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Environmental co-operation in the Danube - Black Sea Region

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Executive Summary

The Danube - Black Sea Region contains the single most important non-oceanic body of water in Europe. Every year, about 350 cubic kilometres of river water pour from the Danube into the Black Sea from an area of 2 million square kilometre basin, covering about one third of the area of continental Europe. Over 160 million people live in this basin. The Danube is the most international river basin in the world, which makes co-ordinated action even more important and challenging.

The strategic importance of the region is increasing in the context of an enlarged Europe. Until now the Danube has been an important link in Central Europe as well as the border between EU and the Balkans and Black Sea Region. With the EU enlargement, a number of the Danube countries will be a member of the European Union and the Danube will become a central axis of Europe while the Black Sea will become a coastal area of the Union.

In environmental and health terms, the Danube - Black Sea region suffers from very acute problems. The Danube is subject to increasing pressure affecting the supply of drinking water, irrigation, industry, fishing, tourism, power generation and navigation. All too often it is also the final destination of wastewater disposal. These intensive uses have created severe problems of water quality and quantity, and reduction of biodiversity in the basin. Eutrophication is the main environmental problem for the Black Sea; it is due to the excessive loads of nutrients via the rivers and directly from the coastal countries. Eutrophication has led to radical changes in the ecosystem since the 1960's and has had a major transboundary impact on biological diversity and human use of the sea.

In the last decade national and international environmental initiatives have tried to remedy the environmental degradation of the Danube and the Black Sea. Different instruments for environmental co-operation have been set up in the region, namely the Danube River Protection Convention (DRPC) and the Convention on the Protection of the Black Sea against Pollution (Black Sea Convention). Under the two conventions, environment programmes have been drawn up defining strategies and identifying hot spots for which investment interventions were needed to address transboundary concerns. However, so far there has been limited investment in the priority projects identified in the two frameworks. Also, since 1990, the European Community has supported the environment of the region through its different funding mechanisms, in particular through its PHARE and TACIS programmes. Several EU Member States are engaged in bilateral environmental assistance. The United Nations and the Global Environment Facility (GEF) have also provided financial assistance for environmental projects and major efforts have been undertaken to co-ordinate activities and avoid duplication of work.

However, the actions and initiatives undertaken so far have, until now, proved to be insufficient to reverse the environmental degradation and health problems in the Danube - Black Sea region and therefore there is a need for strengthened action to restore the environment of the region to a state that is acceptable for the people to live in.

This Communication gives an overview of the present environmental situation of the Danube - Black Sea region and the ongoing environmental co-operation activities. It highlights the priority actions that would be required for improving the environmental quality and outlines a strategy to achieve the environmental protection objectives to be pursued in the region. The present Communication calls for an increased involvement of the EU and its Member States in environmental co-operation within the region, including a co-ordinated action by all financial instruments operating in the region. This will be a key element for the development of broad co-operation among the countries and the peace and stability of the Danube - Black Sea region.

1. INTRODUCTION

The Danube and Black Sea Region contains the single most important non-oceanic water body of Europe. Every year, about 350 cubic kilometres of river water pour from the Danube into the Black Sea from a 2million square kilometre basin, covering about one third of the area of continental Europe. The Danube is the most important river running into the Black Sea. It is the second largest European River (after the Volga), which flows over 2,857 kilometres from its source in the Black Forest of Germany to the Black Sea. Apart from the Danube, Europe's third and fourth largest rivers, the Dnieper and Don, flow to the Black Sea. The population of the greater Black Sea basin is more than 160 million.

The Danube

17% of the Danube catchment area lies within the EU, 57% lies on the territories of the candidate countries to the EU, while 25% of the catchment belong to non-applicant countries. The Black Sea is bordered by three EU Candidate Countries: Romania, Bulgaria and Turkey and by Ukraine, Russia and Georgia.

99% of the catchment area is shared by thirteen countries, i.e. Germany (7%), Austria (10%), the Czech Republic (3%), the Slovak Republic (6%), Hungary (11%), Slovenia (2%), Croatia (4%), Bosnia (7%), Yugoslavia (9%), Bulgaria (6%), Romania (29%), Moldova (1%) and Ukraine (4%). The remaining 1% of the catchment area is shared by as different countries as Poland, Italy, and Switzerland.

The Blue Danube, as it is frequently referred to, binds together eighty million people, a multitude of different traditions, cultural images, and past experiences. The Danube and especially its wetland areas are habitats for a diversity of plants and animals, and a home for rare and threatened species. The Danube supports the supply of drinking water, agriculture, industry, fishing, tourism and recreation, is used for power generation, navigation, and too often it is the final destination of disposal of waste waters. These intensive uses have created problems of water quality and quantity, affected the health of the people and reduced biodiversity in the basin.

The Black Sea

The Black Sea is one of the most remarkable regional seas in the world. It is almost cut off from the rest of the world's oceans but is up to 2212 metres deep. The eutrophication of the Black Sea due to the excessive loads of nutrients via the rivers and directly from the coastal countries has led to radical changes in the ecosystem since the 1960'es. This has had a major transboundary impact on biological diversity and human use of the sea, including fisheries and recreation.

Efforts to reverse this situation have until now been insufficient and there is a need for action in order to restore the environment to a level acceptable for the people of the region and to protect and rehabilitate the Black Sea ecosystems

The Black Sea ecosystems have global ecological and biodiversity significance.

The connection between the Black Sea and the Aegean and Mediterranean Seas is only through the Bosphorus Straits, a 35-kilometer natural channel, as little as 40 metres deep in places. The Bosphorus has a two layer flow, carrying about seawater to the Black Sea from the Mediterranean along the bottom layer and returning a mixture of seawater and freshwater with twice this volume in the upper layer.

Regional co-operation

The countries of the Danube and Black Sea Region are strongly linked by their common political and cultural heritage and their environmental links are also strong because of the river basin shared across national borders. Historically there has been a great deal of co-operation between the Danube and the Black Sea countries. In the future this co-operation will have to be even stronger if the countries are to be successful in dealing with the challenges of restoring the water ecosystems.

The common task of managing the rivers and regional seas is potentially a strong asset for the countries, because it has the potential to induce the development of a fruitful co-operation but, on the other hand, indirectly, it could also be a source of tension between countries, as it has been the case when pollution has spread from one country to another via the rivers. The regional character of the co-operation in the Danube - Black Sea region will be one of the tools to ensure a peaceful co-existence in a reunified Europe on the long term.

The co-operation between the countries of the Danube and Black Sea Region will be an important catalyst for the technological and economic development of the region. The co-operation will allow countries to benefit from the Danube as a navigable waterway, which offers cheaper, and less environmentally damaging means of transport and will allow the economic development to spread faster across the region. This effect has already been seen for the River Rhine, which has been the centre of Europe's main economic development band, stretching between London and Milan and now containing over a third of the wealth of Europe.

Relations with the EU

The European Union and its Member States have multiple reasons to establish and maintain a close co-operation within the countries of the Danube and Black Sea Region. **With the EU enlargement, a large number of the Danube countries will become members of the European Union and the Danube will become a central axis of the enlarged Europe while the Black Sea will become a coastal area of the Union.**

Part of the Danube River Basin lies in Germany and Austria, and the need for these Member States to co-operate with the other countries of the region is obvious. Italy is also closely connected to the region because it shares a small part of the Danube River Basin and because of the Adriatic Sea, which is shared with Bosnia and Herzegovina, Croatia, Slovenia, Federal Republic of Yugoslavia and Albania. For Greece, the Black Sea environmental situation is important, insofar as the waters flowing out of the Black Sea affect the Aegean Sea and the Greek coasts. The close co-operation between the actors of the region and the EU will be essential to establish the political support for the joint actions that need to be undertaken.

Presently a large number of events for the Danube and Black Sea Region are being undertaken or are in the planning phase. These events linked with the fact that the Black Sea Commission has recently granted observership status to the European Commission calls for the EU to take a more proactive approach and achieve a stronger involvement in the environmental co-operation in the region.

2. THE ENVIRONMENTAL CHALLENGES IN THE REGION

One of the main environmental problems related to the water bodies in the Danube - Black Sea region is due to the high content of nutrients that flows into the Black Sea, both via the rivers and directly from land-based sources. This leads to eutrophication of the rivers and the sea, which is recognised as one of the principal causes of their degradation. The eutrophication has consequences for biodiversity in the water bodies and in the surrounding wetlands and forests, and also for human health in the region.

