FUTURE POLICY DIRECTION FOR TRANSPORT ON THE RIVER DANUBE

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Abstract

Since the collapse of the Eastern Bloc, Danube transport has had to rapidly adapt to a new economic and political landscape. Civil war, UN sanctions and NATO bombardment against Yugoslavia[1] in the ensuing decade have further dented an already seriously maimed industry. Nevertheless Danube shipping offers a vast potential; but what are the optimum international policy directions to help realise this potential? This paper analyses past and present policy on Danube transport. This incorporates how international policy impacted upon the Danube shipping industry during the dramatic events and changes of the past ten years. The purpose of the paper is to set out broad policy options for riparian states, the European Union and other international bodies with regard to increasing traffic on the River Danube. Strengths and weaknesses of current policy will be detailed and proposals for future policy direction put forward. Particular reference is paid towards the privatisation process of Danube shipping companies and port operators. The role of dedicated inland navigation promotion agencies and conflicts between other organisations involved in this promotion is addressed. The issue of encouraging modal shift to the Danube is discussed and the varied involvement of non-riparian states is briefly assessed. The paper stems from a series of semi-structured interviews with key players in Danube shipping and policy over the past five years and represents on-going research. The results present a picture of a shipping industry suffering from conflicting international policy and provide policy options that may help to turn the situation around. The revitalisation of the Danube as Central Europe's main trade artery should be of prime importance for the development of the region and its accession into the European Union.

Keywords: River Danube; Inland waterway transport; European policy; modal shift; privatisation
Topic Area: G5 Regional Transport Issues in South/East Europe

1. Introduction

The River Danube is Europe's second longest river however it is the world's most "bullied" waterway. While the Rhine, Volga, Mississippi and other major rivers quietly continue to transport large volumes of cargo, the Danube has an obstruction every step of the way, shipping companies having to contend with everything from civil war and sanctions to intense environmental opposition and inexplicably bombed bridges. These other waterways carry significantly more traffic than the Danube, but because they flow through one or only a handful of countries, policies are much more straightforward. The

[1] *Use of the term* Yugoslavia *in this paper:*

- "former Yugoslavia" *refers to the country of Yugoslavia before the break-up in 1991*
- "Yugoslavia" *refers to the Federal Republic of Yugoslavia between 1992 and 2003 [consisting of the Yugoslav Republics of Serbia and Montenegro only]*
- "Serbia and Montenegro" refers to the country after February 2003 [the new name for the Federal Republic of Yugoslavia]

Danube, on the other hand, flows through ten nations and a melting pot of cultures, political systems and at times conflicting international policies.

2. Historical background

The River Danube is a vital trade link between Eastern and Western Europe. By the mid-Nineteenth Century this assertion had been emphasised by the steam engine and the three vast empires of Austria, Russia and Turkey surrounding the Danube Basin as well as Western European powers each wanted control of this strategic transport artery.

The First Danube Steamship Company (DDSG) was established in Vienna in 1829. The company dominated Danube transport for a century, initially capitalising on poor communications in the Danube region with its own postal service. The DDSG provided the Austrian empire with a vital trading route east via the Danube. Other national shipping companies were established but the DDSG dominated the river even after collapse of the Austro-Hungarian Empire following World War I. The key strategic importance of a strong commercial river fleet is demonstrated by Austria post-WWII when the (albeit much reduced in size) DDSG was heavily subsidised to allow freight rates to compete with those of Eastern Bloc Danube fleets.

Russia controlled the Sulina mouth of the Danube from 1829 until 1856, during which time she failed to maintain adequate navigable conditions to force vessels to use Russian Black Sea ports instead of Turkish (later Romanian) ports on the river. Partly with this in mind, the European Commission of the Danube (ECD) was established in 1856 by Western European powers at the Treaty of Paris following the Crimean War. Ostensibly to improve navigation at the mouths of the Danube, the ECD was primarily established to keep Russia away from this strategic zone (the Treaty of Paris also pushed the Russian border 20 kilometres north of the Danube). While the ECD was praised for its hydraulic engineering successes, Western European policy always took precedence over engineering issues, for example the selection of the central Sulina Channel of the Danube Delta for improvement was the last choice of the chief engineer but politics dictated otherwise.[1]

Russia finally obtained full control of the Danube in 1948. The importance of the river to the Soviet Union is made apparent by Moscow's domination of the river, both politically and commercially, following WWII. Most riparian countries were by then Soviet satellite states and much of the DDSG fleet had been captured by the Soviet Union, with the Soviet Danube Shipping Company (SDP) emerging from WWII with the largest fleet on the river. A political crisis at the start of the Cold War was the 1948 Treaty of Belgrade. The Soviet Union dictated that a new Danube Commission would be established to cover the length of the Danube, composed only of riparian states except for Germany and Austria.[2] Newly installed Communist governments of the satellite states obligingly agreed, despite strong protest from the West. This represented a disaster for many non-riparian shipping companies and abruptly ended Western European political control of this key trade route. Further to this, the international free navigation status of the Danube was somewhat nullified from 1956 with the signing of the Bratislava Agreement, a restrictive cabotage agreement between the riparian national shipping companies (there were by now one or two key state river shipping companies in each Danube country), allowing vessels to trade only to or from their home countries.

2.1 Collapse of the Soviet Bloc

Danube shipping in the Communist era developed into a heavily state-subsidised machine for the movement of bulk cargoes serving often economically unviable heavy industry. Following the collapse of the Communist governments in 1989 much of the economy collapsed with them. This is demonstrated clearly in traffic statistics. The Danube

carried 91.8 million tonnes in 1987, with the figure plummeting to below 20 million by 1994.[3] While the dramatic decline can also be attributed to the civil war in the former Yugoslavia, it is largely due to the collapse of industry in the former Eastern Bloc.

