

ANNUAL REPORT

on the Activities of the ICPDR in 2004



Information

ICPDR – International Commission for the Protection
of the Danube River / Permanent Secretariat
Vienna International Centre, D0412
P.O. Box 500, 1400 Vienna / Austria
Tel: 0043-1-260 60-5738, Fax: 0043-1-260 60-5895
e-mail: icpdr@unvienna.org, www.icpdr.org

Imprint

Owner: ICPDR – International Commission for the Protection of the Danube River / Permanent Secretariat; **Production & Graphic Design:** p:matter, Vienna; **Photos:** Igor Liška, Maria Galambos, Sandra Holzner, Lucian Tropan, Vizy Zsigmond, Mark Fallander (Coca-Cola HBC), Milena Dimitrova; **Proofreading:** Susannah Wight, London; **Print:** Print-Tech, Budapest

Contents



1. OPERATIONAL AND INSTITUTIONAL FRAMEWORK	6
2. FINANCIAL CONTRIBUTIONS AND BUDGETARY SITUATION	11
3. ICPDR MEETING OF DANUBE MINISTERS	15
4. WATER QUALITY AND HYDROLOGICAL SITUATION	16
5. IMPLEMENTATION OF WFD	20
6. POLLUTION CONTROL STRATEGY IN LINE WITH WFD REQUIREMENTS	24
7. OPERATION OF THE DANUBE ACCIDENT WARNING SYSTEM	28
8. FLOOD PROTECTION IN THE DANUBE RIVER BASIN	30
9. ACCIDENT PREVENTION IN THE DANUBE RIVER BASIN	32
10. PUBLIC COMMUNICATION	36
11. INTERNATIONAL AND REGIONAL COOPERATION	39
12. ABBREVIATIONS AND ACRONYMS	45
ANNEX 1: COMPOSITION OF THE ICPDR IN 2004	46
ANNEX 2: OBSERVER STATUS AS OF 31.12.2004	48

Foreword



2004, the tenth anniversary year of the signing of the Danube River Protection Convention, was an eventful and productive year for the ICPDR, in which a number of important milestones were reached.

Among the 2004 highlights was the **Ministerial Meeting** in December 2004. It brought together, for the first time since the signing of the Convention, Ministers responsible for water management in the Danube region to review the work of the ICPDR. Ministers adopted the Danube Basin Analysis ('Roof Report') under the EU Water Framework Directive, the Danube Flood Action Programme, and signed the Tisza Memorandum of Understanding. All these important achievements were endorsed and supported by Danube Ministers in a very constructive and positive atmosphere of cooperation. The Danube, although one of the most international river basins in the world, and presumably the most complicated from the point of view of coordination of interests, has nonetheless managed to achieve an involvement and cooperation which has set standards.

Our cooperation and commitment to coordination will be indispensable to address existing and emerging challenges. Ministers at the Ministerial meeting agreed on a **Danube Declaration** which underlines some of the great successes that have been achieved but also the work we have ahead of us. Given the high degree of cooperation prevailing, I am optimistic we will be able to deliver in the years to come on the commitments made in the Danube Declaration.

Among the significant achievements of 2004 were the events linked to the first ever **Danube Day** held on June 29, 2004. Throughout the Danube basin celebrations were held in connection with Danube Day, reinforcing the concept of basin solidarity and joint responsibility for management and care for our Danube and its tributaries. A special highlight of Danube Day was the award of Danube Art Masters in each country from thousands of art works produced by children throughout the Danube basin. The engagement and enthusiasm of the children for expressing their views on ensuring the protection and restoration of the Danube, which the ICPDR Heads of Delegation got first-hand experience of at the Ordinary Meeting in December 2004, was more than evident and offers hope of a bright future for the Danube.

Of great importance for the work of the ICPDR was the **ratification by Bosnia and Herzegovina of the Danube River Protection Convention**. This act means that the family of Danube countries working under the Convention is now complete. I am especially pleased that Bosnia and Herzegovina is now a full member of the Commission and that work will be intensified to ensure active involvement of experts from Bosnia and Herzegovina in the work of the ICPDR.

Foreword



The completion of the **Danube Basin Analysis** is an essential building block for the future work of the ICPDR. This product, involving the input of all Danube countries, was prepared to meet the requirements and commitments under the EU Water Framework Directive. As Director General of DG Environment I am fully aware of the significance of this report, which was legally mandatory for EU Member States but required for its delivery strong commitment of non-Member States as well. Active work by non-Member States using the Water Framework Directive methodology has set a positive example for other regions of Europe. This report will form the basis for the decisions and actions to be taken to ensure good quality of waters throughout Europe by 2015.

Following the disastrous floods of 2002, Danube countries have also shown their commitment to reducing the risk posed by floods, jointly working hard to complete the **Danube Flood Action Programme**. The Programme was agreed during this past year and represents an essential step along the way to refining and coordinating efforts to minimise the negative impacts of floods.

The year 2004 was special for the EU because of the eastward expansion of its borders. **Four main Danube countries joined the EU** and have brought important benefits to the EU. I have seen during my year of Presidency of the ICPDR how important it is to ensure that cooperation under the Danube River Protection Convention is supported and built upon. This convention has been important not only within the EU but also in linking the EU in cooperative management arrangements with neighbouring countries.

The year 2004 as President of the ICPDR has been special, and rewarding, for me.










Catherine Day
President of the ICPDR 2004

1. Operational and Institutional Framework

Contracting Parties

In 2004, Bosnia and Herzegovina initiated the process to become a full member of the Danube River Protection Convention (DRPC). Thus, the last country having more than a 2,000 km² share in the Danube River Basin becomes a Contracting

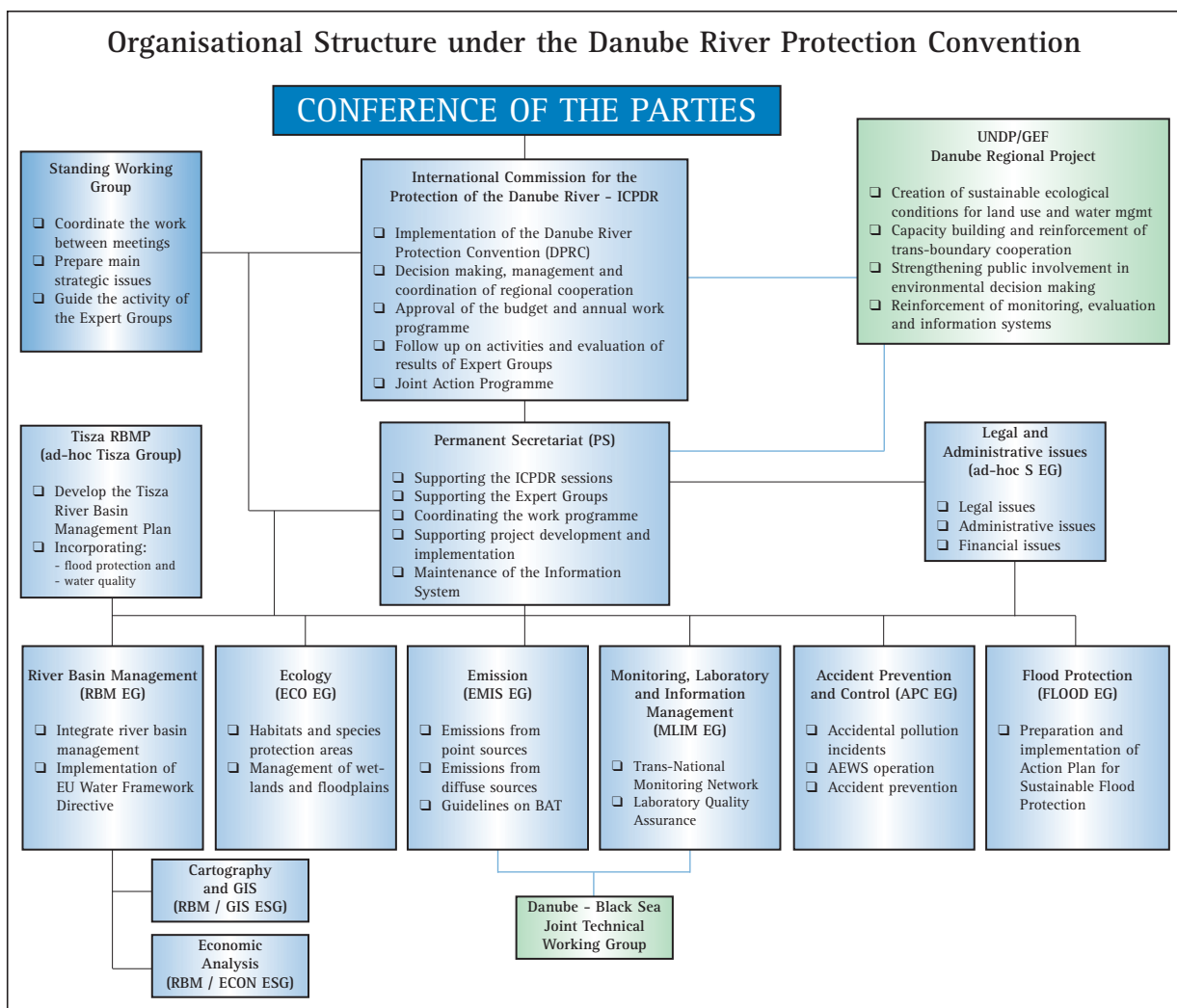
Party in early 2005. The ICPDR warmly welcomed Bosnia and Herzegovina in its advanced membership status and expressed its willingness to provide Bosnia and Herzegovina with all necessary assistance in order to participate in the work of the ICPDR.

 Country/Organisation		Status	Since
 Austria	AT	Contracting Party	22-Oct-98
 Bulgaria	BG	Contracting Party	02-Aug-99
 Bosnia and Herzegovina	BA	Participant with Consultative Status	17-July-97
 Croatia	HR	Contracting Party	22-Oct-98
 Czech Republic	CZ	Contracting Party	22-Oct-98
 European Union	EU	Contracting Party	22-Oct-98
 Germany	DE	Contracting Party	22-Oct-98
 Hungary	HU	Contracting Party	22-Oct-98
 Moldova	MD	Contracting Party	29-Aug-99
 Romania	RO	Contracting Party	22-Oct-98
 Serbia and Montenegro	CS	Contracting Party	19-Aug-03
 Slovakia	SK	Contracting Party	22-Oct-98
 Slovenia	SI	Contracting Party	22-Oct-98
 Ukraine	UA	Contracting Party	13-Mar-03

1. Operational and Institutional Framework



The organisational structure of the ICPDR in 2004 is shown below:



1. Operational and Institutional Framework

Observers

The Observers to the DRPC are international or national organisations, or other bodies invited by the International Commission to participate in all or selected activities in the framework of the

Convention. The Observers make practical and valuable contributions to the implementation of the main principles and goals of the DRPC. In 2004, the Danube Tourism Commission joined the ICPDR as an observer. The full list of Observers to the DRPC is shown below:

	Observer Organisations	Abbreviation
	Black Sea Commission	BSC
	Convention on Wetlands of International Importance esp. as Waterfowl Habitat	Ramsar
	Danube Commission	DC
	Danube Environmental Forum	DEF
	Danube Tourism Commission	Die Donau
	Global Water Partnership - Central and Eastern Europe	GWP / CEE
	International Association for Danube Research	IAD
	International Association for Water Works in the Danube Basin	IAWD
	Regional Environmental Centre for Central and Eastern Europe	REC
	UNESCO - International Hydrological Programme	UNESCO / IHP
	World Wide Fund for Nature	WWF

Expert Bodies

Further efforts were made to ensure the active participation of all Contracting Parties in the work of the ICPDR and particularly in the expert groups. The expert groups are essential to the operation of the ICPDR and rely upon the inputs and contributions of experts from the Contracting Parties. In 2004, the Standing Working Group, six expert groups, two expert subgroups and one ad-hoc group dealt with technical issues and another

ad-hoc expert group addressed administrative and legal matters arising from the implementation of the DRPC. Specifically:

○ The Standing Working Group (StWG) coordinates the work of the ICPDR between its meetings and prepares the topics for the meetings of the ICPDR. In particular, the Standing Working Group should guide the activities of the expert bodies and prepare the main strategic issues to be resolved by the ICPDR. It may revise the Programmes

1. Operational and Institutional Framework



of Work of the expert bodies. It also reviews administrative and financial issues requiring urgent con-sideration.

○ The Expert Group on River Basin Management (RBM EG) defined and prepared the work necessary for the implementation of the EU Water Framework Directive (WFD) in the Danube River Basin, particularly finalising the Roof Report 2004. The work of the RBM EG is supported by two expert subgroups, namely:

- The Expert Subgroup on Cartography and Geographical Information System (GIS ESG), which dealt with preparing an overview map for the Danube River Basin, and developing the System Definition for a Danube River Basin Geographical Information System;

- The Expert Subgroup on Economic Analysis (ECON ESG), which dealt with defining economic indicators to be used in the Roof Report 2004.