Eutrophication means an over-enrichment of the water bodies with organic matter, especially algae (phytoplankton). The algae grow in all surface waters when there is enough light and essential nutrients, especially nitrogen and phosphorous.

When the nutrient level is too high it is supporting an abundant plankton production, and when the plankton degrades, the oxygen consumption increases to undesired levels and the undesirable changes in water quality can lead to the extinction of species.

In the Black Sea this has already happened and the food chain is seriously disrupted

2.1. The Danube

The Danube River is by far the single most important contributor to the nutrient pollution of the Black Sea.

The Danube river basin can be divided into three sub-regions: the upper, the middle and the lower basin including the Danube Delta. The Upper Basin extends from the source in Germany to Bratislava in the Slovak Republic. The Middle Basin is the largest part and comprises the section from Bratislava to the Iron Gate dams in the Federal Republic of Yugoslavia/Romania. The Romanian-Bulgarian lowlands and its upland plateaux and mountains form the Lower Basin of the river. Finally, the division of the river into three main branches creates the Danube delta, covering an area of about 6,000 km².

Tributaries to the Danube

Major tributaries of the Danube are the Inn (Switzerland, Austria, Germany), the Drava (Austria, Slovenia, Croatia and Hungary), the Tisza (Slovakia, Romania, Ukraine, Hungary and Yugoslavia), the Sava (Slovenia, Croatia, Bosnia and Herzegovina, Yugoslavia), the Morava (Yugoslavia) and the Prut (Ukraine, Moldova, Romania).



Danube River Basin

Source of the data for the map: City of Vienna

In 1997 an ad-hoc Joint Technical Working Group was established between the International Commission for the protection of the Black Sea and the International Commission for the Protection of the Danube River. The description in this Communication of the state of the environment in the Danube and Black Sea is based on the report of the work done by this Group. Where data from other sources is used, this is indicated separately.

The data, which was collected by this Working Group, is the latest comprehensive set of data that exists for the Danube and Black Sea. Since then no official data was published, covering the entire Danube and Black Sea Region.

The main problems affecting the Danube River Ecosystems are:

High Nutrient (nitrogen and phosphorous) loads

About half of the nutrients discharged to the river are from agriculture, a quarter from industry and a similar proportion from domestic sources. The main polluters are wastes from cities and industries, chemical fertilisers and manure from intensive and large-scale livestock operations as well as petrochemical processing, iron and metal processing, timber, paper and pulp production and municipal solid waste

Competition for available water

This is a serious problem in the Danube River Basin due to the lack of integrated planning and water management. Irrigation and industry are responsible for the largest water consumption

Overexploitation of surface and groundwater

Changes in river flow patterns

Including transport of sediment

Contamination with hazardous substances

Including heavy metals, oil, oxygen depleting substances and microbiological contamination

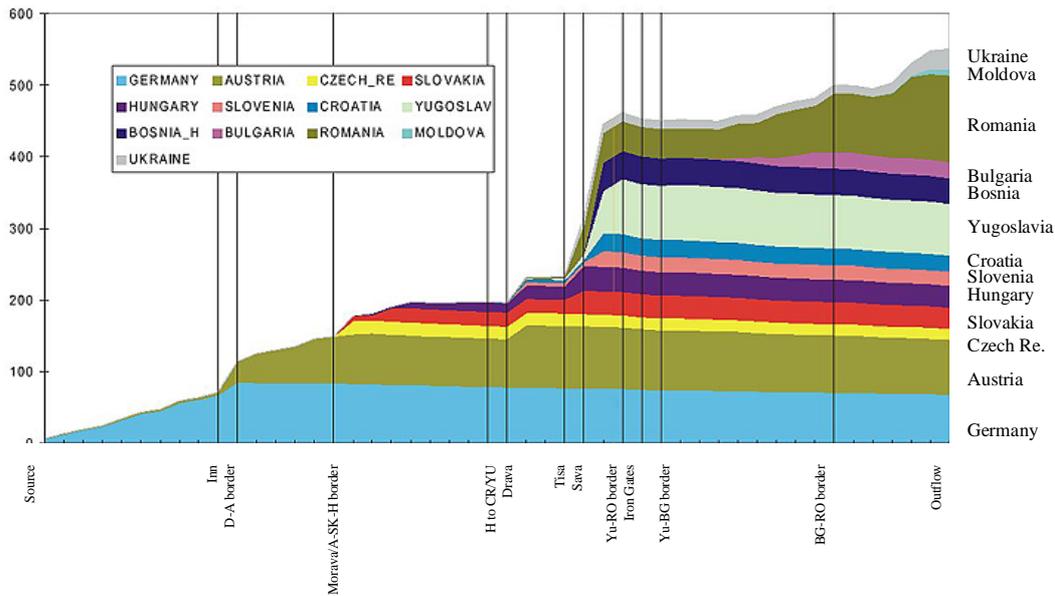
Accidental pollution

Degradation and loss of wetlands

The analysis has shown a gradual increase of the in-stream nitrogen load from the source of the Danube up to the middle Danube area, where it increases very rapidly, due to the inflows of the Drava, Tisza and Sava tributaries. The gradual increase continues up to the outflow. The country contributions show a gradual or jump-wise build-up, similar to the build-up of their catchment contributions. Downstream, the country nitrogen-load contributions decrease gradually because some nitrogen is removed from the water and turned into gaseous nitrogen by de-nitrification.

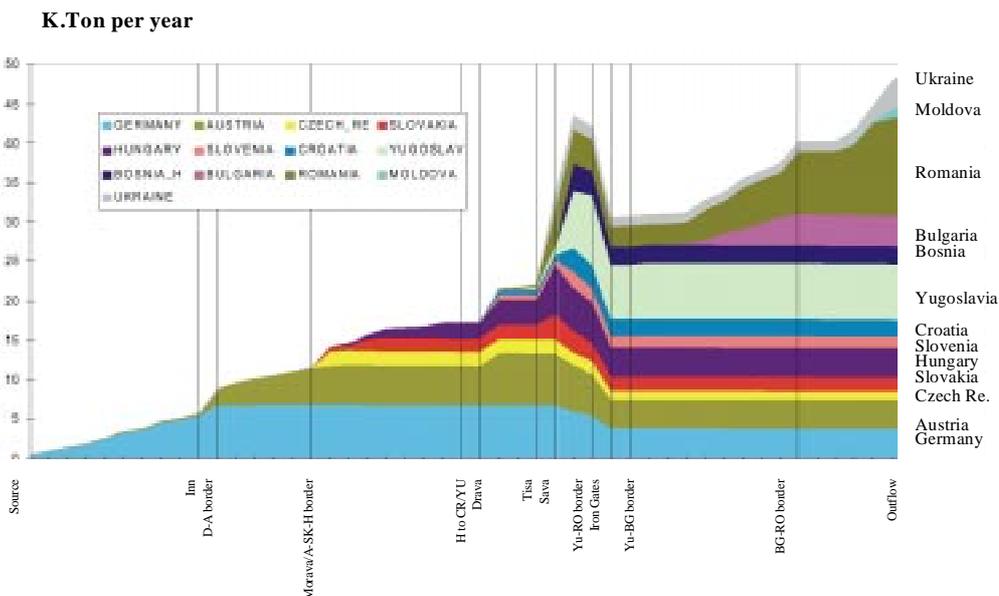
The **total nitrogen load in the Danube River** is estimated to be between 537.000 and 551.000 tonnes per annum, depending on the estimates for removal by de-nitrification. These data are valid for the period from 1992-1996 and are estimated using a steady state model and do not fully cover possible flooding and other unforeseen events. They should be taken as an indication of the size of the nitrogen load only.

K.Ton per year



A similar picture exists for phosphorus. In this case however, the in-stream removal is not distributed over the whole river as with nitrogen. Phosphorus is only removed from the river in the Iron Gates Lake-area, downstream of the inflows of the Drava, Tisza and Sava tributaries. Therefore, the in-stream load sharply decreases just downstream of the strong increase at the locations of these tributaries.

The total phosphorus load in the Danube River is 48,900 tonnes per annum. These data are valid for the period from 1992-1996 and are estimated using a steady state model and do not fully cover possible flooding and other unforeseen events. They should be taken as an indication of the size of the phosphorus load only.



