The Bystroye Canal in the Ukrainian Danube Delta – Questions and Answers
Updated 24 June

Summary
On May 11 2004, the Ukrainian government officially launched the construction of a canal to aid shipping through the Danube Delta. The actual digging started on 16 May. The Government has chosen a route called the Bystroye Canal that will cut through the heart of the Ukrainian Danube Delta Biosphere reserve. This part of the Delta is regarded as the most ecologically highly valuable part of the internationally renowned Delta. Up to eight alternatives have been suggested for the route of the canal including two suggested by a special Ramsar and UNESCO mission to the Delta. The government of Ukraine propose to use the canal to reignite the shipping industry in the delta as a solution to the unemployment problems in the closed Delta ports. Ships at present have to access through the Delta along the Sulina Canal in Romania. The Government of Ukraine claims that the use of this route costs them billions of dollars per year in fees. The construction of the canal that has begun will have a severe negative impact on both the ecology and the socio-economic situation in the Delta. The action by the Ukrainian Government demonstrates a serious lack of commitment to international conventions that Ukraine is signatory to, breaks international laws and has shown that Ukrainian government is prepared to renege on promises made to protect the Delta.

Where is the Ukrainian Danube Delta and the Bystroye Canal?
The Bystroye Canal (former Novo Stambulskoye) runs through the middle of the Ukrainian part of the Danube Delta. The Delta is shared by Ukraine and Romania and is found where the Danube finally meets the Black Sea after its 2840 km long journey through 10 countries. The Bystroye Canal starts 7 km downstream the city of Vilkovo. It is option 2 on the map below.
What are the natural, social and economic values of the Ukrainian Delta?
The Ukrainian part of the Danube Delta is a very dynamic ecosystem comprising 73200 hectares (the Romanian part is 344600 ha, together 417800 ha) of extended reed beds, small lakes of various sizes and natural river levees of gallery-like softwood forests. On the sandy dunes a complex mosaic of hardwood floodplains forests and dry steppe vegetations alternates. The entire Danube Delta has been selected by WWF as one of the world’s 200 most important regions for biodiversity conservation. It is the second largest wetland in Europe and the largest reedbed in the world. It is critical to a number of globally threatened species. It is home to about 330 bird species, 70% of the world’s white pelican population (and 60% of the world’s pygmy cormorants. The Delta is home to a remarkable population of glossy ibis, spoonbill, different species of egrets and herons. Most of the European freshwater fish species (around 70 species) exist in the Delta. Because of its remarkable biodiversity, the Delta was listed by Ukraine under the Ramsar Convention as a Wetland of International Importance on 23 November 1995. The secondary Delta of the Kilija/Chilia branch of the Danube is the youngest territory of Europe, growing continuously in front of our eyes. The Kilija secondary delta is rich in samples of the evolution of new deltaic habitats that from the scientific point of view are highly valuable.

The Delta is not only of high natural value but is important economically and culturally. The people of the Delta have their own customs and practices that have evolved through their close relationship with the Delta. Over 15000 people live in the Ukrainian Delta - the so-called Kilija Delta - all of whom rely on the Delta directly or indirectly. The delta provides water for irrigation and drinking as well as income to the majority of the inhabitants through fishing, reed harvesting and more recently tourism. Vilkovo, in the heart of the Ukrainian Delta, is an important economical center in the region. The city is dissected by small canals and is in many ways comparable to Venice and was founded by religious exiles, the Lipoveni, 250 years ago. The Lipoveni split from the old Orthodox Church and left Russia to escape prosecution. The traditions and language of the original settlers are still maintained.

Within the Ukrainian Danube Delta there is a number of ports that serviced the fleets of ships that once travelled through the Delta. However during the war in Yugoslavia, in particular the port of Ust Dunaisk (north-east of Vilkovo), lost essential business as ships were unable to leave from Yugoslavia due to the bombing of the bridges by the allied troops. The ports declined, many are completely closed, and the existing shipping canals silted up. The ports (including the ones north of the Kilija branch) are now more or less redundant leaving very high unemployment in the port and the associated social and economic problems.