○ The Expert Group on Ecology (ECO EG) was established to support the ICPDR activities related to the conservation, restoration and sustainable management of aquatic ecosystems and those terrestrial ecosystems and wetlands directly depending on them. This expert group has also contributed to the implementation of the ecological provisions of the WFD.

○ The Expert Group on Emission (EMIS EG) focuses its activities on the reduction of pollution resulting from point and diffuse sources of emissions into the waters of the Danube and its tributaries. A priority issue is harmonisation with the EU directives (WFD, Nitrate Directive, IPPC Directive).

○ The Expert Group on Monitoring, Laboratory and Information Management (MLIM EG) is responsible for issues concerning water quality assessment and classification including the operation of the Trans-National Monitoring Network and Analytical Quality Control. In 2004, special activities of this expert group related to the implementation of the WFD in the Danube River Basin.

○ The Expert Group on Accident Prevention and Control (APC EG) is responsible for the improvement and operation of the Accident and Emergency Warning System and the communication of alarm/warning messages during accidents. An additional task of this expert group lies in pollution prevention and precautionary control in the whole Danube River Basin. Special working groups under the APC EG deal with the preparation of inventories, specifically an inventory of potential accident risk spots and of old contaminated sites in potentially flooded areas.

○ The Expert Group on Flood Protection (FP EG) has the responsibility to develop and implement the Action Plan for Sustainable Flood Protection in the Danube River Basin.

○ The ad-hoc Tisza Group has the responsibility to contribute to the development of the Tisza River Basin cooperation by developing, within the framework of the ICPDR, a harmonised Sub-Basin Management Plan and Flood Action Plan / Flood Risk Management Plan for the Tisza River Basin in line with EU and ICPDR requirements.

1. Operational and Institutional Framework

Special working groups dealt with the following issues:

- the UNESCO/IHP Water Balance Working Group is preparing the water balance of the Danube River for the ICPDR;
- the Working Group on the Sava River Basin Management Plan, established in 2002, was incorporated into the interim Sava Commission, and now cooperates closely with ICPDR expert bodies;
- the Danube-Black Sea Joint Technical Working Group coordinates the work of the ICPDR and the International Commission for the Protection of the Black Sea (BSC) aiming at nutrient reduction and pollution control to ensure recovery of the Black Sea ecosystem.

Celebration of 1st Danube Day on June 29, 2004

The largest celebration ever for the Danube Basin and its people was first organised in 13 countries, with 100 events throughout the basin. This festival honoured the Danube and the rivers that flow into it. It paid tribute to the vital role they play in people's lives: providing water, food, power, recreation and livelihood. Danube Day celebrated the people of the region and the wildlife that finds refuge there.

A special publication specifying the activities that took place has been produced.

2. Financial Contributions and Budgetary Situation



Regular budget

The 5th Ordinary Meeting of the ICPDR (Vienna, November 28 - 29, 2002), approved the budget for the year 2004 of € 827,738.48.

The 2004 budget included a contribution from Moldova of € 41,386.92. The 1st Standing Working Group Meeting (Prien am Chiemsee, June 12 - 13, 2003) had however, taken note of, and supported, Moldova's request to reduce their contribution to 1% of the budget, an amount of € 8,135.02 for 2003 and € 8,277.38 for 2004. In 2004 Moldova succeeded in fulfilling its financial obligations for the financial year 2004, paying its reduced contribution and in addition paid the outstanding amount of € 2,135.02 from 2003.

Therefore the annual contributions actually paid to the budget by the Contracting Parties amounted to € 794,579.04, € 33,159.44 short of the projected figure. On the basis of the decision made by the 6th Ordinary Meeting (Vienna,

December 1 - 2, 2003), the deficit resulting from reduced contribution was offset by the contributions of the new Contracting Parties.

A slight revision of the annual budget to ensure funds in the categories where expenditures were higher than anticipated was also deemed necessary and was approved by the ICPDR president on November 30, 2004. The final breakdown of regular expenditures per budget line is as follows:

Budget Chapters	Amount in €
1. Staff	447,897.-
2. Services	134,839.-
3. Equipment	4,958.-
4. Other	87,826.-
5. Operational costs	124,599.-
Overall total	800,119.-

Special Funds in 2004

In addition to the regular budget, special funds, provided by various donors or funders, have allowed the ICPDR to undertake special activities in support of the Convention beyond those possible through the regular budget. All financial contributions to the ICPDR are shown separately in the account of the ICPDR.

Analytical Quality Control (AQC) 2004

In order to assure quality control among laboratories, the ICPDR has been receiving voluntary contributions from contracting parties since 2001. Voluntary contributions were offered by Hungary (€ 11,000), Slovakia (€ 2,000), Romania (€ 2,300), Germany (€ 4,500) and Austria (€ 2,200) for 2004 costs. While the Hungarian, Slovak and Romanian contributions were directly transferred to VITUKI Plc, the German and Austrian contributions were paid through the ICPDR Secretariat.

2. Financial Contributions and Budgetary Situation

Alcoa Foundation

A two-year project has been concluded between the ICPDR and the Alcoa Foundation. The project objective is to improve the capacity of the local laboratory to run an integrated monitoring system by procurement of new and proper equipment, which will assist the defining of some microbiological, biological and chemical elements/parameters, in order to fulfil the monitoring requirements of TNMN, of the Water Framework Directive and of other European directives in the field of waters. The Alcoa Foundation has donated US\$ 100,000 to use for covering the costs of purchasing and installing various water quality monitoring instruments in Romania.

Danube - Black Sea Task Force (DABLAS II)

The DABLAS II project assisted the ICPDR in evaluating the accomplishments realised in 11 countries of the Danube River Basin, in terms of policies, legislation, regulations and investment projects. The results are used as a baseline for evaluating subsequent progress at the national and regional levels. The ICPDR-DABLAS database (prepared in 2003) has been revised to include municipal, industrial, agro-industrial, wetland restoration, and agricultural and land use projects.

The DG Environment of the European Commission has provided the ICPDR Secretariat in 2004 with financial support for these activities in a total of € 124,000 out of which € 99,200 has been transferred to the ICPDR account on June 29, 2004. The sub-contractors received € 40,000 as advance payment, and by the end of the year the ICPDR contribution of € 5,950 as well as other expenditures of € 24,124 has been disbursed.

ICPDR Information System - (re)design of public area

The website of the ICPDR has recently become increasingly important as a source of information for the general public on Danube issues and as a source of information for the public on the workings of the Commission. It is apparent though that this website was not set up to communicate information to the public in a user friendly way and that in order to meet the increasing demand for information by the public there was a need to revise and reorganise the site in 2004. The German government decided in December 2003 to finance this activity with € 15,000.

Based on a new concept, a new layout has been designed, and the new structure has been developed. Text for the new structure was prepared and edited, and is being uploaded into the new structure which is expected to go online in 2005.

UNESCO World Water Assessment Programme (WWAP)

The ICPDR, as partner of UNESCO-WWAP, participated in this project to enhance the activities and programmes undertaken by UNESCO-WWAP. The ICPDR takes part in the elaboration of the second UN World Water Development Report to be issued in 2006, and the German government decided to finance this activity with € 15,000 which was made available on December 14, 2004.

Posters for the Ministerial Meeting

In order to present the results of the ICPDR in its 7th Ordinary (Ministerial) Meeting, the government of Germany made available € 7,790 to the Secretariat for developing posters. These posters

2. Financial Contributions and Budgetary Situation



have been presented during the meeting to the invitees, and can further serve the Secretariat for other presentations as well. A Service Agreement of € 7,790 has been awarded to consultants for preparing these posters, and on December 27,

2004 the first instalment of € 6,804.70 has been paid out. The second instalment will be paid, and the final invoice to the German government will be submitted in 2005.



Support for Danube Art Master event

During the events of the first Danube Day (June 29, 2004) a contest of Danube Art Masters was organised by the ICPDR in each participating Danube country. The national winners of this contest have been invited to the 7th Ordinary (Ministerial) Meeting in Vienna, where the overall winner has been selected and awarded. The government of Germany has provided the Secretariat with financial support for the visit of the young winners in a total of € 1,741.05 for covering their expenses while in Vienna. The amount has been fully utilised and the final invoice to the German government will be submitted in 2005.

EC Support for the Ministerial Meeting

The 7th Ordinary (Ministerial) Meeting was organised outside the Vienna International Centre, with the aim of celebrating the signature of the Danube Declaration and Tisza Memorandum of Understanding at the closing event of the ICPDR 10th anniversary. The European Commission provided the ICPDR Secretariat with a financial support of € 15,108.28 for these activities. This covered logistical costs of the meeting, out of which, by the end of the year, a total of € 6,773.88 was disbursed as advance payment. The remaining amount of € 8,334.40 has not yet been invoiced to the Secretariat. After having received and pre-paid the full cost, the final invoice will be submitted to the EC for reimbursement.

2. Financial Contributions and Budgetary Situation

REGULAR BUDGET 2004

Contributions

Contracting Parties	Contribution Keys ¹ %	Contributions in €	
		Planned	Actual
Germany	13.51	111,890.98	111,890.98
Austria	13.51	111,890.98	111,890.98
Czech Republic	10.94	90,533.90	90,533.90
Slovakia	9.22	76,295.84	76,295.84
Hungary	10.94	90,533.90	90,484.00
Slovenia	10.94	90,533.90	90,533.90
Croatia	9.22	76,295.84	76,295.84
Bulgaria	5.00	41,386.92	41,386.92
Romania	9.22	76,295.84	76,295.84
Moldova ²	5.00	41,386.92	8,277.38
European Union	2.50	20,693.46	20,693.46
Total Contributions	100.00	827,738.48	794,579.04

Expenditures¹

	Approved budget	Expenditures	Engagements	Status as of 31-Dec-2004
	in €	in €	in €	in €
A. Administrative costs				
1. Staff	464,500.00	442,646.49	5,250.12	16,603.39
2. Services	134,500.00	128,890.06	5,948.56	-338.62
3. Equipment	5,000.00	958.25	4,000.00	41.75
4. Other	85,000.00	76,309.10	11,517.25	-2,826.35
Sub-total A	689,000.00	648,803.90	26,715.93	13,480.17
B. Operational costs	138,738.48	112,977.11	11,622.08	14,139.29
Overall total (A + B)	827,738.48	761,781.01	38,338.01	27,619.46

¹ Minor differences are due to roundings

² Accepted by the ICPDR to reduce to 1%

3. ICPDR Meeting of Danube Ministers



On December 12, 2004 Ministers responsible for water resource management in the Danube basin met for the first time since the signing of the Danube River Protection Convention to discuss further actions to reinforce transboundary cooperation on sustainable water resource management within the Danube region. As the conclusion of this historic meeting, the Ministers agreed upon a “Danube Declaration”, which expresses their commitment to future actions necessary to achieve progress under the Convention.

In her opening speech to the meeting, Catherine Day, President of the ICPDR and Director General for Environment of the European Commission, stated *“the Ministerial Meeting should be used to evaluate the progress that has been made to improve the management and the quality of the Danube waters and, more importantly, to identify the strategies and actions necessary for addressing the challenges that remain”*. To continue, the Bosnia and Herzegovina delegation announced that their country had recently adopted the ratification instrument to join the Danube River Protection Convention. This positive commitment was followed by a discussion of the Ministers and agreement on a number of issues, in particular:

○ The Danube Declaration, **“The Danube Basin - Rivers in the Heart of Europe”**, underlines the commitment of the respective countries to cooperate in identifying and implementing solutions for integrated and sustainable water resource management in the Danube River Basin. The Declaration also sets out the priorities, objectives and major actions for the ten years ahead.

○ The adoption of the **Danube Basin Analysis (or Roof Report 2004)** at the meeting fulfilled one of

the requirements of the EU Water Framework Directive. The report describes the main environmental problems in the Danube River Basin and reveals that if no action is taken the majority of water bodies may fail to achieve good status by 2015. Based on this report, a cost-effective programme of measures will be developed in order to ensure that the objectives of the Water Framework Directive are met. This programme of measures will be included in the Danube River Basin Management Plan to be completed in 2009.

○ The Action Programme for Sustainable Flood Protection in the Danube River Basin was also adopted at the meeting. The Flood Action Programme aims at achieving a long-term and sustainable approach for managing the risk of floods to protect human life and property, while at the same time encouraging conservation and the improvement of water related ecosystems. The action programme will now be implemented in the coming years.

○ In addition, a Tisza Memorandum of Understanding, specifying additional commitments to coordinate water quality and flood risk management in the Tisza River Basin, was signed by Hungary, Romania, Serbia and Montenegro, Slovakia and Ukraine.

○ The Ministerial meeting, which was held in the context of the ICPDR Ordinary Meeting, provided strong support for the work that had been done in the previous decade since the signing of the Danube River Protection Convention, and outlined key challenges and actions for the coming years. The meeting was clearly an important milestone in the ongoing work of the ICPDR and was concluded with a commitment of the Ministers to meet again in five years to review the progress that had been achieved.