Large Nutrient loads

The size of the nitrogen and phosphorus loads in Danube River is large compared with the loads to the sea from other important rivers in Europe. For example the nitrogen load for the same period from the River Rhine is approximately 50.000 tonnes per year and the nitrogen load from the River Seine is 149.000 tonnes compared with the 537-551.000 tonnes coming from the Danube.

The division between the countries of the region in their contribution to the total loads of nitrogen and phosphorus to the Danube (estimated at source) is indicated in the table below:

Country	Nitrogen (%)	Phosphorus (%)	% of Danube population ¹	Nitrogen Load/Person (kg/year)	Phosphorus Load/Person (kg/year)
Germany	12,3-13	7,6	10,9	7,3	0,4
Austria	13,9-14,4	7,7	9,2	10,0	0,5
Czech Republic	2,8	2,2	3,4	5,4	0,4
Slovakia	5,4-5,5	3,5	6,2	5,8	0,3
Hungary	5,6	7,7	12,2	3,0	0,4
Slovenia	3,5-3,6	2,7	2,0	11,8	0,8
Croatia	4,1	4,5	3,8	7,2	0,7
Yugoslavia	12,8-13,1	14,4	10,8	8,0	0,8
Bosnia Herzegovina	6,4-6,5	4,6	3,5	12,4	0,8
Bulgaria	4-4,1	8,1	4,6	5,9	0,1
Romania	21,3-22	26,0	27,1	5,4	0,6
Moldova	1,4-1,5	2,9	2,3	4,2	0,7
Ukraine	5-5,1	8,1	3,7	9,0	1,3

The table shows that the largest contributors for nitrogen, with more than 10%, are Germany, Austria, Romania, and The Federal Republic of Yugoslavia. For phosphorus the largest contributors are The Federal Republic of Yugoslavia and Romania. It can be noted that there is not always necessarily a correspondence between the share of the population and the share of the nutrient load. Any effort to solve the nutrient problems of the river should therefore be carefully targeted, taking into consideration both the relative and absolute contribution of a country to the pollution of the Danube and Black Sea.

For the other main pollutants of the Danube and Black Sea the data has not been so adequately quantified.

¹ See Annex 3 for data used.

In spite of pollution and of the construction of dams, there are some preserved natural areas in the Danube catchment area; the Romanian part of the delta was registered under the Ramsar Convention and designated a Biosphere Reserve in 1992 within the framework of the UNESCO's Man and Biosphere Heritage. Another unique ecosystem is the Karst wetlands of the lower Danube in Romania and Bulgaria.

The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty which provides the framework for national action and international co-operation for the conservation and wise use of wetlands and their resources.

There are presently 124 Contracting Parties to the Convention, with 1073 wetland sites, totalling 81.76 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance.

2.2. The Black Sea

Six countries border the Black Sea: Romania, Bulgaria, Turkey, Georgia, Russia and Ukraine.



Eutrophication has led to radical changes in the Black Sea ecosystem since the 1960's with major transboundary impact on biological diversity and human use of the sea, including fisheries and recreation.

The nitrogen and phosphorus compounds triggering eutrophication come from all over the Black Sea Basin. The Black Sea Transboundary Diagnostic Analysis (1996) indicates that in 1992 70% of the nutrients came from the six Black Sea countries. Three of the Black Sea Countries, Romania, Bulgaria and Ukraine, discharge much of their nutrient load through the Danube. The remaining 30% come from the non-coastal countries.

The Dnieper River transports some 20.000 tonnes of nitrogen annually to the Black Sea.

The contribution of nitrogen and phosphorus (estimated at source) to the Black Sea from the individual countries is listed in the table below (Black Sea pollution assessment, 1998):

Country	Nitrogen	Phosphorus	% of Black Sea population ²
Bulgaria	14%	5%	5,0
Romania	27%	23%	20,6
Ukraine	12%	20%	42,2
Russian Federation	10%	13%	23,4
Georgia	<1%	1%	1,8
Turkey	6%	12%	7,0
Non-coastal countries	30%	26%	-

The table shows that there is not always a correspondence between the share of the population in the Black Sea countries and the share of the nutrient pollution. Any effort to solve the nutrient problems should therefore be carefully targeted, taking into consideration both the relative and absolute contribution to the pollution.

Recent developments

The current load of nutrients entering the Black Sea from the Danube has fallen in recent years. This is due to the experienced downturn trend of the economies of lower Danubian and former Soviet countries, the measures taken to reduce nutrient discharge in the upper Danube countries, and the implementation of a ban in polyphosphate detergents in some countries. However, total nitrogen levels are still at least four times as high as those observed during the 1960s (almost no decline in total inorganic nitrogen over period from 1980 has been observed), while current phosphate levels appear to be roughly the same as in the 1960s.

Silicates have declined to about 30% of 1960s levels. (Causes and Effects of Eutrophication in the Black Sea; Summary Report; June 1999. Danube Pollution Reduction Program).

Black Sea waters are also heavily impacted by sewage, a situation exacerbated by the economies of coastal states, which can hardly afford the heavy investments in building the wastewater treatment installations needed to avoid the water contamination. Some countries (e.g. Bulgaria and Romania) are already investing in new wastewater treatment facilities but in general terms, water treatment is absent or deficient in most places around the Black Sea. There are also serious problems with solid waste disposal.

Oil pollution in the Black Sea does not appear to be a widespread problem but has an importance within the coastal areas around river mouths, sewage outlets, industrial installations and ports. However, new environmental pressures are emerging as a result of the rapid increase in the use of the Black Sea as a maritime transport route, particularly for the shipment of oil en-route from the newly opened Caspian oil fields. This development creates a high accident risk of tankers, especially in the Turkish Straits.

² See Annex 3 for data used.

There is no evidence to date of significant **heavy metal pollution** or pollution from pesticides and other persistent organic pollutants (such as PCBs) in the Black Sea.

Another serious issue is related to loss of **biodiversity** in the Black Sea. Originally there was a very rich biodiversity, especially on the North Western shelf of the Black Sea, where a unique system of red algae existed. This area has now changed to a seasonally anoxic “dead zone”. The total area affected by these conditions has increased 1000 times during the last 30 years. This has impacted the entire Black Sea and changed the balance between the different species leading to an unstable ecosystem. Another problem is the overexploitation of the fish stocks in the sea. Since the 60's the industry has expanded and high technology fish-finding techniques have been applied. Problems also occur due to the arrival of an exotic species, the comb jelly, which had no natural predators in the Black Sea. It has flourished and is claimed to have reached a total biomass of about one billion tonnes in the Black Sea, more than the world annual fish harvest at its peak in 1989-90. This has an enormous impact on the Black Sea's ecosystems and commercial fish stocks.

These problems combined with the pollution of water mainly by nutrients as well as increase in turbidity has resulted in a decrease in the diversity of commercially exploitable fish from some 26 species to 6 species, since the late seventies.

3. EXISTING ENVIRONMENTAL CO-OPERATION IN THE REGION

The Danube River States have signed the Convention on Co-operation and Protection and Sustainable use of the Danube River (Danube River Protection Convention, DRPC) on Environmental Co-operation in the river catchment area. The European Community is also party to the Convention and finances parts of the Convention's activities. The International Commission for the Protection of the Danube River (ICPDR) is implementing the DRPC.

Parties that ratified the Danube River Protection Convention (DRPC) are:

Austria, Bulgaria, Croatia, Czech Republic, Germany, Hungary, Moldova, Romania, Slovak Republic, Slovenia and the European Community.

Ukraine has signed but not ratified the convention and Bosnia and Herzegovina and Federal Republic of Yugoslavia are observers

The parties to the Black Sea Convention are: Romania, Bulgaria, Ukraine, Georgia, Russia and Turkey.

The European Commission on behalf of the European Community has recently been granted official observer status

Black Sea environment takes place in the framework of the Convention on the Protection of the Black Sea against Pollution (Black Sea Convention).

These two Conventions should be the basis for the regional co-operation and efforts to support the region.

Thereby the focus should be on reinforcing these conventions rather than creating new ones, as has been suggested from time to time.

Community support

Since 1990 the European Community has supported the Danube region via the PHARE³ programme, consisting of both national programmes and multi-country assistance to the countries of the region. The Danube Environment programme was among the first multi-country programmes approved and at the same time one of the largest projects undertaken. At the same time also the UN and GEF have been active in the region and major efforts have been undertaken in order to co-ordinate the activities of the EU and the UN and to avoid duplications of programmes.

