

# Danube-Oder-Elbe Canal

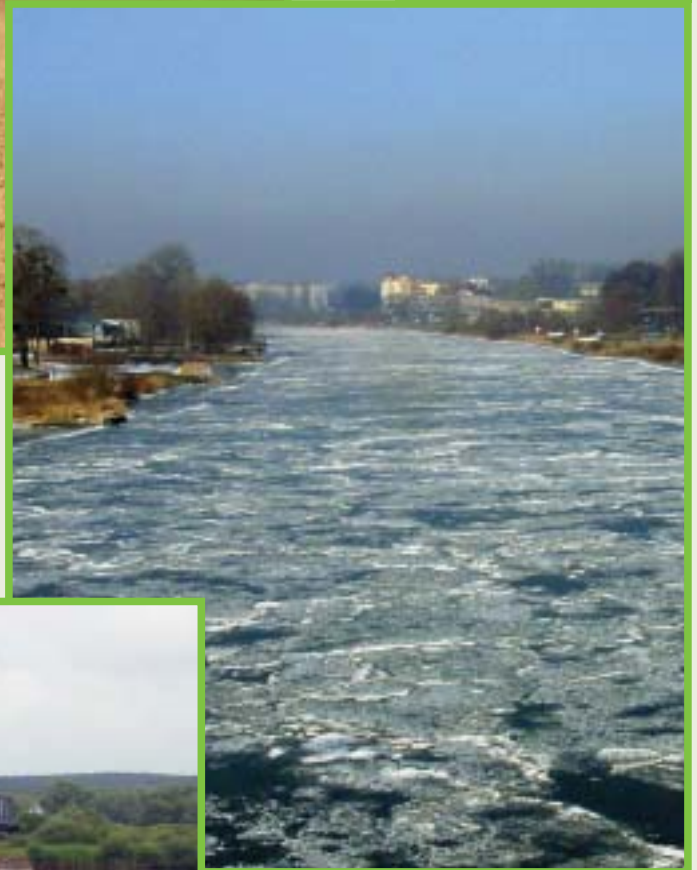
An Opportunity  
or a Threat?

POSITION PAPER





Frozen Oder-river in Wroclaw



Low water level near Eisenhüttenstadt, south of Frankfurt/Oder

Old train-bridge across the Oder between Kostrzyn and Schwedt



National Park "Lower Odervalley / Unteres Odertal"



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Oder near  
Glogow, west  
of Wroclaw

# 1. Introduction

Over the last century lobby groups have sporadically attempted to re-introduce the plan to build a Danube-Oder-Elbe-Canal (DOEC). The DOEC would enable ships to travel from the Baltic and North Seas southwards to the Black Sea. The plan would consist of two enormous stretches of canal spanning approximately from Vienna to the Oder in southern Poland, with another branch splitting off in the Czech Republic in the direction of Dresden, Germany. The most probable canal routes are shown on map 1.

Although plans to construct a DOE canal are hundreds of years old, they have never yet come to fruition. A considerable strength of concern remains regarding these plans. Currently, the European Union is in the process of revising the guidelines shaping its transport policy for the next few decades. There are concerns that the European Union might promote the construction of (new) waterways in Central Europe (CE) in the coming years as a supposedly more environmentally friendly mode of transport. An extension of the inland waterways as proposed in the TINA (Transport Infrastructure Needs Assessment) has been enshrined in the Annexes of the Accession Treaty to the EU of April 16th, 2003.

The objective of this position paper is to provide an overview of the many controversial issues relating to the possible construction of the Danube-Oder-Elbe Canal (DOEC). It summarises the position of environmental NGOs on the DOEC incorporating economic, environmental and legal arguments. The DOEC project is being evaluated by comparison with other modes of transportation. Recent studies and reports on transport, water management, flood prevention, emission control and nature conservation are used and cited. The paper provides also an overview of project preparation in certain key countries: namely the Czech Republic, Poland and Slovakia.

The paper includes recommendations and conclusions along with the demands of environmental groups from across Europe, which form part of the 'Life for the Danube, Oder and Elbe Rivers Coalition'. All these environmental groups are highly concerned about the plans for the construction of the Danube-Oder-Elbe Canal both from an environmental and an economical point of view.

## 'Life for the Danube, Oder and Elbe Rivers Coalition' is:

BUND (Friends of the Earth Germany)  
 DAPHNE – Institute of Applied Ecology (Slovakia)  
 Hnutí Duha (Friends of the Earth Czech Republic)  
 Arnika (Czech Republic)  
 CEPA (Friends of the Earth Slovakia)  
 SOVS (BirdLife Slovakia)  
 Veronica (Czech Republic)

## This position paper is supported also by:

CEE Bankwatch Network  
 Polish Green Net



Small ferry in Poland near the German border

## 2. What is the Danube-Oder-Elbe Canal (DOEC)

### 2.1 A brief history of the Danube-Oder-Elbe Canal

Plans for a DOE canal have existed for centuries, with the first plans for the waterway dating as far back as 1681. Ever since then the basic idea behind the canal has remained consistent: the DOEC would enable ships to travel from the Baltic and North Seas southwards to the Black Sea. The canal would thus give the landlocked Central European countries a better sea-link.

Between 1938 and 1943, 5 kilometres of the canal were dug out as the first part of a Danube-Oder canal a small distance due east of Vienna. Owing to the Second World War and the massive growth in motorised transport in the 1950s, the idea went out of favour. Since the 1970s, however, the DOEC plan gained new momentum, partly as a result of the Czechoslovak government's national spatial planning strategy, which reserved the possible DOEC route for the future.

In 1981 a special Group of Rapporteurs of the Economic Commission for Europe in Geneva (UN ECE) published their final report on the economic effectiveness of the Danube-Oder-Elbe Canal (Document TRANS/SC3/AC.2/R.1), this was once again updated in 1992. This study optimistically maintained that the estimated traffic on the canal could increase to 72 – 79 million t/year. At the same time, the canal concept was taken up again by Municipality of Vienna and the Viennese port authorities due to the increasing contact with post-communist Central European countries and increased anticipated opportunities for economic growth following political change.

A small but relatively effective lobby group has been working tirelessly to promote the concept of a DOE canal. In 1992, a so-called 'Working Group DOEC' (ARGE DOEK = Arbeitsgemeinschaft DOE Kanal) was set up by the Czech transport company Ekotrans Moravia, Vodohospodarska Vystavba from Bratislava and the Viennese port authorities. In 1997 this was followed by the foundation of the 'Association Danube-Oder-Elbe (Association DOE)' based in Prague. The association's main aim is lobbying strongly in favour of the DOEC. The association seeks to provide 'comprehensive documentation' about the DOEC project. Some of its most prominent members include the City of Vienna, the County of Lower Austria and the Polish Szczecin-Swinouscie Port Authority.

Historically, the canal is highly desired by Czech, Slovak and Austrian planners, as these three countries hope that through the DOEC they can improve their links to seas. Gradually, over the last twenty years, the concept of constructing a DOEC has shifted beyond constructing a waterway for freight cargo towards creating a multifunctional canal including claims that the canal can be used for recreational (touristic) uses as well.

Most recently, the idea of a DOEC was resurrected in the framework of accession of the post-communist Central and Eastern European Countries to the European Union and the extension of the EU's Trans-European Network for Transport (TEN-T) to CEE. Though the DOEC has not been included into currently revised TEN-T priority list, it has been embodied in the EU Accession Treaty and the pro-canal lobby believes it will convince the EC to put forward funding for the DOEC project.

### 2.2 Possible routes

The Danube-Oder-Elbe Canal is designed to connect the Danube waterway (E80) with the Elbe River (E20) and the Oder River (E30). As the 'Association Danube-Oder-Elbe' states: "The proposed planned Danube-Oder-Elbe waterway connects the River Danube with the North and Baltic Seas, crossing the very heart of the continent and offering the shortest routes from the Danube countries to the main European seaports". This goal however assumes all subsistent waterways (rivers) being navigable at full stretch. As described herein, this assumption is currently not secured. To make the whole waterway operable, substantial adaptations including river regulation would have to be implemented on the existing Elbe and Oder rivers. By the Danube-Oder-Elbe Canal, for the purposes of this position paper, we are in fact referring to the overall proposed waterway, including the entire lengths of both the Elbe and Oder rivers.