4. Water Quality and Hydrological Situation

The long-term daily mean flow of the Danube River is about $6,500 \text{ m}^3\text{s}^{-1}$. This represents an average annual discharge of 207 km^3 . The discharge in 2004 was very close to the long-term average - almost 207 km^3 (99.5% of the average annual discharge).

Hydrological situation

The weather situation in the upper Danube River Basin in 2004 was similar to the previous year although less extreme when compared to the long-term average. In general, the observed sunshine duration and annual temperature level were both above average and a precipitation deficit was recorded. In line with these meteorological conditions, water levels of rivers and lakes remained low in the upper Danube region and that situation was compounded by the initial hydrological conditions (i.e., dry year 2003). The flows of the Danube tributaries in Bavaria as well as the Morava and Thaya/Dyje rivers in the Czech Republic were significantly lower than average. Only one high flood event was recorded in Germany (January 12 - 16) resulting from the coincidence of rainfall and snowmelt. However, no remarkable snowmelt occurred in the alpine region.

The weather situation in the central Danube region differed from that in the upper region and resulted in precipitation over the long-term mean value. In Hungary, a significant amount of precipitation was observed in June and July (100 - 150 mm). In Slovenia, October was the month with the highest rainfall (190% of a long-term mean). Overall there were elevated discharges and water levels in the central area. The annual flow of the Tisza River at Szeged was 6.7% above the aver-

age and the water levels in the two large Hungarian lakes, Lake Balaton and Lake Velence, were higher than in 2003. The total stream flow in Slovenia (difference between outflow from and inflow to the country) was 4% above the average.

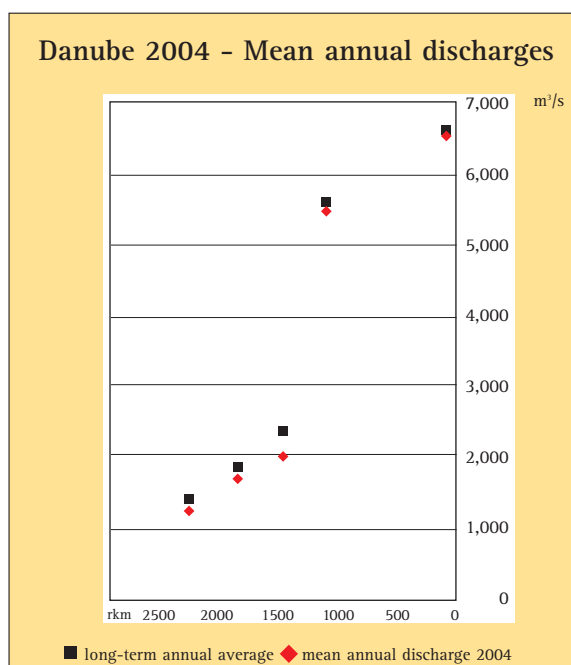


Figure 1: The Danube - Mean annual discharges in 2004

In the major part of the lower Danube area the annual rainfall was close to the long-term average (1 - 2% below). The monthly distribution of the precipitation in Romania is shown in Figure 2.

4. Water Quality and Hydrological Situation

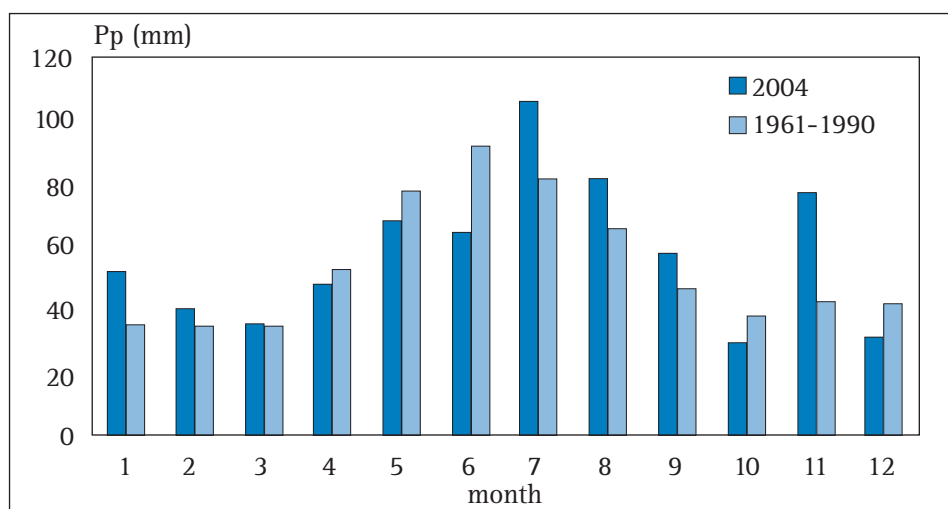


Figure 2: Average monthly precipitation in Romania in 2004 compared to the long-term average pattern (1961-1990)

In Romania, from the hydrological point of view, year 2004 was characterised by an elevated runoff in the rivers in the western part of the country and a less-than average discharge of the rivers in the rest of the country. The peak discharge of the Danube in Romania (10,800 m³/s) was reached in April, when also the maximum average monthly discharge of 9,660 m³/s was recorded. The

lowest discharge of the Danube River in 2004 in Romania was recorded in September (2,300 m³/s). In Bulgaria, the annual discharge of the monitored rivers in 2004 was 3% below the average. The values of the total precipitation in 2004 as well as the relative precipitation in the same year when compared to a long-term annual average in selected countries are shown in the following table:

Country	Total annual precipitation in 2004 [mm]	Relative annual precipitation in 2004 [%]
Germany	899	91
Austria	820	80
Czech Republic	641	89.7
Hungary	665	110
Slovenia	1,511	108
Serbia and Montenegro	915	117
Romania	639	98.8
Moldova	692	134

4. Water Quality and Hydrological Situation

Pollution due to accidents

In 2004 in the Danube River and its major tributaries only minor accidents were reported with negligible impacts on the water quality. The majority of the accidents involved oil pollution.

In Germany, the impact caused by infiltration of hexachlorobutadiene (HCBD) into the river Inn in 2001 has been further reduced. The restoration activities still continue.

In Hungary there was an accidental spill at Dorog Incinerator Plant. The spill entered the Kenyérmezei creek, a secondary tributary of the Danube. The estimated volume of the spill was 100 m³, out of which there were 48 tons of diverse pollutants (a mixture of oils and organic extracts containing toluene, xylene and benzene). The floating material was removed by an adsorbent. Water quality measurements on August 6, 2004, in the Danube at the river kilometre 1,721 and at Esztergom bank-filtered water resource showed that pollutant concentrations were below the detection limits. Pollution did not affect the downstream countries. A floating municipal garbage-waste (about 100 m³) came from Ukraine to Hungary in September in the Tisza River as a result of surface runoff caused by a heavy rainfall.

In Serbia, several local minor accidents occurred in the Banat region and in the vicinity of Belgrade, resulting in an increase of concentrations of ammonium, MBAS and phenol. Fish kills were registered only during the pollution of the river Plovni Begej, in the area of Srpski Itebej, in the beginning of August.

Accidents that triggered the Danube Accident Emergency Warning System are reported in Chapter 7.

Improvements in wastewater treatment

Technical improvements aiming at nitrogen and phosphorus reduction were performed in several wastewater treatment plants (WWTPs) in Germany. By the end of 2004, WWTPs in the German portion of the Danube larger than 100,000 person equivalents (PE) achieved the EU requirements on nitrogen and phosphorus treatment (this part of the Danube Basin is not considered to be a sensitive area). Specific attention was given in recent years to plants on the river Isar, an upstream tributary of the Danube. At this alpine river six WWTPs were equipped in previous years with a UV disinfection or membrane filtration to achieve bathing water quality. Eight more WWTPs will be upgraded in the same way in 2005. Moreover, at the Austrian border a bilateral water treatment project was finished. Thanks to these efforts, water quality of the Isar River in the sensitive downstream alpine area has improved significantly.

The share of population in Austria connected to central WWTPs is 87%. Approximately 90% of these WWTPs utilise tertiary treatment; the rest of the treatment plants apply biological carbon elimination and in some cases nitrification.

In the Czech Republic in 2004, technical improvement of wastewater treatment aiming at reduction of pollution at point sources continued to be a positive trend. Because the whole area of the Danube catchment in the Czech Republic has been declared a sensitive area, a main objective has been reduction of nutrient discharges in line with

4. Water Quality and Hydrological Situation



the UWWT Directive. In WWTPs larger than 100,000 PE only one plant is still in need of improvement. As a consequence more attention was given to plants with capacity ranging from 10,000 to 100,000 PE. In the Czech part of the Morava River basin all point sources over 10,000 PE have been equipped with adequate biological treatment, however, only about half of these include nutrient reduction. In 2004, planned reconstruction of two WWTPs was finished; reconstruction activities at three additional WWTPs had started.

In Hungary, under the National Municipal Sewerage and Wastewater Treatment Programme, seven major WWTP projects for the towns of Győr, Szeged, Pécs, Sopron, Szombathely, Kecskemét and Debrecen were in the implementation phase in 2004.

Technical improvements aiming at N-reduction were performed on several smaller WWTPs in Slovenia. At present, two of the Slovenian plants larger than 100,000 PE still have to be adapted to the UWWT Directive requirements and reconstruction activities are progressing according to the national environmental action plan.

The Croatian National Water Management Plan is under preparation although at the same time pollution reduction activities are in progress - the WWTP for the city of Vinkovci for example was completed. In Serbia and Montenegro, reform of water tariffs and taxes is needed to generate the funds necessary to make progress in waste water treatment. There were no new investments in the waste water sector in 2004. In Romania about 1,460 WWTPs were in operation

in 2004 out of which about 47% performed satisfactory. Ten WWTPs were in construction or being modernised.

Water quality trends

Similarly to 2003, reduced precipitation resulted in diffuse pollution levels below average values in Germany. This resulted in lower concentrations of nutrients, degradable organic substances and pesticides when compared to a long-term mean.

When compared to 2003, no significant changes in the water quality of the Danube River and its major tributaries were observed in the Czech Republic, Hungary, Slovenia, Croatia, and Serbia and Montenegro. A similar situation was reported in Bulgaria for the Danube River; although some slight water quality problems were observed in smaller tributaries caused by discharges of sewage from municipalities without WWTP.

A continuous improvement of water quality in 2004 was reported by Romania. The major amounts of pollution reduction originated from the industrial and agricultural sectors. The chemical and mining industry as well as farming activities have decreased substantially in Romania since 1989. Use of fertilisers in agriculture has decreased significantly after 1989 with a reduction in 2004 of more than 62%.

5. Implementation of WFD

During 2004 the work of the ICPDR continued to focus on meeting the reporting requirements of the Water Framework Directive and focused on the following issues:

- 1) finalisation of WFD Roof Report 2003 (Art. 3.8 and Annex I)
- 2) preparation of the WFD Roof Report 2004 (Art. 5 with Annexes II and III, and Art. 6 with Annex IV)
- 3) public participation in connection with WFD implementation.

WFD Roof Report 2003 (Art. 3.8 and Annex I)

The WFD Roof Report 2003 (Art. 3.8 and Annex I) was finalised on April 16, 2004 and sent to the European Commission as informal information on June 22, 2004. In addition, the national reports of the EU Non-Member States were sent to the Commission (Croatia, Serbia and Montenegro, Bulgaria, Romania and Moldova). Ukraine is currently not in a position to report on WFD implementation.

Preparation of WFD Roof Report 2004 (Art. 5, 6 and Annexes II, III, IV)

The WFD Report 2004 (reporting deadline: March 22, 2005) deals with the characterisation of surface waters and groundwater, with the assessment of significant pressures and impacts, and with the economic analysis of water uses. The preparation of this report has been coordinated by the River Basin Management Expert Group.

The Roof Report was based on an agreed outline. The chapters were prepared by consultants, by expert groups, by country experts or by members of the Secretariat based on the data provided by the Danube River Basin countries. Drafts were dis-

cussed in the RBM EG Meetings. All comments from countries and conclusions from the RBM EG Meeting were integrated into the revised version of the report. In addition, the Secretariat made structural and editorial changes to streamline the report and to enhance readability.

A number of workshops have taken place, partially supported by the UNDP/GEF Danube Regional Project, which have provided crucial input into the work:

- Workshop on nutrients as a transboundary pressure: January 26 - 27, 2004, in Sofia,
- Workshop on heavily modified water bodies: February 9 - 10, 2004, in Bucharest,
- Workshop "WFD Implementation in Serbia-Montenegro": June 7 - 8, 2004, in Belgrade,
- 3rd Surface Water Workshop - Estimation of the risk of failure to reach the environmental objectives: June 24 - 25, 2004, in Neusiedl am See.

Main results of the Danube Basin Analysis (WFD Roof Report 2004)

The first report on the characterisation and analysis of the Danube River Basin District has shown that in recent decades the environmental conditions in the Danube basin have considerably improved. Where investments, e.g. in wastewater treatment, have taken place, the improvement of the water quality is clearly visible. However, a major part of pollution reduction can be attributed to the decline of industries and agricultural activities in the middle and lower part of the basin. The main pressures are due to organic pollution, hazardous substances and nutrients. In addition, hydro-morphological alterations are the cause of degradation throughout

5. Implementation of WFD



the basin. In these areas, investments for a sustainable reduction of pollution levels as well as from other pressures has just started and will have to continue for another ten to 20 years.