In July 2000 the Council endorsed a proposal from the EU Commission to pay into an international fund for clearing up the River Danube (Council Decision 2000/474/European Commission of 17 July 2000). Since January 2001 the Danube Commission based in Budapest has started the implementation of the project of clearing parts of the Danube.

³ From 1 January 2000 all pre-accession assistance must be geared towards preparing the Candidate Countries for accession, i.e. to priorities mentioned in the Accession Partnerships.

PHARE and TACIS support has also been provided to environment projects in the Black Sea region since the start of the Black Sea Environment Programme (BSEP), which was established in 1993 with the support of GEF and the UN. The overall objective has been to assist Bulgaria, Romania, Russia, the Ukraine and Georgia to strengthen their individual and shared capacity to tackle the Black Sea's environmental problems. Furthermore support has been provided from TACIS to Georgia, Russia and the Ukraine to participate in and implement the Black Sea Convention and the Black Sea strategic action plan, particularly in relation to raising education and public awareness on Black Sea problems, assistance to local groups and transfer of knowledge.

Strategic Action Programmes

Since the Danube and Black Sea Programmes were initiated, they have focused on defining strategies and identifying hot spot investments for which interventions are needed to address transboundary concerns. One of the main goals achieved until now for both the Danube and the Black Sea programmes is the development of Strategic Action Programmes. These form the basis for the activities to be undertaken in the future.

Limited investments

However, so far there has been limited investment in the priority projects identified in the two frameworks. The main constraint appears to be that Black Sea and Danube «hot spots» do not yet figure prominently in the national public investment priorities, nor are they part of comprehensive and sound strategies at national level.

A set of harmonised water quality objectives has been proposed for the Black Sea in compliance with the 1996 Black Sea Strategic Action Plan but overall implementation of the Plan is well behind schedule.

As a part of the structure set up under the Black Sea environmental programme, an activity centre was set up in each of the Black Sea countries. Each centre has its own area of responsibility, such as fisheries, biodiversity, monitoring etc. having a co-ordinating role at the regional level. At the same time in all of the countries, National Focal Points for the mentioned activities have been identified. The network of these activity centres is at present in a difficult situation due to lack of funding and support from the national governments.

Annex 2.3 lists selected EU projects carried out in the region in the last ten years. For the Danube region, these include both studies and investments in water and wastewater projects, which have had a direct effect on the water quality of the Danube and the Black Sea.

The EU has recently undertaken a successful regional environmental co-operation effort in the context of the Regional Environmental Reconstruction Programme (REReP) for the Balkans.

This programme offers a platform for co-ordinating the environmental activities in the wider context of the international assistance to the Balkans Region, focusing especially on institution building, but including also some urgent environmental investments. Another similar model can be found in the EAP-Task Force

(<http://www.oecd.org/env/eap/eaptf/12taskforce/index.htm>) .

4. KEY ENVIRONMENTAL OBJECTIVES

The joint Danube - Black Sea Working Group defined in 1998 overall environmental objectives for the Danube and Black Sea Region. The European Community shares these objectives and works to support their fulfilment.

The long-term goal is to reduce the levels of nutrient and other hazardous substances in order to allow the ecosystems of the region to recover

Most of the countries of the region have adopted national environmental strategies including the Danube and Black Sea. But the most needed economic development should be envisaged in a way that ensure appropriate measures and practices to limit nutrient discharge from point sources (municipal, industrial and point agricultural sources) and non point sources (agriculture).

The current level of nutrients entering the Black Sea represent a unique situation resulting from economic depression in the majority of the coastal countries in the last decade. However, it is of utmost importance that nutrient influxes remain low in any economic scenario and therefore any national development plans include nutrient and toxic substance emission control.

In view of the above,

The intermediate goal is that all countries of the Danube – Black Sea basin establish and implement urgent control measures to avoid discharges of nitrogen and phosphorous to the Black Sea (including via the Danube) exceeding those levels observed in 1997.

The Joint Danube - Black Sea Technical Working Group has suggested the use of 1997 as a reference year, since the analysis carried out by the Group showed at least a status quo situation or even a slight improvement of the conditions of the ecosystems in the Black Sea.

Other important objectives, should in the opinion of the European Commission be in line with the principles of the EC Water Framework Directive:

- to prevent further deterioration and protect and enhance the status of the aquatic ecosystems and terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;
- to promote sustainable water use based on a long-term protection of available water resources;
- to enhance protection and improvement of the aquatic environment through specific measures for priority substances and the cessation or phasing-out of the priority hazardous substances;
- to ensure the progressive reduction of pollution of groundwater and prevent its further pollution,
- to contribute to mitigating the effects of floods and droughts

Integrated Coastal Zone Management

In 2000, the European Commission adopted a Communication on Integrated Coastal Zone Management: A Strategy for Europe (COM/00/547 of 27 September 2000). This Communication identifies the principles that should be followed to promote sustainable planning and management in the coastal zone. The document outlines the actions that will be undertaken at Community level to promote these principles, but also stresses the importance of action at the national, regional and local levels.

In view of the many and increasing pressures on the Black Sea coastal area, the principles of ICZM should be implemented in the planning and management of this region.

The Integrated Coastal Zone Management (ICZM) approach emphasises:

The need for co-ordination between the many economic and policy sectors that are active in the coastal zone;

The links between activities in the hinterland and the state of the coastal zone;

The importance of coherent planning and management of the landward and seaward sides of the coastal zone

The need for collaboration between neighbouring countries in planning and management at the regional seas level.

5. PROPOSED ACTIONS

In order to effectively address the problem of eutrophication of the Danube and Black Sea ecosystems and meet the objectives outlined in section 4 above, concerted action is required by all the countries concerned as well as by the international organisations working in the region.

It is widely recognised that the best model for a single system of water management is by river basin, which is the natural geographical and hydrological unit, rather than according to administrative or political boundaries.

This is the approach now being developed in the EU through the implementation of the new Water Framework Directive and it is the approach proposed for an enhanced environmental co-operation in the Danube - Black Sea region.

Even though the Danubian Countries that are not EU-member states can not implement the Water Framework Directive in the strict sense of the word, all the member countries of the Danube River Protection Convention have decided to pursue river management following the principles of the Water Framework Directive.

This implementation is co-ordinated by an expert group under the ICPDR and is chaired by the European Commission. The time schedule for implementation follows the one foreseen in the Directive for the current EU member States.

The obligations of the EU Water Framework Directive relevant for the Danube Black Sea River basin include:

*Expanding the scope of water protection to all waters
Achieving good status for all waters by a certain deadline
Water management based on river basins
Combined approach of emission limit values and quality standards
Getting the prices right
Getting the citizen involved more closely
Streamlining legislation*

For each river basin district a "river basin management plan" will need to be established. This plan will have to include an analysis of the river basin's characteristics, a review of the impact of human activity on the status of waters, and an economic analysis of water use in the district

Furthermore, now that all Danubian countries are committed to this river basin management approach, some of the coastal areas of the Black Sea will be assigned to the Danube River Basin District, providing a new impetus for an integrated approach involving the whole Danube-Black Sea catchment area.

For the other river tributaries to the Black Sea, efforts are ongoing to develop action plans - first steps towards river basin management - that can form the basis of integrated approaches to the protection of the Black Sea⁴.

The environmental challenges of the Black Sea, which are not directly linked to the nutrients and other pollution in the rivers flowing into the Sea, will also have to be addressed in the work ahead. These include establishment of criteria for sustainable fisheries, the pollution from oil and hazardous substances, airborne pollution, dumping, vessel pollution and prevention of accidents.

The actions envisaged fall into three instrumental aims:

1) An operational framework for co-operation in the entire region

2) An improved integration of Danube and Black Sea priorities into EU co-operation policy framework, including sectoral integration

3): A more efficient financial assistance.

Operational framework for co-operation in the entire region

The Institutional framework for environmental regional co-operation in the Danube Black Sea region already exists (see section 3 and annex 2), but the implementation as well as co-ordination of the different ongoing initiatives lag behind, thereby not resulting in desired synergies.

There is therefore an urgent need for an improved co-ordinated assistance to the existing regional environmental structures (ICPDR and Black Sea Commissions) and to the individual countries of the Region. It is also essential to promote the further development of the regional co-operation between the countries of the basin themselves.