Although there are different options, the DOE canal is most likely to take the route presented as part of the Trans-European Transport Network Outline Plan in maps 4.6, 4.8 and/or 4.9 included in the Annex II of the Accession Treaty to the EU of 16th April 2003 (refer to map 2). This route is also presented on the web page of the 'Association Danube-Oder-Elbe'. ([www.tinavienna.at/donauoderelbe/canalgeneralf.htm](http://www.tinavienna.at/donauoderelbe/canalgeneralf.htm))

#### **The Danube-Oder-Elbe Canal should consist of 3 branches:**

► The Danube (Morava) branch (A-SK-CZ): from Vienna 170 km north-east through the lower Morava floodplains and river upwards to Prerov (Czech Republic)

According to the 'Association Danube-Oder-Elbe': "The Danube branch begins near Vienna and is led generally along the river Morava (March) or – in some sections – through the bed of this river up to Prerov in central Moravia. One can therefore speak about a combination of river canalization and lateral canals."

► The Oder branch (CZ-P-D)

Association Danube-Oder-Elbe states that: "The Oder branch between Prerov and the navigable Oder ... should be constructed predominantly as a man-made canal, only shorter section of it can be realized by canalization of the river Oder."

However this could apply only to first two sections of the Oder branch. The first section consists of over 100 km from Prerov to Ostrava (the upper Oder River). The second section is over 46 km from Ostrava to the Gliwice canal in Poland. The third section runs through Poland to Szczecin on the Baltic Sea. The Oder River is navigable there only to a minimal extent. Therefore river regulation of approximately 520 kilometres would be needed from Kedzierzyn-Kozle to the mouth of the Warta River.

► The Elbe branch (CZ-D)

The first section consists of over 150 km from Prerov to Pardubice (the upper Elbe River). According to Association Danube-Oder-Elbe: "It will be realized exclusively as a man-made canal." The second section of the Elbe branch consists of over 676 km from Pardubice to Hamburg in Germany and it will be realised mainly as adaptation of existing riverbed.

It should be stated that there are still many uncertainties about the routing of the DOE canal. Especially as the route from the Danube close to Vienna northwards is unclear it's not even yet certain whether the first part of the route will include Slovakia or will link the Danube directly from Vienna to the Czech Republic. The exact routing of the canal stretch in the vicinity of Ostrava, close to the Polish – Czech border is equally unclear. These ambiguities concerning the exact DOEC routing make it impossible to exclude the possibility of impacts on any site of high natural value located along the pre-defined DOEC route.

## 2.3 Canal construction aspects

According to the 'Association Danube-Oder-Elbe', in correspondence with the European Agreement on Main Inland Waterways of International Importance (AGN), the DOEC should have the parameters of shipping class Vb ([www.tinavienna.at/donauoderelbe/canalparamsf.htm](http://www.tinavienna.at/donauoderelbe/canalparamsf.htm)). This means that it should enable the passage of vessels with a draught of 2.8 meters. However, the DOEC planners are even more ambitious and have designed several sections of the canal to up to 5 meters depth to enable passage of vessels with draughts of up to 3.5 meters. Other technical parameters of the DOEC are also more ambitious than in the case of the Rhine-Main-Danube Canal, which is often used for comparison. This includes the width (12.5 m instead of 12 m) and the depth (4.5 m instead of 4 m) of the locks, the vertical clearance of bridges (7 m instead of 6 m) etc. These parameters would theoretically enable passage of river-sea vessels. To enable such transportation, the existing Danube, Elbe and Oder rivers would have to be made deeper than the existing maximum of 2.8 meters depth (according to the requirements of shipping class Vb). For example, in the Czech Republic controversial demands to deepen the navigable part of Elbe close to German border to a depth of 1.9 meters are currently being made, even though it is not possible to maintain such a depth throughout the entire year. This means that the canal could never be used to the extent foreseen by its planners without requiring additional canalisation or development on the Danube, Elbe and Oder rivers (groynes, lateral dikes, straightening), which means, in fact, massive habitat destruction and huge increase of the total DOEC costs.

Apart from these facts, construction of the DOEC will result in the building a series of dams (average length of pool 15.6 km) with 32 locks, each of 190 meters length. These locks would have to be built to overcome altitude differences of 554.3 meters. Furthermore, 126 road bridges and 31 railway bridges would have to be re-built to enable the passage of ships. According to the 'Association Danube-Oder-Elbe' the canal will be 499 km long; this does not, however, reflect the length of the adjacent stretches of the Oder and Elbe. These would need to be canalised or built-up in order to make the Danube-Oder-Elbe link (corridors E20 and E30) functional.

According to the website of the 'Association Danube-Oder-Elbe' ([www.tinavienna.at/donauoderelbe/canalenviromf.htm](http://www.tinavienna.at/donauoderelbe/canalenviromf.htm)), the waterway will have its own entirely separate water management system. However, the source of this water remains unclear – from time to time supplies from the lower Dyje/Thaya or the Danube are being proposed. The 'Life for the Danube, Oder and Elbe Rivers Coalition' is very sceptical about these plans, because of the low water levels that already frequently affect the respective rivers. Additionally, freezing of the rivers in winter is a limiting factor for the use and operation of the DOEC as it halts all transport regularly for several months.

All in all, a number of technically highly complicated works will have to be carried out in order to construct the canal. We are worried that the technical and financial aspects of some works connected to – or caused by – the construction of the canal have so far been underestimated or neglected by existing studies.

## Summary:

► The exact routing for the canal is still unclear. Generally, the DOEC is said to be constructed as a combination of river canalisation and lateral canals. These facts make it impossible to exclude possible impact on sites of high natural value located along the pre-determined DOEC route.

► Due to the enormous scope of technical problems and conflicts with natural sites the DOEC projects need further planning and assessment. Each further planning session makes the project more complex and more expensive. At the same time, it is likely that a large amount of technically complex work has been underestimated by the proponents of the DOEC.

► The canal cannot be used to its full capacity, if constructed according to current plans: natural occurrences and conditions on the adjacent rivers such as total depth and/or freezing will reduce its functionality.

► In order to make the Danube-Oder-Elbe waterway (corridors E20 and E30) functional, an additional canalisation or development on the Danube, Elbe and Oder rivers (groynes, lateral dikes, straightening) would be necessary. This would mean massive habitat destruction and an increase of the total DOEC costs.

► It is unclear which water resources should be used to subsidise the DOEC. Water circulation in the canal might aggravate water deficit problems in the adjacent rivers and floodplains used as a water resource for the canal.

### 3. Economic aspects of the Danube-Oder-Elbe Canal

According to the proponents of the DOEC, there are many economic benefits to be gained by the Central European (CE) region as a result of the construction of the canal. However, these so-called benefits soon crumble if pro-canal arguments are examined with closer scrutiny.

#### 3.1 Waterway transport versus railway transport

Waterway transport and, in particular, the construction of a DOE canal is promoted by the 'Association Danube-Oder-Elbe' as an economically and environmentally attractive alternative to other means of transport, such as motorway or railway transport. The arguments referred in the section below lead us to disagree with this point of view.

A railway network exists along almost the whole of the proposed DOEC and the existing Elbe, Danube and Oder rivers. In the case of the Oder, a railway line exists on both sides of the river. Along many parts of these rivers, renovation plans for the railways are underway. The railway between Prague and Dresden and Dresden and Wrocław, for instance, will be upgraded for trains travelling at 160 km per hour and upgrades to the similar speed are being carried out on literally all the backbone corridors in the area, including Breclav-Prerov-Ostrava and Prerov-Prague-Dresden – lines running parallel to the potential canal route. Furthermore, train connections between Berlin and Wrocław on the Oder will be upgraded to carry freight. In addition, the report of the European Commission's High Level Group on the Trans-European Transport Network (European Commission, Directorate-General for Energy and Transport, 2003: Priority projects for the Trans-European Transport Network up to 2020) identified priority railway upgrading/construction projects that overlap with the foreseen DOEC route. This includes, for example, the mixed railway line Gdansk-Warszawa-Brno/Zilina to be completed by 2020 and the dedicated freight railway line Gdansk-Bydgoszcz-Katowice-Zwardon to be completed in the long term.