What is planned and what has happened already?
The Ukrainian government has proposed to establish a waterway through the Delta for two main reasons. The first is to revitalise the Delta ports that closed in the 80s and 90s. The second reason is to relieve the expense of having to use the 70 km long Sulina Canal in Romania as access to the Black Sea. This route allegedly costs the Ukrainian government billions of dollars in fees. The government therefore has proposed to use the Kilija branch on the border between Romania and Ukraine as a shipping way and to construct a canal through the Ukrainian Danube Delta to avoid these fees and to generate its own revenue from foreign ships. The previous route to the port of Ust Dunaisk used by ships to access Ukraine have silted up due to neglect. However the government has chosen not to restore that route but to select a second route, the Bystroye Canal (former Novo Stambulskoye branch) that is shorter (9km and deeper 4,20 m) and therefore less expensive to construct and maintain. This may prove to be a false economy as the route is likely to be more liable to
siltation than others and therefore cost more in the end. The government intends to finance the construction and maintenance of the canal from the fees charged to use the canal. There are economists however who claim that the government is overestimating the income that would be generated through this canal. Other options have been proposed that would provide solutions to the root problems but these are considered by the government as unfeasible.

At the moment about 300 m has been dredged in the Black Sea constantly approaching the mouth of the Bystre Gyrlo and sand bars, and about 300,000 cubic meters of sand and clay have been extracted from the Black Sea shelf so far. There are numerous dredging vessels involved, but the work is frequently interrupted.

**Who is doing the works?**
A German, Hamburg based company, has been contracted for canal construction through the Danube biosphere reserve. On May 16 (Sunday!) 6 am Josef, Moebius’ vessel started dredging works at the estuary Bystroe sandbar in the Black sea. The German company Gosef Mobius Bau Aktiengesellschaft is specializing in hydraulic engineering construction of various types of hydraulic works, dredging, shore protection, construction of roads, highways, railroads, and also waterproofing of ground coverings. The Mobius is also involved in the controversial Mühlenberger Loch project near Hamburg, where a Ramsar wetland has been destroyed for an Airbus plant.

**What are the socio-economic and ecological consequences of the canal?**
There has been no detailed social and environmental impact of the canal and the one hurriedly carried out by the Kharkiv University failes to comply with the principles of objectivity, scientific validity, publicity, complexity, considering public opinion and transboundary effects. The assessment of the canal impact on fisheries and birdlife has not been conducted either.

On the positive side the canal may bring some economic benefits to some (but not all) of the ports that once serviced the Delta. However the net impact is likely to be negative. Most of the population who live in the area rely on the Delta for their livelihoods, which will be threatened by the destruction to the natural delta systems. Many of the smaller canals so important for local fisherman are likely to be silted up and even the canals that dissect the city of Vilkovo may disappear once the canal is constructed. The Bystroye branch will be rectificated and deepened from 4,20 m to 7,20 m, its riverbanks reinforced, as well as a 3 km dam into the Black Sea will be built.

The ecological consequences of the canal construction are likely to be most negative. First of all a natural dynamic part will be destroyed - the unique sample of natural, continuously growing delta with evolution and formation of new habitats for a lot of species characteristic to these type of biotopes. Internationally important bird populations will be threatened by the direct removal and disturbance of their habitat and food supplies. The reedbeds, river systems and sandbanks are critical to these birds. The construction of the canal will directly destroy this habitat through the dredging activities and the construction of concrete canals. Sandbars will need to be removed at the mouth of the Bystroye Canal to allow ships to enter the canal. The removal of the sandbar at the mouth of the canal, for instance, will directly lead to the loss of the habitat of a total of over 4000 birds including 550 common and sandwich terns, 6 pairs of spoonbill, 25 pairs of white-pelican, 3 pairs of Dalmatian pelican, 25 pairs of pygmy cormorant (globally threatened) and one pair of white–tailed Eagles according to annual counts made in April this year.
The Danube Delta, including its Ukrainian part, is an important and internationally recognized habitat and spawning ground for fish resources shared by Danube and Black Sea countries. Planned large-scale dredging (both for construction and maintenance of canal) and operation of the canal will cause loss of these habitats and spawning grounds for a number of threatened and commercial fish species. The spawning migration of the Danube herring (Pontic shad) *Alosa pontica* passes through the mouth of the Bystroye. The herring has spawning grounds further upstream on the Danube, but its larvae migrate down the stream to the Black Sea. Nearly 5,000 fishermen belonging to four countries (Romania, Ukraine, Bulgaria and Serbia) depend economically on the lower Danube River fishery. Dredging and operation of the canal during the spawning period (mid-May to Mid-August) will decrease the population of this species. The construction and maintenance of the canal will also impact the vital sturgeon populations. The Danube is the last river of the Black Sea Basin where natural spawning of passing sturgeons remains.

