FAST DANUBE 2

Improvements of navigation conditions on the joint Romanian-Bulgarian sector of the Danube

Romeo SOARE, AFDJ Galati

2th SCOM , 10th of December, 2025, Bucharest

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FAST DANUBE goals and objective

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FAST DANUBE goals:

Implement a strategy to improve navigation based on:

- *Increasing the number of days per year during which the minimum conditions are provided for navigation traffic through the Rhine – Danube corridor. The target increase in usage is from a current level of 280 days to 340 days/year.*
- *Increasing traffic safety;*
- *Increasing the total goods transported; to be targeted as a 20% increase in traffic compared with 2014 usage levels; presumably measured in tonnage.*

FAST DANUBE objective:

Ensure unimpeded navigation for at least 340 days/year, including Q= approx. 3000 m^3/sec, by maintaining a fairway of adequate width and depth with an appropriate alignment.

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Project area

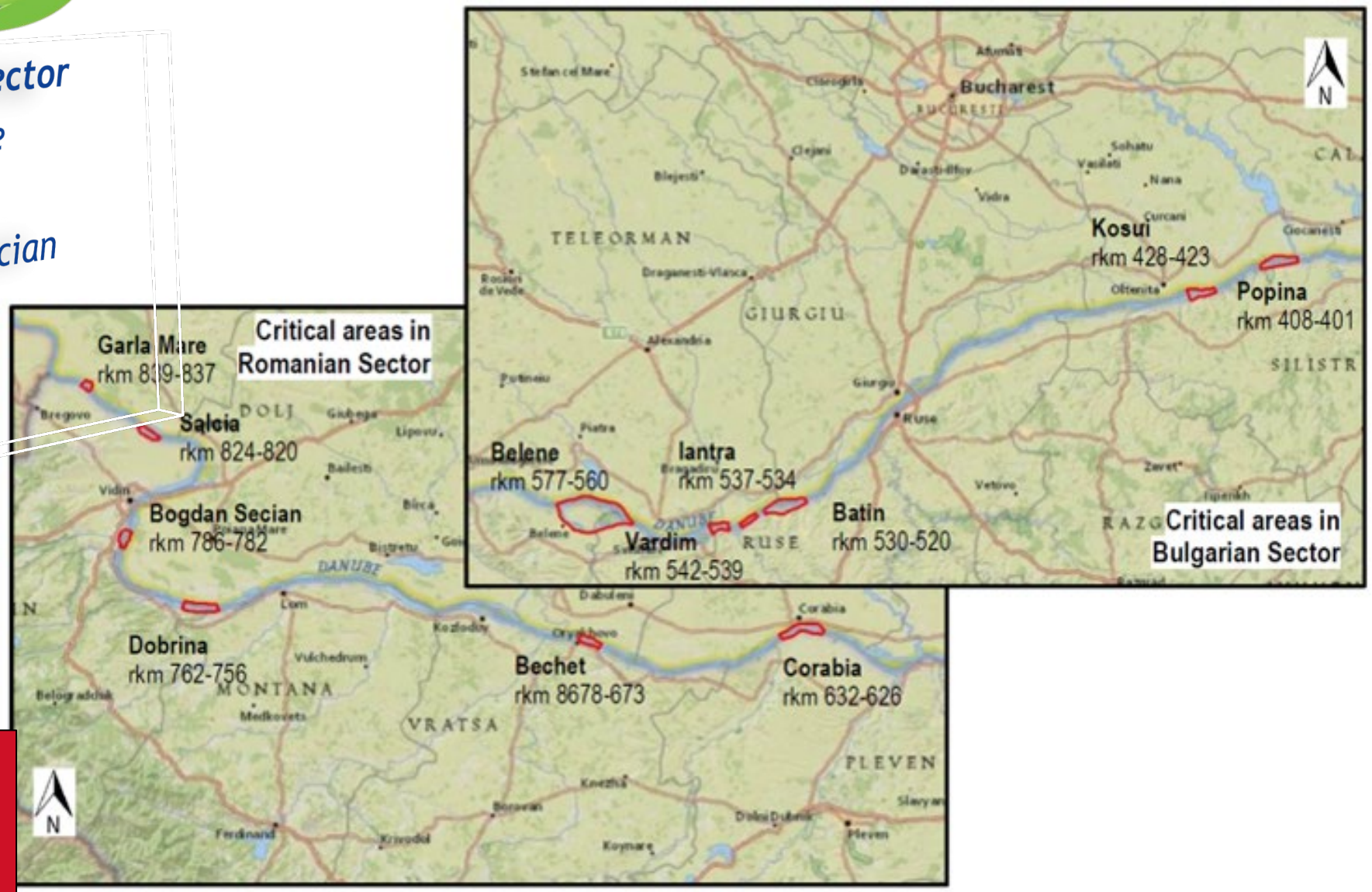
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Romanian sector