In surface waters, the loads of organic pollution are still unacceptably high in most of the Danube tributaries and in some parts of the Danube River. The considerable discharge of untreated or insufficiently treated wastewater from municipal, industrial and agricultural point sources are widespread, in particular in the middle and lower part of the basin. A significant reduction potential for organic pollution exists through the application of best available techniques for wastewater treatment facilities. Considerable efforts, in particular as regards financial investment, will be necessary to reduce organic pollution to acceptable levels in some parts of the middle and lower basin.

Among the pressures those from diffuse sources of nutrients are the most significant. Overall, nutrient loads into the Danube basin have significantly decreased over the past 20 years, but they are still well above the levels of 1955. In the future, this development may be reversed as diffuse pollution from agriculture increases again after the breakdown of the economic situation in many countries of the region in the early 1990s. Impacts from nutrients can mainly be seen in the receiving coastal waters of the Black Sea, but also in many lakes and groundwater bodies throughout the basin. While in rivers nutrients generally cause fewer problems due to turbulent flow conditions, some slow flowing river stretches such as the middle Danube, impounded river sections and lakes also show effects of eutrophication.

Pollution from hazardous substances is significant in many parts of the basin. Hundreds of hazardous substances are being used and released into the surface waters, although the full extent cannot be evaluated to date. There are only few data available for some hazardous substances (such as heavy metals and pesticides), which indicate the transboundary scale of the problem. Cadmium and lead can be considered to be the most serious heavy metals exceeding the target values considerably in many locations on the lower Danube. Also, pesticides show alarming concentrations in some tributaries and in the lower Danube.

The extent of the hydromorphological alterations in the Danube basin has been significant over the past centuries. Such alterations include, *inter alia*, the building of dams, weirs and sluices, the canalisation of rivers and subsequent disconnection of their floodplains and old arms, erosion (incision) of the riverbed and lowering of water tables with consequently higher flood risks. Some of these changes are irreversible; however, there is a potential for rehabilitation, which should be explored to the fullest extent. This is particularly the case where floodplains could be reconnected with the main river thereby improving natural flood retention and enhancing fish migration to their natural habitats. In addition, migration pathways would be needed on barriers on the Danube and most of its tributaries.

Due to these significant hydromorphological changes large parts of the Danube River and of numerous tributaries have been provisionally identified as heavily modified water bodies on the basin-wide scale. Dams and weirs on the Danube as well as bank reinforcements and fixations on

5. Implementation of WFD

the tributaries put these stretches “at risk” of failing to reach the “good ecological status”.

Some parts of the Danube River Basin are still rather untouched ecosystems and a unique heritage to be preserved. The basin hosts a large number of wetlands offering unique habitats for a rich and diverse aquatic community. Many of these areas have high protection status such as the large wetland complexes protected under international conventions, others still deserve to be designated as protected areas, but have not been granted such status. 80% of the historical floodplain on the large rivers has been lost during the last 150 years mainly from significant hydromorphological alterations, and many already protected areas deteriorate due to new human interventions. Still today, many wetlands are under pressure from navigation, hydropower plants, intensive agriculture and forestry as well as from new infrastructure projects. Wetland restoration can bring many benefits, in particular for flood protection. As a first step, an inventory of the most important water-related protected areas for species and habitat protection has been established for the Danube River Basin.

The coastal waters and the larger marine environment of the Black Sea have been strongly influenced by high nutrient loads from the inflowing rivers especially in the period up to the mid 1980s. Since then a significant reduction of nutrient input has taken place, but the nutrient levels are still significantly higher than in the 1960s. The effects of reduced nutrient inputs are clearly visible in the north-western shelf of the Black Sea, which is shallow and therefore particularly susceptible to eutrophication. The marine ecosystem

of the Black Sea is highly complex and strongly influenced not only from high nutrient loads from the Danube and other Black Sea tributaries, but also from other pressures such as over-fishing and changes in the food web.

Groundwater is mainly used for drinking water supply and for agriculture. In some areas significant pressures result from over abstraction, high nutrient levels infiltrating the groundwater as well as from hazardous substances originating from inadequate waste treatment. For these reasons a few important transboundary groundwater bodies are estimated to be “at risk” to reach the environmental objectives. Since many of the groundwater bodies are highly vulnerable special protection strategies are needed to ensure the sustainable use and protection of groundwater.

Finally, the economic aspects of implementing the Water Framework Directive need to be strengthened. Currently, economic data are being collected based on administrative boundaries, which are not in accordance with the hydrological boundaries of the river basins. It has become apparent that this is a problem throughout Europe, not only in the Danube River Basin. Best practices on assessing cost-effectiveness and introduction of water pricing strategies should be shared.

Public participation in connection with WFD implementation

The ICPDR has approved the first and second stage of the ICPDR Operational Plan (activities in 2004 and 2005). The ICPDR intends to repeat Danube Day on an annual basis. In particular for 2005, it will be used as a forum to present the WFD Roof Report 2004 and to start the public

5. Implementation of WFD



participation process. In addition, the ICPDR is planning the first Stakeholder Conference to step from information to active involvement of the stakeholders. The Stakeholder Conference will be organised back-to-back with Danube Day in 2005. The conference will give information on:

- the planned involvement of stakeholders on the level of the ICPDR
- the results of the WFD Roof Report 2004
- the Flood Action Plan.

The Conference will proactively involve stakeholders and it will be possible for stakeholders to become accredited observers of the ICPDR after the conference.

Conclusions and next steps

This first comprehensive analysis of the significant pressures and impacts in the Danube River Basin District was endorsed by the Contracting Parties under the Danube River Protection Convention at the 7th Ordinary (Ministerial) Meeting held on December 13 -14, 2004, in Vienna. At that same meeting the Ministers also adopted the Danube Declaration (“The Danube Basin - Rivers in the Heart of Europe”), which affirms the role of the ICPDR as a catalyst for cooperation, records the achievements in the basin, but also notes with concern the problems of nutrient pollution, hazardous substances such as heavy metals and pesticides, the existence of a large number of sites at risk to reach the environmental objectives. The Ministers agreed to aspire to achieve the implementation of the WFD including the development of the Danube River Basin Management Plan.

This high level political commitment should help secure the support for the implementation of measures necessary to achieve the good ecological and chemical status in surface waters and the good quantitative and good chemical status for groundwater by the year 2015.

The next steps in the planning process for the development of the Danube River Basin Management Plan will include identifying the key water management issues according to Art. 14 WFD and setting up the timetable and work programme for its development. This needs to be published by the end of 2006.

6. Pollution Control Strategy in Line with WFD Requirements

Background

Progressive reduction of point and diffuse pollution from municipalities, industries and agriculture is needed in the Danube basin. An emission inventory prepared by the ICPDR has tracked the information related to emissions and has been used for assessing the effects of anthropogenic activities on water pollution under the Water Framework Directive.

In supporting the implementation of DRPC and WFD, updated templates of emission inventories were prepared that provide information on discharges basin wide and deliver results in an easily accessible and user-friendly form. The emissions inventories include municipal, industrial and agricultural point sources (discharges from municipal waste water treatment plants and direct industrial discharges).

Significant point source pollution

In response to Article 5 of the WFD, an updated basin-wide Emission Inventory of pollutants released to the water from municipal, industrial and agricultural dischargers, for reference years 2002 and 2003, has been made publicly accessible in 2004. The WFD requires information to be collected and maintained on the type and magnitude of significant anthropogenic pressures, and indicates a broad categorisation of the pressures into:

- point sources of pollution
- diffuse sources of pollution
- effects of modifying the flow regime through abstraction or regulation
- morphological alterations.

Any other pressures, i.e. those not falling within

these categories, must also be identified. In addition, there is a requirement to consider land use patterns (e.g. urban, industrial, agricultural, forestry) as these may be useful to indicate areas, in which specific pressures are located.

The ICPDR inventory has expanded in scope to collect data from all settlements having more than 10,000 inhabitants, industrial pollution-prevention activities, as well agricultural discharges. For each river basin district, information has been listed and assessed on the type and scale of significant anthropogenic pressures, including point and diffuse sources of pollution. The list of pressures has been screened according to certain criteria, which determine what “significant pressure” means for the whole Danube district.

Recent trends in preventive environmental management and water pollution necessitated changes in the focus of the industrial discharges inventory. Consideration has been given to the IPPC implementation results, the use of Best Available Techniques, integration of CP and Environmental Management Standards, and incorporation of the ICPDR preliminary list of priority substances. Information from the updated emission inventory methodology will be used to recommend industrial control policy at the country level, which can be supported by BAT in individual installations and plants, in line with IPPC.

The municipal and industrial emission inventories 2002 shows a significant decrease of pollutant emissions. The reason for the decrease is increased investments both from governmental and private resources to the water sector, and increase of pollution charge rates, which have

6. Pollution Control Strategy in Line with WFD Requirements



motivated reduction. Key policy issues, such as the control of diffuse water pollution, land-use planning, the designation of heavily modified water bodies and the role of wetlands in the Directive must be addressed by the ICPDR pollution control strategy. Particular emphasis should be placed on the diverse sources of diffuse pollution to help to meet the challenging environmental standards required by the Directive for hazardous substances. These include discharges from agriculture and also from other land-uses such as urban developments, transport infrastructure and abandoned mineral workings.

Diffuse pollution

Diffuse pollution from agriculture is an important issue in the Danube countries. A better understanding of agricultural pollution is possible due to the development of the first agro-industrial point sources inventory, reference year 2002. This inventory is a reference document for use by decision makers, local environmental and agricultural authorities in the implementation of diffuse source pollution management programmes.

The results of the MONERIS model calculation of diffuse pollution have also contributed to the discussion on the appropriate instruments for pollution control.

The spatial resolution of parts of the database is insufficient with regard to the demand for the management of the whole river system according to the WFD. Therefore, the model and the database have to be improved in coming years. In addition, the model approach could be utilised to address other substances such as heavy metals and organic materials.

In taking appropriate actions we must be able to respond in a focused way to control and reduce pollution while avoiding larger-scale damage to economic development. Emission inventories provide policy makers and the public with an understanding of the key polluting sources or the "pressures" as WFD requires, how these sources have developed with economic growth and how they are likely to contribute to pollution in the future. This understanding is essential for a focused "response" to the problems associated with water pollution and to meet the demands of sustainable development.

In coming years it is hoped that the ICPDR emission inventory will be further refined to meeting the existing management challenges.

Joint Action Programme - Interim Implementation Report

In 2004 the ICPDR prepared an interim report on the mid term results of the work done under the Joint Action Programme. The JAP contains commitments for country actions from January 1, 2001, to December 31, 2005.

The interim report found that there has been substantial legislative reform and in particular the implementation of EU community law within the DRB. Despite the difficulties of cooperation among the large number of states within the Danube region there has been important progress in establishing the necessary mechanisms for coordination and cooperation under the framework of the Danube River Protection Convention.

The EU Water Framework Directive has added strength to the efforts to coordinate actions in

6. Pollution Control Strategy in Line with WFD Requirements

support of integrated river basin management and pollution control and reduction.

In recent years, EU environmental policy has evolved from a traditional, command-and-control approach towards a more integrated and flexible approach. New instruments to tackle pollution caused by point and diffuse sources are being used by Danube countries to control pollution. These include: flexible legislation imposing additional site-specific or national rules, which will vary from one installation to another within the Union (e.g. the IPPC Directive), voluntary and/or market-based instruments setting the basic rules for operators who want to exploit market opportunities (e.g. the EMAS regulation and a future emissions trading scheme), or the introduction of EU-wide environmental quality standards established through the water directives.

A country's choice on how to achieve compliance with EU directives will have a significant

influence on compliance costs. Progress has been achieved in ensuring a coordinated, harmonised and transferable policy approaches and legislative measures introduced at the national level of the participating countries. The analysis of the JAP implementation has, however, highlighted both the implementation efforts and deficits. This is especially the case for those EU directives that require substantial administrative reform and financial investments.

In addition to assessing policy changes the interim JAP report identified significant investments in pollution control.

The current analysis and reviews of activities conducted at the national level within the framework of the Joint Action Programme show that many investments and actions are happening. Table 1 presents the investments made and projected in the coming years.

