project description

Deep Water Navigation Canal Danube Black Sea

assignment

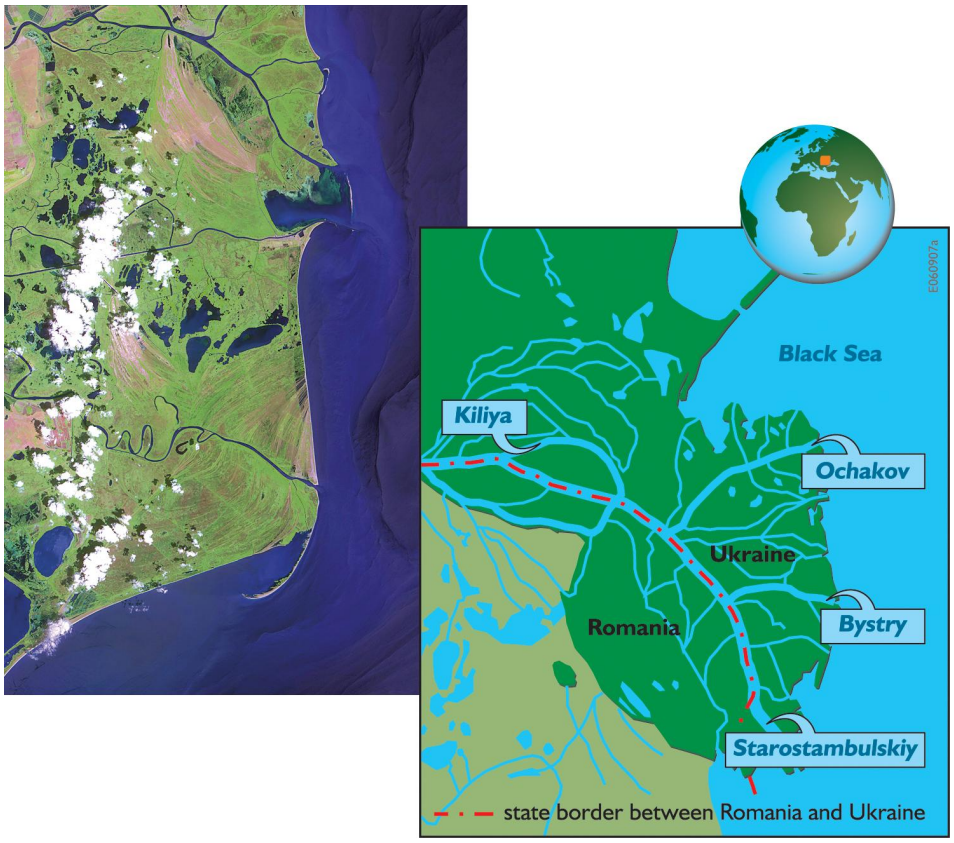
Under the ESPOO Convention (1991), an Inquiry Commission was established related to the project "Danube-Black Sea Deep Water Navigation Canal in the Ukrainian sector of the Danube Delta" (also known as the "Bystry Canal"). A Technical Commission, comprising representatives of the involved countries Romania and Ukraine as well as a number of independent experts were nominated to investigate the project. WL | Delft Hydraulics was invited to take part in the Technical Commission on areas related to river hydrology, sediment transport and coastal morphology.
The objectives of the Technical Commission were to advise the Inquiry Commission on the likeliness of significant transboundary impacts as a result of the project implementation.

client

United Nations Economic Commission for Europe - ENHS

period

December 2005 – June 2006



Aerial view and map of the Danube Delta (image courtesy of the Earth Observatory of the NASA Government)

keywords:
Danube Delta
Espoo Commission
Transboundary water management

project background

The project under investigation concerns the re-opening of the navigation route from the Black Sea to the Danube River via the Bystry branch and the Kiliya branch (see overleaf). Different options for the Black Sea-Danube navigation route were studied by the Ukrainian government; before the option via the Bystry branch was finally selected. The project comprises (a) the dredging of the sandbar section at the mouth of the Bystry Branch, (b) the deepening of shallow areas in the Kiliya river section, and (c) the provision of protective hydraulic structures.