The European Community, which is already providing technical and financial support to the region should take a more pro-active role and become the driving force of this much-required co-ordinated assistance.

- As a first step, the Danube Commission (ICPDR) Secretariat needs to be reinforced in order to take up the task of co-ordinating the implementation of the EC Water Framework Directive. In parallel the sustainability of the Black Sea Commission Secretariat and the activity centres in each country must be ensured, so that the countries around the Black Sea take direct responsibility for its running politically and financially.

⁴ For the Dnieper River (Russia, Belarus and Ukraine) a GEF supported programme is developing a Transboundary Diagnostic Analysis and a Strategic Action Programme for the Dnieper River basin. The project will assist the Dnieper basin countries in identifying, prioritising and addressing both point and non-point sources of nutrient and toxic pollution to the Dnieper and the downstream Black Sea. Action Plans have also been developed for the Prut River with the support of European Community funds of TACIS, in the lower Don River with World Bank funding, in the Sea of Azov primarily with Dutch funding and the Dniester River (various donors).

Both Commissions have already jointly declared their willingness to co-operate for achieving common strategic goals. A Memorandum of Understanding (MoU) between the two parties on the reduction of release of nutrients to the Danube and Black Sea is under development.

- The European Commission will strive at turning the Memorandum of Understanding between the Danube and Black Sea Commissions into a practical common platform for co-operation with concrete implementing steps. This would imply, first of all, the signature of the Memorandum by the signatory parties of the Conventions. In order to set this platform, the Commission will propose the establishment of an informal Task Force (The DABLAS Task Force), within the existing framework for co-operation among the two Conventions. The first task of the Task Force will be to conduct the preparatory work leading to the signature of the MoU and then draw up an environmental plan including a list of projects for environmental rehabilitation of the region, in order of priority.

The informal Task Force should consist of representatives from the countries of the Region, the Danube and Black Sea Commissions, the European Commission, interested EU Member States, the international financing institutions and bilateral donors.

- On a more technical level, the European Commission will support the re-launching of the existing Joint Danube Black Sea Working Group, which will form the basis for an improved technical assessment of the environmental problems in the region.

Both the informal Task Force and the Joint Danube-Black Sea Working Group should initiate their activities in autumn 2001.

- The European Commission will work to facilitate the co-operation between the Danube and Black Sea Conventions and the European Environment Agency (EEA) in order to ensure that monitoring and data management is harmonised in the region and consistent with the practices in the EU. During 2001/2002 the EEA will work on developing actions relevant for the Danube and Black Sea Region and this will form the basis for future work.

A large number of countries of the region are expected to become members of the European Environment Agency by 2002⁵. This is likely to lead to an establishment of new work topics for the EEA related to the Danube and Black Sea with the possibility to carry out special projects of interest to the member countries of the region.

- The European Commission will assist in the establishment of operational arrangements for co-operation between the future extended EEA and the non-EEA-member countries of the region.
- The Regional Environment Centre (REC) of Szentendre⁶, that will in the near future be extended to cover Turkey together with the rest of the Candidate Countries, should be invited to be involved in the development of projects and activities focusing on the Danube and Black Sea.

⁵ Council Decisions 2001/582/EC – 2001/594/EC of 18 June 2001 on the conclusion of the Agreement between the European Community and the Czech Republic, Poland, Romania, Slovenia, Hungary, Latvia, Lithuania, Bulgaria, Slovak Republic, Estonia, Cyprus, Malta, Turkey concerning participation in the European Environment Agency and the European environment information and observation network.

⁶ <http://www.rec.org/>.

- Furthermore, the Caucasus Regional Environment Centre⁷ has an important role to play in the environmental scenario of the eastern Black Sea Countries and should therefore be invited to be associated within the new proposed Regional initiatives
- A clear link between the activities in the Danube and Black Sea Region and those undertaken in the context of the Environment for Europe process should be established. Advantage should be taken of the experience of the EAP Task Force in relation to water issues, in particular. The EAP Task Force will therefore be invited to take part in the informal task force to be set up.

Finally, the Black Sea Commission has recently granted formal observer status in the Black Sea Convention to the European Community. In the medium term – linked with the accession process to the EU for relevant Black Sea countries - the European Community will seek to become a member of the Black Sea Convention.

Improved integration of Danube - Black Sea priorities into EU co-operation policy framework

- The European Commission will assist in the implementation of the guiding principles of the EC Water Framework Directive in the entire Danube Basin and the Black Sea coastal states, starting with the Candidate Countries. The timeframe for this action will be a ten-year period with concrete milestones to be met by the Countries.
- On a longer-term basis the Commission will strive to assist in creating co-operation agreements, similar to the one agreed for the Danube basin (see section 2.1 above) for the other river basins tributaries to the Black Sea⁸. The first milestone will be a review of current environmental action plans for these rivers and the development of a strategy for their further development. This work will be initiated during 2001 and a plan will be drawn up for a closer involvement of all countries of the Black Sea region in solving the problems of the Black Sea.
- The European Commission will encourage the countries of the region, whenever relevant and in conformity with the Community instruments concerned⁹ (LIFE, PHARE, ISPA, TACIS, CARDS, SAPARD etc.), to include in their national programmes and strategies for Community financial support, projects beneficial to the Danube - Black Sea environment, in line with the principles of the EC Water Framework Directive and other EC water legislation.
- The Commission will encourage the countries of the region and donors financing waste water projects to ensure that all new wastewater treatment plants include secondary treatment (biological) that can be upgraded to tertiary treatment (with nutrients removal) without excessive costs.

⁷ <http://rec.caucasus.net>.

⁸ The Black Sea convention being a shoreline may prove to be a barrier to taking a basin wide approach and this aspect will have to be examined and eventually resolved.

⁹ ISPA is the main Community instrument for supporting environmental investment projects. The role of PHARE will be limited to support, in the ten central and eastern candidate countries, institution building and investments, which form an incidental but indispensable part of integrated industrial reconstruction or regional development programmes.

- There is a fundamental need for enhanced research in order to provide sound scientific support to decision makers for the orientation of investments aimed at improving the environment quality in the Danube river basin and in the receiving Black Sea region, and for their prioritisation. The research carried out under the Community research programmes will contribute to that aim.
- The Commission will strive to ensure that the next review of the Common Agricultural Policy addresses its role in the protection and enhancement of the environment of the region, in particular, in relation to reduction of nutrient emissions and protection of nature reserves and biodiversity in the Danube and Black Sea areas.
- Romania plays a particularly important role in the discharge of nutrients to the Black Sea. Its entire territory drains into the Black Sea, mostly through the Danube. Special attention should be paid to support Romania's efforts to reduce its pollution load.
- The Commission will encourage the countries of the region to sign and ratify the relevant UN/ECE conventions, especially the *Convention on the protection and use of transboundary watercourses and international lakes* and the *Convention on the transboundary effects of industrial accidents*. The Commission will stress the need for the Countries of the Danube and Black Sea Region to incorporate the environment and health dimension into their sectoral policies such as transport, energy, agriculture, fisheries, trade etc., in line with the European Union's strategy on integration (Cardiff process).

More efficient financial assistance to the region

The present financial support for the region from the Community includes an allocation of € 3 million, under the Tacis Regional Co-operation Programme (2000 budget), providing technical assistance support to the Regional Activity Centres in Odessa, Krasnodar and Batumi in order to reinforce their capacity on effective environmental management advice and assistance.

Furthermore the Environment and Sustainable Development programme under the Research Framework Programme is supporting several research projects in the Danube-Black Sea area. The most relevant are: the DANUBS project, a large research project on the Danube river basin with the aim to generate scientific sound scenarios and giving decision makers a basis for the prioritisation of the interventions needed to reduce the eutrophication of the Black Sea. The second is the TISZA RIVER PROJECT, which should provide an integrated modelling approach, supported and validated by field studies, which will give decision makers a set of instruments for planning and management of this crucial part of the Danube river.

- The European Commission will ensure that, in the future, all relevant EC funded projects in the Danube and Black Sea Region should take into account the priorities in the Danube and Black Sea Strategic Environmental Action Plans. This has not always been the case so far, since the countries themselves have not reflected these priorities in their requests for financial support.