Railway freight transport capacities are currently not being used to their full extent. Even during peak use in the 1980s, the lines were not being used at full capacity. The railway between Prerov and Ostrava in the Czech Republic was, for instance, running at about 80 % of its maximum, the link Pardubice-Prerov-Breclav 60 % (Jan Zeman, Czech Ecological Institute 2003). During the decrease of the freight railway traffic in the 1990s, the main railway corridors in Poland and the Czech Republic were upgraded. Thus, the capacity of the railway links running parallel to the potential DOE canal is even higher than it has been in the past.

In 1992 WWF Austria commissioned a study by Korab and Hiess (R. Korab & H. Hiess, WWF, 1992: Baukostenver-

gleich Donau-Oder-Wasserstraßenverbindung Alternative Hochleistungsbahnstraße. Im Auftrag des WWF Wien) to compare the construction costs of a Danube-Oder canal and a high-speed railway line. According to this study, a canal would cost a minimum of 52.4 Billion Austrian Schilling (about 3.8 Billion Euro), whereas the construction of a high-speed railway line would cost only 35.4 Billion Austrian Schilling (about 2.6 Billion Euro). Furthermore, the capacity for freight transport would be higher with a high-speed railway line: 60 million tons/year versus 50 million tons/year for the Danube-Oder canal. This means that in both cases the railway is the more favourable option.

#### 3.2 Overly optimistic freight prognoses

According to the 'Association Danube-Oder-Elbe', the UN-ECE commissioned an 'Economic study of the Danube-Oder-Elbe-connection' in 1981 which forecasted a possible increase of freight transport for the future canal to up to 79 Million tons of goods to be transported annually. Such numbers are now completely out of date, since the structure of the economy of the countries involved has completely changed after the fall of the Iron Curtain: less bulk goods, less coal used, etc. Traditionally, cargo ships transport bulk goods such as coal, cement, stones and fertilisers.

Generally there seems to be a trend of overestimation of future freight transport along rivers in CE. An example would be the Oder in Poland where the record number of tons transported took place in 1980. In that year, 14.1 million tons were transported on the Oder River. This number fell drastically in the first years of the 1990s, with only 5.5 million tons of goods being transported in 1991 and 1992. It is therefore unclear as to why the Polish government expects an increase of the tonnage from 5.5 million (1991-1992) to 20 million tons annually at some point in the next decade (Programme for the Oder 2006 – Pre-feasibility Final Report, 2001).

We can observe another example in Germany. In 1990, 8 million tons were transported on the Elbe annually (see table 2). The German waterway authorities wanted to increase this number to 23 million tons annually. In reality, the number of goods transported has decreased to about 4 million tons annually (source: Canale Saale – grande Katastrophe! BUND, Ernst Paul Dörfler, 2003)

A further example is the predicted increase in goods transported along the Main-Danube canal, which was constructed in Germany and finalised in 1992 although the local population held an intense campaign against the construction of the canal. In spite of the huge investment the transport volumes remain at 7.5 million tons per year compared with the 18 million tons per year, which were predicted.

The following overview shows a sharp decrease in goods transported on the Czech waterways since the fall of the communist regime in the end of the 1980-ies.

Table 1 – Figures for water transport in Czech Republic, 1988 – 2001

Year	Water transp. (thous.t)	index 1988	Output (mil. Netto tkm)	index 1988
1988	8866	1,00	1671	1,00
1989	7906	0,89	1507	0,90
1990	6370	0,72	1405	0,84
1991	5857	0,66	1507	0,90
1992	5125	0,58	1337	0,80
1993	4906	0,55	1261	0,75
1994	4991	0,56	1186	0,71
1995	4441	0,50	1348	0,81
1996	3214	0,36	1353	0,81
1997	1828	0,21	783	0,47
1998	1678	0,19	915	0,55
1999	1877	0,21	913	0,55
2000	1906	0,21	723	0,43
2001	1594	0,18	606	0,36

Source: Czech transport yearbooks, statistic yearbooks.

The table shows that the economic transformation in the Czech Republic has decreased the level of water transport to 36% when comparing 2001 to 1988. The volume of the goods transported on the water has fallen down to 18% of its former level. This was caused by the sharp decrease in the transport of coal, raw materials and other high-volume commodities.

Even the freight prognoses for the Danube-Hodonín section of the DOE canal, which is being pushed forward most intensively at present, seem to be too optimistic. An official study of economical effectiveness undertaken by the Slovak Transport Research Institute evaluates that the expected transport intensity of 18-30 million tons per year in five years after the completion of this waterway section is unrealistic. Such a transportation intensity is not even being reached on international waterways such as the Danube, on the section Bratislava – Gabčíkovo (Transport Research Institute Žilina, Water Transportation Division Bratislava, 1993: Re-evaluation of economical effectiveness of the Danube-Oder-Elbe project in relation to development of waterways and water transport in Slovakia, Section Danube-Hodonín.).

Finally one must question on what basis the 'Association Danube-Oder-Elbe' calculated its predicted transport good volume of up to 79 millions tons a year, when one knows that currently freight transports on the relevant rivers are as follows:

Table 2: Transported goods volumes on the CE waterways

River	Transported goods in million tons/year		
	present	planned	prior (Year)
Elbe	4	23	8 (1990)
Oder	5.5	20	14.1 (1980)
Main-Danube Canal	7.5*	18	7.5 (1992)
<b>Total</b>	<b>17</b>	<b>61</b>	<b>29.6</b>

\*For the sake of convenience, the number of tonnes transported for 1992 (the first year of operation of the Main-Danube Canal) was based on the same level as the number of tonnes currently.

In 1999, a German consulting company called PLANCO interviewed transport companies about their reasons for rejecting cargo ships as a means of transport. In total 150 companies were asked. The numbers introduced below in table 3 contain the rationale for rejecting cargo ships as a means of transport.

Table 3: Reasons for rejecting cargo ships as a means of transport

Reason	Number of companies
Overly long transport time	50
Overly big volume of transportable freight	20
Overly small network of waterways	20
Non-suitable materials which should be transported	7
Overly high transport costs	6
Other	13

Source: PLANCO, 1999

Table 3 shows that simply constructing new waterways in order to expand the waterway network (with the goal of lowering the transport costs) will not directly lead to an increased transport of goods on waterways. In this respect, the decrease in goods transported on the CE inland waterways should not be seen only as a result of fall of the centralised economy, but also as a result of changed market strategies and commodities which are transported.

### 3.3 The Danube-Oder-Elbe Canal and investment needs

According to the 'Association DOE', the costs for the construction of the DOEC add up to about 5.8 Billion EUR ([www.tinavienna.at/donauoderelbe/canalparamsf.htm](http://www.tinavienna.at/donauoderelbe/canalparamsf.htm)).

Experience shows that during construction phases costs often increase. Furthermore, one can expect that a biased pro-canal organisation will put this estimation of the costs at a low level. Additionally this estimation does not take into consideration the costs of mitigation and compensation measures.

Furthermore, the estimated costs of 5.8 Billion EUR do not include the required water works on the Danube, Oder and Elbe rivers. For example: the Polish government decided to implement the so-called 'Programme for the Oder 2006' in July 2001. This programme has the aim of modernising the

water system in the Oder river basin, and has a total financial value of 2.5 Billion EUR. The Polish government has some serious funding shortfalls with this highly controversial programme. Given the difficulties in identifying sufficient funding to realise the Oder 2006 Programme it is questionable if the required funds will be found to construct the DOEC.

Although the source for project's funding remains unclear, the canal planners have changed their opinion in recent years. Instead of the previously proposed multi-source funding, substantial funding (80%) is now expected to come from national and EU public funds.

### 3.4 Economic efficiency and energy use

So far, no all-encompassing cost-benefit analysis has been undertaken for the canal.