1. Garla Mare
2. Salcia
3. Bogdan Secian
4. Dobrina
5. Bechet
6. Corabia

Bulgarian sector

1. Belene
2. Vardim
3. Yantra
4. Batin
5. Kosui
6. Popina



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FAST Danube 2 - main activities

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The Project consists in:

- ***Environmental monitoring*** in accordance with the requirement of the Environment Protection Authorities;
- ***Design and execution of works*** in 12 critical areas along the Danube sector;
- ***Works supervision***.

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Environmental monitoring

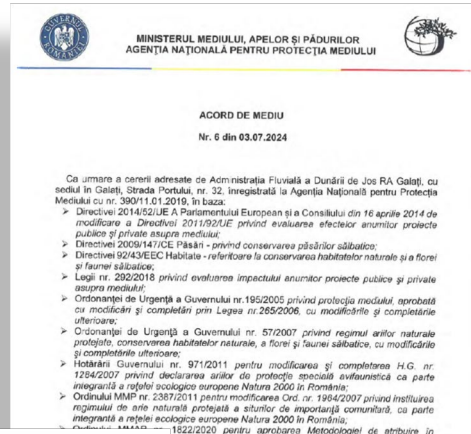
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After developing the **Environmental Impact Assessment (EIA)** and its components:

- ✓ **2 Appropriate Assessment** (for Romania and for Bulgaria protected areas)
- ✓ **The Water Body Impact Assessment Study**
- ✓ **The Climate Change study**

Were issued:

- The Environmental Agreement No. 6/03.07.2024 in Romania
- Decision No. 2-2/2024 in the Republic of Bulgaria



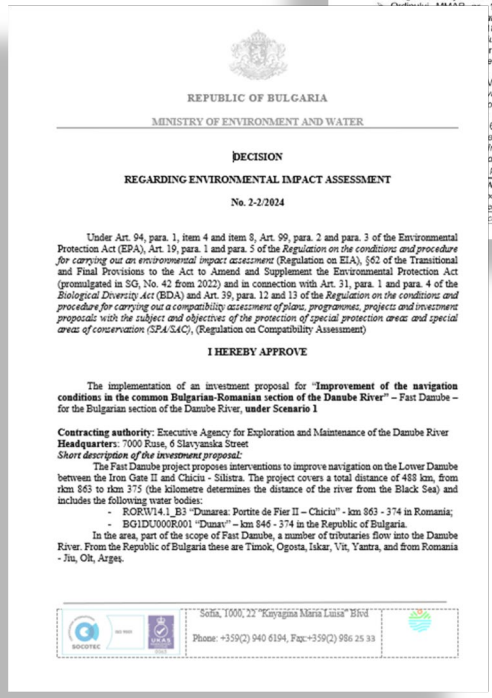
MINISTERUL MEDIULUI, APELOR ŞI PĂDURILOR
AGENŢIA NAŢIONALĂ PENTRU PROTECŢIA MEDIULUI

ACORD DE MEDIU

Nr. 6 din 03.07.2024

Ca urmare a cererii adresate de Administraţia Fluvială a Dunării de Jos RA Galaţi, cu sediul în Galaţi, Strada Portului, nr. 32, înregistrată la Agenţia Naţională pentru Protecţia Mediului cu nr. 390/11.01.2019, în baza:

- Directivei 2014/52/UE A Parlamentului European şi a Consiliului din 16 aprilie 2014 de modificare a Directivei 2011/92/UE privind evaluarea efectelor anumitor proiecte publice şi private asupra mediului;
- Directivei 2009/147/CE Păsări - privind conservarea păsărilor sălbatice;
- Directivei 92/43/EEC Habitate - referitoare la conservarea habitatelor naturale şi a florei şi faunei sălbatice;
- Legii nr. 292/2018 privind evaluarea impactului anumitor proiecte publice şi private asupra mediului;
- Ordonanţei de Urgenţă a Guvernului nr.195/2005 privind protecţia mediului, aprobată cu modificări şi completări prin Legea nr.265/2006, cu modificările şi completările ulterioare;
- Ordonanţei de Urgenţă a Guvernului nr. 57/2007 privind regimul ariilor naturale protejate, conservarea habitatelor naturale, a florei şi faunei sălbatice, cu modificările şi completările ulterioare;
- Hotărâri Guvernului nr. 971/2011 pentru modificarea şi completarea H.G. nr. 1284/2007 privind declararea ariilor de protecţie specială avifaunistică ca parte integrantă a reţelei ecologice europene Natura 2000 în România;
- Ordinului MMP nr. 2387/2011 pentru modificarea Ord. nr. 1964/2007 privind instituirea regimului de arie naturală protejată a siturilor de importanţă comunitară, ca parte integrantă a reţelei ecologice europene Natura 2000 în România;



REPUBLIC OF BULGARIA

MINISTRY OF ENVIRONMENT AND WATER

DECISION

REGARDING ENVIRONMENTAL IMPACT ASSESSMENT

No. 2-2/2024

Under Art. 94, para. 1, item 4 and item 8, Art. 99, para. 2 and para. 3 of the Environmental Protection Act (EPA), Art. 19, para. 1 and para. 5 of the *Regulation on the conditions and procedure for carrying out an environmental impact assessment* (Regulation on EIA), §62 of the Transitional and Final Provisions to the Act to Amend and Supplement the Environmental Protection Act (promulgated in SG, No. 42 from 2022) and in connection with Art. 31, para. 1 and para. 4 of the *Biological Diversity Act* (BDA) and Art. 39, para. 12 and 13 of the *Regulation on the conditions and procedure for carrying out a compatibility assessment of plans, programmes, projects and investment proposals with the subject and objectives of the protection of special protection areas and special areas of conservation (SPA/SAC)*, (Regulation on Compatibility Assessment)

I HEREBY APPROVE

The implementation of an investment proposal for "**Improvement of the navigation conditions in the common Bulgarian-Romanian section of the Danube River**" – Fast Danube – for the Bulgarian section of the Danube River, **under Scenario 1**

Contracting authority: Executive Agency for Exploration and Maintenance of the Danube River
Headquarters: 7000 Ruse, 6 Slavyanska Street
Short description of the investment proposal:
The Fast Danube project proposes interventions to improve navigation on the Lower Danube between the Iron Gate II and Chiciu - Silistra. The project covers a total distance of 488 km, from rkm 863 to rkm 375 (the kilometre determines the distance of the river from the Black Sea) and includes the following water bodies:

- RORW14.1_B3 "Dunarea: Portile de Fier II – Chiciu" - km 863 - 374 in Romania;
- BG1DU000E001 "Dunav" – km 846 - 374 in the Republic of Bulgaria.

In the area, part of the scope of Fast Danube, a number of tributaries flow into the Danube River. From the Republic of Bulgaria these are Timok, Ogosta, Iskar, Vit, Yantra, and from Romania - Jiu, Olt, Arges.

Sofia, 1000, 22 "Knyagina Maria Luisa" Blvd
Phone: +359(2) 940 6194, Fax:+359(2) 986 25 33

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Environmental monitoring

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Research activities according to environmental permits



- ✓ Geodetic surveying;
- ✓ Engineering and geological mapping;
- ✓ Conducting exploratory drillings;
- ✓ Conducting geophysical surveys;
- ✓ Conducting field tests (penetration studies, elastometry, experimental filtration studies);
- ✓ Laboratory studies to determine the physical and mechanical properties of engineering and geological varieties;
- ✓ Assessment of the stability of slope sections in a basic and special combination of loading and predictive analysis for changes in stability during project implementation;
- ✓ Hydrographic measurements and riverbed models;
- ✓ Construction of a control and measurement system and regular monitoring activities.