- The Commission will examine ways to improve coherence and co-ordination of Community financial assistance to regional environmental projects including infrastructure projects. This examination will look at ways to improve co-ordination between the different funding instruments for the Danube - Black Sea Region, including ISPA, PHARE Romania and Bulgaria as well as TACIS Programme and the Turkey financial instrument. Other possibilities may include projects under INTERREG IIIB, in which Candidate Countries may also be involved.
- The Commission will explore and pursue the possibility of extending LIFE third Countries to include all Countries of the region.
- The Commission will work actively to increase investments by the International Financial Institutions (IFIs) and bilateral donors in the region and will explore all possibilities for increased Community co-financing of IFI investments and improved co-ordination with Member States' bilateral programmes. In this context, it is envisaged to co-finance an investment in the Black Sea area concerning water management and supply in south Ukraine (2001 budget).

Especially important in the short term will be the release of 70 million \$ for investment in the Region from the GEF-World Bank Partnership Investment Facility. The Global Environment Facility, GEF, plans in the coming years, to fund a joint technical assistance project for the Danube and the Black Sea. The total capacity building component of the project will be 24 million \$. The first part of this money was released in May 2001.

- Through its participation in the work of the ICPDR and Black Sea Commission, the European Commission will support the implementation of this initiative.
- The Commission will call on the EU Member States to include the Danube and Black Sea Region in their priorities for bilateral support in the fields of environment and sustainable development.

6. CONCLUSION

The Danube - Black Sea region constitutes an axis of increasing geo-political importance in the context of the enlarging European Union.

The environmental degradation of the Danube and Black Sea region requires urgent attention and can only be tackled through a joint effort of environmental rehabilitation, conducted at regional level. This much-required effort will become a prime tool to promote and then secure the sustainable development of the region.

The EU's Strategy for Sustainable Development underlines the key role the EU has in bringing about sustainable development within Europe and also in the wider global stage. It stresses that the EU policies –internal and external- must actively support efforts of other Countries to achieve development that is more sustainable.

- Along these lines, the Commission invites the Council and the Parliament to consider a concerted EU initiative in the Danube - Black Sea Region. The Commission will report back, in 2003, on the results of the renewed efforts and initiatives that it intends to undertake.

Annexes

ANNEX 1 LIST OF ACRONYMS

PHARE	Pre-accession assistance for Central and Eastern European Countries
ISPA	Instrument for Structural Policies for Pre-Accession
TACIS	Assistance programme for NIS countries
SAPARD	Structural pre-accession assistance for Central and Eastern European Countries
CARDS	Community Assistance for Reconstruction, Democratisation and Stabilisation
MEDA	Assistance programme for Mediterranean Countries
UNESCO	United Nations Educational, Scientific and Cultural Organisation
ICPDR	International Commission for the Protection of the Danube River
DRPC	Danube River Protection Convention
BSC	Commission on the Protection of the Black Sea against Pollution (Black Sea Commission)
ICPBR	International Commission for the Protection of the Black Sea
REReP	Regional Environmental Reconstruction Programme
REC	Regional Environmental Centre
GEF	Global Environment Facility
EEA	European Environment Agency
BSEP	Black Sea Environment Programme
PCB	Poly chlorinated bi-phenyls

ANNEX 2 ENVIRONMENTAL CO-OPERATION IN THE REGION

Annex 2.1 International Commission for the Protection of the Danube River

The Convention on Co-operation for the Protection and Sustainable Use of the Danube River (Danube River Protection Convention, or DRPC) was signed on 29 June 1994 in Sofia by eleven of the Danube Riparian States and the European Community. The Convention came into force on 22 October 1998 after the ratification of nine states.

The Convention is based on the Bucharest Declaration for the Protection of the Danube River and on the UN/ECE Convention on the Protection and Use of Transboundary Water Courses and International Lakes (Helsinki, 1992)¹⁰.

The Convention applies to the surface waters and the ground waters in the catchment area of the Danube River as far as the Contracting Parties share it.

The Danube River Protection Convention is aimed at achieving the sustainable and equitable water management in the Danube basin, including the conservation, improvement and the rationale use of surface waters and ground water in the Danube catchment area. Contracting Parties shall also make efforts to control the hazards originating from accidents involving substances hazardous to water, floods and ice-hazards of the Danube River. The Contracting Parties shall endeavour to contribute to reducing the pollution loads of the Black Sea from sources in the catchment area.

Furthermore, the Contracting Parties shall co-operate to at least maintain and improve the current environmental and water quality conditions of the Danube River and of the waters in its catchment area.

The Contracting Parties shall set measures aiming at sustainable development and environmental protection of the Danube River. This objective in particular is directed to ensure the sustainable use of water resources for municipal, industrial and agricultural purposes as well as the conservation and restoration of ecosystems and to cover also other requirements occurring as to public health.

The following activities and measures fall under the scope of the Convention, as far as they cause or are likely to cause transboundary impacts:

- the discharge of waste waters, the inputs of nutrients and hazardous substances both from point and non-point sources as well as heat discharge,
- planned activities and measures in the field of water construction works, in particular regulation as well as run-off and storage level control of water courses, flood control and ice hazard abatement
- other planned activities and measures for the purposes of water use, such as water power utilisation, water transfer and withdrawal,

¹⁰ The Convention was approved by the European Community in a Council Decision (97/825/EC) on 24. November 1997 as published in OJ L 342/18.

- the operation of the existing hydrotechnical constructions,
- the handling of substances hazardous to water and the precautionary prevention of accidents.

The Convention is applicable to issues of fishery and inland navigation as far as problems of water protection against pollution caused by these activities are concerned.

In order to achieve the goals set in the Convention, bilateral and/or multilateral co-operation has to be developed and implemented in particular with regard to

- the recording of conditions of natural water resources within the catchment area applying agreed quality and quantity parameters,
- the adoption of legal provisions concerning waste water discharges,
- the adoption of legal provisions for handling the substances hazardous to water,
- the adoption of legal provisions for reducing inputs of nutrients or hazardous substances from non-point sources,
- harmonisation of regulations at a high level of protection, and
- the adoption of measures to avoid the transboundary impacts of wastes and hazardous substances in particular originating from transport.

Appropriate measures shall be taken to prevent and reduce transboundary impacts of pollution and ensure sustainable and equitable use of water resources and conservation of ecological resources.

To further the aims of the Convention, the Contracting Parties shall establish complementary or joint programmes of scientific or technical research programmes and shall provide for co-ordinated or joint communication, warning and alarm systems in the basin-wide context.

Five Annexes form an integral part to the Convention. Annex I defines the concept of Best Available Techniques and Best Environmental Practices. Annex II lists the industrial sectors and hazardous substances, which fall under the scope of the Convention. Annex III provides a general guidance on water quality objectives and criteria and Annex IV describes the structure and procedures of the International Commission and Annex V sets the procedure of the arbitration.

Annex 2.2 Convention on the Protection of the Black Sea against Pollution

This co-operation of the Black Sea Countries was first formalised in the 1992 Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention) for the protection of the Black Sea against Pollution and the three related Protocols. The Protocols are an integral part of the Convention and cover: Protection of the Black sea Marine Environment against Pollution from Land Based Sources; co-operation in Combating Pollution of the Black Sea Marine Environment by Oil and other harmful substances in emergency situations and Protection of the Black Sea Marine Environment against pollution by dumping.

The Black Sea Convention applies to the Black Sea proper and is as such a shore convention for the countries bordering the Black Sea. However the convention opens the possibility for Non-Black Sea states to become associated with the convention if they share the interest in achieving the aims of the convention.

The Convention on the Protection of the Black Sea against Pollution obliges its contracting parties to individually or jointly to take all necessary measures to prevent, reduce and control pollution of the Black Sea. Furthermore the Convention enables the contracting parties to elaborate additional protocols in the areas they find necessary.

The following activities and measures fall under the scope of the Convention:

- Prevention of pollution of the marine environment by the substances and matters specified in the Annex of the convention. These include among others substances containing heavy metals, persistent substances and radioactive substances
- Prevent, reduce and control pollution from land-based sources
- Prevent, reduce and control pollution from vessels
- Co-operation to combat pollution in emergency situations
- Prevent, reduce and control pollution by dumping
- Prevent, reduce and control pollution from activities on the continental shelf such as exploitation of natural resources
- Take individual or agreed measures to prevent, reduce and control pollution from atmospheric sources
- Protection of the marine living resources
- Prevent pollution due to the transport of hazardous waste
- Co-operation in scientific research
- Undertake complementary or joint monitoring programmes

Under the Bucharest Convention the Istanbul Commission ensures the co-ordination of the work on the convention. In September 2000 the Black Sea countries established the Secretariat of the Black Sea Commission. The implementation of the Bucharest Convention will now proceed co-ordinated by the Secretariat.