A partial cost-benefit analysis undertaken for some parts of the canal does not indicate particularly favourable results. An official evaluation undertaken for the Danube-Hodonin section (Morava River) by the Slovak Transport Research Institute states that the desirable level of investment return – 9.5% – set up for the navigation projects cannot be reached in the case of the DOEC, even if the transportation and hydro-energetic functions of the canal are combined (see Table 4).

Table 4: Level of internal investment return ratio (%)

Subvariant	Variant			
	I. (riverbed variant)	II. (leftbank channel variant)	III. (alterna- tive left- bank channel variant)	IV. (left-right bank channel variant)
<b>A</b> (incomes from the water transport)	2.02	1.95	2.41	0.48
<b>B</b> (incomes from the water transport + electricity)	3.28	2.30	2.92	1.00
<b>C</b> (incomes from the water transport + electricity + utilization of irrecoverable subsidies)	6.66	6.43	7.92	1.93

Source: Transport Research Institute Zilina, Water Transportation Division Bratislava, 1993: Re-evaluation of economical effectiveness of the Danube-Oder-Elbe project in relation to the development of waterways and water transport in Slovakia, Section Danube-Hodonin.

In the case of implementing the 'Programme for the Oder 2006', the pre-feasibility study that was undertaken for this Polish government programme clearly states that the benefit-cost ratio is only 1.03 for the water transportation component of the Programme: it is clear that this is not enough for the component to be justified.

According to the 1999 WWF report 'Donau-Oder-Elbe: Living Rivers oder Kanal?' (Zinke, 1999) and the 2002 WWF 'Waterway Transport on Europe's Lifeline the Danube: Impacts, Threats and Opportunities', the total energy inputs into a DOE canal system require considerably more energy than the alternative of using railways.

At first glance this may not seem to be the case, the typical argument being that inland waterways require less input of fossil fuels. Total energy inputs into the canal, however, far outweigh this apparent argument. Huge energy requirements are needed for the construction of the canal, for the construction of the locks and dams, and over the years huge energy costs will be expended in maintaining the canal. All of these energy costs translate into financial costs that are much larger than those associated with utilising the railway system.

### 3.5 Emissions

The promoters of freight transport by ship often argue that shipping has a lower negative environmental impact than other transport modes. However, the following data from the Czech Republic show that shipping is not the most environmentally friendly means of transport. As regards freight transport in the Czech Republic, the least CO<sub>2</sub> emissions are caused by electrified railway system. For the same energetic output it produces only 36.1 % of the emissions associated with water transport. Much worse than specific water transport emissions are those of road freight transport and diesel railway transport. The fact that the railways parallel to the DOEC are electrified means that when assessed in terms of CO<sub>2</sub> emissions, railway transport indices are nearly three times better than the equivalents for waterway transport.

Table 5: Outputs of freight transport and CO<sub>2</sub> emissions (netto tkm/t CO<sub>2</sub>) in 2001 in the Czech Republic

Transport	Output (mil. tkm)	Output (%)	CO <sub>2</sub> emissions (tons)	CO <sub>2</sub> emissions (%)	Output/CO <sub>2</sub> emissions
<b>Electrified railway</b>	15 719	26.674	552 712	10.636	28 439.7660
<b>Inland water</b>	606	1.036	59 000	1.135	10 271.1860
<b>Road</b>	40 260	68.83	4 289 000	82.53	9 386.8035
<b>Diesel railway</b>	1 906	3.26	296 000	5.696	6 439.1892

Sources: Czech Ministry of Transport; Center of Transport Research, Brno 1996; Jan Zeman, Czech and Slovak Traffic Club 2003

Table 6 shows a comparison of solid SO<sub>2</sub>, NO<sub>x</sub> and CO emissions for electrified railway and water transport.

Table 6 – Emission strenuousity of electrified freight railway transport and water transport in the Czech Republic in 2001.

Item	Solid emissions (in tons)	SO <sub>2</sub> (in tons)	NO <sub>x</sub> (in tons)	CO (in tons)
Emissions from 1 GWh of produced el. energy	1.108	14.734	2.462	0.339
Emissions from 807 GWh of produced el. energy	894.156	11 890.338	1 986.834	273.573
Electrified railway for 1 bil. tkm	59.969	797.474	133.255	18.348
Inland water for 1 bil. tkm	85.246	31.148	1311.475	1147.541
Index el. rail./water	0.703	25.603	0.102	0.016

Source: Jan Zeman based on the Transport Yearbooks data, electricity data coming from Czech Electric Utility data. Comparable data for emissions of VOC and CxHx are not available.

Table 6 shows that on the basis of SO<sub>2</sub> emissions, water transport provides better results than electrified railways. From the point of view of solid emissions, and mainly with respect to NO<sub>x</sub> and CO emissions, the electrified railways are much more environmentally friendly than water transport.

Similarly, results of recent research in the USA show that shipping emissions contribute greatly to emissions affecting air quality. Commercial marine traffic on rivers emits substantial pollution, according to a study reported in the March 15 (2002) issue of Environmental Science and Technology, a publication of the American Chemical Society. The pollutants include nitrogen oxides, fine particulate matter and oxides of sulphur.

Around riverside cities, nitrogen oxide pollution from shipping can equal that from a major highway full of traffic, according to James J. Corbett, Ph.D., from the University of Delaware's College of Marine Studies, Newark. Corbett's findings are based on a detailed inventory of air emissions from commercial vessels in the Northwest United States.

### 3.6 Employment and regional development

One cannot dispute that construction works for the DOE canal would temporarily create a number of jobs in the region. However, in the long term it is disputable whether the DOEC would create sustainable job opportunities, considering the current overall depression in inland navigation throughout the Europe (refer to chapter 3.2). Therefore, a proper cost-benefit analysis, one including an assessment of the number of long-term jobs created in relation to public money spent, is an absolute requirement.

Furthermore, the potential DOEC route, owing to its being reserved in regional spatial plans in the Czech Republic, hampers construction and development in certain regions along the canal. This situation impacts upon hundreds of villages and dozens of towns and doesn't foster any job creation in the affected regions. This is a serious issue because the wider neighbourhood of the potential DOEC is predetermined by these development limits.

### Summary

► A functioning railway network exists along all the affected rivers. This railway network has not yet been used to its full extent.

► Upgrading the parallel railway network is cheaper than the construction of a DOEC. The upgrade of several railway lines along the canal has been identified as EU priority transport projects.

► Freight transport prognoses for waterway transport in CEE seem to be structurally too optimistic.

► On the Elbe and Oder, the annual number of transported tons decreased substantially over the last 15 years. This decrease should not be seen only as a result of fall of the centralised economy in CE countries, but also as a result of changed market strategies and change in commodities, which are transported.

► Traditional inland navigation is generally quite an inflexible mode of transport. Constructing new waterways in order to expand the network will not directly lead to an increased transport of goods on waterways.

► The DOEC construction would cost a minimum of 5.8 billion EUR. The financial resources for this large investment remain unclear.

► The sum of 5.8 billion EUR does not include costs for mitigation and compensation measures; neither does it include the costs of necessary navigation works on hundreds of kilometres on the Elbe in Germany, the Oder in Poland or the Danube River, respectively.

► No comprehensive cost-benefit analysis exists for the DOEC.

► Partial cost-benefit analyses officially undertaken for certain parts of the DOEC do not show favourable results.

► Rail transport uses less energy than waterway transport. Electrified railways have been evaluated as a more environmentally friendly mode of transport than inland navigation in terms of emissions.

► Although some temporary construction jobs will be created, investments to the DOEC will not ensure creation of long-term job opportunities considering decreases in inland navigation throughout Europe.

► The potential canal route is included in spatial plans in the Czech Republic. The lack of clarity relating to the future of the canal is blocking regional development and prohibiting other socio-economic activities in certain regions along the proposed route.