6. Pollution Control Strategy in Line with WFD Requirements



Project Realisation (all sectors combined)								
Country	All Projects		Projects Completed by 2003		Projects Completed by 2005		Projects Completed after 2005	
	No. of Projects	Investment MEUR	No. of Projects	Investment MEUR	No. of Projects	Investment MEUR	No. of Projects	Investment MEUR
Bosnia and Herzegovina	30	198	0	0	2	0.6	28	197.4
Bulgaria	47	260.8	0	0	2	7.8	45	253
Croatia	19	221.5	0	0	2	2.2	17	219.3
Czech Republic	42	283.6	5	40.6	16	169.8	26	113.9
Hungary	26	1029.9	8	57.7	15	110.7	11	919.2
Moldova	43	63	0	0	1	0.3	42	62.7
Romania	38	584.7	0	0	0	0	38	584.7
Serbia and Montenegro	5	530	0	0	0	0	5	530
Slovakia	42	308.6	11	46.5	23	100.5	19	208.1
Slovenia	39	327.7	5	77	14	176.5	25	151.2
Ukraine	23	74.2	0	0	2	3.9	21	70.4
Totals:	354	3,882	29	222	77	572	277	3,310

Table 1: Projects in the municipal, industrial, agricultural sectors and wetlands finalised before the end of 2003, 2005 and after 2005

Among the 354 projects covering all sectors, 93 projects are fully financed, representing 33% (1,247 MEUR) of the total 3,822 MEUR estimated investment cost. An additional 115 projects have secured partial funding and/or have more or less completed the planning stages but have not yet attained financing. These 115 projects have a combined total investment need of 1,798 MEUR (47% of the total costs), of which 543 MEUR are confirmed. There are an additional 146 projects (837 MEUR) indicated as “unprepared”, referring to projects that have no secured funding and require technical assistance for further project planning.

The interim report provides a useful starting point for undertaking analysis related to and reporting on the implementation and effective-

ness of policies in Danube countries. Second, it shows that appropriate task implementation and reporting are useful for the Danube countries in order to better address and measure the policy responses. Third, the report highlighted the need to streamline reporting obligations under various directives in implementing various JAP tasks.

7. Operation of the Danube Accident Emergency Warning System

In 2004 the Accident Emergency Warning System (AEWS) was activated by five accidents. An overview of these accidents is given below.

Site of Accident / Date	Affected River	Primary Pollutant	AEWS Messages	Tranboundary Impact
Hungary (Dorog) 30.07. - 09.08.2004	Kenyermezei creek, Tati-Danube branch	Oil, Organic extracts	PIAC-05 → PIAC-04 "Standard Message" PIAC-08 → PIAC-05 "Request-for-Information" PIAC-05 → PIAC-07 → PIAC-08 → PIAC-13 "Standard Message" PIAC-05 → PIAC-04 → PIAC-07 → PIAC-08 → PIAC-13 "End-of-Alert" PIAC-05 → PIAC-08 "End-of-Alert" (repeated)	H: No
Romania (Baja Borsa) 04.09.2004	Cisla creek, Viscu River	Slurry	PIAC-05 → PIAC-08 → PIAC-11 "Request-for-Information" PIAC-08 → PIAC-05 "End-of-Alert"	Ro: No
Ukraine, Romania Hungary (Tiszabecs) 27.09. - 29.09.2004	Tisza River	Floating municipal garbage	PIAC-05 → PIAC-11 "Request-for-Information" PIAC-05 → PIAC-04 "Warning-Pollution" PIAC-05 → PIAC-04 → PIAC-11 "End-of-Alert"	H: No
Hungary (Komarom) (Slovakia) 07.10.2004	Danube - trans-boundary section	Oil	PIAC-05 → PIAC-04 "Standard Message" PIAC-0405 → PIAC-04 "End-of-Alert"	H: No
Slovakia (Gabcikovo) 27.10.2004	Danube	Oil	PIAC-05 → PIAC-04 "Standard Message" PIAC-0405 → PIAC-04 "End-of-Alert"	Sk: No

Note: A "Yes" in the "Transboundary Impact" column means that accidental water pollution entered into the downstream country.

7. Operation of the Danube Accident Emergency Warning System



Upgrade of AEWS

An essential improvement of AEWS was carried out in 2003/2004 with support of the UNDP/GEF Danube Regional Project. The goal of this upgrade was to increase the effectiveness and cost-efficiency of the warning system by replacing the satellite communication with an internet-based information system using GSM/SMS messages for alerting the PIAC staff. The final test of the upgraded system was performed on June 14, 2004. The test has proven that the system works

as expected and is ready for use. Consequently, the ICPDR at its 7th Ordinary Meeting approved the upgrade of AEWS to an internet-based information system. To enable a further harmonisation of accident control procedures, the ICPDR encouraged the Danube countries to consider the application of the internet-based AEWS on a bilateral level. This would enable a more effective use of the developed set-up by extending its scope of use to the bilateral border river commissions.

8. Flood Protection in the Danube River Basin

In 2004 the ICPDR completed an important step to responding to floods. Following the major floods in 2002, a need became apparent for achieving concerted, coordinated action to prevent or reduce risks caused by floods and to improve the overall level of protection against floods.

In response to the danger of flooding and in line with its Joint Action Programme, the International Commission for the Protection of the Danube River (ICPDR) decided in 2000 to establish the long-term Action Programme for Sustainable Flood Prevention in the Danube River Basin. The whole process was accelerated after disastrous floods in 2002 and resulted in adoption of the Action Programme at the ICPDR 7th Ordinary (Ministerial) Meeting on December 13 - 14, 2004.

This Action Programme is based on the sustainable flood protection programmes developed in various Danube countries as well as on networking existing structures and using the future-oriented knowledge base accumulated through a wide range of activities over the past decade. The overall goal of the Action Programme is to achieve a long term and sustainable approach for managing the risks of floods to protect human life and property, while encouraging conservation and improvement of water related ecosystems. Given the large area, the complexity and the internal differences in the Danube River Basin, the Action Programme represents an overall framework, which needs to be specified in further detail for sub-basins.

The Action Programme begins with a description of the general hydrological and climate charac-

teristics of the Danube River Basin as well as an overview of floods and flood protection. The section on “General considerations, basic principles and approaches” of the Action Programme refers primarily to UN-ECE Guidelines on Sustainable Flood Prevention, EU Best Practices on Flood Prevention, Protection and Mitigation and to the EU Communication on Flood Risk Management, COM(2004)472.

The major principles advocated are: (i) the shift from defensive action against hazards to management of the risk and living with floods (ii), the river basin approach taking into account the Water Framework Directive, (iii) joint action of governments, municipalities and stakeholders towards flood risk management and awareness raising, (iv) reduction of flood risks via natural retention, structural flood protection and hazard reduction, and (v) solidarity.

Targets of the Action Programme are set on a basin-wide and a sub-basin level taking into account the above-mentioned principles.

There are four major basin-wide targets:

- improvement of flood forecasting and early flood warning systems; interlinking national or regional systems
- support for the preparation of and coordination between sub-basin-wide flood action plans
- creating forums for exchange of expert knowledge
- recommendation for a common approach in assessment of flood-prone areas and evaluation of

8. Flood Protection in the Danube River Basin



flood risk.

At the sub-basin level six targets have been identified in the Action Programme:

- to reduce the adverse impact and the likelihood of floods in each sub-basin through the development and implementation of a long-term flood protection and retention strategy based on the enhancement of natural retention as far as possible
- to improve flood forecasting and warning suited to local and regional needs as necessary
- to increase the capacity building and raise the level of preparedness of the organisations responsible for flood mitigation
- to develop flood risk maps
- to harmonise design criteria and safety regulations along and across border sections
- to prevent and mitigate pollution of water caused by floods.

The measures of the Action Programme are directly linked with the targets mentioned above.

As regards the sub-basin measures, the Action Programme provides a recommended structure of the flood action plans to be prepared at the sub-basin level and gives an overview of activities to be considered during their preparation.

Decisions on the framework of implementation of the sub-basin Action Plans are the task and responsibility of the countries affected, according to their national legislation as well as their bilateral

and multilateral agreements. In sub-basins of multinational interest, development of Action Plans should be coordinated using existing frameworks such as the working groups under the Tisza Forum or the interim Sava Commission. Where the mechanisms of sub-basin-wide cooperation do not exist, consideration of the establishment of the appropriate working forums is recommended.

Financial resources necessary for the implementation of the Action Programme are intended to come from national budgets and other national sources, EU funds, including new cohesion policy funds, and loans from international financing institutions.

9. Accident Prevention in the Danube River Basin

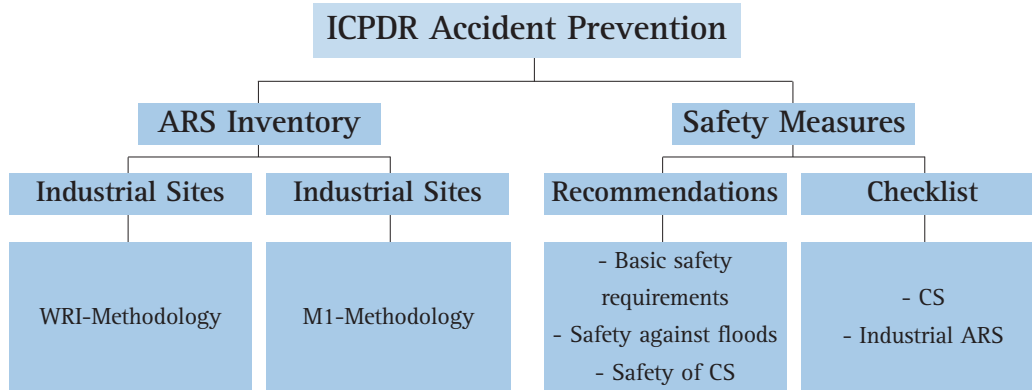
General concept of accident prevention under the ICPDR

An effective way to minimise risks stemming from environmental disasters is to develop accident prevention strategies. Following the disastrous spills in the Tisza River Basin the ICPDR committed itself to establishing a prevention policy under the Joint Action Programme and

began developing a comprehensive concept of accident prevention. At present, this concept is based on the following key elements:

- elaboration of inventories of potential Accident Risk Spots (ARS) in the Danube River Basin
- implementation of safety measures minimising the risk potential.

The general structure of this strategy is demonstrated below:



Inventory of accident risk spots in the Danube River Basin

The ARS Inventory contains two subsets:

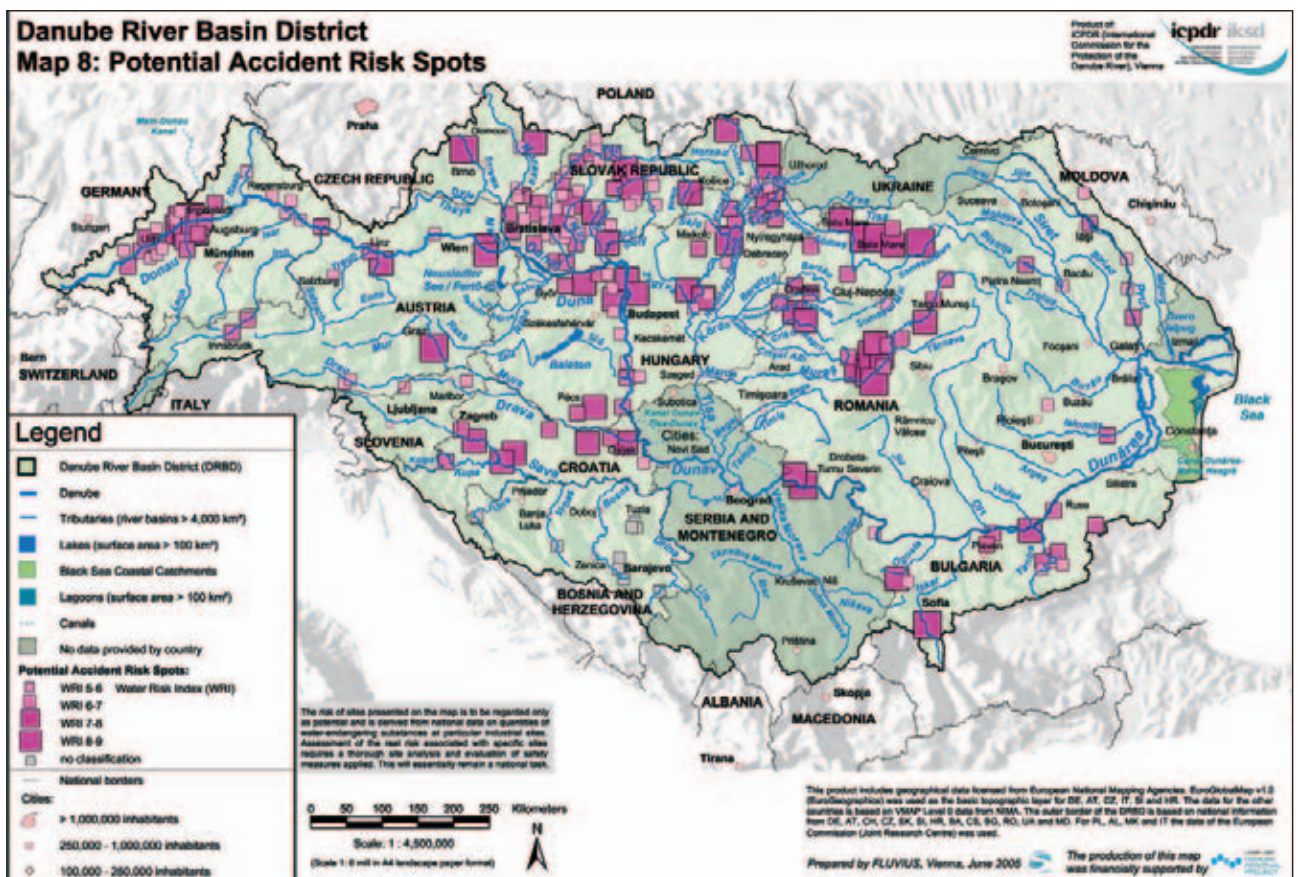
- 1) Inventory of industrial sites (ongoing activities)
- 2) Inventory of contaminated sites in flood-risk areas (closed-down waste disposal sites and industrial installations in flood-risk areas).