Annex 2.3 Other players

European Commission

PHARE and TACIS Projects in the Environmental Programme for the Danube River Basin

	Full Title	Short Description	Beneficiary Countries
1994	Implementation of the Danube AEWS	The establishment of an effective Danube Accident Emergency Warning System (AEWS). Setting up of a Principle International Alert Centre (PIAC) in each of the Danube riparian countries. Such a PIAC will be the sole responsible operational unit, in charge of all (international) communications. PIAC operations are triggered by the reception of a message about a potentially serious, sudden pollution event or accident received.	all Danube Basin
1994	Quality sediments and biomonitoring	The project collected detailed information on the selected reach of the Danube on sediments and biomonitoring (Applied Research Project (ARP))	HU, SK
1995	Projects started in 1995		
1995	Setting up demonstration centres for sustainable agriculture in the Danube Basin	Setting-up of 3 demonstration farms (Bulgaria, Romania and Hungary) for sustainable agriculture and making projections for future of Organic Agriculture (ARP project)	HU, BG, RO
1995	Impact of radionuclides in surface water and sediments in the Danube Basin	The project investigated if there was evidential downstream accumulation of radionuclides (ARP project)	HU, RO
1995	Nutrient application in agriculture in CEE/protection of water resources against nutrient diffuse pollution	The project investigated the application of agrochemicals and their impact on the environment (ARP project)	RO, HU
1995	Removal of phosphates from detergents in the Danube Basin	The project investigated the amount of phosphates loaded into the Danube and also the detergent originated ones (ARP project)	HU, RO, SK, CZ, UE, BG
1995	Biodiversity study of the Danube River	The project intended to map the biodiversity of the Danube river (ARP project)	SK, BG, RO
1995	Danube Eros 2000 project – Romanian part	ARP Project: Research project to assess trends of the state of Danube & Delta, and the impact on ecological functioning of the Romanian coastal zone	RO
1995	Danube Eros 2000 project – Bulgarian part	Research project to assess trends of the state of Danube and Delta, and the impact on ecological functioning of the Bulgarian coastal zone (ARP Project)	BG, RO

1995	Present and possible future role in nutrient removal from surface water by wetlands, floodplains and reservoirs	The project investigated the possible role of wetlands and floodplains in removal of nutrients from surface (river) water (ARP project)	SK, SLO, RO, CZ
1995	Ecological risk assessment of pollution by heavy metals and organic micropollutants in the Danube Catchment area	Development of policy oriented tools and scientific infrastructure for environmental risk assessment of accumulation and release of chemical pollutants (ARP project)	SK, BG, HU, CZ
1995	Water Quality targets and objectives for surface waters in the Danube Basin	The project was to develop water quality targets and proposals for emission load reduction strategies for nutrients concerning surface waters (ARP project)	HU, SLK, RO, BG
1995	Danube regional pesticide study	The project evaluated the risk of pesticide application to humans and the aquatic life and prepared recommendations for legal, policy and management framework (ARP project)	BG, SK, HU, CZ
1995	Development of a Danube Basin Alarm model in support of the Accident Emergency Warning System	The project developed and put into operation a model for the transport and decay of substances released during accidental spills (ARP project)	HU, SK, RO, BG
1995	Nutrient balances for Danube countries and options for surface and ground water protection	The project gave recommendations for monitoring water quality and nutrient loads and methodology, technology transfer and capacity building (ARP project)	HU, BG, CZ, UE, RO, MO, SLO, SK
1996	Projects started in 1996		
1996	Preliminary Phase of the project, Morphological Changes and abatement of their negative effects on a selected part of the Danube River	The project investigated the negative impacts of morphological changes in the lower reach of the Danube (ARP project)	SK, HU, RO, BG, UE
1996	Applied research programme management	Management of the Applied Research Programme and the organisation of a final Applied Research Conference in Sinaia, Romania including the production of a conference report.	All Danube Basin
1997	Projects started in 1997		
1997	Restoration of small-scale wetlands in the Danube River Basin	Support and strengthen local expertise and organisations in furthering wetland restoration	All Danube Basin
1997	Needs assessments for MLIM & AEWS Capabilities in Bosnia-Herzegovina	Assessment of the capability of Bosnia-Herz. To participate in MLIM & AEWS	B&H
1997	Clean technology and industrial waste management	Evaluation of technologies and selection of methods for reducing pollution from industry (3 factories)	BG, SK, RO
1997	Project M1: Transboundary assessment of pollution loads	Agreement on common, compatible, cost effective procedures for load calculations	All Danube Basin

	and trends		
1997	Treatment and Disposal of Manure	Reduction of pollution of surface and groundwater, and the input of nutrients to Danube and Black Sea, from wastes derived from animal farms	SLO, RO, HU, CZ
1997	EPDRB workshop for environmental Small Investment	Organisation of workshop "Small environmental Investments"	All Danube Basin
1997	Project AE1: Information Enhancement	Strengthen the expertise and knowledge of PIACs staff	All Danube Basin
1997	AE2 methods for calibration experiments	Recommend a cost-effective and methodological approach for calibration experiments for Danube Basin Alarm Model; accidental spills calibration.	All Danube Basin
1997	Floodplain meadow and forest restoration	Restoration and sustainable management of floodplain forests and meadows in lower Dyje/Morava river systems	CZ, SK
1997	Danube M2: Data processing , Data Interpretation and Information Dissemination	Improve interpretation of water quality data and broad dissemination of approved info/data	All Danube Basin
1997	Development of the Yantra river basin	Develop and Implement pilot River Basin Council for the Yantra river in Bulgaria	BG, RO
1997	M4: provision of a stable, control programme	Implement a cost-effective and stable analytical quality control program in Danube River Basin	All Danube Basin
1998	Projects started in 1998		
1998	Water quality enhancement in the Danube River Basin	Several actions related to water quality enhancement in Danube Basin	All Danube Basin
1998	Restoration of fish habitat	Re-naturalisation of flows and restoration of fish habitats in Lower Dyje/Morava rivers	CZ, SK
1998	International co-operation in Danube river basin management	3 components for international Cooperation in river management (Tisza and Drava)	RO, SK, HU, SLO
1998	M5 : Support of Monitoring, Laboratory and Information Management Sub- Group and Working Group	Support MLIM Sub- and Working groups	All Danube Basin
1998	CBC-1996: Accident Emergency Warning System and Monitoring Laboratory and Information Management for the Ukraine and Moldovan part of the Danube Basin	TACIS project: The overall objectives are to enable Ukraine and Moldova to meet their international obligations under the DRPC in the establishment of the Danube AEWS and TNMN systems	UE, ML
1998	Transfer of skills in Accident Emergency Warning System sub group	Support to AEWS Sub-Group	All Danube Basin

1998	Final Phase of Morphological changes and abatement	Integrated planning of remedial actions development conc. Rivers morphology	All Danube Basin
1998	Exchange and training programme for Principle International Alert Centres, This action is connected to 1997 Project AE1. Reporting is included in that projects' report.	Exchange and training programme for Principle International Alert Centres staff; this project is complementary to project AE1 Information Enhancement, PHARE contract number 97-5244, on more information please refer to the AE1 project.	All Danube Basin
1999	Projects started in 1999		
1999	Transboundary co-operation in wetland conservation and River Basin Management	4 different actions for wetland and floodplain protection/restoration	SLO, HU, SK, RO
1999	Strengthening sustainability of water quality management	7 different actions for water quality management	All Danube Basin
1999	Ship-Borne oily waters and wastes	Preparatory study on system of collection of ship-borne polluting substances	All Danube Basin
1999	Improvement and maintenance of the EPDRB Homepage	Improvement and maintenance of EPDRB Homepage	All Danube Basin
1999	Sustainable Management of Manure animal farms in Danube	Sustainable management of manure from animal farms	All Danube Basin
1999	Dissemination Information on sustainable Agriculture	Capacity building at organic farming institutions in order to improve dissemination of information on sustainable agriculture	BG,HU, RO
1999	Selected Actions in Moldova and Ukraine from the Environmental Programme for the Danube River Basin	4 different actions (industrial clean production, waste management, river basin management and wetland protection) for the implementation of the Strategic Action Plan Implementation Programme (SIP) in Moldova and Ukraine.	UE, ML

During its first year of operation, ISPA 2000 has focused its financial support on environment in projects related with the implementation of water EU legislation in candidate countries of Central and Eastern Europe. This will be again a priority for ISPA operations in the years to come and will have direct beneficial impacts on the quality and good management of water resources in the Danube and Black Sea regions

The most important research projects, which have been addressed or are actually addressing the Danube River and the Black Sea, are:

EROS-2000/EROS-21 ("The interactions between the River Danube and the Northwestern Black Sea"). EROS-2000 was the pilot phase of EROS-21.