## 4. Environmental aspects of the Danube-Oder-Elbe Canal

### 4.1 The Birds and Habitats Directives

One of the key areas of EU legislation which must be taken into account when planning the TENs inland waterways and the DOEC is that of nature conservation and, in particular, the establishment of the European ecological network Natura 2000. The Natura 2000 network is to be established in application of the Birds Directive (79/409/EEC) and the Habitats Directive (92/43/EEC). At the present time, potential Natura 2000 sites along rivers in CE are threatened by the extension of TENs to CEE. According to a study by BirdLife International the extension of the TENs (as planned in the TINA assessment) might affect 85 such sites in Central Europe, 38 of which will be affected on inland waterways ("An assessment of the potential impact of the TINA network on Important Bird Areas (IBAs) in the accession countries" RSPB 2001:24).

In order to join the European Union, Poland, Slovakia and the Czech Republic must transpose the requirements of the two Directives into their national legislation and prepare for the establishment of Natura 2000 on their territory. This includes submitting by the date of accession their lists of proposed Sites of Community Importance (pSCI) and the Special Protection Areas (SPAs) to the European Commission.

Numerous parts of the river basins forming parts of the proposed DOEC hold protected species and extensive habitats listed in the Annexes to the Birds and Habitats Directives. These areas are thus eligible for designation as Natura 2000. The building of a canal of 1980 km length might, in the worst case, directly or indirectly affect protected or projected protected areas (460,000 hectares of precious riparian landscape) in five countries – Austria, Slovakia, the Czech Republic, Poland and Germany (Zinke Environment Consulting (1999): *Donau-Oder-Elbe: Living Rivers oder Kanal, Aktuelle Analyse aus Naturschutzsicht. Im auftrag des WWF. Wien*). According to this assessment, two of the 38 affected protected areas are national parks, a further six are Ramsar sites and another two are biosphere reserves.

Research and mapping work show that the canal would affect 20 potential Natura 2000 sites in Poland alone if constructed along the Oder ("Mapping of N2000", WWF Poland, 2002). The international importance of these sites is based on their containing species listed in the Annexes to the Birds and Habitats Directives and, very probably, also for other species of animals and plants as well as threatened habitats. These sites will qualify for candidate Natura 2000 status when Poland joins the EU.

If the construction of projects constituting parts of the Danube-Oder-Elbe canal proceeds without due respect to the

EU's Strategic Environmental Assessment or Environmental Impact Assessment Directives then these future EU Member States will breach the provisions of the Habitats- and Birds Directives. On the basis of the requirements set out by articles 6.3 and 6.4 of the Habitats Directive, compliance with the obligations concerning environmental impact assessment, access to environmental information, water protection as well as the river basin management should be carried out. This is essential to ensure that any new developments and land use planning is undertaken to ensure that nature is protected and not destroyed.

The construction of the canal will also be in conflict with the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and the Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention). As the previously mentioned report "Donau-Oder-Elbe: Living Rivers oder Kanal" (Zinke, 1999) states, the DOEC would impact upon six Ramsar Sites (Wetlands of International Importance) in Austria, the Czech Republic, Slovakia and Poland. Article 3.1 of the Ramsar Convention asks Contracting Parties to the Convention to "formulate and implement their planning so as to promote the conservation of the wetlands included in the List (of Wetlands of International Importance)". Furthermore Article 3.2 of the Convention states that Contracting Parties should "arrange to be informed at the earliest possible time if the ecological character of any wetland in its territory and included in the List has changed, is changing or is likely to change". As a result of concerns of the possible impact of the DOEC on the Ramsar Sites in Central Europe a specific Recommendation 6.17 has been adopted by the 6th Meeting of the Conference of Contracting Parties to the Ramsar Convention in March 1996. The recommendation "requests the Governments of Austria, the Czech Republic and the Slovak Republic, in their deliberations on the possible construction of a Danube-Elbe-Oder canal, to give full consideration to the fact that such a canal would cause serious adverse changes to the ecological character of five Ramsar sites in these three countries". Regardless of this fact, no progress is yet to be made in these countries to alleviate these concerns, fully backed by the official Ramsar Convention's Recommendation.



Schwedter Hafen – a new harbour (in Brandenburg, Germany) build with a lot of money, but nearly no ship is loading /unloading there...

## 4.2 The Water Framework Directive

The Water Framework Directive (WFD) is possibly one of the most progressive pieces of environmental legislation in the EU today. It also provides a clear test case for coherence between EU environmental legislation and other EU policies and funding mechanisms.

Article 1 of the WFD states that the purpose of the Directive is to prevent further deterioration of aquatic ecosystems. Article 4(1)(a) (i) and (b)(i) of the Directive specify that Member States shall take the necessary measures to prevent deterioration of the status of all bodies of surface water and groundwater respectively. We believe that this duty has been binding from the date on which the Directive entered into force – 22nd December 2000. Common sense would indicate that this is the only acceptable date, as preventing deterioration is a logical step in the process of achieving "good ecological status" for all water bodies – the final goal of the WFD to be achieved by 2015 – and it should be mandatory since the entry into force of the Directive.

By May 2004 accession countries will have to have transposed the WFD into their national legislation. They should thus not only start planning measures to achieve this goal of good status in all water bodies by 2015, but above all they should not develop any plans that would detract from – or undermine – such a goal by causing deterioration of the water status. The fact that there are still considerable numbers of pristine river systems in CEE should constitute a great incentive not to develop such plans as these systems will not only help in achieving the WFD much more easily, but will generate considerable economic value for the region in the future (e.g. rural and ecological tourism, etc).

According to the 'Association Danube-Oder-Elbe' ([www.tinavienna.at/donauoderelbe/canalenvirnf.htm](http://www.tinavienna.at/donauoderelbe/canalenvirnf.htm)) only "some sections (of the DOEC) will be solved as canalised river stretches" and "this solution is used only in the cases of existing river pools that were constructed formerly for various other reasons. In no case will the waterway touch the remaining natural river sections". This is in obvious contradiction with general information about the DOEC published on the same web page, where channelisation of the Morava and Oder rivers has been proposed (see chapter 2.2). Considering the adaptations to be made on the Elbe and Oder rivers which will be required to make the whole Danube-Oder-Elbe waterway operational, these plans do not comply with the main goals of the WFD.

Abrupt changes to a river's morphology and hydrology caused by the building of the DOE canal and its subsequent impacts on the nature, habitats and species in the region are at odds with the principle of sustainable water management both enshrined in – and required by – the WFD. Further it would undermine possibilities of Slovakia, the Czech Republic, Austria, and Poland achieving the overall objective of the Directive of reaching "good ecological and chemical" status in all waters by 2015.

The different 'status' categories used in the Directive are a measure of how far a body of water deviates from its natural condition. Inland water bodies in Central Europe are special as many are still in a natural state. Construction of the DOEC would cause deterioration in the status of waters in Austria, the Czech Republic, Poland, and Slovakia.

Article 6 of the WFD requires that a register of protected areas within each river basin district (RBD) be established. This includes Natura 2000 sites under the Birds and Habitats Directive. This step follows the identification of River Basin Districts and is important in identifying those parts of a river basin especially sensitive to human activities. Natura 2000 sites in Slovakia, the Czech Republic and Poland are either already documented or under the process of being identified.

The fundamental requirement for maintaining these habitats and species along the Morava, Oder and Elbe rivers is an unaltered hydrological regime. The construction of the DOE canal would certainly disrupt or destroy this regime. Construction would also result in water tables dropping. This drop in water levels would result in the loss of riverine habitats, specifically, the drying of wetlands, a decrease in diversity of alluvial meadows and the alteration of other natural habitats.

Sections of the Morava (and Dyje/Thaya), Oder and Elbe already have limited water resources. These limited water resources would be diverted for operating the DOE canal, for example on the section Vienna-Hodonin (lower Morava) and for the highest sections of the Oder and Elbe during their low water periods (Waterway Transport on Europe's Lifeline the Danube: Impacts, Threats and Opportunities. WWF, Vienna, 2002). Altering the hydrological regime would also aggravate problems in habitats with invasive and non-native species. The self-purification abilities of natural waters would also be reduced.