For both inventories a specific methodology was developed to (i) identify potential ARS and (ii) establish a ranking system to evaluate a real risk. For ARS based on industrial activities the ICPDR developed a method for evaluation of potential risk resulting in preliminary ranking of potential Accident Risk Spots in the Danube River Basin. This inventory was finalised in 2001 and updated in 2003 (Map 1).

9. Accident Prevention in the Danube River Basin



Map 1: Danube River Basin District - Potential Accident Risks Spots



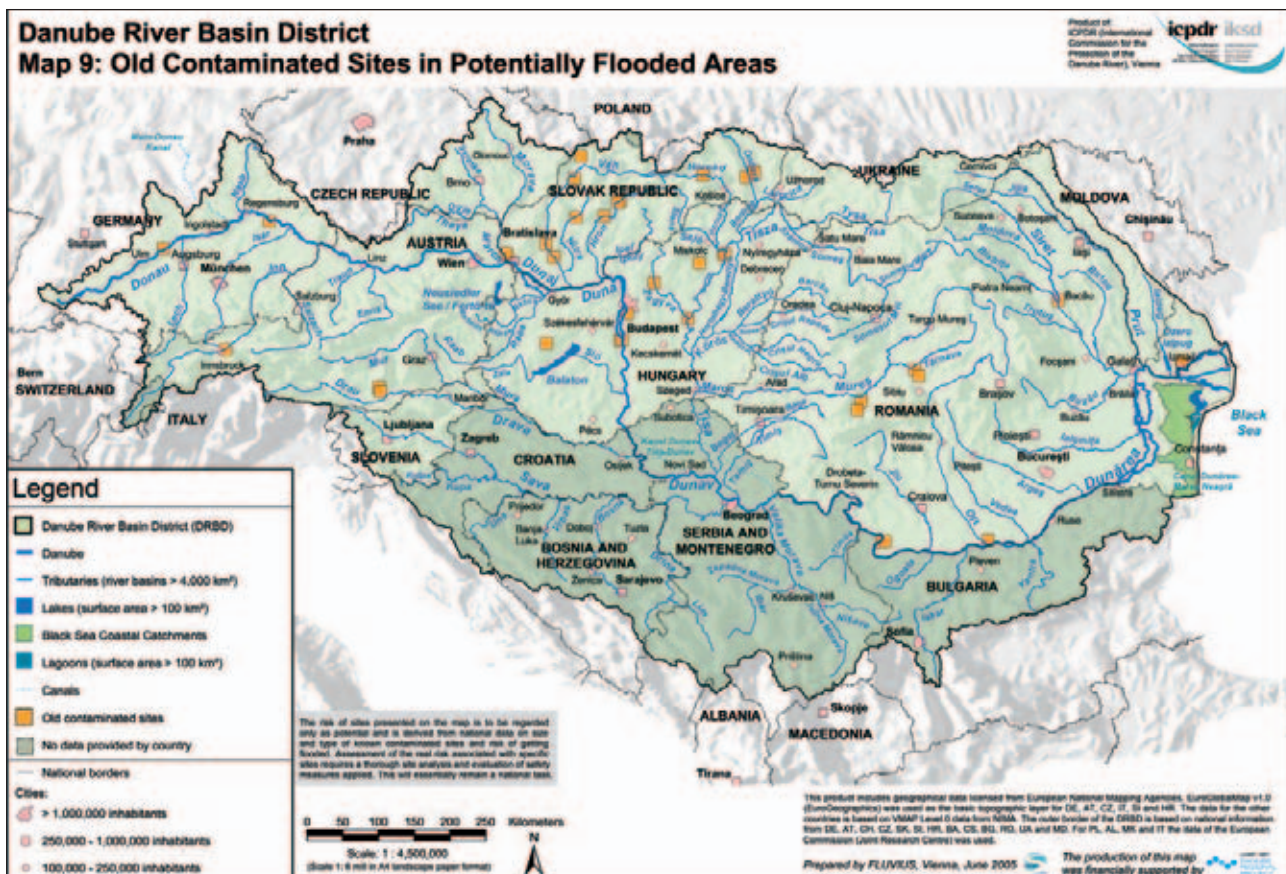
The floods of August 2002 highlighted the problem of inundation with water of landfills, dump sites and storage facilities where harmful substances are deposited. Flooding of such sites can mobilise the contaminants and cause pollution. To avoid this kind of risk the elaboration of an inventory of contaminated sites in flood-risk areas was initiated. For an initial risk assessment of all submitted “candidate” sites a so-called M1 methodology was developed in 2003 and used for creating a draft ranking list of contaminated sites

(see Map 2). In a second step, risk of flooding and safety measures applied will be evaluated to receive a priority ranking. For this evaluation, a draft of so-called M2 methodology was elaborated by the Working Group on Inventories (WGI) in 2004 and agreed by the APC EG. This M2 methodology will be further refined in 2005 and a site classification system will be developed with support of the UNDP/GEF Danube Regional Project. For final ranking and prioritisation of contaminated sites, the respective checklists will be produced.

9. Accident Prevention in the Danube River Basin

At present, both inventories and related maps reflect only potential dangers; the actual danger to the environment can only be determined on the basis of safety measures that have been put in place including a thorough site analysis. This will predominantly be a national task still to be performed.

Map 2: Danube River Basin District - Contaminated Sites in Flood-Risk Areas



9. Accident Prevention in the Danube River Basin



Safety measures

The philosophy of water protection, as seen in relation to industrial installations in developed industrial countries, is based on the assumption that the potential hazard to water bodies can be compensated by comprehensive technological and organisational safety precautions. An evaluation of the quality and quantity of prevention, or of the safety rating of the ARS concerned, is therefore one of the major future tasks of the ICPDR.

For this purpose two major instruments are used by the APC EG:

- recommendations for safety guidelines as supporting instruments for the Danube member states to improve the current standard of safety measures
- application of existing and development of new checklists to control the implemented safety measures at existing ARS.

Concerning safety recommendations, the ICPDR is building on the work and experience of other river commissions. Two relevant documents were elaborated by the APC EG and adopted by the ICPDR (Basic Requirements for Installations Handling Water Endangering Substances and Safety Requirements for Contaminated Sites in Flood-risk Areas). In 2004, the ICPDR approved the “Recommendations on requirements for industrial plants containing water-polluting substances in areas with a risk of flooding” and recommended their application at national level. These recommendations apply to plants, plant components as well as to safety equipment that could be affected by flooding. The term flooding

refers here to any kind of inundation as the result of high water, backflow from water bodies or from a canal network, rising groundwater levels ensuing from long-term high-water events or from fire-fighting water that was retained by a fire-fighting water retention facility. The requirements apply equally both to all existing plants as well as to all plants that are to be newly constructed.

For the checking of safety measures at the ongoing industrial sites a series of checklists was developed by the German Federal Environmental Agency (Umweltbundesamt, UBA) on the basis of the safety recommendations of the International River Commissions from the Rhine and Elbe. The application of these checklists in the Danube River Basin will be tested in 2005 and 2006 in the frame of a pilot project supported by UNDP/GEF. Another set of checklists is under preparation for assessment of safety measures in contaminated sites in flood-risk areas. The first draft is expected to be available in 2005.

10. Public Communication

Redesigning the look of Danube Watch - the magazine of the ICPDR

In 2004, a small team within the ICPDR and the UNDP/GEF Danube Regional Project started the challenging process of comprehensively evaluating the magazine of the ICPDR, Danube Watch.

In addition to carrying out an in-depth professional review, readers were directly asked for feedback. The aims of the review were to find out if the production costs of Danube Watch were justified, if water professionals throughout the basin see Danube Watch as a valuable information tool and - if there was a clear yes to the first two questions - how the magazine could be improved.



Happily, “readers find Danube Watch informative, useful and topical”, as stated in the Danube Watch evaluation. They find most valuable the practical case studies, summaries of progress, features about how problems were addressed, and information on concrete measures and project results, which can be used in other cases.

Based on this review greater attention and effort was provided to Danube Watch to make it as informative and enjoyable as possible. The ICPDR has also focused effort on redesign. The goal was to make Danube Watch more visually appealing to its readers, so that readers not only enjoy reading its messages, but also browse through its pages.

Activities to improve Danube Watch were possible through the financial support of the UNDP/GEF Danube Regional Project.

Other publications

In 2004 two other publications were produced, highlighting the work of the ICPDR:

- a special publication documenting the activities of Danube Day

- a special ten-year review of the work of the ICPDR, entitled “*Active for the Danube River Basin: 1994 - 2004. Ten years of cooperation in the Danube River Basin*” was produced and distributed at the Ministerial Meeting.

ICPDR Information System

Information management (collection and presentation of information about the Danube) continued to be an important aspect of the work of the ICPDR in 2004. The ICPDR Information System (DANUBIS), set up in 2000, continued to fulfil its original goal of supporting the work of the delegations and expert bodies, as well as informing the general public about the activities of the ICPDR. After four years of operation, a decision was taken in 2003 to revise the goals and objectives of the system to meet the new challenge of implementing the EU Water Framework Directive, and the increasingly important demand to make publicly accessible information about the Danube through the internet. In addition to the new functions, the system will continue to serve as the general platform of providing the Contracting Parties and work groups with the information needed for their work under the Danube River Protection Convention.

10. Public Communication



Development of a new public website

The ICPDR website was originally not set up with the primary purpose of communicating information to the public in a user-friendly way. In order to meet the increasing demand to provide information to the public, a process of revision and reorganisation was begun in 2003. The German Government and the UNDP/GEF Danube Regional Project, together with the ICPDR Secretariat, ensured that financial resources are available for this work, the bulk of which was carried out in 2004. Based on a new concept, a new layout has been designed, and the new structure has been developed. Text for the new structure was prepared and edited, and uploaded into the new structure.

Since the new public website is based on open source software, it had to be separated from the current website, a task that will be completed in 2005. In the web text hyperlinks will be defined to point to documents finalised by the ICPDR experts. The task has not been completed yet. The redesign of the restricted area, which is reserved for ICPDR experts to elaborate documents, will shortly follow the public part.

Geographical Information System

Responding to the need for collection of geographical-based information, the ICPDR has developed a Strategic Plan for the Danube River Basin Geographic Information System (GIS) in 2003-2004. The plan prepared by the Cartography and GIS Expert Subgroup (GIS ESG) addresses organisational, technical and financial issues, and defines a planning procedure, for the establishment of a common Danube River Basin GIS. The development of a common, consistent and harmonised Danube River Basin GIS was initiated to help pro-

vide a basis for the coordination of data collection between Danube River Basin countries and to facilitate the WFD reporting at the level of the Danube basin.

The Strategic Plan for the Danube River Basin Geographic Information System was finalised by the GIS ESG and adopted by the ICPDR and its expert bodies. The Austrian Environmental Agency (Umweltbundesamt - UBA) was selected to design and implement the system in close collaboration with the GIS ESG and other expert bodies of the ICPDR. The UNDP/GEF Danube Regional Project financed the design work.

The final draft of the system definition was completed at the end of 2004 with alternative solutions for software platform use. In order to facilitate the decisions on future development a work plan and cost estimation were also provided. In 2005 the ICPDR will make a final decision on the next steps and then work on design and implementation of the DRB GIS can begin. In addition to the financial support secured from the UNDP/GEF DRP, other financial contributions will be necessary to complete the work.

Trans-National Monitoring Network Database (TNMN Database)

Data for the years 1996 to 2001 are available. Users can generate predefined reports for:

- overview data (annual average, minimum and maximum values of a selected determinand and/or for selected monitoring point)

10. Public Communication

○ results of analysis at monitoring points (detailed data of samples and analysis at selected monitoring points)

○ TNMN monitoring points, determinands and analytical methods.

Charts are also available for:

- average values
- determinand values by date of sampling.

