendre, Hungary.

**Péter Kovács**

**State secretary for water**

**Ministry of Rural Development**

Mr. Kovács started his professional career, with a civil engineering background at a regional water and environmental administration. Since 1997, he worked for various ministries dealing with water related issues (for the implementation of the Water Framework Directive) in different positions. He has a long experience with transboundary cooperation, at present leading 6 bilateral commissions with neighbouring countries. He has an active participation in multilateral level as well, eg. leading the Hungarian delegation to the ICPDR. Since 2012 he was appointed as a state secretary for water.