The canal will also impact Romanian wetlands and the Romanian Biosphere Reserve. The construction of the canal is planned in Bystroye mouth and upstream in the Starostambulskoye mouth. The deepening of the existing riverbed of Bystroye mouth will inevitably increase river flow in that channel. Additionally, the Ministry of Transport of Ukraine are going to construct a “dam” (turning vane) for water flow regulation at the place where Starostambulskoye mouth branches off from Bystroye mouth. This is intended to result in reduction of water flow downstream in Starostambulskoye mouth – water that is shared with Romania and its part of the bilateral Danube Delta Biosphere Reserve. Those activities of Ukraine will not only affect the water resources of Romania, but will also cause negative consequences for flora and fauna biodiversity depending on these wetlands. Following the negotiations between Ukrainian and Romanian governments in June, a joint Working Group has been set up to assess the tranboundary effects of the canal.

The Institute of Geological Studies of the National Academy of Sciences of Ukraine confirms in their expert opinion that the waters and bottom sediments (both in Danube and shelf) are polluted by pesticides, heavy metals, radionuclides, and oil products that have been accumulated there for many years. Huge amounts of dredged soils (contaminated by heavy metals, pesticides etc.) will be removed to the sea dumping ground far away from the shore in the Black Sea. At the sea-dumping site, intensive long-term local pollution of sea bottom and waters will take place. The consequences of such dumping will be the loss of bottom biocenosis, deterioration of oxygen conditions, toxic influence on biological forms. In addition, there is a real threat of pollution of artesian waters during the removal of upper slimy ground, which serves as a filter.

The changes caused in water circulation will damage and change the whole ecosystem. Through the deepening of the Bystroye branch, the water flow will be accelerated to the sea and the drainage of the surrounding area will increase. Due to the reinforcement of the banks, the lateral water flow from the branch to the neighboring area will diminish or will be interrupted which will interrupt the important ways for short migratory fish to their spawning places, as was proven by rectification works in the Romanian part of the Danube Delta.

**What International treaties and agreements are concerned?**

The construction of this canal will seriously contravene a number of international agreements to which Ukraine is a signatory even if it may not have ratified them all.

1. Convention on Biodiversity (Article 14)
2. Espoo Convention on Environmental Impact Assessment in a Transboundary Context (Paragraphs 2.3 and 6 article 2)
3. Convention on Cooperation for the Protection and Sustainable Use of the Danube River (Danube River Protection Convention) (Articles 5, 6, 10, and 11)
4. The Bonn Convention on the Conservation of Migratory Species of Wild Animals (Article II (2.3), III (4))
7. The Ramsar Convention on Wetlands of International Importance (Article 3, 4, 5)
8. The Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (Paragraphs 2, 3, 4, 6, 7, 8, and 9 of Article 6)
9. The Bern Convention on the Conservation of European Wildlife and Natural Habitats (Article 2, 3, 4, 6, 7, 9, 10)
11. The Joint Declaration on the creation of the Lower Danube Green Corridor including a network of protected, proposed protected, and restoration area signed by the countries of the Lower Danube: Romania, Bulgaria, Moldavia and Ukraine on 5th June 2000.

The Compliance Committee of the Aarhus Convention initiated official consideration of the violations by Ukraine of the citizens’ environmental rights in the process of planning and construction of the canal Danube – Black Sea. It sent a letter to the Government of Ukraine requesting to comment on the matter.