Increasingly at the forefront of environmental work and environmental legislation today is the necessity of public participation. Indeed, the WFD creates a general obligation in Article 14 "to encourage the active involvement of all interested parties in the implementation of this Directive". Three different forms of public participation are noted in the Directive:

- ▶ Information supply
- ▶ Consultation
- ▶ Active involvement

In the development of the DOE canal plans a sufficient degree of public participation has not taken place: this is at odds with the WFD. Although civil society in the Czech and Slovak Republics has expressed its opinion on numerous occasions in voicing its opposition to the canal, no process of consultation or active participation between the state and water authorities and the populations affected has yet taken place.

### 4.3 The Danube-Oder-Elbe Canal and flood prevention

In the light of the devastating floods in Central Europe in 2002, the European Commission has stated that it would examine how "inadequate land-use and water management policies" contributed to the floods (European Commission Communication to the European Parliament and the Council COM (2002) 481. The European Community Response to the Flooding in Austria, Germany and Several Applicant Countries, Brussels 28th August 2002).

Another important reaction to the flood events in CE of the summer of 2002 was the clear perception by many Government authorities, as well as the EU institutions, that traditional policies and practices for flood prevention and protection – based on infrastructure developments – had failed significantly to tackle the ever more frequent flood events in Europe. Policy decisions and instruments in preparation for the future had, therefore, to go beyond existing perceptions and "beliefs" and fundamentally address the root-causes behind floods, and not just treat the symptoms.

The EU Environment Council meeting in October 2002 gave a mandate to the European Commission to start defining a European wide "instrument" that would assist Member States and Acceding countries in defining new and more effective flood prevention measures. These could also constitute a change of paradigm into a more "ecological" form of flood management and some Member States are already moving in this new direction (e.g. Germany).

According to recent analyses ("Background Briefing Paper Managing Floods in Europe: The Answer Already Exists: More intelligent river basin management using wetlands can alleviate future flooding events", WWF, Brussels, 2002) multiple land and water management failures resulting in floods include:

- ▶ inappropriate land use planning
- ▶ upland deforestation
- ▶ channelised and straightened rivers for navigation
- ▶ drained wetlands and floodplains as a result of agriculture, transport, and settlement
- ▶ increased soil impermeability through the sealing of land due to transport infrastructure and urbanisation
- ▶ oxbow lakes and floodplains, disconnected from the rivers.

The floods of 2002 damaged vital communication and transport infrastructure in Central Europe that must clearly be repaired. It is, however, important to recognise that transport corridors are the factors that caused some of the catastrophic affects in 2002. "River channelisation works to protect a town can speed up the propagation of the flood and increase flood risk downstream. Channelisation generally changes a heterogeneous meandering river into a homogeneous straight channel with an increased bed slope, uniform flow conditions and less habitat diversity compared to the undisturbed

situation." (European Environment Agency: Sustainable Water Use in Europe, Part 3: Extreme Hydrological Events: floods and droughts. Environment issue report number 221, Copenhagen 2001, pg. 19).

In light of these experiences construction of the DOEC would prevent more "ecological" water management, including flood management in 2 main European watersheds – the Elbe and Oder – and in the part of the river Danube's catchment as well. The DOEC route would very probably dissect and block current natural flood-retention areas. For example, river sections together with some of the last intact floodplains in Europe, featuring unique biodiversity and significant nutrient uptake capabilities, such as the lower Morava River (Rybanič R., Šeffler J. & Čierna M. 1999. Economic Valuation of Benefits from Conservation and Restoration of Floodplain Meadows In: Šeffler J. & Stanová V. (eds.): Morava River Floodplain Meadows – Importance, Restoration and Management, Daphne, Bratislava) also serve as natural flood retention areas. Construction of the DOEC would probably impair or dissect these areas.

### 4.4 Strategic Environmental Assessment (SEA)

#### 4.4.1 Public involvement and a need for SEA

As the DOEC as a large-scale international project is facing various constraints in certain countries, the canal planners are frequently changing their defensive strategies of the overall project by promoting various partial solutions, more or less attractive to certain countries. This strategy is presently used in promoting the connection 'Danube-Czech Republic' as the first phase of the building of the DOEC. This approach, however, brings a lot of ambiguities into the decision-making process.

In some large-scale infrastructure projects already constructed in post-communist CEE countries, inappropriate practices were used in direct conflict with public interests. These practices, if applied, render the assessment of the overall impact (economic, social and environmental) of such large-scale project impossible, and prevent effective public participation and transparent decision-making.

The "per partes" approach: The overall project (e.g. waterway or highway) is divided into a number of partial sub-projects (for instance a series of dams, highway sections). These sub-projects represent separate investments with separate budgets, decision-making procedures and timeframes for their implementation. Instead of the comprehensive environmental, social, economic, financial and strategic assessment of the project as a whole this approach allows to reduce the assessment of sub-projects to more or less irrelevant procedures having zero or very little influence on the planned investment.

The "as much as possible new constructions" approach: The construction of a number of sub-projects on different sites usually starts at the same time but they are not directly linked with each other at the beginning. Although the funds for their full implementation are not guaranteed, the government signs long-term binding agreements for their construction with major contractors. Very often, these agreements generate growing financial losses from the state budget. After investing large amounts of tax-payers money into a number of projects that stand for a long time unfinished, the state falls under a growing pressure not only for their completion (1), but also for the completion of the missing sub-projects which would join them up, in order to put the overall project into operation (2). In the second phase, the overall economic ineffectiveness of the project often becomes obvious. However, there are usually no other options to mitigate the economic losses than to complete the whole project.

Planning and decision-making regarding large-scale infrastructure projects are often not adequately transparent and democratic. There is no clear definition of public interests in individual sectors thus 'public interest' in the environment can be easily overrun by the 'public interest' in infrastructure development. No regulation for inclusion of externalities into planning exists. Citizens do not have effective legal instruments to enforce sustainable alternatives to what is being planned. There is no evidence that plans, policies and strategies reflect the interests of concerned citizens.

Furthermore, not only public opinion is often avoided, but public consultation is frequently not arranged in an appropriate fashion. Public opinion – if it is against the strategy of the project promoters – is thus effectively ignored. For instance, in Slovakia a petition was circulated regarding a planned port in Devinska Nova Ves (in relation to the overall Danube-Oder-Elbe Canal project) and the majority of the affected population opposed its development. The investor abandoned the project two years after the assessment extent was set by the Ministry of Environment as part of EIA procedure. The idea of the new port in Devinska Nova Ves has since returned to the agenda, now a project promoted by navigation authorities and companies (also in relation to development in the TEN-T revision process) as well as the overall DOEC project (or its sub-projects in certain countries).

It is obvious that decision-making on a large project such as the DOEC can easily be abused as described in the paragraphs above. We believe that, if it is implemented properly, only transparent and participatory procedures such as Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA), including a trans-boundary EIA in agreement with the Espoo Convention, will ensure an adequate assessment of environmental, social and economic sustainability.

#### 4.4.2 Strategic Environmental Assessment (SEA)

While an EIA examines projects in a piece-by-piece manner, SEA examines projects more comprehensively by taking a more holistic view of the planned project. Because these two systems of evaluation assess the environmental impacts of projects with differing strategies, it is necessary that they are both applied.

Particularly important in assessing large transport projects is the EU Directive 2001/42/EC on the effects of certain plans and programmes on the environment, known as "Strategic Environmental Assessment" (SEA). In order to avoid a negative large-scale impact of the DOE canal on the environment a SEA should definitely be carried out. The SEA Directive 2001/42/EC will come into force on the 1st January 2004 for EU Member States and the 1st May 2004 for Acceding Countries.

Recommendations from DG TREN specifically state the necessity of an early SEA application. Further, the SEA report should be reviewed by environmental authorities and other interested parties and by the public and also noting that the "consultation and participation are integral to the SEA process" (DG TREN: Manual on Strategic Environmental Assessment of Transport Infrastructure Plans. Executive Summary).

Furthermore Directive 97/11/EC amending Directive 85/337/EC sets out the conditions for project-level environmental impact assessment. In many acceding countries, numerous cases have shown that Environmental Impact Assessments (EIAs) are weakly conducted. There is a real need to raise capacity within national, regional and local government bodies in accession countries to improve the quality of EIAs as well.