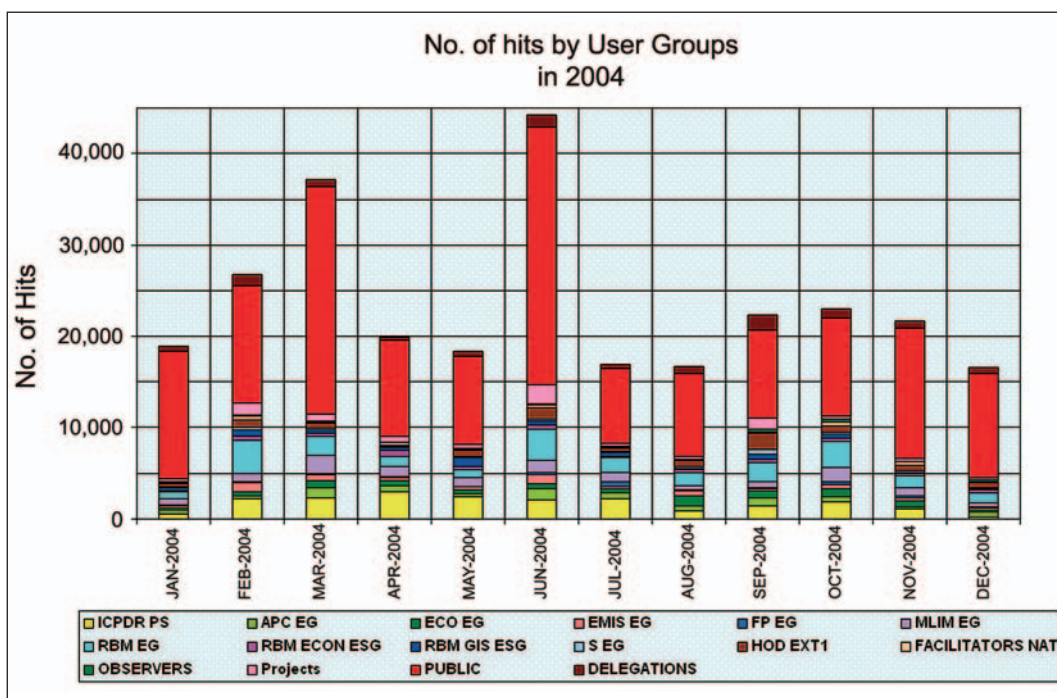
Other activities

User and access management

There were 504 registered users of the ICPDR

DANUBIS network at the end of 2004. The activities of the most important user groups are shown in the figure below.

A new End-User License Agreement was launched in 2003 and continued in 2004 to facilitate users (not members of any internal working group) to use database information for scientific purposes. Those users, after a simple registration procedure, can use data downloaded from the different ICPDR databases for individual, specified scientific purposes.



11. International and Regional Cooperation



The UNDP/GEF Danube Regional Project

In 2001 a two phase Danube Regional Project “Strengthening the Implementation Capacities for Nutrient Reduction and Transboundary Cooperation in the Danube River Basin” was launched with the primary goal of reducing pollution loadings into the Danube River and its tributaries, to improve water quality and to restore ecosystems of the Danube - Black Sea Basin, and of strengthening transboundary cooperation among countries in this region. The Danube Regional Project is complementing the activities of the International Commission for the Protection of the Danube River, required to strengthen a regional approach for solving transboundary problems.

The UNDP/GEF Danube Regional Project also continued its implementation in 2004. The period January to June 2004 was a transitory period for the project. The results of Phase 1 have been consolidated and components of Phase 2 were under preparation. In June 2004, Phase 2 of the project was officially launched.

In November 2004, the project organised a mid-term stocktaking meeting where the progress of the GEF Danube-Black Sea Strategic Partnership implementation and the results obtained were presented to the key stakeholders: the representatives of the Danube and Black Sea countries, the two commissions, GEF and UN organisations, World Bank, donors and NGOs. This meeting was designed to review the results obtained so far, bottlenecks in the implementation and to give recommendations for further reinforcement of cooperation and to increase the efficiency of the GEF interventions to nutrient reduction and environmental protection in the Danube-Black Sea Region.

Progress in 2004

In 2004 the project components of Phase 2 were in different stages of implementation. Some of the largest components were prepared already by the end of the Phase 1 or continued (e.g. support for the DEF, Small Grants, Access to Information, Tariffs and Charges). The Project Team continued with preparation of Terms of References (TORs) for remaining components, in cooperation with the ICPDR Expert Groups and Technical Experts of the Secretariat.

For the Project Objective 1: “Creation of sustainable ecological conditions for land use and water management”, the project activities focused mainly on providing support for the analytical work related to preparing the Roof Report 2004, e.g. on nutrients, ground waters, water bodies, significant point and diffuse sources of pollution, maps, etc. To provide support to EU Water Framework Directive (WFD) Implementation in non-accession countries, the DRP organised workshops on the implementation of the WFD in Serbia and Montenegro, and Bosnia and Herzegovina. Components on agriculture, industry, wetlands and detergents were in preparation with an expected start in 2005.

The activities of the Project Objective 2: “Capacity building and reinforcement of transboundary cooperation for the improvement of water quality and environmental standards in the Danube River Basin” were mostly in the planning phase under discussion with the relevant ICPDR Expert Groups. In particular activities for Accident Emergency Response were agreed concerning the support for the PIAC in Serbia and Montenegro, further development and application of checklists

11. International and Regional Cooperation

for the assessment of complex industrial sites, and the development of a methodology for the assessment of contaminated sites at risk from flooding. Attention was also given to planning of the further reinforcement of ICPDR information system DANUBIS. A first independent assessment of the DANUBIS was carried out, in order to identify additional needs and to give guidance and recommendations for its further development and ways its usefulness for external users could be increased.

The Project Objective 3: "Strengthening of public involvement in environmental decision making and reinforcement of community actions for pollution reduction and protection of ecosystems" was designed to support and strengthen the Danube Basin NGOs community and strengthen the public involvement and awareness in environmental issues.

The DRP continues to provide assistance to the Danube Environmental Forum (DEF), the umbrella organisation of the Danube NGO, in the form of financial support to the Secretariat and national focal points as well as through assistance in developing the work programme, communication strategy and capacity building training. The DEF Secretariat and network is now fully operational and a wide range of activities is being initiated and implemented.

In Phase 1 of the DRP initiative on the Small Grants Programme (SGP) 58 national grants and five regional grants, coordinated by the Regional Environmental Centre (REC), were implemented. The second call for national and regional grants is foreseen in 2005.

Activities on communication and public awareness were initiated. The DRP has worked to develop a communication/media strategy for implementation in Phase 2 of the project. In this context the preparation and arrangement of the Danube Day has been one of the priorities in addition to preparing basic branding and communication activities for the project and supporting the development of the Danube Watch magazine.

A large component on enhancing public access to information was launched at the beginning of Phase 2. National and regional workshops have been held in Bulgaria, Romania, Serbia and Montenegro, and Bosnia and Herzegovina to analyse country-specific situations and to identify potential demonstration projects for implementation.

The activities of the Project Objective 4: "Reinforcement of monitoring, evaluation and information systems to control transboundary pollution, and to reduce nutrients and harmful substances" are mostly under preparation. One component on the study in pollution trading and economic instruments was finalised at the end of 2004.

A key challenge for Phase 2 will be to assist the non-accession countries (Bosnia and Herzegovina, Moldova, Serbia and Montenegro, and Ukraine) to participate in the implementation of the EU WFD and in particular project-related activities. The DRP will place a special emphasis on cooperation with these countries in Phase 2 to strengthen their abilities to participate on an equal basis within the regional framework.

11. International and Regional Cooperation



An overview on the implementation of DRP project components during the period January - December 2004 is shown in the following table:

Ref.	Component	Phase 1 finalised	Status	
			started	in 2005
1.1	Roof Report 2004	X		
1.1-5	Danube GIS development	X	X	
1.1-9	Pilot River Basin Plan in the Sava	X		X
1.2, 1.3	Policies for the control of agricultural point and non-point sources of pollution; Pilot projects on agric pollution reduction	X		X
1.4	Integrated land use assessment and inventory of protected areas	X		X
1.5	Industrial reform and development of policies and legislation for reduction of nutrients and dangerous substances	X		X
1.6, 1.7	Assessment and development of water and waste water tariffs and effluent charges designs	X	X	
1.8	Recommendations for the reduction of phosphorus in detergents		X	
2.1	Interministerial coordination mechanisms	X		X
2.2	Support for TNMN and EMIS Inventory harmonisation	X		X
2.3	Accident prevention and control	X	X	X
2.4	Support for DANUBIS reinforcement	X	X	
2.6	Training and consultation workshops	X	X	
3.1	Institutional development of NGOs and community involvement	X	X	
3.2	Initiating the Small Grants Programme -1st contract	X	X	
3.3	Developing a DRB Communications Strategy	X	X	
3.4	Public access to information			
4.1	Indicators for project monitoring and evaluation	X		X
4.2	Assessment of Iron Gates sediments			X
4.3	Monitoring and assessment of nutrient removal capacities of riverine wetlands			X
4.4	Study on pollution trading and corresponding economic instruments for nutrient reduction	X	X	

The Danube - Black Sea Cooperation

Danube-Black Sea Joint Technical Working Group (JTWG)

The objectives of the 4th meeting of JTWG hosted

by ICPDR on June 3, 2004, were to (i) assess availability of the information on the indicators on the state of the Black Sea agreed by the JTWG, (ii) refine the work programme of JTWG to respond

11. International and Regional Cooperation

to the tasks related to the “Implementation of WFD requirements in regard to achieving the good status of coastal waters in the Black Sea”, (iii) inform on the progress with development monitoring and assessment in both commissions, and (iv) share information on DABLAS-related activities in both commissions.

Based on the presentations and discussions on the monitoring results from the Danube and Black Sea the following conclusions were made:

The Danube

The data on loads of pollutants discharged to the Black Sea will be based on the TNMN station Reni.

○ The data on loads of suspended solids, inorganic nitrogen, phosphates, total phosphorus and BOD₅ until 2005 will be taken from the TNMN load assessment programme.

○ The data on loads of ammonium, nitrates and nitrites until 2005 will be calculated from the TNMN results on yearly average concentrations.

○ The data on loads of suspended solids, inorganic nitrogen, phosphates, total phosphorus, BOD₅, ammonium, nitrates, nitrites, total nitrogen, cadmium, copper, lead, mercury and silicates as of 2005 onwards will be taken from the TNMN load assessment programme.

An inevitable precondition for delivery of the data is the availability of AQC results in the responsible laboratory.

The Black Sea

The historical data on ten indicators have been collected and will be analysed by the BSC and

presented to the ICPDR. This information is intended to be used to assist in further development of the monitoring system of the Black Sea. The BSC has agreed to prepare a statement on historical data and on the methodology for the development of the Black Sea monitoring system necessary for collecting the data on ten agreed indicators. It was agreed that an analytical quality control system for the Black Sea monitoring programme has to be developed.

Further work will be needed to secure the needed information from the BSC related to the status of the Black Sea.

Strengthening cooperation between the Danube and Black Sea Commission Secretariats

On the occasion of the stocktaking meeting in November 2004 a preparatory meeting was held between the representatives of the JTWG. Discussions were focused on the reporting data submitted by BSC and the need to further harmonise them with those provided by the ICPDR.

Cooperation with Alcoa Foundation

In 2004 additional support for pollution control and monitoring came from the Alcoa Foundation to the ICPDR. A grant proposal was submitted within the Alcoa specified area of excellence “Conservation and Sustainability”.

Progress has been made in the 2003 grant for procurement of new and proper equipment, which will assist the defining of some microbiological, biological and chemical elements/parameters for laboratory of the local branch (Oradea) of the national administration “Apele Romane” in

11. International and Regional Cooperation



Romania. The outcomes of this grant include (i) improved capacity of the local branch (Oradea) of the national administration “Apele Romane”, to run an integrated monitoring system in order to fulfil the monitoring requirements of the Danube River Protection Convention, through the Trans-National Monitoring Network (TNMN), (ii) enhanced ability of the water authorities in Romania and Hungary to respond to WFD implementation tasks, in particular in identification and assessment of biological, chemical and physical data to provide information for basin-wide planning, and (iii) developing a dynamic bilateral example of cooperative, interagency assessment teams which can gather and interpret information about the water quality in a transboundary water.

In 2004 two more grant proposals were submitted for: (i) laboratory equipment for Mures River Basin to respond to WFD and ICPDR reporting requirements, and (ii) encouraging partnership between communities, government and NGOs on reducing pollution and protecting natural resources everywhere in the Danube River Basin.

One main outcome of this grant will be a handbook on effective strategies for partnerships on specific issues of interest for the ICPDR’s water management policies and strategies. It will assist in determining the potential nature and scope for public involvement, ensuring ongoing participation and feedback on evaluation of partnerships. The handbook will capture the best practices and lessons learned about how to use water quality monitoring data in communicating with different internal and external stakeholders within DRB. Best practices will be identified, reviewed, discussed and published.

The grants will also allow communication objectives to be met so as to provide an effective educational opportunity that would allow the professional to use appropriate equipment, learn about new assessment techniques and enhance their perception of the water pollution impacts.

Cooperation with GEF-FFEM

The French GEF Project entitled “Transboundary River Basin Management of the Körös/Crisuri Rivers, a Tisza River sub-basin”, which is aiming at building the capacity of the Romanian-Hungarian Commission by strengthening the Romanian and Hungarian organisations in charge of water management, was further developed in 2004. Specifically the project “would assist in the preparation of the basin characterization and procedures for a preliminary transboundary, harmonized management plan in accordance with the recommendations of the WFD”.

