

# No economic case for new waterway through Polesia

*Evaluation of E40 waterway proposals reveals flaws in feasibility study as well as unacceptably high risks and costs*



© Daniel Rosengren



## Summary

An expert economic assessment has laid bare the huge capital expenditure, investment risks, and environmental consequences from the proposed development of the E40 waterway. In Poland and Belarus the potential problems are so severe that construction of the E40 waterway is unlikely to be economically viable. Only one section of the E40 waterway downstream of Kiev in Ukraine could realistically make economic sense – and only if no government subsidies are used. In this context, experts believe that governments and investors should recognise the highly limited economic potential of E40 inland waterway in Poland, Belarus, and Ukraine and instead focus on strategic improvements to priority road and rail links.

### They found that:

- The economic assessment made by the 2015 feasibility study is flawed and underestimates the cost of construction.
- There would be no economic benefits from the E40 waterway, and huge financial and environmental risks associated with the construction and maintenance of the route.
- Without subsidies, the E40 waterway would not be able to compete with road and rail transport.
- The socio-economic and environment impacts of the E40 waterway, including increases in greenhouse gas emissions, would be unacceptable.
- There are many investment risks associated with E40 waterway, including radiation contamination, and knock-on effects on the local road and rail freight industries.
- The E40 waterway would not comply with criteria of the Trans-European Transport Network (TEN-T), such as requirements for environmental protection.
- There are better alternatives, including the modernisation of existing road and rail infrastructure.

## Background: Polesia and the E40 waterway

Polesia is a vast wilderness area stretching across Belarus, Poland, Russia and Ukraine<sup>1</sup>. The E40 waterway<sup>2</sup> is a transnational initiative aiming to link the Baltic and Black Seas by an approximately 2,000 km long navigable connection running from Gdansk in Poland to Kherson in Ukraine. This could have very serious impacts on the natural and cultural heritage and people of Polesia, as well as more wide-ranging effects on economies and the global carbon balance.

Although the planning of E40 waterway is still at an early stage, a feasibility study was published in 2015<sup>3</sup>. This proposes that the route would go through the river systems of Vistula, Bug, Pina, Pripyat and Dnieper (see figure 1). Along the majority of its course it would go through free-flowing rivers, and several parts would need to be straightened, dammed, dredged, or drained. While some shipping channels already exist, the extent of the proposed new development is so massive that it threatens an environmental catastrophe in the region.