Cross-border co-ordination is also necessary in order to avoid per partes evaluation of projects. If for example countries make national decisions to evaluate projects for the network, essentially breaking the network into small pieces, later decisions about the network could prove useless if projects are already underway because national governments have pushed their projects through. National decisions on specific projects affect the entire network. Therefore, it is important that a European Commission-co-ordinated SEA be applied to the overall Danube-Oder-Elbe Canal project prior to the application of EIAs of partial sub-projects.

Comparisons with other alternative solutions must be made, public interests must be clearly stated, a complex risk assessment (including effects on macro-economy in the case of large investments) and a proposal of risk management must be made prior to any public funds being invested. Together with the SEA, the needs assessment, a cost-benefit analysis, a least cost analysis, and an opportunity cost analysis should be completed for the project. Calculated project costs must include (internalise) all relevant social, environmental and economic externalities.

## Summary

- ▶ The DOEC will negatively impact numerous (potential) Natura 2000 sites. This is in direct conflict with EU environmental legislation.
- ▶ The DOEC will stand in direct conflict with the main goals and principles of the Water Framework Directive of the EU, such as the 'no deterioration' of aquatic ecosystems and achieving 'good ecological status' of all waters by 2015.
- ▶ Construction of the DOEC would lead to the deterioration of water quality in the affected rivers. The self-purification capacity of natural waters would be reduced.
- ▶ The construction of the DOEC might also aggravate problems with invasive and non-native species.

▶ The construction of a DOEC would prevent more "ecological" water management, including flood prevention in 2 main European watersheds – the Elbe and Oder – and in the part of the Danube River watershed.

▶ A European Commission-co-ordinated SEA of the overall Danube-Oder-Elbe Canal project should be carried out prior to the application of EIAs of partial sub-projects. In the case of the EIAs, a transboundary EIA in correspondence with provisions of the Espoo Convention should be applied.

▶ Generally, public participation in the DOEC planning and decision-making process is lacking. Public is 'offered' to take part in EIAs for small segments of the DOEC (e.g. sluices on the Elbe in the Czech Republic), while the assessment of the overall project in the SEA process has not started yet, despite affected countries already having the means to carry out the SEA.

## 5. The Danube-Oder-Elbe Canal and the EU

### 5.1 The current status of the TENs

Within the European Union, the concept of the so-called Trans-European Networks (TENs) emerged after the idea for a single European market materialised in the 1980s. Now, as the European Union is set to expand its borders, TENs are being extended into Central and Eastern European countries. The basis for the extension of the Trans-European Network for Transport (TEN-T) is the so-called TINA (Transport and Infrastructure Needs Assessment), which was carried out by the TINA Secretariat in Vienna and funded by the European Commission in order to assess the needs for infrastructure development in the acceding countries. Most of the proposed infrastructure corridors proposed in the TINA now form part of the Trans-European Transport Network Outline Plan maps included in the Annex II of the Accession Treaty (AA2003/ACT/annex II/en 1645).

([www.europa.eu.int/comm/enlargement/negotiations/treaty\\_of\\_accession\\_2003/index.htm](http://www.europa.eu.int/comm/enlargement/negotiations/treaty_of_accession_2003/index.htm))

The use of the TINA as a basis for the network infrastructure development in the acceding countries raises serious environmental sustainability concerns. At the time of the compilation of the TINA report, no environmental assessment of the proposed transport network had been undertaken, and since then, no thorough strategic environmental assessment has been carried out. Therefore, the extended TEN-T maps included in the Accession Treaty send a very bad signal to the acceding countries, practically giving the political 'go ahead' for a network negotiated on the basis of the political agenda, rather than on systematic economic and environmental assessments ("Trans-European Transport Networks Options for a sustainable future" T&E, 2003:8).

The TEN-T guidelines were finally adopted by the European Commission in 1996. In 1998, the Commission announced a

big consultation process for the revision process of these TEN guidelines. In September 2001, the Commission published a White Paper on 'European Transport Policy for 2010: decision time!', which identified the potential new priority projects for the TEN-T. This was immediately followed by the EC proposal for a revision of the TEN-T (COM/2001/0544) but as the Council could not agree on the proposed priority projects it later announced a new proposal for the end of 2003.

A High Level Group was set up by the European Commission and chaired by Karel Van Miert, ex EC-Commissioner, to identify new priority projects and to assist the Commission in drafting the new revision proposal. The final report of Van Miert HLG was published on June 30th 2003 and is available at [http://europa.eu.int/comm/ten/transport/revision/hlg\\_en.htm](http://europa.eu.int/comm/ten/transport/revision/hlg_en.htm). The Van Miert HLG report recommended that the Commission concentrate "on finishing by 2010 five of the fourteen priority projects identified by the Christophersen Group in 1994 and confirmed by the European Councils of Essen and Dublin and starting 22 new priority projects with a time horizon of 2020". Among the 22 new priority projects is listed Project No.2 'Eliminating bottlenecks on the Rhine-Main-Danube'. The project should result in improved navigability of the Danube in certain sections, including the Vienna-Bratislava section. Although it is not clear yet which technical measures should be implemented, the adaptation of this section of the Danube may substantially improve the navigability of the Morava River and enable construction of Danube-Hodonín (Breclav) section of the DOEC, currently promoted mainly by Czech pro-canal lobby groups.

The proposal of new priority TEN-T projects of the Van Miert HLG, including improvement of the Vienna-Bratislava section of the Rhine/Meuse-Main-Danube inland waterway route, have been justified by the European Commission pro-

posal for the extension of the TENs-T to the new Member States of the EU. This proposal states that "these projects should be declared to be of 'European interest' in order to focus on them the resources available from the various Community financial instruments for the networks". In this respect it is extremely worrying that, as yet, no opportunities for consultation or public participation were offered by the Commission to NGOs or public, thus preventing them from putting forward their point of view regarding the proposed priority projects to be made part of the TEN-T revision.

## 5.2 National waterway policies and plans and identification of EU funds.

Realisation of the Danube-Oder-Elbe Canal in Central European Countries is frequently justified by its inclusion into the European Agreement on Main Inland Waterways of International Importance (AGN) operative from June 23rd, 1997. According to the AGN, the Danube-Oder-Elbe Canal represents a link for the so-called waterways of international importance E80 (Le Havre-Conflans – Le Havre Tancarville – Koblenz – (Rhine) Mainz – Bamberg – canal Main-Danube – Kelheim – Sulina), E20 (Hamburg – Magdeburg – Pardubice – Prerov – Danube) and E30 (Szczecin – Wrocław – Kozle – Ostrava – Prerov – Danube).

However there are a number of interesting facts resulting from the legal analysis carried out by a private lawyer (2000) upon the request of the Administration of the Poodri Protected Landscape Area in the Czech Republic concerning claims by the DOEC to construct on its territory. According to this assessment the remark "(connection Oder-Danube)" included in the Annex I of the European Agreement on Main Inland Waterways of International Importance (AGN) cannot be interpreted as a legal obligation of the Czech Republic to construct the canal on its territory. Finally, the AGN treaty (ratified by the Czech Republic) cannot be interpreted – or even implemented – so as to breach other international treaties for which the country is a Contracting Party, such as the Ramsar Convention on Wetlands.

As a result of the inclusion of the DOEC into the AGN agreement, the construction of the DOEC has been included into a number of national policies and plans in CE countries. Several projects along the planned DOE canal in the Czech Republic, Austria, Slovakia and Poland are at various stages of planning/completion. The following paragraphs provide an overview of the national policies and some of investment plans along the affected rivers that have a direct or indirect relationship to the construction of the DOE canal.

### Slovakia

The Inland Water Transportation Development Plan for the Slovak Republic includes the construction of the Bratislava-Wolfsthal water dam and preparation of the DOE canal in compliance with the European Agreement on Main Inland

Waterways of International Importance. According to this plan, the construction of the DOE canal should be continued – in the first phase – as far as the planned port at Devinska Nova Ves (5km upstream of the confluence between the river Danube and the river Morava).