In September 1991, during the turbulent period immediately following the coup in the dying weeks of the Soviet Union, the rudder of the Rostock, a 5657dwt SDP cargo vessel jammed on the main Sulina Channel of the Romanian Maritime Danube at one of the narrowest points and blocked the fairway. It has never been proven but it is widely believed that this was not an accident[4] – perhaps it was the reawakening of Russian policies from over 100 years earlier. While an alternative fairway was quickly completed around the vessel, the shipwreck remains an obstacle to navigation over a decade later.

Modern Ukrainian policy on the Danube has focused on the reopening of Ukraine's Kilia arm of the Danube Delta for sea-going vessels. Romania charges upwards of USD 4000 per single transit of the Sulina Channel for a laden coastal vessel, which partly accounts for the relatively small traffic on the 170-kilometre Maritime Danube. Ukraine wants to fully open the Kilia arm to provide direct access to its Maritime Danube ports of Reni, Izmail and Ust-Dunaisk. Until now financial restraints have prevented her from doing so, however in early 2003 the Ukrainian Transport Minister Kirpa announced that the project is now a top priority for the internal security of Ukraine.[5]

Despite the collapse of the Soviet Union, Russia retains her grip on the Danube by retaining her seat on the Danube Commission, ironically becoming the only non-riparian member state. Modern Russia defends her position on the Danube Commission fiercely, stating that other non-riparian states should join. While this clearly contradicts the Soviet viewpoint of 1948, it displays that Russia still recognises the strategic nature of the Danube – while many other non-riparian countries appear to have forgotten this point. The UK is a prime example of a country once heavily involved with the development of Danube navigation, whereas today she does not even have an official policy viewpoint on the subject. By contrast, Turkey, The Netherlands, France and the Czech Republic all take an active role in Danube navigation policy as demonstrated by their observer status in the Danube Commission.

Russia's interest in the Danube should only be viewed as positive. Indeed it should encourage other non-riparian states to become more involved in the continuing development of Danube navigation. The issue of the control of the Danube has changed considerably. What were originally primarily territorial disputes to control Danube trade in the interests of individual countries have now become cooperation between the relevant nations in the interests of promoting international trade. However, while many countries agree on issues relating to the promotion of Danube transport, political and ethnic differences continue to bring some level of instability to the river.

3. International policy and the Former Yugoslavia

3.1 Civil war

There were two major obstacles to navigation on the Danube during the civil war, in addition to the actual fighting on the bank of the river;

- Serbian imposed transit charge
- United Nations (UN) sanctions enforced by the Western European Union (WEU)

The 1948 Treaty of Belgrade designates free navigation on the Danube, prohibiting riparian states from charging vessels to use the waterway.[6] Starved by sanctions and desperate for hard currency, Serbia nevertheless saw the Danube as a source of funds and imposed a charge for all vessels transiting their territory from 1991. While shipping companies strongly resented the extra expense, transport on the Danube continued.

The Danube was also a source of oil for Serbia. UN sanctions banned oil shipments to Serbia, however those enforcing UN sanctions seemed unaware that an international waterway flowed through the country. Throughout 1992 large quantities of oil arrived in Serbia via the Danube, often in Soviet-flagged river vessels. As the Soviet Union no longer existed it was therefore extremely difficult to trace the source of this traffic, with the Ukrainian ports of Reni and Izmail fiercely denying that they were involved with illegal oil transport.

The real damage to Danube navigation was made by the WEU, the organisation charged with enforcing the UN sanctions on the Danube when the international community finally realised oil was reaching Serbia via the river. Again the low priority of the international community of transport on the Danube is emphasised by their approach: posts were set up at the Serb borders with Hungary and Bulgaria/Romania and from 1993 to 1996 vessels entering Serbia were inspected. If the officers, who in most cases had no experience of the Balkan region, believed the convoy to be heading for a Serb port carrying possibly sanctioned cargo, then the vessels were prohibited from proceeding. The WEU argued that this was the only method of preventing oil from reaching Serbia, but in fact the WEU disrupted Danube transport for all ten riparian states and created an even more volatile situation on the borders of Yugoslavia as those involved in illegally selling oil to Serbia employed increasingly desperate measures to get it there. On a number of occasions legitimate oil cargoes not intending to transit Serbia (for example traffic between Bulgaria and Ukraine) were hijacked and forced to head for Serbian ports, sailing straight past the WEU posts with the crew held at gunpoint.

The WEU inspections were the deciding factor for many shippers: the Danube could no longer provide reliable transport. They were forced to find alternative routes for their cargo. The Romanian Association of River Shipowners and Port Operators claim that 60% of transit traffic through Serbia has never returned following the WEU inspection period.

The lucrative Danube cruise trade also lost out by no longer being able to provide Germany to Black Sea Danube cruises. Initially passengers were taken by road around the former Yugoslavia while their vessels hurried through that territory for the passengers to continue their cruise on the other side, but this was not compatible with the luxury premise of cruise holidays.[7]

Should similar measures need to be implemented in the future to enforce sanctions or other trade restrictions then a more rigorous system needs to be put in place to determine the true destination of the cargo to allow legitimate traffic to continue. This will become increasingly possible with the development of cargo tracking telematic systems.

3.2 International policy disaster: NATO 1999

For the first time since the collapse of the Eastern European Communist governments and the collapse of the Soviet Union itself there was peace on the Danube in the late 1990's and the opportunity for river transport to play its role in the newly opened-up markets of the region. Traffic had started to return to the Danube following the departure of WEU inspectors in 1996 (after the lifting of UN sanctions). It was also the first time that the whole Danube had access to the Rhine, following the opening of the Main-Danube Canal in 1992. Then in 1999 the North Atlantic Treaties Organisation (NATO) bombed eight bridges over the River Danube in Yugoslavia as part of its campaign against that country, blocking navigation completely.

The NATO bombing of the Danube represents the worst aspects of international policy and emphasises the international community's lack of understanding of waterborne transport and it's importance to the regional economy. Whatever the correct response of

the international community to the situation in Kosovo, bombing the Danube was not it. From all official points of view the bridge bombing has yet to be justified.