The French GEF has developed a draft agreement (covenant) between the ICPDR and the French GEF to regulate the oversight and quality control of the project. The covenant has been agreed to and work on this project will begin in 2005. The ICPDR is acting as a management authority for this project and ensuring the coordination of activities with ICPDR work groups.

Cooperation with DABALS Taskforce

The ICPDR continued to be involved in the work of the DABLAS Taskforce and has undertaken a major project to evaluate work under this forum. The project was titled: “*Evaluation of policies, regulation, and investment projects implemented in the last five years in DRB in line with EU directives and regulations*”.

11. International and Regional Cooperation

With funding from the EU ICPDR undertook a second EU DABLAS project with the aim of compiling information and providing a clear picture of the results achieved by the individual Danube countries on pollution control, the policy and legal reforms under preparation, the gaps to be filled and the investment projects, that need further technical and financial support. The results are to be used as a baseline for evaluating subsequent progress at national and regional levels.

As part of the project the existing ICPDR-DABLAS database has been revised to include municipal, industrial, agro-industrial, wetland restoration, and agricultural and land use projects. The project has included two main tasks:

(i) to evaluate the implementation of policies, regulations and measures of compliance in line with the provisions of the ICPDR Joint Action Programme at the national level, taking into account:

- the transfer of EU water-related directives (Nitrates Directive, Urban Waste Water Directive, IPPC Directive, Water Framework Directive, etc.) into national policies, regulations, and compliance mechanisms
- the estimated cost for reforms concerning institutional and legal measures and direct investments that have been carried out to respond to new water related regulations (pollution reduction targets)

(ii) to implement investment projects, for municipal, industrial and agro-industrial schemes, measures for wetland restoration, agricultural

reforms and land use planning analysis, taking into account:

- projects implemented in the past five years considering the type of project (technical description), investment cost, financing modalities and achieved results in terms of compliance with EU directives and pollution reduction (BOD, COD, N and P)
- projects under implementation or in the pipeline, which are well prepared and do not need any further technical or financial support, considering the same points as above, indicating expected results
- projects in preparation, which need further technical and financial support; these projects will be described as above, indicating the needs for technical and financial support for project preparation and/or project implementation and the expected results (for municipal projects, the results of the above EU DABLAS project will be taken into account and updated).

The DABLAS database has been developed as an interactive tool to be used for evaluating remaining needs for investments and policy measures on a regional, national, and sector basis.

The current DABLAS database for investment projects in the Danube River Basin countries is accessible under www.icpdr.org.

12. Abbreviations and Acronyms



AEWS	Accident Emergency Warning System
APC EG	Expert Group on Accident Prevention and Control
ARS	Accident Risk Spot
AQC	Analytical Quality Control
BAP	Best Agricultural Practices
BAT	Best Available Techniques
CAP	Common Agricultural Reform
DABLAS TF	Dablas Task Force
Danube RBM Plan	Danube River Basin Management Plan
daNUbs	Nutrient Management in the Danube Basin and its impact in the Black Sea
DEF	Danube Environmental Forum
DRB	Danube River Basin
DRP	Danube Regional Project
DRPC	Danube River Protection Convention, short for Convention on Cooperation for the Protection and Sustainable use of the Danube River
DW	Danube Watch
ECO EG	Expert Group on Ecology
ECON ESG	Expert Subgroup on Economics
EGM	EuroGlobalMap
EMIS EG	Expert Group on Emission
EPER	European Pollutant Emission Register
FAP	Flood Action Programme
GIS	Expert Subgroup on Cartography and GIS
GW	Groundwater
GWP-CEE	Global Water Partnership for Central and Eastern Europe
HMWB	Heavily Modified Water Bodies
ICPDR	International Commission for the Protection of the Danube River
IFIs	International Finance Institutions
IPPC	Integrated Pollution Prevention Control
IUCN	World Conservation Union
JAP	Joint Action Programme
DBS-JTWG	Danube Black Sea - Joint Technical Working Group
MLIM EG	Expert Group on Monitoring, Laboratory and Information Management
MONERIS	MOdelling Nutrient Emissions in RIVER Systems
MoU	Memorandum of Understanding
PE	Population Equivalent
PIP	Project Implementation Plan
PRTR	Pollutant Release and Transfer Registers
RBM EG	Expert Group on River Basin Management
REC	Regional Environmental Center for Central and Eastern Europe
SOP	Standard Operational Procedure
TNMN	Trans-National Monitoring Network
UNDP/GEF	United Nations Development Programme - Global Environment Facility
UWWTD	Urban Wastewater Treatment Directive
WFD	EU Water Framework Directive (Directive 2000/60/EC)
WWF	Worldwide Fund for Nature
WWTP	Wastewater Treatment Plant

Annex 1: Composition of the ICPDR in 2004

PRESIDENT: *Catherine DAY*
Director General - Environment

HEADS OF THE DELEGATIONS:

Germany: *Fritz HOLZWARTH*, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, Robert Schuman Platz 3, D-53048 Bonn, Germany

Austria: *Wolfgang STALZER*, Federal Ministry for Agriculture, Forestry, Environment and Water Management, Section VII, Marxergasse 2, A-1030 Vienna, Austria

Czech Republic: *Jaroslav KINKOR*, Director, Water Protection Department, Ministry of Environment, Vrsoviccka 65, CZ-10010 Praha 10, Czech Republic

Slovakia: *Marian SUPEK*, Ministry of Environment, Division of Water Namestie L'Stura 1, SK-81235 Bratislava, Slovakia

Hungary: *Gyula HOLLÓ*, Department River Basin Management, Ministry of Transport and Water Management, Fő utca 44-50, POB 351, H-1394 Budapest, Hungary

Slovenia: *Mitja BRICELJ*, Ministry of Environment and Spatial Planning, Dunajska cesta 48, SI-1000 Ljubljana, Slovenia

Croatia: *Željko OSTOJIĆ*, State Water Directorate, Ulica grada Vukovara 220, HR-10 000 Zagreb, Croatia

Bosnia-Herzegovina: *Mehmed CERO*, Federal Ministry of Physical Planning and Environment, M.Tita 9a, BiH-71000 Sarajevo, Bosnia and Herzegovina

Borislav JAKŠIĆ, Ministry for Urbanism, Construction, Communal Issues and Ecology, Trh Srpskih Junaka 4, 78000 Banja Luka, Republika Srpska

Serbia and Montenegro: *Igor TADIĆ*, up to April 2004, Ministry of Agriculture and Water Management, Directorate for Water, 2 Bulevar Umetnosti, 11000 Belgrade, Serbia and Montenegro

Nikola MARJANOVIĆ, as of May 2004 Ministry of Agriculture, Forestry and Water Management, Directorate for Water, 2a Bulevar Umetnosti, 11000 Belgrade, Serbia and Montenegro

Bulgaria: *Nikolai KOUYUMDZIEV*, Deputy Minister, Ministry of Environment and Water, Bd. Maria Luisa 22, BG-1000 Sofia, Bulgaria

Romania: *Florin STADIU*, Secretary of State, Ministry of the Water and Environmental Protection, 12 B-dul Libertatii, Sect. 5, RO-Bucharest, Romania

Moldova: *Gheorge DUCA*, up to March 2004, Minister, Ministry of Ecology, Construction and Territorial Development, 9 Cosmonautilor str., MD-2005 Chisinau, Moldova

Constantin MIHAILESCU, as of April 2004 Minister, Ministry of Ecology and Natural Resources, 9 Cosmonautilor str., MD-2005 Chisinau, Moldova

Ukraine: *Anatoliy V. GRYTSENKO*, Cabinet of Ministers, Ministry of Environment and Natural Resources, Khreshchatyk 5, UA-252601 Kiev, Ukraine

Annex 1: Composition of the ICPDR in 2004



European Community: *Helmut BLÖCH*, European Commission, DG-Environment - Unit Water and Marine Protection, 200 rue de la Loi, B-1049 Brussels, Belgium

PERMANENT SECRETARIAT:

Philip WELLER, Executive Secretary

Károly FUTAKI, Information Management and Administration Officer

Igor LIŠKA, Technical Expert for Water Management and Water Quality

Mihaela POPOVICI, Technical Expert for Water Management and Emission Pollution Control

Ursula SCHMEDITJE, Technical Expert for River Basin Management

Jasmine BACHMANN, Technical Expert for Public Relations and Communications

Julia KÖLBLINGER, Finance Officer

Sylvia KERSCH, Management Assistant

CHAIRPERSONS OF THE EXPERT GROUPS AND SUBGROUPS:

Expert Group on River Basin Management (RBM EG): *Joachim D'EUGENIO*, European Commission, DG/Environment, 200 rue de la Loi, B-1049 Brussels, Belgium

Expert Subgroup on GIS (GIS ESG): *Visnja OMERBEGOVIĆ*, until September 2004, *Eva SOVJAKOVA*, as of October 2004, Croatian Waters, Ulica grada Vukovara 220, HR-10 000 Zagreb, Croatia

Expert Subgroup on Economics (ECON ESG): *Ibolya GAZDAG*, Ministry of Transport and Water Management, Dob ut. 75-81, H-1077 Budapest, Hungary

Expert Group on Ecology (ECO EG): *Gabor MAGYAR*, until March 2004, Ministry of Environment and Water, Authority for Nature Conservation, Költö utca 21, H-1121 Budapest, Hungary, *Adriana KLINDOVA*, as of March 2004, Ministry of Environment, Nature and Landscape Protection Dept., Namestie Ludovita Stura 1, SK-812 35, Bratislava, Slovakia

Expert Group on Emissions (EMIS EG): *Zdenka KELNAROVA*, until June 2004, Water Protection Department, Ministry of Environment, Namestie L' Stura 1, SK-81235 Bratislava, Slovakia, *Joachim HEIDEMEYER*, as of July 2004, Umweltbundesamt, Postfach 330022, D-1419 Berlin, Germany

Expert Group on Monitoring, Laboratory and Information Management (MLIM EG): *Liviu POPESCU*, Senior Expert, ICIM Research & Engineering Institute for Environment, Spl. Independentei 294, Sect. 6, RO-77703 Bucharest, Romania

Accident Prevention and Control Expert Group (APC EG): *Aurel VARDUCA*, Head of the Department, ICIM Research & Engineering Institute for Environment, Spl. Independentei nr. 294, Sect. 6, RO-77703 Bucharest, Romania

Flood Expert Group (Flood EG): *Sandor TOTH*, National Water Authority, Marvary u. 1/c H-1012 Budapest, Hungary

ad hoc Strategic Expert Group (S EG): *Knut BEYER*, Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, BMUNR, WA I 6B, Robert Schuman Platz 3, D-53048 Bonn, Germany

Annex 2: Observer Status per 31. 12. 2004

Name of Organisation	Address
Danube Commission (DC)	<i>Danail Nedialkov, Director General, Benczúr utca 25, H-1068 Budapest, Hungary</i>
World Wide Fund for Nature (WWF)	<i>Dave Tickner, Michael Baltzer, Director, Danube Carpathian Programme Mariahilferstr. 88a/3/9, A-1070 Vienna, Austria</i>
International Association for Danube Research (IAD)	<i>Meinhard Breiling, General Secretary, Dampfschiffhaufen 54, A-1220 Vienna, Austria</i>
Convention on Wetlands of International Importance especially as Waterfowl Habitat (RAMSAR)	<i>Tobias Salathe, Regional Coordinator for Europe Rue Mauverney 28, CH-1196 Gland, Switzerland</i>
Danube Environmental Forum (DEF)	<i>Jan Seffer, DEF Secretariat Rytierska 2, SK-841 10 Bratislava, Slovakia</i>
Regional Environmental Center for Central and Eastern Europe (REC)	<i>Marta Szigeti-Bonifert, Executive Director, Ady Endre ut 9-11, H-2000 Szentendre, Hungary</i>
The Commission for the Protection of the Black Sea Against Pollution (BSC)	<i>Plamen Dzhadzhev, Dolmabahce Sarayi II. Hareket köskü II, 34353 Besiktas, Istanbul, Turkey</i>
Global Water Partnership for Central and Eastern Europe (GWP-CEE)	<i>Milan Matuska, GWP-CEE Secretariat c/o Slovak Hydrometeorological Institute, Jeseniova 17, 83315 Bratislava, Slovakia</i>
United Nations Educational, Scientific and Cultural Organization - International Hydrological Programme (UNESCO / IHP)	<i>Philippe Pypaert, UNESCO Venice Office Dorsoduro, 1262/A, I-30123 Venice, Italy Miklos Domokos, Hungarian IHP/OHL, NC-Secretary VITUKI, Kvasay J. ut 1., 1453 Budapest, Hungary</i>
International Association for Water Works in the Danube Basin (IAWD)	<i>Markus Werderitsch, c/o Wiener Wasserwerke Grabnergasse 4-6, A-1061 Vienna, Austria</i>
The Danube Tourism Commission (Die Donau)	<i>Ursula Deutsch, Margaretenstrasse 1 A-1040 Vienna, Austria</i>