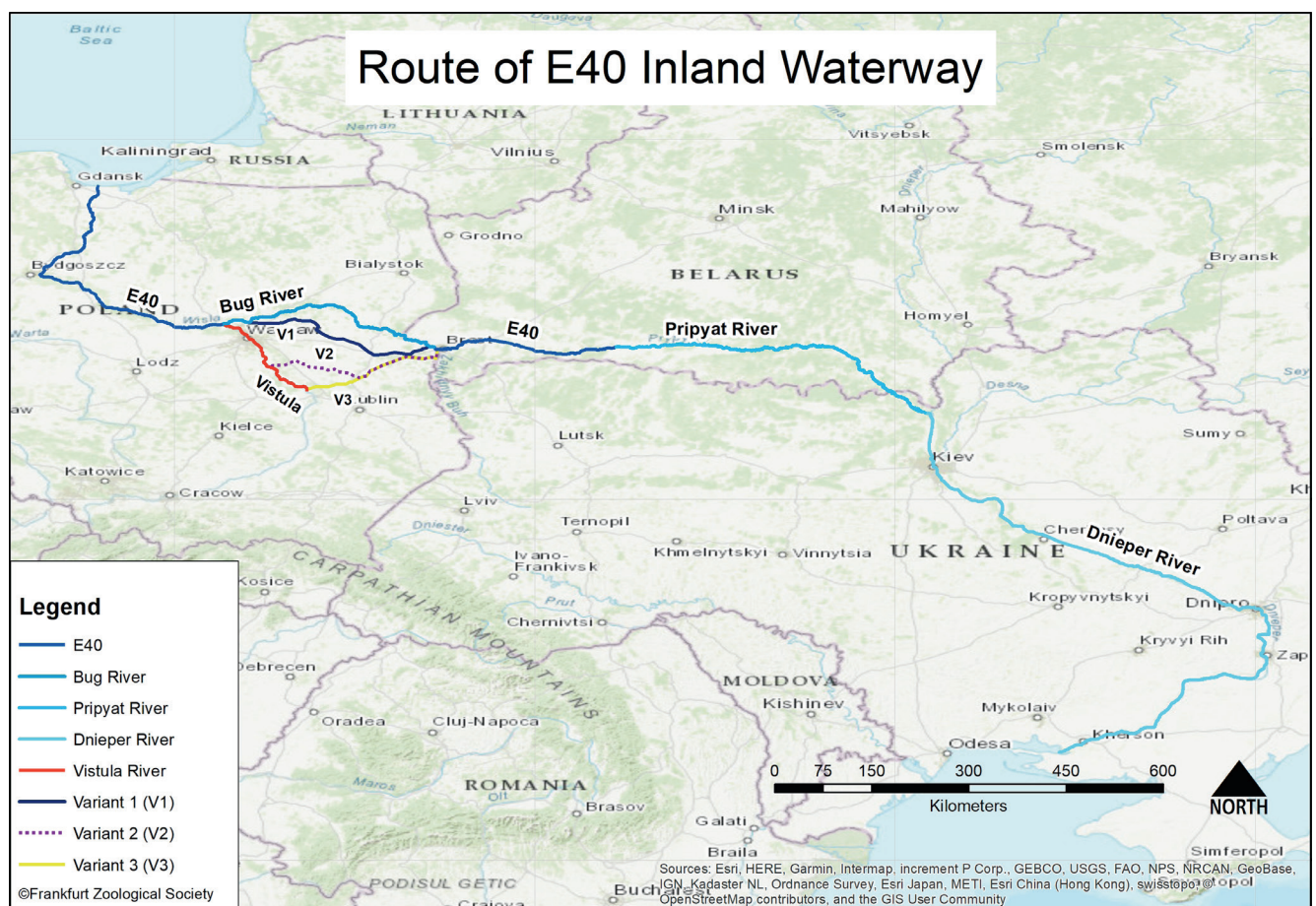


Figure 1. Overview of the E40 waterway and the river channels

<sup>1</sup> See factsheet "About Polesia – A unique wilderness of global importance"

<sup>2</sup> See factsheet "Polesia under threat – How a new waterway could destroy Polesia's natural environment"

<sup>3</sup> Maritime Institute in Gdansk [2015] Restoration of Inland Waterway E40 Dnieper – Vistula: from Strategy to Planning. Final Feasibility Study Report – Corrected Report (According to the remarks and requirements introduced by Willem Zondag, Legal and Technical Consultant). Gdansk, December 2015.

## Expert studies

To better understand the potential impacts of the E40 waterway on Polesia, we commissioned a range of experts to look at the following factors: hydrology, transport economics, radioactivity, and potential alternative development scenarios for Polesia. This factsheet summarises the findings of the economic assessment. It has been carried out by experts from the Business Union of Entrepreneurs and Employers. The full report is available here<sup>4</sup>.

### What the assessment looked at

Experts analysed in detail the 2015 feasibility study from an economic perspective.

#### The key issues considered were:

- The quality of the study;
- The projected economic costs and benefits;
- The competitiveness of the E40 waterway with road and rail transport;
- The overall social, economic and environmental impacts;
- The investment and economic risks;
- The compatibility with key international transportation requirements;
- The potential alternatives.

## Findings

### The economic assessment made by the feasibility study is highly flawed

Experts found that the economic analysis in the feasibility study was not sufficiently detailed to enable unambiguous conclusions to be drawn. It contains various methodological and factual errors and does not comply with relevant international standards, such as those of the United Nations Industrial Development Organisation (UNIDO)<sup>5</sup>.

The feasibility study does not give a clear figure for the overall total investment costs or a breakdown of what these costs will include. Figures are included for some elements of the programme and these amount to just over €12 billion, but some costs do not appear to have been taken into account and others appear to have been significantly undervalued. For example, there is no estimate given for the cost of creating additional port infrastructure or reconstructing bridges. As a consequence, experts believe that investment cost for the development of the Ukrainian part of the Dnieper river, excluding the reconstruction of bridges, is understated by almost €100 million. They also report that investment costs of the Belarusian section are likely to have been underestimated by at least €900 million. This suggests that the true costs of the programme will exceed €13 billion.

### There would be no economic benefits from the development of the E40 waterway

Having analysed the feasibility study and compared it to other transport sector data, the experts concluded that the development of the entire E40 waterway does not have clear economic benefits. The analysis suggests that one section of the project in the lower reaches of the Dnieper river in Ukraine might provide some economic returns as long as inland water transport is not being subsidised by governments. However, there are many economic and environmental risks from development in all other sections of the E40 waterway, including in Ukraine upstream of the Kiev lock and the entire Belarusian and Polish sections.

<sup>4</sup> Business Union of Entrepreneurs and Employers (2019) Economic Assessment of Reconstruction Plans for the Inland waterway E40. Minsk, February 2019.

<sup>5</sup> Manual for the Preparation of Industrial Feasibility Studies. Available from: [https://open.unido.org/api/documents/4690274/download/MANUAL%20FOR%20THE%20PREPARATION%20OF%20INDUSTRIAL%20FEASIBILITY%20STUDIES%20\(08219.en\)\)](https://open.unido.org/api/documents/4690274/download/MANUAL%20FOR%20THE%20PREPARATION%20OF%20INDUSTRIAL%20FEASIBILITY%20STUDIES%20(08219.en)))

### **It is likely the E40 waterway would be uncompetitive with road and rail transport**

Experts found the analysis of the transport market in Belarus, Poland, and Ukraine inadequate in the feasibility study. They found that for most commodities, the estimated tariffs for water transport in Belarus and Ukraine were not competitive with rail transport. They also found inland waterway transport to be less competitive along the proposed E40 route due to low delivery speed, the presence of seasonal restrictions such as ice and low water, and additional transfers needed such as shifting cargo between vessels to accommodate differences in the capacity of the channel.