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Environmental monitoring

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The following will be monitored:



- *River morphology*
- *Hydrodynamic parameters* of the water flow
- *Sediment* characteristics
- *Geotechnical parameters* for the Danube riverbed and banks
- *Physico-chemical parameters* - water turbidity, oxygenation conditions, nutrients.
- *Specific non-synthetic pollutants* - metals: Cu, Zn, As, Cr.
- *Biological parameters* - phytoplankton, phytobenthos, macrophytes, benthic invertebrate fauna, etc.
- *Chemical parameters:* Hg, Pb, Ni, Cd
- *Parameters of biodiversity* potentially affected by works to improve navigation conditions.

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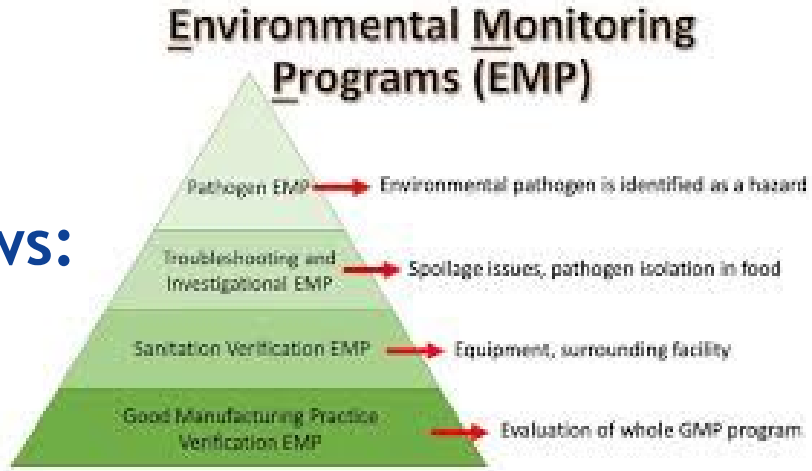
Environmental monitoring

Co-funded by the European Union

The monitoring program will be carried out 9 years:

- ✓ 2 years before the start of the works,
- ✓ 2 years during the execution of the works,
- ✓ 5 years after the completion of the works, as follows:
  - *3 years for all environmental factors*

  and further
  - *2 years of monitoring only for biodiversity*



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Design & Works execution

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Capital dredging works **in all 12 critical locations,**

- **up to 3.5m water depth, below LNWL are proposed across the width of 180m on the existing fairway route;**
- **or, in some cases, on a realigned fairway route, adapted to the natural evolution of the river in that section.**
- **Dredged material will be disposed of in special designated disposal areas, subject to authorities' approval.**
- **The locations carefully chosen giving regards to the existing environment and to naturally integrate with the characteristics of the flow and the riverbed morphology.**

River training structures**: in 3 critical locations: Bechet, Belene, Popina**

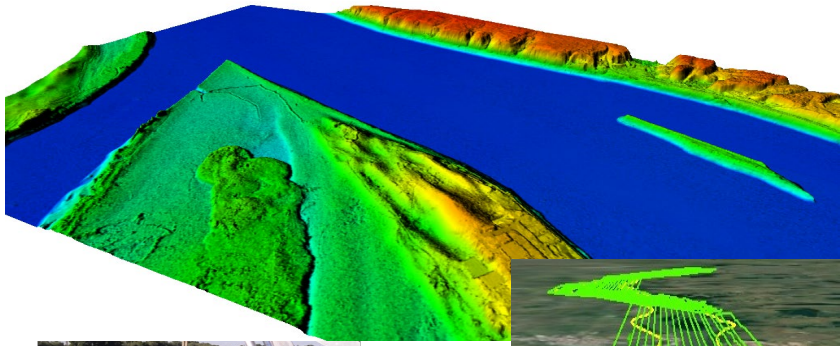
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Design & Works execution

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Measurements, Studies, Investigations

In parallel with the environmental monitoring, ***measurements, studies and investigations*** will be carried out to acquire the data necessary for ***the preparation of the technical design***.