In 2000 a baseline study was registered at the Slovak Ministry of Environment to build a roll-on-roll-off ramp in Devinska Nova Ves. The project has been proposed by Czech Ports (Ceske pristavy) and justified by supposed demands for car shipping from the nearby Volkswagen factory onto cargo ships. Expected costs were around 1.2 million Euro and it was proposed that the project be co-financed by EU PHARE funds. After a local petition against the port was organised, and after the assessment extent was set by the Ministry of Environment as part of EIA procedure, the investor backed out of the project.

In May 2003 the Slovak Ministry of Transport, Post and Telecommunication negotiated with the Czech Ministry of Transport and Services over the connection of the Czech Republic to the river Danube. As previously stated, no decision has yet been made. In June 2003 the Van Miert High Level Group report, followed by the European Commission's September 2003 proposal, proposed improvements to the navigability on the Vienna-Bratislava section of Danube, but without specifying any technical details and, what is worse, with no public participation and without sufficient consultation with professionals in other sectors. In accordance to this proposal the Ministry of Transport, Post and Telecommunication is promoting the construction of the Wolfsthal Dam, which may improve not only navigability of the Danube but also of the Morava River as part of the DOEC 'river' variant.

### Czech Republic

Two Czech legislative instruments support the canal project. Firstly, Government Decision 635/1996 enabled representatives of the Czech government to commence negotiations with representatives of other countries on the DOE canal route to reserve land for the construction of the canal within the spatial plans of territorial units concerned. Secondly, Government Decision 1319/2001 on the adjustment of the Program for Water Transport Development Promotion in the Czech Republic by 2005 promotes the DOEC in as much as it supports making parts of it navigable.

Further plans and activities planned in the Czech Republic, that are connected to the DOE canal are:

#### i) Elbe area

- ▶ Planned Dams or weirs of Prostedni and Male Brezno on the Elbe between Usti nad Labem and the Czech-German border
- ▶ A planned bypass at Prelouc, and enlargement of the waterway to Pardubice
- ▶ A Harbour and industrial zone in Pardubice and Kolin

**ii) Oder area**

- ▶ The Ostrava-Kozle channel
- ▶ An industrial zone near Bohumin (Dolni Lutyne)
- ▶ A part of TEN-T priority motorway corridor: Katowice – Ostrava – Brno – Breclav – Vienna

**iii) Morava area**

- ▶ Planned dams Tvrdonice and Teplice nad Bečvou
- ▶ Planned ports Breclav, Hodonin (Holic) and possibly Lanzhot (Brodske)
- ▶ A part of TEN-T priority motorway corridor: Katowice – Ostrava – Brno – Breclav – Vienna

In March 2003, the Czech Minister of Environment set up a Working Group in his Ministry dealing with the DOE canal. The Working Group, which includes environmental experts as well as several representatives of Czech environmental NGOs focuses on the detailed assessment of environmental, social and economical impacts of the DOE canal on the Czech territory.

In the summer of 2003 the Czech Directorate of Waterways ordered a feasibility study for the waterway connection of Breclav with the Danube (as far as it is known several options will be investigated under this study). The results shall be ready by late 2003.

As far as EU funding is concerned, the project promoters expect that up to 80 percent of the money for the DOEC project will come from EU structural funds, even though the project will be built part by part over the next 30 years.

**Poland**

The situation in Poland differs to the that explained in the previous paragraphs as here the Oder River already exists, while in Austria and the Czech Republic an almost completely new artificial canal will have to be constructed.

In Poland, the biggest impact on the Oder River doubtlessly stems from the 'Programme for the Oder 2006', a plan accepted by the Polish Sejm (parliament) to modernise the entire water system of the Oder basin. This includes inter alia flood protection, but also includes improvements to the navigability of the Oder, plus increasing the use of the Oder for hydropower.

The 'Programme for the Oder 2006' will be implemented between 2002 and 2015. The programme has a total financial value of about 2.5 billion EUR. At least 50% of this sum was earmarked by the Polish government to be co-funded by the European Union; the chances of receiving such a sum are fairly slim. This is owing to the fact that environmental NGOs have been strongly opposed the Programme Oder 2006, since it would destroy valuable potential Natura 2000 sites along the river. Further, the planned construction of two dams on the Oder stands in direct conflict with the EU Water Framework Directive (WFD). Part of the budget of this pro-

gram is reserved for construction work on the Oder, including such work as deepening the river for navigability purposes.

**Germany**

Shortly after the devastating floods on the Elbe in August 2002, the German government announced a total stop to all construction work on the Elbe River. Recently, however, the proponents of further works on the Elbe River are becoming stronger again, even though the transported volume of goods on the Elbe has been decreasing for years. So, although construction remains halted along the Elbe the situation may change in the future.

**Summary**

▶ The revised list of TEN-T priority project includes improvement of navigability of the Vienna-Bratislava section of the Danube. This may substantially improve the navigability of the lower Morava River and enable the construction of the Danube-Hodonin (Breclav) section of the DOEC.

▶ So far, no opportunities for consultation or public participation have been offered by the European Commission to NGOs or to the public to put forward their opinion regarding the proposed TEN-T priority projects.

▶ The TINA has been taken over as an extension of the TENS in Central Europe, without any SEA being undertaken. The same process was neglected while including the DOEC into several national policies in CE countries.

▶ Realisation of the Danube-Oder-Elbe Canal in CE countries is frequently justified by its inclusion into the European Agreement on Main Inland Waterways of International Importance (AGN). However according to legal analysis there is no obligation for countries such as the Czech Republic to construct the canal on their territory. Implementation of the AGN treaty can not breach provisions of other international treaties valid for respective countries, such as the Ramsar Convention on Wetlands.

▶ Several construction works along rivers in CE related to the DOEC are at various stages of planning/completion.

▶ Promoters of these parts of the potential DOEC didn't succeed in including them in the current TEN-T priority list and still count upon receiving a large share (80 %) of EU co-funding for their projects.

## 6. Demands of the 'Life for the Danube, Oder and Elbe Rivers Coalition'

Based on the paragraphs above the 'Life for the Danube, Oder and Elbe Rivers Coalition' makes the following demands:

- ▶ No public EU or national funds should be made available for the construction of any part of the Danube-Oder-Elbe Canal until a full strategic environmental assessment has taken place, and a cost-benefit analysis of all relevant options vis a vis other transport modes is carried out.
- ▶ If, after the relevant assessment, it is found that the construction of the DOEC cannot be carried out without breaching EU environmental legislation, the project should be removed from TEN-T plans, national development plans, operational programmes and relevant policies.
- ▶ EU funds should be used for preparatory studies to develop ecologically compatible transport solutions that respect the provisions of EU environmental legislation, most notably the Birds and Habitats Directives and the Water Framework Directive.
- ▶ The requirements of the Water Framework Directive for no further deterioration in water status and the achievement of 'good ecological status' via integrated river basin management, taking into consideration the specific value of wetlands for water management along the Oder, Elbe, Morava and Danube rivers, must be implemented.
- ▶ EU environmental legislation should be fully implemented, especially the Birds and Habitats Directives in all countries concerned, including the full establishment and safeguarding of the Natura 2000 network of protected areas.
- ▶ Public participation should be an integral part of the TEN-T revision process as well as of any planning and/or decision-making being conducted for specific projects such as the Danube-Oder-Elbe Canal.
- ▶ Awareness raising on the values and functions of natural river ecosystems of Central Europe should be ensured by the EU and national authorities: the preservation of rivers and nature should be the basis for sustainable development.



Oder River – Bridge in Glogow



Ship on the "Hohensaaten-Friedrichsthaler Wasserstraße", a canal next to the Oder in Germany



**Map 1:** The most probable routes of the Danube-Oder-Elbe Canal and the Oder and Elbe rivers.



**Map 2:** The map 4.6 included in the Annex II of the EU Accession Treaty (AA2003/ACT/Annex II/en 1645) showing the Danube-Oder-Elbe Canal as a planned waterway in the Trans-European Transport Network Outline Plan.

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