The Implementation Committee of Espoo Convention on Environmental Impact Assessment in a Transboundary Context considered the complaint of a Ukrainian NGO Ecopravo Lviv and decided that it could not consider the complaint since it was submitted from an NGO. However, at the beginning of June Romania filed an official complaint against Ukraine with the Implementation Committee of the Convention. The issue was also raised at the last Conference of the Contracting Parties in June.

Both Ramsar Convention Secretariat and the International Commission for the Protection of the Danube River have expressed serious concerns about the construction the canal and urged the Ukrainian Government to halt the dredging works that began and offered their “assistance to bring together all other international bodies which share interest in the issue to discuss appropriate alternatives and steps to ensure that all environmental considerations are addressed”.

Representative of Bonn Convention will visit Ukraine in July. The Government of Germany, Romania and USA have expressed concerns on the construction of the canal via Bystre Gyrlo.

What about the EU?

Water Framework Directive (WFD)

Ukraine should be involved in the production of a single river basin management plan in order to achieve the WFD "good ecological and chemical status" objectives in the whole of the river basin, as the Danube is an international river basin district (RBD)
according to Article 13.3 of the WFD. This means that - at the very least - the Danube riverine countries, in particular Romania should be concerned as project will prevent the achievement of the WFD objectives in the RBD. Unclear whether Ukraine can be asked to subject the project to the derogations in Article 4 of the Directive and the public participation processes surrounding them.

The EC is currently presiding over the International Commission for the Protection of the Danube River (ICPDR), so its role is to help achieve the objectives above.

Ukraine's Partnership and Cooperation Agreement with the EU

Sets common objectives in terms of sustainable development of Ukraine via gradual approximation of its policies to those of the EU. Basic approach to be followed by EU in doing so is defined on a document called Common Strategy on Ukraine. This document states that one of the 3 principle objectives is to meet common European challenges including environmental protection. This is also linked to conditions for EU funding for Ukraine (i.e. TACIS, etc. see below).

Agreement regularly reviewed. Latest discussions confirm that environmental protection is a priority area for which APPROXIMATION WITH EU LEGISLATION IS ENVISAGED. In the case of the Bystroye project, this is relevant in terms of WFD, nature protection legislation (Birds & Habitats Directives), and EIA. Meaning that carrying the project forward shows NO WILLINGNESS AND NO COMMITMENT TOWARDS SUCH AN APPROXIMATION.

Recent Wallstroem letter to Ukraine's Environment Minister confirms that she is worried that the EIA is not up to "international standards", and this should also be taken to refer to the EU ones (on top of the Espoo ones mentioned above)

EU "Neighbourhood" policy: Wider Europe

Relations with Ukraine (as shown above) need to be STRENGTHENED in view of the recent EU Enlargement, in particular in terms of sustainable development. In practice this could mean the extension of the internal market to Ukraine if the EU acquis, including on environmental protection, is used as a model for the Ukraine's institutional reform. This matches what is said on the "Status" box in the row above. This will be linked to the provisions of further EU funding for Ukraine, i.e. European Neighbourhood Instrument if approved in the context of the new EU financial perspective

The European Neighbourhood Instrument will provide further funding for Ukraine on top of TACIS if approved in the context of the new EU financial perspective, but only if approximation of the EU environmental acquis is fulfilled. Again carrying the Bystroye project forward shows NO WILLINGNESS AND NO COMMITMENT TOWARDS SUCH AN APPROXIMATION

EU funding investments in Ukraine for environmental protection

Mainly TACIS and bilateral funding from Member States. In the future European Neighbourhood Instrument if approved in the context of the new EU financial perspective

The EU is the largest donor to the Ukraine, over the last 10 years up to 2001 total assistance has amounted to 1.072 billion Euro from European Commission (EC) directly and Member States have paid directly 157 million Euro over 1996-1999. Further, 173 million Euro have been allocated over 2002-2003.
Over 1999-2002, a total of 5 million Euro EU funds have been invested in the Ukraine SPECIFICALLY for "Environmental protection and natural resources management".

Conclusion: The EU/EC should be very unhappy about the Bystroye project as this would "destroy" direct environmental protection investments in the Ukraine. Further, it undermines the big financial effort made by the EU generally in the Ukraine, which aims at helping it becoming a "good" EU neighbors (see above)

Commissioner Margot Wallstroem and ICPDR chairwoman Cathrine Day from DG Environment have expressed concerns about the canal and urged Ukraine to carry out a proper Environmental Impact Assessment according to international standards. The issue will most likely be raised at the EC-Ukraine Summit in July.