ERMAS ("European River Margins: Role of biodiversity in the functioning of riparian systems"). This project addressed inter alia the investigation of the wetlands of the Danube delta by the University of Bucharest

DANUBS project, started in February 2001 (and which shall terminate end of January 2005). This project addresses the entire Danube River Basin regarding nutrients and selected other pollutants, including their fate in the Western Black Sea.

TISZA RIVER PROJECT, which has just been negotiated for funding and for which a contract will be launched before the end of this year.

Projects in the Black Sea Area

In the Black Sea EU has provided support through the Black Sea Environment Programme (BSEP) with the overall objective to assist Bulgaria, Romania, Russia, the Ukraine and Georgia to strengthen their individual and shared capacity to tackle the Black Sea's environmental problems. The total contract amount was 1,5 million € from the PHARE/TACIS 1995 budget.

The five components of the project were:

- (1) Environmental Education and Public Awareness
- (2) Sustainable Economic development
- (3) Pollution assessment and control
- (4) Coastal zone management
- (5) Restructuring the Black Sea Biodiversity Centre

Apart from that TACIS has supported the Black Sea Secretariat.

The International Task Force for the Danube (ITF)

An International Task Force (ITF) was set up on 25 February 2000 at the initiative of the European Commission in response to the pollution incident by cyanide at Baia Mare. The *International Task Force for Assessing the Baia Mare Accident (the Baia Mare Task force)* worked in close co-operation with the International Commission for the Protection of the Danube but however completely independent from that Commission.

The ITF's main assignments were: to assess damage, investigate what caused the accident, outline measures to be taken, ensure that such a disaster could never happen again and finally to identify essential measures to be taken to restore the confidence of the local populations.

The task force assessed the causes of the accident and made a set of recommendations on strengthening the regulatory framework and improved operational practices.

The Global Environment Facility (GEF)

The Global Environment Facility was established to forge international co-operation and finance actions to address four critical threats to the global environment: loss of biodiversity, climate change, degradation of international waters, and ozone depletion. Launched in 1991 as an experimental facility, GEF was restructured after the Earth Summit in Rio de Janeiro. The facility that emerged after restructuring was more strategic, effective, transparent, and participatory. In 1994, 34 nations pledged \$2 billion in support of GEF's mission; in 1998,

36 nations pledged \$2.75 billion to protect the global environment and promote sustainable development.

The GEF can succeed in its global environmental mission only as part of a world-wide movement toward sustainable development. GEF brings together 166 member governments, leading development institutions, the scientific community, and a wide spectrum of private sector and non-governmental organisations on behalf of a common global environmental agenda.

With regard to international waters, GEF has since 1993 supported countries of the Danube Basin and those around the Black Sea to understand priority water-related problems they face and to build their capacity under the Danube Convention and the Black Sea Convention to address the priorities jointly.

GEF has supported a series of projects to accomplish this through joint processes of producing a transboundary analysis for setting country-driven priorities and then formulating a Strategic Action Plan (SAP) of needed regional and country-specific actions to address the root causes of the transboundary problems.

Within the framework of the GEF's Small Grants Programme administered by the UNDP, GEF has funded the *Danube Grant Programme* for NGOs. This programme was implemented in 1998-99 by the Regional Environmental Centre for Central and Eastern Europe (REC). The main objectives were to increase public awareness and public participation and to reinforce NGO participation on community-based pollution reduction measures and awareness-raising projects.

Approximately during the same period, GEF has funded the Danube Pollution Reduction programme (PRP). The Danube PRP aims at improving the quality of surface and ground water bodies and presents a group of projects and measures that respond to identified pollution and transboundary effects in the Danube River Basin and the Black Sea. It supports the strategies and policies as defined in the SAP as well as the implementation of the DRPC.

Various activities have been carried out within the framework of the PRP:

- the transboundary analysis including a list of the main sources of pollution and hot spots,
- the development of a model to evaluate the flow of pollution through the Danube to the Black Sea (Danube Water Quality Model),
- the establishment of thematic maps for the river basin management, the drafting of several studies regarding financing mechanisms, wetland rehabilitation and the creation of a databank with ongoing and planned projects (421 projects covering 246 hot spots).

The results of the PRP will support the activities of the ICPDR through the development of a programme of Action for the Implementation of the Danube River protection Convention.

Black Sea Economic Co-operation

The Black Sea Economic Co-operation consists of an organisational structure, containing intergovernmental, inter-parliamentary, inter-business and financial components. It aims at co-ordinating and synchronising the views and positions of the Participating States with regard to the Black Sea Economic Co-operation.

The intergovernmental component consists of the decision-making body the Meeting of the Ministers of Foreign Affairs (MMFA) of the Participating States, the Senior Officials Meeting, the Working Groups of Experts which are the subsidiary bodies established by the MMFA and which deal with concrete spheres of the BSEC activities.

According to the MMFA decision, the Permanent International Secretariat of the BSEC was established and headquartered in Istanbul, Turkey. The Secretariat, working under the authority of the BSEC Sessional Chairman, assumed its duties in 1994.

The inter-parliamentary component was created in 1993 when the representatives of Albania, Armenia, Azerbaijan, Georgia, Moldova, Romania, Russia, Turkey and Ukraine decided to establish the Parliamentary Assembly of the BSEC (PABSEC). Its aim is to create proper conditions in the Participating States, including juridical support for the realisation of the goals and principles of the BSEC Summit Declaration. Within the spectrum of its objectives, the PABSEC has been created also to strengthen the pluralistic democratic structure and political stability in the Black Sea area.

There are three committees of the PABSEC of which environmental matters are undertaken in “the Economic, Commercial, Technological and Environmental Affairs Committee

The Black Sea Trade and Development Bank, which has its headquarters in Thessaloniki, represent the financial component of the BSEC structure. The Bank is the principal mechanism of the BSEC in working out, financing and implementing joint regional projects and providing the necessary financial resources for the Participating States.

Danube Environment Forum (DEF)

The Danube Environment Forum is a network of non-governmental 13 organisations representing all the countries of the river basin except Hungary and Moldova. The legal registration of DEF as an international organisation under Slovak law was accomplished in October 1999. The DEF has been granted an observer status to the ICPDR in November 1999. In 6 countries (Austria, Czech Republic, Slovakia, Former Republic of Yugoslavia, Romania, Ukraine), DEF disposes of National Focal Points.

The Danube Commission

In July 2000, the Council endorsed a proposal from the European Commission to pay into an international fund (“The International Fund for Clearing the Danube Riverbed Channel”) for clearing up the River Danube from war damage debris, to restore the navigability in the area of Novi Sad. managed by the Danube Commission based in Budapest.

Since January 2001 the Danube Commission has started the implementation of the project and operations of clearing parts of the Danube is starting in the course of the summer 2001.

ANNEX 3 POPULATION IN THE DANUBE AND BLACK SEA REGION

Country	Population in Danube River Basin (million)	% of Danube population
Germany	9,1	10,9
Austria	7,7	9,2
Czech Republic	2,8	3,4
Slovakia	5,2	6,2
Hungary	10,2	12,2
Slovenia	1,7	2,0
Croatia	3,2	3,8
Yugoslavia	9,0	10,8
Bosnia and Herzegovina	2,9	3,5
Bulgaria	3,9	4,6
Romania	22,6	27,1
Moldova	1,9	2,3
Ukraine	3,1	3,7
Total Danube	83,3	100

Country	Population in Black Sea Basin (million)	% of Black Sea population
Bulgaria	5,5	5,0
Romania	23	20,6
Ukraine	47,1	42,2
Turkey	7,8	7,0
Russia	26,1	23,4
Georgia	2	1,8
Total Black Sea	111,5	