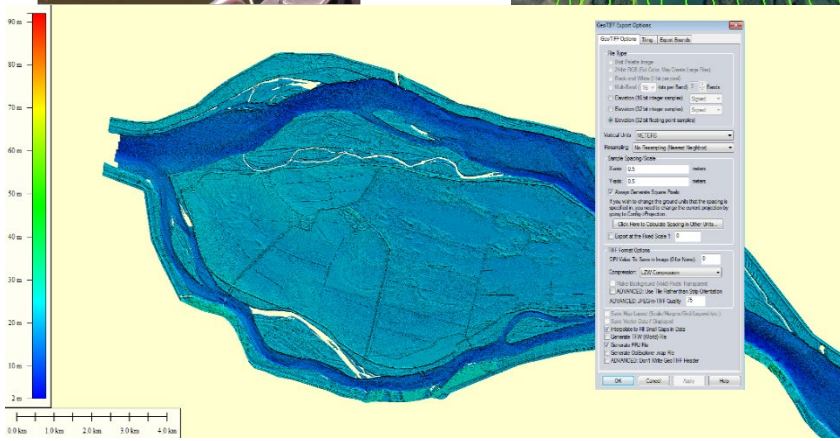
The following measurements will be carried out:

- Bathymetric;
- Hydrodynamic;
- Geotechnical;
- Sediment measurements.





Geotechnical investigations will be carried out to determine the physical and mechanical characteristics of the banks and bed of the Danube, for the locations where engineering structures will be built and for the identification and dimensioning of landslides and bank erosion.



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Design & Works execution

Co-funded by the European Union

Measurements, Studies, Investigations

- In accordance with the *Environmental Decision issued in the Republic of Bulgaria*, a sensors network will be developed for 24/7 monitoring of landslides and bank erosion phenomena.
- *1D, 2D & 3D numerical models* will be developed.
- Following the development of the detailed technical project, steps will be taken to obtain *building permits from both the Romanian and Bulgarian authorities*.

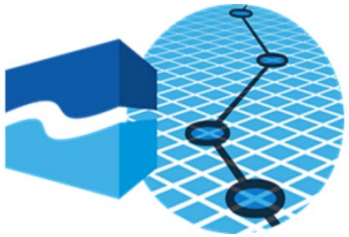
Flood Modeller Suite

Developing software for over **40** years

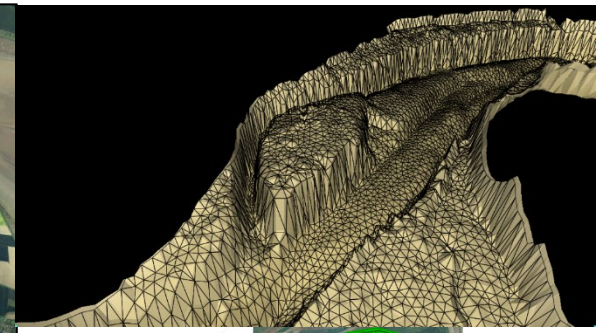
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Desing & Works execution

Co-funded by the European Union

Types of intervention considered at all critical locations



Key considerations:

- *Recognition that dredging can be an important intervention – requires technical, institutional and financial sustainability;*
- *Restricting rigid engineering as initial works to the most problematic critical locations – Bechet, Belene and Popina;*
- *Preliminary environmental impact assessment at site and downstream;*
- *Introducing morphological engineering measures on a trial, monitor and adaptive basis;*
- *Implement using a phased programme, with intensive monitoring/ re-assessment as part of a strategy for adaptive management;*
- *River training with maximum use of natural (hydro-morphological) processes;*
- *Planning/conducting of detailed geotechnical surveys during the next phases (technical design/construction) of the project, to substantiate the technical solutions, in order to obtain the construction permit.*

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Desing & Works execution

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Works for improvement of the fairway condition:

- ***Dredging works*** in 12 critical locations ***(110 km in total)***;
- ***Bank stabilization*** in 3 locations (***5.45 km in total***);
- ***Groynes*** for limiting the movement of sediments, in 3 critical locations ***(Belene, Bechet, Popina – 2.6 km in total)***;
- ***Chevrons*** to modify the hydraulic flow and sediment response of the river, in 3 critical locations ***(Belene, Bechet, Popina – 1.9 km)***;
- ***Islands*** to modify the hydraulic flow and sediment response of the river along the envisaged sector ***(1.2 million cubic meters)***.