The main argument put forward by NATO is that the bridges were on key road and rail routes for reinforcing the Yugoslav army, however this view can be quickly countered by the fact that there are no major military bases in Northern Vojvodina. A key unanswered question is why four of the bridges were destroyed and not simply disabled, with the latter option stopping road and rail movements but not blocking the international waterway. A 1977 United States Defence Intelligence Agency report on Soviet Bloc river crossing military capabilities details the ease with which Central and Eastern European rivers can be crossed quickly by makeshift ferry and pontoon bridge.[8] Therefore NATO were fully aware that destroying the bridges would not prevent then Yugoslav President Milosević from sending troops and military equipment across the Danube if he needed to, which NATO in any case knew that he would not. Finally, if the aim of bridge bombing was to stop Yugoslavian river navigation then NATO failed as the bombed bridges stopped navigation for all riparian states except Yugoslavia, because she still had full Danube access both east and west on either side of the bombed bridges.

While all shared the same initial shock that the river had been blocked, members of the Danube shipping community have expressed a variety of reactions to NATO's bombing. Many in the Lower Danube states of Romania, Bulgaria and Ukraine - those most seriously impacted by the blockage - are convinced that the bridges were bombed on purpose to disrupt international transport and thus destabilise Europe, or at least to delay further the accession of these countries into the European Union (EU). Possibly the most realistic view is one of pure ignorance, with the outside world (in this instance NATO) showing little understanding of waterborne transport: NATO simply did not consider river navigation.

Conflicting international policy over the Danube finally stopped the bridge bombing with a complaint from a NATO member - not riparian member states Germany or Hungary but non-riparian France. While this demand may have saved the bridges of Belgrade, it was too late to stop the blocking of the Danube in Novi Sad and elsewhere in Serbia. Hungary may have felt it could not complain because that nation, a new NATO member, was keen to accede to the EU.[9] The reason for Germany's silence is less clear. It can be noted that the Main-Danube Canal, a national German waterway opened in 1992 connecting the Danube with the Rhine, has benefited with substantially more traffic than predicted, due largely to the blockage of the Danube in Yugoslavia. Despite over 50 locks and a narrower waterway, many shippers to Germany, Austria and sometimes Slovakia and Hungary have been forced to send their goods via North West European ports and the canal in place of Constanţa on the Black Sea and the Lower Danube. Lower Danube states Romania and Bulgaria could not complain to NATO about the blockage of the Danube, as these states were eager to join NATO in addition to the EU, placing political aspirations above the vital need of a cheap transport mode for their respective economies.[10]

While indifferent military policy blocked the Danube in 1999, it can also be argued that largely indifferent European and international policy also prevented the problem from being rectified quickly. For four years after the bombing meetings of regional heads of state frequently made the comment "the Danube must be cleared" without specifying a suggested methodology or timescale. However some departments of the European Commission and related agencies have made a decisive effort to implement the clearance of the river, leading to the European Parliament voting to fund 85% of the cost of clearing the bridge debris in Novi Sad where three bridges were bombed intensively.[11] The clearance and riverbed rehabilitation work was completed by June 2003 however the question has to be posed, is this really acceptable over four years following the bombing?

EUR 22 million (85% of the total estimated cost) seems hardly significant compared to the estimated EUR 1 million that the Danube port and shipping industry alone lost per day during the blockage.[12]

Milosević remained in power for a year and a half following the commencement of the NATO campaign. Although the EU allocated the funds in July 2000, Milosević refused to allow the clearance of the Danube to go ahead without funding for replacement bridges. The European Commission refused to fund the bridge reconstruction while Milosević remained in power. The United States of America went one step further and stated they did not believe the European Commission should fund even the clearance of the river while Milosević remained in power, clearly disregarding the importance of river navigation to Central and Eastern European states dependent on this transport mode. Following the departure of Milosević in October 2000, the new Yugoslav and Serb governments permitted the clearance work to get underway.

Since 1999 Vojvodinan, Serbian and Yugoslavian (local, regional and federal) government have used the bridge wreckage as a trade-off, principally by limiting the opening of a temporary pontoon bridge, to ensure that reconstruction funds are received. This can be seen as justified considering the huge impact the bridge destruction has had on the local community – as well as carrying thousands of commuters on a daily basis the bridges carried water and electricity supplies. Except at times of very low water, it has been possible to navigate over the bridge debris in Novi Sad since late 1999, with an official safe marked fairway opening in November 2001. The true Danube blockage is now not the bridge debris itself but the temporary pontoon bridge in Novi Sad. The Serbian authorities are determined that the pontoon bridge will not be removed until the nearby 6-lane Sloboda road bridge has been restored and reopened. Funding was eventually found for this bridge through the European Agency for Reconstruction but the contract was not signed until July 2002 and the completion date for the bridge is not until late 2005. It can be suggested that if the EU was keen to fully reopen the River Danube it could have significantly speeded up the Sloboda Bridge reconstruction process. Meanwhile the Danube Commission Secretariat has persuaded the Serb authorities to open the pontoon bridge for river traffic to pass three nights per week (from only once per month in early 2001) and to reduce the transit charge to EUR 0.40 (previously DM 3.- / EUR 1.53) per grt. Like the Serbian transit charge in the mid-1990s, this toll is against the terms of the 1948 Treaty of Belgrade. Nevertheless this demonstrates the success of the Danube Commission, which has been in the awkward position of having both two NATO countries and Yugoslavia as members and therefore also being unable to publicly criticise NATO's actions.[13]

A division of the Budapest-based Danube Commission specially created for the task, the Clearance Project Unit, organised the clearance work. Being concurrently largely funded by the EU, a division of the Danube Commission and operating in Serbia-Montenegro the Clearance Unit had to contend with at least three different types of often conflicting and notoriously complex bureaucracy from these bodies. Despite this the Clearance Unit progressed relatively quickly and had the Novi Sad section of the Danube fully cleared and reopened by mid 2003.