Are there alternatives?
Two other options were suggested following a Ramsar and UNESCO mission to the Delta in October 2003. They recommended that “in order to make a well-informed decision, the Government of Ukraine needs to have…the results of a comprehensive environmental impact assessment comparing three main choices”. They recommend further that preventing damage rather than repairing it ex post is the cheapest option and ecological compensation measures need to be planned and executed IN PARALLEL with the planning of the construction of any waterway and their success in terms of the protection of species and habitats need to be monitored. The mission considered that choice A, the Bystroye canal, would represent the worst solution because the damage to the natural environment would be unacceptably high and the high costs of the required level of compensation would outweigh the benefits. The mission selected option B (Ocheakovski) as the best short to medium term option. In the long term however they suggested that the best option was option C which is a plan to construct the waterway outside of the dynamic part of the delta area. This will be the most expensive in the short term (international funding may be possible if this taken) but will have far lower maintenance cost in the future and have the least environmental impacts of the three options. In addition the missions suggests strongly that in addition to the ecological compensation measures, additional measures to improve the functioning of the Danube Biosphere Reserve need to be undertaken including strengthening of the capacity to support sustainable tourism.

What is WWF recommending?
WWF is asking the government of Ukraine to halt all the construction works on the Danube Delta immediately. Although WWF supports the idea of socially and economically justifiable waterway to the Black Sea, it request that the government of Ukraine discusses the route of this waterway as well as possible less environmentally damaging and economically expensive alternatives directly with the Ramsar Convention, UNESCO and the International Commission for the Protection of the Danube River (ICPDR). Alternatives should be identified and its economic, social and environmental impacts assessments developed.

WWF is happy to support the search for alternatives together with the other major agencies working in the Delta. WWF is requesting that Strategic Environmental Impact Assessment is completed to comply with the international standards which is developed through a transparent and participative process. WWF also requests that additional measures to improve the functioning of the Danube Biosphere Reserve are undertaken in line with the recommendations made by the Ramsar/UNESCO mission in October 2003.
What is the attitude of the local population towards the construction of the canal?

The issue has become very controversial. Local environmental NGOs continue criticizing the government for their role in choosing the worst route for the construction of the canal. There has been numerous protests and campaigns held so far (protest in front of a German Embassy in Kyiv, letter campaigns to the Government of Ukraine, Moebius, President’s wife, who has been recently appointed a UNESCO’s ambassador).

Ukrainian NGO Eco-pravo Lviv has filed complaints to ICPDR, Espoo Convention, Aarhus Convention, Bonn Convention as well as Ukrainian Court since the construction of the canal contravenes both international commitments of Ukraine and national legislation.

According to the survey conducted by 3 Delta NGOs in Vilkovo – 80% of the respondents, citizens of Vilkovo are against the construction of the canal through Gyrlo Bystre. There is a constantly growing tension between the workers of the German Company and local youth who were hoping to benefit from getting the jobs on the construction.

What actions have been taken to protect the Ukrainian Delta up until now?
The most critical work on the Ukrainian Delta, led by the local NGOs, is the establishment of protected areas in the Delta. One NGO actually established and is managing one of these protected areas. The largest conservation project ($1.5 Million) was funded by the World Bank and was aimed partly to establish the Biosphere Reserve which is now being threatened by the construction of this canal. Since then the management of the Reserve has been supported by the Ukrainian government and is led by the management board of the Danube Biosphere Reserve. International support is provided both to the management board and also to the local NGOs for research, environmental education, alternative income generating activities, monitoring and protection. WWF is supporting restoration of parts of the Delta that were destroyed or degraded by past actions meant to control the flow of the Danube (see below).