### **The socio-economic and environment impacts of the E40 waterway would be unacceptable**

Experts estimate that about 2,000 km<sup>2</sup> of land in Poland and Belarus, located mainly in the valleys of the Vistula and Pripyat rivers, could be threatened by hydrological changes. This could have significant impacts on water-dependent sectors of the economy, such as agriculture. In addition, protected areas would be damaged and the provision of essential ecosystem services such as flood control adversely affected.

Any shift of cargo from rail to inland waterway transport could increase greenhouse gas emissions. New reservoirs forming part of the development could also become additional sources of emissions. Calculations show that on the Polish and Belarusian sections of the E40 waterway, emissions may exceed 600,000 tons of CO<sub>2</sub> per year. According to the assessment methods recommended by the European Commission, by 2050 the damage from such an impact on the climate could reach €150 million per year.

### **There are numerous investment risks and economic threats associated with E40 waterway**

Experts believe that significant investment costs and the risks of radiation contamination from the Chernobyl exclusion zone make development of the whole E40 corridor unrealistic. In particular, they do not believe the planned construction of an intermediate port in Nizhny Zhary, Belarus, is a viable solution.

The economic assessment suggests that the E40 waterway would be uncompetitive with road and rail transport without subsidies. Experts also state that if subsidies were given for transport using the E40 waterway, there could be a significant reduction in revenue for existing rail and road transport companies, potentially leading to a crisis in these sectors.

The 2015 feasibility study suggests that the operating costs of the E40 waterway, such as lock operation, could be recovered. However, experts point out that the study has not accounted for the capital expenditure necessary for the development of the waterway. They believe that this approach violates the 'user pays' principle and will transfer the costs of the development to taxpayers. As a consequence, experts asserted that although there may be a positive impact on the economy of the three countries in the short term, in the medium and long-term the economic effect would likely be neutral or even negative.

### **The E40 waterway would not comply with criteria of the Trans-European Transport Network (TEN-T)**

The E40 waterway would not be able to meet the navigation class criteria (class IV shipping) required for inclusion in TEN-T by 2023. This is an issue in Poland in particular. Further plans for development of the E40 waterway conflict with the requirement that TEN-T projects comply with EU requirements for environmental protection<sup>6</sup> (such as the nature, water framework and environmental assessment directives<sup>7</sup>) and climate change commitments<sup>8</sup>.

### **There are better alternatives**

In the experts' opinion, the following projects are of high importance and have significant potential for development:

- modernisation of border crossings and customs terminals;
- modernisation of existing and construction of new roads, increasing their speed limit;
- modernisation of railways in order to increase the capacity and speed of trains;
- improving logistics infrastructure adapted to handle goods involved in cross-border trade.

<sup>6</sup> TEN-T legal basis, available from: [https://ec.europa.eu/transport/themes/infrastructure/ten-t\\_en](https://ec.europa.eu/transport/themes/infrastructure/ten-t_en), in particular Regulation (EU) No 1315/2013

<sup>7</sup> Nature Directives available from [https://ec.europa.eu/environment/nature/legislation/index\\_en.htm](https://ec.europa.eu/environment/nature/legislation/index_en.htm);

Water Framework Directive available from [https://ec.europa.eu/environment/water/water-framework/index\\_en.html](https://ec.europa.eu/environment/water/water-framework/index_en.html); Environmental Impact Assessment and Strategic Environmental Assessment Directives available from [https://ec.europa.eu/environment/eia/index\\_en.htm](https://ec.europa.eu/environment/eia/index_en.htm)

<sup>8</sup> Climate change strategies and targets available from [https://ec.europa.eu/clima/policies/strategies\\_en](https://ec.europa.eu/clima/policies/strategies_en)

## Who is Save Polesia?

Our coalition includes six organisations from four countries.



### APB – Birdlife Belarus

APB's mission is the conservation of biological diversity for the benefit of the present and future generations and involvement of people in active nature protection activities.



### Bahna, Belarus

The aim of Bahna is to prevent further degradation of the environment and to preserve natural habitats and biodiversity of our country.



### FZS – Frankfurt Zoological Society, Germany

FZS invests in wilderness areas of global significance – “legacy landscapes” – with aesthetic and natural values, pristine landscapes, important ecosystem processes or values, and endemic and endangered species.



### NECU – National Ecological Centre of Ukraine

NECU is an NGO with branches in a dozen of Ukrainian cities. It works to bring environmental consideration into the core of any decision making.



### OTOP – Polish Society for the Protection of Birds

OTOP's mission is to protect birds and their habitats and establish and manage new bird reserves. The organisation has strong educational work in order to increase public support for nature conservation.



### USPB – Ukrainian Society for the Protection of Birds

USPB's mission is to conserve the biodiversity of Ukraine by saving birds, sites and biotopes.



### Contact for more information

Dr Helen Byron, Save Polesia Project Coordinator – email: [byron@zgf.de](mailto:byron@zgf.de)  
Find out more on [www.savepolesia.org](http://www.savepolesia.org)