Political pressure to persuade river cruise operators to re-introduce Germany to Black Sea cruises has been significant. Ministries of Tourism in all riparian states apart from Moldova and through the Danube Tourist Commission of which they are each members persuaded the Serbian authorities to allow cruise vessels to pass Novi Sad free of charge. The success of this initiative is apparent by the return to the Lower Danube of almost all Danube cruise operators since the 2002 season.

The NATO bombing of the Danube in 1999 demonstrates how disastrous the effects of ill-informed policy making can be. The blockage of the river was the biggest single constraint to Danube navigation since regular steam navigation began. Without access to a cheap bulk transport mode industry has suffered throughout Central and Eastern Europe. For example, ZSNP aluminium producer in Slovakia, Dunaferr steel works in Hungary and Tepro pipe works in Romania each reported substantial losses, citing the Danube blockage as a key factor in the decline. A major inland shipyard went bankrupt[14] and several smaller companies went out of business altogether due to the Danube blockage. The importance of river navigation on the Danube and elsewhere has to be clearly understood by international policy-makers at all levels to prevent such nonsensical actions as the blocking of an international waterway from occurring again.

4. Navigation policy: Depths versus environmental opposition

For inland navigation to be competitive with other modes a reliable and cost effective service must be offered. The Danube however cannot offer sufficient depths all year in ten key sectors, most notably between Straubing and Vilshofen in Germany and between Brațul Bala and Cernavodă in Romania. The Danube Commission requires a minimum depth of 2.5m on the fluvial Danube, however the minimum depth falls below 1.3m on the Straubing-Vilshofen sector. Despite many years work having been put into researching this project, it has still not been decided which river training method should be employed to improve this awkward section of the River.[15] Whichever one is selected the scheme is already fiercely opposed by the environmental lobby who believe the river should be left as free flowing. This has influenced the German Federal government who have spoken in favour of a "compromise" solution, while the Bavarian government are generally in favour of new hydro-electric plants to provide the required depths for navigation.

The Gabčikovo-Nagymaros dam is the ultimate example of conflicting policy on the Danube. This vast civil engineering project involved diverting the Danube and the construction of two large dams for hydroelectric power generation and also to improve navigation. The project was a joint Communist-era Czechoslovak-Hungarian collaboration. However with the collapse of the Communist governments in 1989, the new administration in Hungary decided to pull out of the scheme on environmental and cost grounds. Unfortunately by this time Czechoslovakia had nearly completed her section in Gabčikovo, which was opened despite intense political pressure and environmental opposition in 1992.[16] One half does not function properly without the other, but the other half was never completed. The case went to the International Court of Justice but no conclusive verdict was forthcoming. It is now widely accepted that Hungary will not complete the Nagymaros section of the scheme, except by Slovakia (Slovakia and the Czech Republic split in 1993), who still intend to see the project completed. While a detailed examination of this issue is beyond the scope of this paper, the Gabčikovo case demonstrates how policy decisions for the Danube can be radically different between neighbouring riparian states.

While constructed primarily for hydroelectric power generation, such schemes also dramatically improve navigational reliability and safety. There are fifteen hydro-electric schemes with associated locks on the German and Austrian sections of the Danube, with a further two large structures on the shared section of river between Serbia-Montenegro and Romania at Iron Gates I and Iron Gates II. Popular with shipping operators, they are usually unpopular with environmentalists because they change the river regime and submerge natural habitats.

The Danube is both the main water supply and the main sewer for the ten countries it passes. Therefore the promotion of environmental issues and international efforts to clean the river are very much needed and welcomed by the riparian states. Shipping companies

however feel that they are unjustly accused of heavy pollution. Environmental agencies including the UN Environmental Programme and the WWF have launched strong protests about channel improvement projects (including Straubing-Vilshofen) and express concern about the increase in Danube traffic now that the navigational constraints in Serbia-Montenegro have lessened. The Danube transport industry feels these are grossly unjustified comments. They argue that inland waterway transport is the most environmentally friendly mode, the environmental damage done by the channel regulation works and vessel operations is minimal compared with the emissions of the road vehicles which will carry the cargo if the Danube is unable to provide an adequate service.

5. Fleet and port infrastructure

Policies of the European Commission and of the various promotion agencies listed in Table 1 below can fail Danube shipping at times. For example, many prioritise navigational and logistical River Information Services (RIS) while largely ignoring the ageing fleet. Already millions of Euros have been spent on researching and implementing RIS. While RIS will indeed be revolutionary on the Danube when fully implemented, many of the largest fleets on the river - on the Lower Danube - have not been involved with the studies so far and feel somewhat "left out". These shipping companies complain that they cannot afford to equip their vessels with the required technology to utilise the proposed RIS. The priority should be fleet and port infrastructure investment, modern navigational aids are very important but should not take precedence over the vessels themselves. 44% of the Danube fleet is over 25 years old leading to high maintenance costs, higher fuel consumption and poorer reliability. Equally port facilities are outdated often with crumbling infrastructure and poor cargo handling facilities.[17] Policy should now focus on the three key issues of fleet, ports and waterway. Investment is urgently required along the length of the Danube to ensure it remains a competitive, reliable and environmentally friendly mode of transport in Central Europe.

5.1 Privatisation

5.1.1 Fleet policy

Table 1 displays that Danube countries have each progressed to a different stage in privatising their principal Danube shipping companies. All have expressed an interest in part or full privatisation except for Ukraine, where the merchant fleet and port infrastructure is to remain under state control. Serbia-Montenegro and Croatia are somewhat behind other states but have each referred to the eventual privatisation of their respective river shipping companies.