What is WWF’s trackrecord with the Ukrainian Danube Delta?
WWF has been working in the Delta for more than 12 years. The WWF Danube-Carpathian Programme has worked in the region since 1998 to promote the conservation, restoration and sustainable management of nature for the benefit of both people and environment. The Danube Delta is the single most important part of the entire 817,000 sq.km basin for wetland conservation. Since the beginning of the 20th Century, over 80% of the Danube River basin’s wetlands and floodplains have been entirely destroyed. The most intact remaining area are the wetlands found in the Lower Danube Green Corridor which includes the Danube Delta. In June 2000, Romania, Bulgaria, Moldova and Ukraine made a commitment to create a network of protected area and areas to be restored along the Lower Danube including the Danube Delta.

WWF through its Auen Institute, dedicated to apply research, conservation and restoration of wetlands in floodplains and deltas, has had a long engagement in the Danube Delta. At the beginning of the 90’s contacts were established and first project activities planned for the protection and restoration of this ecosystem. In 1990 the “Green Danube Project” was initiated, which in 1992 became a Programme of WWF
International. First projects aimed to protect this area were realised in 1992 and the first restoration projects in the Danube Delta were completed in 1994.

More recently as part of WWF’s contribution to the Lower Danube Green Corridor initiative, WWF has been supporting efforts of the local NGOs to establish protected areas in the Delta. Furthermore, through support from WWF Netherlands an ambitious and inspiring plan for the Danube Delta in Ukraine (A Vision for the Danube Delta published by WWF) was prepared via expert consultation and collaboration. Since its publication WWF has provided funding for activities aimed to restore the Delta as described in the vision, as many areas were destroyed through the construction of canals and dykes to control the water flow. It is more than likely that further funds will have to be found in the future to restore the damage done by the Bystroye Canal.

**What actions have been or are planned to be taken by WWF and other organisations/institutions to halt the construction?**

- WWF is helping individuals, experts, NGOs and other government and multilateral agencies share information, pool their resources and act together with one voice concerning this issue
- WWF issued number of press releases aimed primarily at the Western European media who are likely to be able to influence those who are making decisions in favour of this canal.
- Other international organisations have issued statements, press releases or letters of complaint and protest to the Government of Ukraine and European decision makers (e.g. European Commissioners for Environment and External Relations)
- Letters of protest have been sent to President Kuchma and his senior government staff from leaders of International NGOs (including WWF), European based Ministers of Environment and senior officials of the European Commission
- Legal action has been started against the Ukrainian government by local Ukrainian organisations
- Direct and indirect protests against the German construction company, Moebius are underway including lobbying the shareholders of the company to reconsider their involvement
- International agencies, individual experts and are discussing methods to provide alternatives to the Bystroye Canal
- WWF is requesting high level meetings between the Ukrainian Government and major multilateral agencies (ICPDR, EU, UNESCO, World Bank) to identify immediate solutions to the socio-economic problems faced by the Ukrainian government in the Danube Delta
- WWF will continue to support restoration and conservation activities in the Delta. These areas are unlikely to be adversely impacted by the construction of the canal.
- WWF will offer support to the Ukrainian government to undertake international standard Social and Environmental Impact Assessments and to help explore less destructive alternatives to the canal. WWF will request and support activities to improve the management of the biosphere reserve including proper zonation of the reserve, local environmental education activities and monitoring regimes
Who can we contact?

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E-mail: reserve@odtel.net
http://www.seu.ru/projects/dunay/dunayukr/dunukr.htm

Local NGOs

Olga Zakharova
The Socio-Ecological Union (Moscow)
Where can we find more information?

On transport issues and the Danube

- A report is available from WWF “Waterway Transport on Europe’s Lifeline, the Danube’ This report is available from WWF Danube-Carpathian Programme
  WWF Danube Carpathian Programme, Tel: +43 1 52 45 470
  http://www.panda.org/dcpo
  Take action: www.passport.panda.org

On the Bystroye Canal


On the Danube Delta
• **A Vision for the Danube Delta, Ukraine**
  
  Printed background document, September 15, 2003. Available from WWF Danube-Carpathian Programme Tel: +43 1 52 45 470

• **Short pdf version of the vision:**
  

• **Life in the Danube Delta** – feature article by WWF
  
  http://www.panda.org/about_wwf/where_we_work/europe/where/danube_carpathian/danube_river_basin/danube_delta.cfm