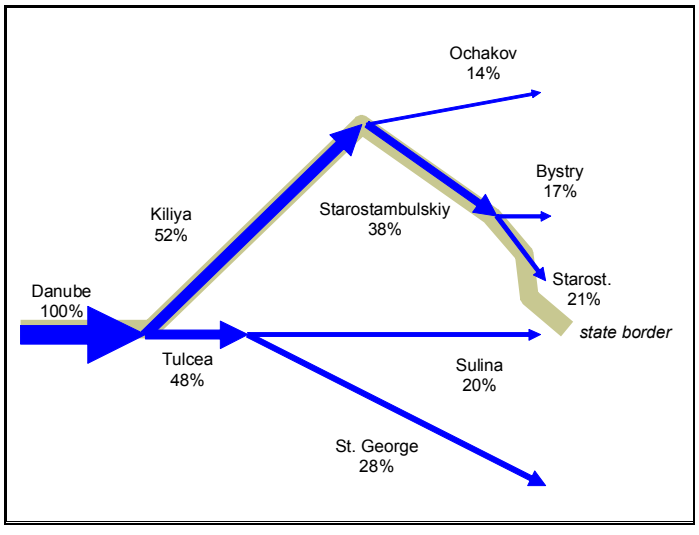
Due to the trajectory through the unique Danube Delta ecosystem, where Ukraine and Romania have jointly established the Danube Biosphere Reserve transboundary protected wetlands area of 626,000 ha, the project has raised significant concern all over Europe

activities and findings

WL | Delft Hydraulics experts on river hydrology, sediment transport and coastal morphology screened and evaluated the available information on the baseline situation, the project definition and the projected impacts. On this basis, with additional expert judgements, a synthesis was produced that made it possible to draw conclusions on the likeliness of significant transboundary impacts as a result of the project implementation.

In particular two aspects were addressed:

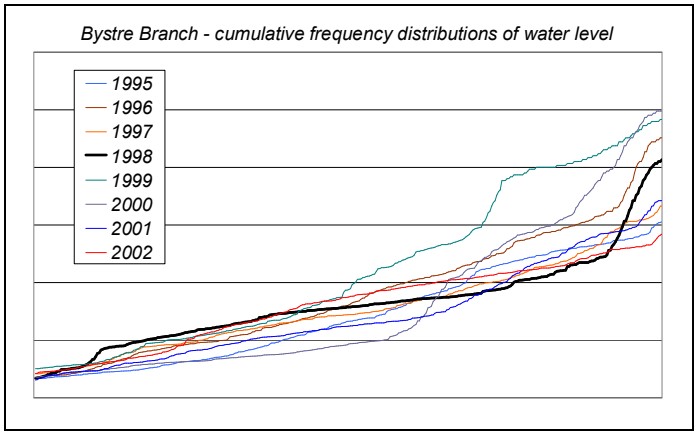
(1) Trans-boundary hydrological impacts on the discharge distribution over the different river branches (see below) and on the water level dynamics.



(2) Trans-boundary impacts on the coastal morphology and the coastal water quality.

The conclusions about these aspects then provided input to similar assessments by other experts on the impacts of the project on bird and fish communities, both of which contain rare and valuable species.

The development of criteria for the significance of certain impacts has been part of the expert judgement process. In a number of cases, impacts were evaluated in relation to the natural variability of the system under study (see below).



On the basis of the expert assessments, the Technical Commission published its conclusions, see http://www.unece.org/env/eia/inquiry.htm. Furthermore, it recommends starting a bilateral research programme related to activities with transboundary impacts in the framework of bilateral cooperation under the Espoo Convention.

WL | Delft Hydraulics

Decisive advice: from multidisciplinary policy studies to design and technical assistance on all water-related issues.

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