Varied shipping policy on the Danube is also apparent in the total fleet capacities. Romania was the only country to continue building river vessels in any quantity after 1989 (about five pusher tugs per year – still not nearly enough to replace the obsolete tonnage) while the other countries almost halted newbuildings. The figures in table 1 accurately portray potential fleet capacity, but they do not show the proportion of vessels out of service. Romania today has the largest fleet on the river but also has the most vessels laid-up. Much of Germany's small Danube fleet has been reregistered to Eastern European flags.

Table 1: Danube shipping company ownership and carrying capacity

Riparian State	Principal Shipping Company	Ownership of Principal Shipping Company	Riparian State 2000 Total Carrying Capacity (tonnes)
Germany	Bayerischer Lloyd (Regensburg)	Privatised 1995	93560*
Austria	DDSG-Cargo (Vienna)	Privatised 1993	232403
Slovakia	SPaP (Bratislava)	Privatised 2002 (following several abortive attempts)	347370
Hungary	MAHART (Budapest)	State (latest attempt to privatise underway in 2004)	196624
Croatia	Dunavski Lloyd (Sisak)	State	99616
Serbia-Montenegro	JRB (Belgrade)	State	579357
Bulgaria	BRP (Rousse)	State (privatisation in progress)	325754
Romania	Navrom Galați / NFR Drobeta / CNF Giurgiu	Privatised 1998 (with some level of indirect government control remaining)	1777939
Moldova	[negligible Danube fleet]	N/A	17789**
Ukraine	UDP (Izmail)	State (reclassified as the national shipping company of Ukraine, following the collapse of most of the others)	809134

source: face-to-face semi-structured interviews with shipping companies;
Commission du Danube (2002), *Annuaire Statistique de la Commission du Danube pour 2000*, Budapest.
*latest available Germany data 1999
** Moldova figure includes or consists only of vessels on the River Dniester

5.1.2 Port policy

The extent of port privatisation on the Danube also varies with the riparian states' different port policies. The usual Danubian definition of 'port privatisation' is an operating concession with the state retaining at least landlord control of the port estate, but this varies from one country to the next. Following restructuring of many Danube port administrations in the mid-1990s, many are now transferring ownership, either closer to the private sector or to an alternative state administration. Several riparian Ministries of Transport have considered international best practice in port ownership with particular attention paid to the ports of Rotterdam and Duisburg. Danube ports are increasingly attracting private companies to the port estate not only to operate terminals and undertake stevedoring but companies providing warehousing operations, logistics services, manufacturing industry and other added value activities.

The Ukrainian government has declared that following international best practice, they will not fully sell off the nation's ports, as some degree of state control is required in this industry. Ports in Ukraine have already been "commercialised" by transferring to joint stock companies, but still fully under state control.

Moldova has less than one kilometre of Danube bank and has tried to build a port there with European Bank for Reconstruction and Development funding and Greek partners on the build-operate-transfer concept; however this failed and the partners were forced to resort to the Court of Arbitration in London. In April 2002 Russian President Putin confirmed that Russia would complete the oil terminal and also construct a fruit and vegetable terminal. This surprise declaration emphasises both Russia's longstanding policy on the Danube as discussed above and the small republic of Moldova's continued reliance on Moscow despite independence in 1992. In February 2003 the Russian state transport company Inmortrans outlined an investment of USD 44 million in the new port at Giurgiulesti and also referred to new Danube shipping operations of both Moldova and Russia,[18] confirmed by the Russian Ministry of Transport in December 2003. Despite a decade of failed port policy objectives for Moldova, the small nation may yet complete her vital port due to the ever-present Russian understanding of the Danube's potential and strategic importance.

Overall landlord control of river ports in Romania is to remain firmly with the Ministry of Transport after an unsuccessful three-year experiment in which four ports were transferred to Municipal ownership. Reports of increased tariffs and decreased maintenance resulted in a dramatic decline in traffic through some of these ports.

Concessions for private terminal and port operators have so far proved a notable success in Romania, with an emphasis on modernisation and investment. These policies are demonstrated with an increase in port productivity with more vessels and cargo handled and a higher turnover for almost all private operators. Concessions have been made available for both individual terminals (for example TransEuropa in Turnu Severin and Brăila, where the company built new grain silos in 1997) and whole ports, such as Docuri and Bazinul Nou in Galați, which are both owned by a Bucharest-based metal products trading company. Concession periods vary, although those to operate whole ports are for considerably longer periods (about 50 to 99 years) than individual terminals (10 to 25 years). The ore port in Galați, Romportmet, handles ore for the nearby ISPAT-Sidex steel works complex. This port's operations were privatised in 2000 with ownership now split between Broadhurst Investment of Cyprus and Sidex itself. Foreign involvement in the Romanian Danube port and shipping industries is on the increase with Broadhurst also a major shareholder in the largest Romanian privatised shipping company, Navrom Galați. Despite difficult times at present, the potential of Danube ports and shipping has not gone unnoticed.

Bulgaria will shortly be offering operating concessions at its sea and river ports. The success of the Bulgarian Danube Port of Lom in receiving EUR 17 million from the European Investment Bank for infrastructure regeneration reflects on the policies of cooperation between different government departments. Lom is the only Lower Danube port to have received such funding (despite almost all Lower Danube ports requiring substantial infrastructure investment). The port also expects to receive funding from the Balkan Reconstruction Programme of the Greek government and work is planned to commence in 2004.

In Serbia-Montenegro a transport company privatisation law is presently being drafted. The extent to which ports are to be included is presently under review. Meanwhile, privatisation and commercialisation are underway at the Croatian river ports of Vukovar and Osijek. The Danube port of Vukovar was owned by the VUPIK state conglomerate and has now been restructured into a new concession-awarding port authority under the Ministry of Transport.

There are a variety of ownership regimes in Hungary, with the infrastructure of the majority of ports under state control. Hungarian shipping company MAHART has port

interests in Budapest with it's own port at Csepel. There are a number of fully private ports however, including Dunaferr steel mill's port at Dunaújváros and private terminals, such as Ferroport within Csepel.