• **Lower Danube Green Corridor agreement**
  
  http://www.panda.org/about_wwf/where_we_work/europe/where/danube_carpathian/danube_river_basin/lower_danube_green_corridor.cfm

**Where are pictures, footing etc. available**

**Photos:**

• **Ukrainian Danube Delta** WWF- Canon Photo Database
  
  http://photodb.wwfint.org/photodb/

• **About the canalisation work**
  
  WWF Danube Carpathian Programme, Tel: +43 1 52 45 470

**Footing:**

• **Several video and beta footages** are available about the Danube Delta (treasures, everyday life, ect). WWF Danube Carpathian Programme, Tel: +43 1 52 45 470

• **TV Centre World Images:** Julie Gambling Julie.Gambling@world-television.com
ANNEX:

Facts and Figures about the Bystroye Canal:

The first stage of the construction work envisages construction of the ship channel with length of 3.3 kilometers, bottom width of 85 meters, depth of 7.65 meters and parts of a dam with length of 1.54 kilometers.

The navigable channel will comprise 170.36 kilometers.

The implementation of the first stage of the channel's construction should ensure passage of ships with water draught of 5.85 meters.

Construction of the first stage of the canal costs UAH 78.64 million, and it is planned that the first stage construction work will end in August 2004.

The second stage envisages construction of a deep channel of up to 8.32 meters, an increase of the width by 100 meters and the length of the dam by 3 kilometers.

The implementation of the second stage of the construction should ensure the passage through the channel of ships with water draught of 7.2 meters.

The German company Josef Mobius Bau Aktiengesellschaft is the general contractor for the construction of the Danube-Black Sea channel.

The final completion of the project is envisaged towards the autumn of 2005.

The investment return is 9 years. But we are confident that the time (of the investment return) will be shorter because the price for passage will be 3 times cheaper than through the Sulin Channel. And yet still because the handling capacity will be more. Unlike the Romanian channel, there will be a two-sided passageway, and it will operate round-the-clock.

Kostiantyn Syzov, the deputy director of Delta Lotsman, said that the approximate cost of the entire project is nearly UAH 210 million.

Delta Lotsman carries out the function of overseeing safety and effectiveness of navigation.

Costs:

Initially announced 144.9 mln UAH (24 mln Euro) (including 1 phase 35,6 mln UAH 6 mln Euro).

As the works started it was announced that the 1st phase will cost 78,6 mln UAH (13,1 mln Euro)

Investment return

Unlike the Romanian Sulina Canal, the Ukrainian Bosphor-1 will have two way traffic at the same time all day round and will be 3 times cheaper to pass.

The total costs returned in 9 years, the first phase in 4,5 years.
Canal via Bystroye

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<td>Depth</td>
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<td>Width (bottom)</td>
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<td>Vessel draught</td>
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<td>Excavated mud/sand</td>
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<td>Bottom width – two way traffic</td>
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<td>120 m</td>
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<tr>
<td>Bystre Gyrlo width – one way traffic</td>
<td>60 m</td>
<td>60 m</td>
</tr>
<tr>
<td>Vessel draught</td>
<td>5.85 m</td>
<td>7.2 m</td>
</tr>
<tr>
<td>Excavated mud/sand</td>
<td>1726000 m³</td>
<td>4765000 m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dam (turning vane)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume of stone</td>
<td></td>
<td>138790 m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOTAL Shipping canal</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>170.36 km</td>
<td>170.36 km</td>
</tr>
<tr>
<td>Draught Vessel</td>
<td>5.85 m</td>
<td>7.2 m</td>
</tr>
<tr>
<td>Excavated silt/earth</td>
<td>3423000 m³</td>
<td>7096000 m³</td>
</tr>
<tr>
<td>Volume of stone</td>
<td>98910 m³</td>
<td>267990 m³</td>
</tr>
</tbody>
</table>

1 phase

- 3 km canal into the sea (see the table above)
- left bank Γ shaped dam to protect the canals from waves and sedimentation from the streams on the right. It will be planned from stone on shallow sand bottom
- a temporary canal to allow equipment to pass 47600 m², volume 90000 m³.

The dumping site for earth/silt is planned in the sea 8 km away from Bystroye.