Slovakia's ports have recently been fully privatised together with the rest of the shipping and port company SPaP. The Slovak Government's Privatisation Agency NPF awarded the tender for its 87% stake in SPaP to Dunajservis for the second year running in April 2002 after cancelling the 2001 tender. Dunajservis is backed by the Slovak "corporate raider" Penta Group.[19] A number of abortive attempts have been made in the past at privatising SPaP, including in March 1997 when a majority of SPaP employees opposing the privatisation attempted to purchase a majority stake in the company. Some members of the former SPaP management criticised the privatisation for only considering the price the company will fetch rather than the level of investment that the buyer will make into the company. The privatised company has been partially split up and resold.[20] To ensure the ports of Komárno and Bratislava are operated in the interests of the local economy, the respective municipalities are both shareholders, but nevertheless the future of Slovakia's Danube ports along with the rest of SPaP is somewhat uncertain.

Danube ports in Austria and Germany are under state ownership (municipal or regional governmental control) with both public and private terminal operators. Despite varied approaches to port operations, most Danube countries have opted for the landlord port model with private concessions.

6. Policies to encourage modal shift to The Danube

After the dramatic losses of the past decade the River Danube urgently needs to win back lost traffic and to attract new higher value cargoes. Before doing so however Danube transport will need to prove its reliability and to integrate further into the European transport system. While the river's principal traffic is likely to always remain bulk cargo, opportunities for the transport of unitised higher value cargoes are increasing dramatically with the growth of trade in Central and Eastern Europe. There is a huge potential for additional Ro-Ro services operating the length of the river and new container services from the recently completed container terminal in Constanța.[21]

Transport policies for Danube ports to evolve into logistics hubs have succeeded in attracting more traffic to the ports, although not always river traffic. Container terminals in Bratislava and Budapest, for example, have been a notable success, but almost all movements are by road and rail with only occasional river container traffic (scheduled container services to these ports from Rotterdam were unsuccessful). Hungary selected four Danube ports to develop into multimodal logistics centres with the aim of integrating into European transport chains (Győr-Gönyű, Budapest Csepel, Dunaújváros and Baja).[22] Developments included a new Ro-Ro terminal opened at Győr-Gönyű in late 2000 as part of an intermodal terminal development, following a similar terminal opening at Baja in autumn 1999. Costs were shared between the EC funded Phare Programme and Hungary. Unfortunately little traffic has been attracted to the new facilities as the Hungarian transport network is heavily centralised on Budapest. This demonstrates that government and EC priorities on the Danube are not always where they should be – shippers and shipping companies should be more involved in such major infrastructure investment projects.

Romanian policy is attempting to attract more trade to the country and specifically more traffic through it's ports by extending the existing free trade, or "export processing" zone status in five ports (Giurgiu, Brăila, Galați, Sulina and Constanța) to cover whole ports. The creation of free ports will simplify and reduce customs requirements. This also encourages crucial added-value activities at the port with increasing numbers of western

European investors being attracted to ports, including the existing Free Trade Zones. Three ports have already obtained free port status: Constanța and Galați ports Docuri and Bazinul Nou.

Governments realise the importance of attracting new traffic to river transport and targets are high. The Croatian Ministry of Transport aims to increase the market share of river transport from its present two percent to fifteen percent before 2011 (including the Croatian sectors of the Rivers Drava, Sava and Danube).[23] Meanwhile, the EUDET report stated that fourteen percent for the whole Danube is technically possible.[24]

It can be noted that as large multinational corporations are purchasing the surviving heavy industry of Central and Eastern Europe, responsibility for transport decision-making is moving from individual sites to global company policy. Trade patterns of industry on the Danube are shifting from the demand for one manufacturer's product to the economic status of a whole international group.[25] Danube transport has to adapt accordingly, and become a player in the global transport marketplace. Improved intermodal links in Danube ports and the further integration of river transport into the supply chain are two examples of how this can be achieved.

7. Strengths and weaknesses of European policy and inland shipping promotion

It has been commented that there are several international organisations charged with the role of developing Danube shipping, and yet there is very little progress on the Danube in this regard. The former Hungarian Foreign Affairs State Secretary specifically drew attention to the duplication created by the Danube Cooperation Process,[26] which was initiated in May 2002 as a further organisation aimed at creating closer links between Danube states in a variety of fields including navigation. Table 2 below demonstrates that there are indeed a comparatively large number of European based intergovernmental and nongovernmental organisations involved in the promotion of Danube transport. In fact the involvement of so many organisations in the promotion of Danube transport should only be praised, although even closer cooperation between these agencies should be encouraged to avoid duplication. The principal constraint is that the shipping companies themselves are not represented by any of them. While government involvement is necessary, the consultation of those who utilise and provide river transport is crucial. The available funding should be targeting infrastructure projects following consultation of key shipping companies, shippers and port operators.

The only access operators have to these organisations is usually indirectly through their respective national governments. Even companies still belonging to the state have difficulty getting through the unavoidable bureaucracy that is required to present a specific concern to one of these organisations via this method. The solution for some shipping companies is the Bratislava Agreement. This still represents a forum for the companies to discuss problems amongst themselves without resorting to the higher political level of Ministries of Transport or the Danube Commission. However the Bratislava Agreement is far from the ideal body to represent Danube shipping. Its anti-competitive nature of fixing rates for all major ports and shipping companies represents something of a "closed-shop" for everyone outside the organisation. Membership remains open for the former national shipping companies of the riparian states, while non-riparian and new small private operators are excluded. The Bratislava Agreement represents thriving Communist-era policy still very much in force on the river.

Shortly after 1989 the Romanian river shipping division of the state shipping company Navrom was split into three with a number of new small operators also starting up. Together these companies founded the Romanian Shipowners and River Port Operators Association. The association has both strong political and commercial links and is not

afraid to make its grievances known. This assertion is demonstrated by the association's blocking of the Romanian Danube for three days in September 1999 and again in September 2000 to draw attention to the crisis in the Danube shipping industry caused by the blockage in Yugoslavia. The Romanian government eventually wrote off taxes and other debts owed to the state by Romanian Danube shipowners and port operators, a total debt estimated at EUR 1.5 million.

The European Barge Union (EBU) already exists to represent inland navigation interests throughout Europe and can be commended in this regard. However the EBU does not currently have any Eastern European members nor a particular focus in that region and like Inland Navigation Europe (INE) consists of largely government agencies. INE is an umbrella for European inland navigation promotion agencies and is not intended for shipping companies themselves.

What is required for the Danube transport industry is a Danube-specific lobbying organisation similar to the Romanian Shipowners Association but for the whole river and with a voice in Brussels. A Danube waterway lobby run in the interests of shipping operators rather than that of riparian governments or government promotion agencies. In addition this new organisation could replace the obsolete remaining section of the Bratislava Agreement.

European legislation is having an increasing impact upon the River Danube. However much of the Danube shipping community feel very isolated from Brussels. There is a clear need for more direct contact between the European Commission and these bodies, an avenue for river transport to explain to the European Commission the changing needs and problems of the industry. For the Danube to become fully integrated into European Transport Policy there needs to be a great deal more dialogue between the policy makers and individual Danube shipping companies, port administrations and operators, again not only through the respective Ministries of Transport. Danube ports (which choose to join) are already represented in Brussels by the European Federation of Inland Ports (EFIP) which lobbies on their behalf. EFIP has achieved much in forcing the European Commission and Parliament to take inland ports seriously, however still closer links directly between Danube ports and shipping companies and the European Commission are required. This strengthens the case for the Danube-specific lobbying organisation outlined above.

The European Commission's Trans-European Transport Networks (TEN-T) are aimed at boosting growth, competitiveness, employment and economic and social cohesion across Europe. Waterways did not originally feature very prominently in TEN-T, however in April 2001 – partly due to the efforts of EFIP – inland ports handling over 500,000 tonnes per annum or with intermodal installations became eligible for funding under the scheme. In the October 2001 revision of the TEN-T 1996 guidelines a list of seventeen priority projects included one on the Danube, the Straubing-Vilshofen bottleneck. As the only waterway project on the list INE complained that this was simply not adequate if the European Commission was to meet its modal shift targets.[27] At that stage TEN-T policy could be criticised on two basic levels. Firstly, it did not seem to take into consideration other European transport network policy initiatives such as the Transport Infrastructure Needs Assessment (TINA) ten multimodal transport corridors in Central and Eastern Europe. Then the very nature of TEN-T was questioned; projects were frequently in the national interests of member states and not the wider interests of the community, indeed not Trans-European.[28] This is demonstrated by the priority of tackling individual bottlenecks, such as in the case of Straubing-Vilshofen.

Table 2: Key organisations involved in the promotion of Danube transport

Organisation	scope	funding source
Danube Commission (Budapest, Hungary)	Navigation & regulation of the Danube	Member state governments
United Nations Economic Commission for Europe Inland Transport Committee: Working Party on Inland Water Transport (Geneva, Switzerland)	Technical & Legal development of inland navigation	United Nations
Transport Infrastructure Needs Assessment: Corridor 7 (Vienna, Austria)	Transport network infrastructure	European Commission / City of Vienna
Southeast European Cooperative Initiative: Danube Transport Working Group (Vienna, Austria)	River transport development	various European countries & USA
Stability Pact for South Eastern Europe (Brussels, Belgium)	Infrastructure investment	international community
Danube Co-operation Process (joint Austrian/Romanian initiative)	Increased cooperation between riparian states	Riparian states, Stability Pact, European Commission
European Conference of Ministers of Transport (Paris, France)	Policy Cooperation Forum	42 European Ministers of Transport
via donau (Vienna, Austria)	Promoting Danube transport, with specific regard to River Information Systems	Austrian Ministry of Transport
IVR (Rotterdam, The Netherlands)	Inland vessel register; harmonisation of legislation on European waterways	members
Inland Navigation Europe (Brussels, Belgium)	Lobbying for inland navigation	Member navigation promotion agencies, start-up assistance from the European Commission
European Federation of Inland Ports (Brussels, Belgium)	Lobbying for inland ports	Member ports

It could be suggested that the TEN-T represented a "backdoor" or "pass the blame" method of pushing through projects which were considered necessary by member state governments but which may be unpopular with voters. However the relationship between TEN-T policy and IWT changed for the better with the publication of the Van Miert Report in June 2003. This report prioritises Rhine-Main-Danube Corridor waterway infrastructure projects, lists the ten Danube priority sectors and costs them at EUR 1.7 billion.[29] While the report makes no suggestions regarding how such funding could be obtained, it is certainly a step in the right direction for TEN-T policy.

There are some clearer success stories. For example, the United Nations Economic Commission for Europe[30] (UNECE) with the Danube Commission and the Central Commission for the Navigation of the Rhine have succeeded in harmonising carriage of goods legislation for both key European waterways. The Budapest Convention[31] was signed in Budapest in October 2000 and replaces the carriage of goods section of the Bratislava Agreement. The Budapest Convention represents a balance of European inland navigation law, for the first time unifying inland waterway transport law across Europe.

8. Conflicting international policy

Conflicting policy on the Danube can be seen from within two of the world's largest intergovernmental organisations, the United Nations and the North Atlantic Treaties Organisation. The UNECE has been the primary agency for several years in the standardisation of inland navigation legislation, technical and safety requirements in Europe. However another agency of the United Nations, the Global Environmental Facility, has spoken out strongly against the increasing of river traffic on the Danube, concerned at the environmental devastation that they believe will prevail. The UN's most damaging policy against Danube transport was the sanctions against Serbia in the mid-1990s.

In May 1996 NATO held a research workshop in Budapest bringing together Ministries of the Environment from all countries in the Danube Basin (except Moldova) and experts from NATO countries on water quality monitoring and data sharing systems.[32] Three years later NATO's bombing of Danube bridges and oil refineries in Serbia brought environmental devastation to the Danube Basin. Large quantities of oil products and chemicals were released into the Danube, while the use of uranium tipped warheads has created long-term pollution of unknown proportions. Certainly bodies such as the UN and European Commission need to represent all viewpoints, but many companies on the Danube see the same organisation giving with one hand while taking away with the other.

9. Conclusions and future policy directions

This paper explains the wide variety of factors of Danube shipping policy which have either created or failed to prevent a crisis in the industry almost continually since 1989. During fundamental political changes, civil war, sanctions and NATO attack on the Danube, river transport has been the lowest priority of the international community and even on occasion the riparian states themselves. Closer cooperation with each other is required of the array of intergovernmental and nongovernmental agencies involved with promoting Danube shipping to ensure that this does not happen again.

Most critical of all is the role of Danube shipping companies in Danube policy making. They must be involved. Direct links between the Brussels institutions and Danube shipping companies and ports are essential. Dialogue between policy makers and service providers is clearly of vital importance. This will not lessen the significance of existing governmental links, but will provide the European Commission and other institutions with a better chance of understanding the commercial reality and constraints of Danube transport as

opposed to only hearing the regulatory issues. An association of Danubian shipowners and operators is required to represent all shipping companies together and to act as a partial replacement for the Bratislava Agreement. The new association should from the outset work closely with existing inland navigation promotion and other key agencies including INE and the Danube Commission.

Danube shipping must adapt from being purely a bulk transport system to an integral part of the supply chain within the European transport system. The marketplace continues to evolve rapidly and so Danube shipping has to adapt to these changes or get left behind. Above everything else the River Danube, especially the Middle and Lower reaches, requires large-scale infrastructure investment for desperately needed fleet, port and waterway improvement. The Danube now has the opportunity to provide a strategic, cost-effective and reliable transport system to become once more the key transport artery of Central Europe. However this is very much subject to the correct policy decisions being made. The Van Miert report has made a good start, but much more is now required.

In summary, this paper can put forward the following broad policy direction suggestions:

- Create an association of Danube shipowners and operators
- Danube shipping companies require representation in Brussels
- Direct consultation of the Danube port and shipping industry with regard to European policy is imperative
- Funding priority: Infrastructure. Fleet, port, waterway.

References and Notes

[1] Hartley, C.W.S., 1989. A Biography of Sir Charles Hartley, Civil Engineer, Volume One, Edwin Mellen, Lampeter, p.117.

[2] Austria joined the Danube Commission in 1960, although Germany did not become a full member until 1998, at the same time as the new states of Croatia and Moldova.

[3] Commission du Danube, 1997. Ouvrage de Référence Statistique de la Commission du Danube pour la période 1950-1995, Commission du Danube, Budapest, p.27.

[4] Residents of the Romanian village of Partizani recall that the crew, complete with suitcases, stepped off the stern onto the bank (before it collapsed) without even getting their feet wet.

[5] Katkevitch, V., 2003. Ukraine recognises Danube-Black Sea Channel as foreground task, SeaNews, 4 April.

[6] Except in specified sectors where above average levels of dredging and other maintenance costs are born, such as the Sulina Channel and Iron Gates sections.

[7] Meanwhile the Danube cruise trade upstream has expanded dramatically between Germany and Hungary since the mid-1990s, with 86 cruise vessels operating on the river today (2004).

[8] Defense Intelligence Agency, 1977. Soviet and Warsaw Pact River Crossing: Doctrine and Capabilities, DDI-1150-13-77, Department of Defense, Washington DC.

[9] Unless a further unproved (and extremely unlikely) theory applies, that new NATO member Hungary actually requested the bridges to be bombed to prevent Milosević's troops from invading that neighbouring country. Hungary is due to accede to the EU in May 2004.

[10] Romania and Bulgaria may accede to the EU in 2007 (and are expected to join NATO shortly – see point 13 below)

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[12] Martin, E., 2002. The impact of the Novi Sad blockage of the River Danube on river ports, The Danube Summit – Conference Proceedings, Volume 2, 26-27 June, Constanţa, Romania.

[13] This situation is however changing rapidly, with three further riparian states expected to join NATO in 2004 (Slovakia, Romania and Bulgaria) and many other riparian states aspiring to join at a later date, including Serbia-Montenegro.

[14] SLK in Komarnó, Slovakia. Management problems were also cited as reasons for the bankruptcy and the yard was eventually rescued with government support.

[15] Reche, J., 2002. "Eliminating a bottleneck on the German Danube. Straubing-Vilshofen: Evaluation of Alternatives and Decision Process", PIANC Bulletin, No. 110, pp.45-53.

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[18] Infotag, 2003. Russian State Company to Invest in Giurgiulesti Port, 17 February.

[19] Smolka, D., 2002. Dunajservis again takes SPaP in repeat tender, The Slovak Spectator, 15 April.

[20] For example SPaP passenger shipping operations were sold to Spanish company Tabacmesa SA in October 2002. Shareholders of the port and shipping company in addition to the local municipalities include transport company Budamar Transport and investment company Istrokapitál.

[21] For details see: Martin, E., 2000. Opportunities for Modal Shift to the River Danube with specific reference to Romanian River Ports, Forum Romania at the Crossroads International Transport Conference – Proceedings, 3-5 April, Bucharest.

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[29] Van Miert, K., 2003. High Level Group on the Trans-European Transport Networks: Report – Technical Annex, European Commission, 27 June, Brussels.

[30] United Nations Economic Commission for Europe - Inland Transport Committee - Working Party for Inland Water Transport

[31] Central Commission for the Navigation of the Rhine, Danube Commission and United Nations Economic Commission for Europe, 2000. Budapest Convention on the Contract for the Carriage of Goods by Inland Waterways (CMNI), ECE/TRANS/CMNI/CONF/2/FINAL, 3 October.

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