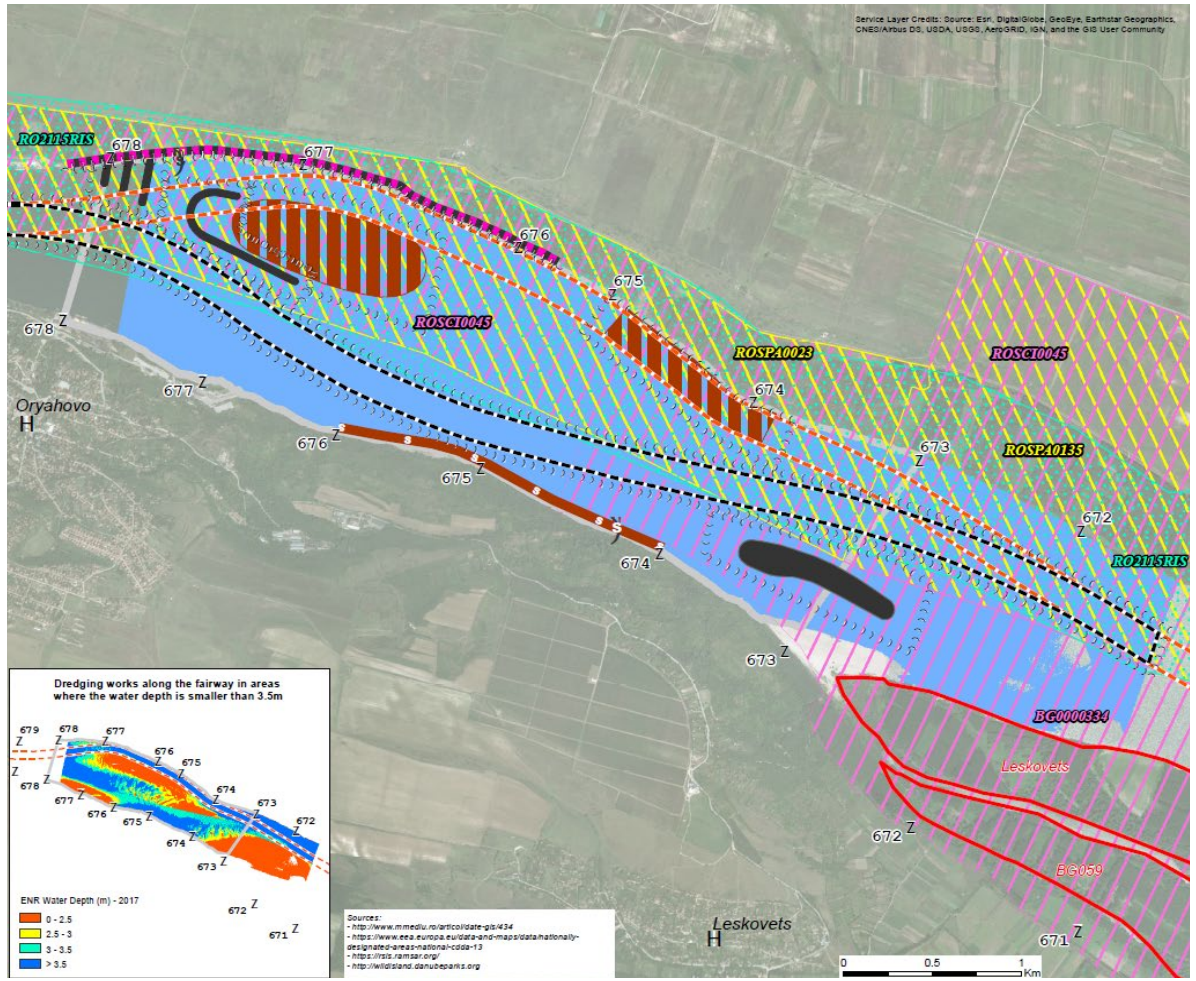


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Desing & Works execution

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Bechet



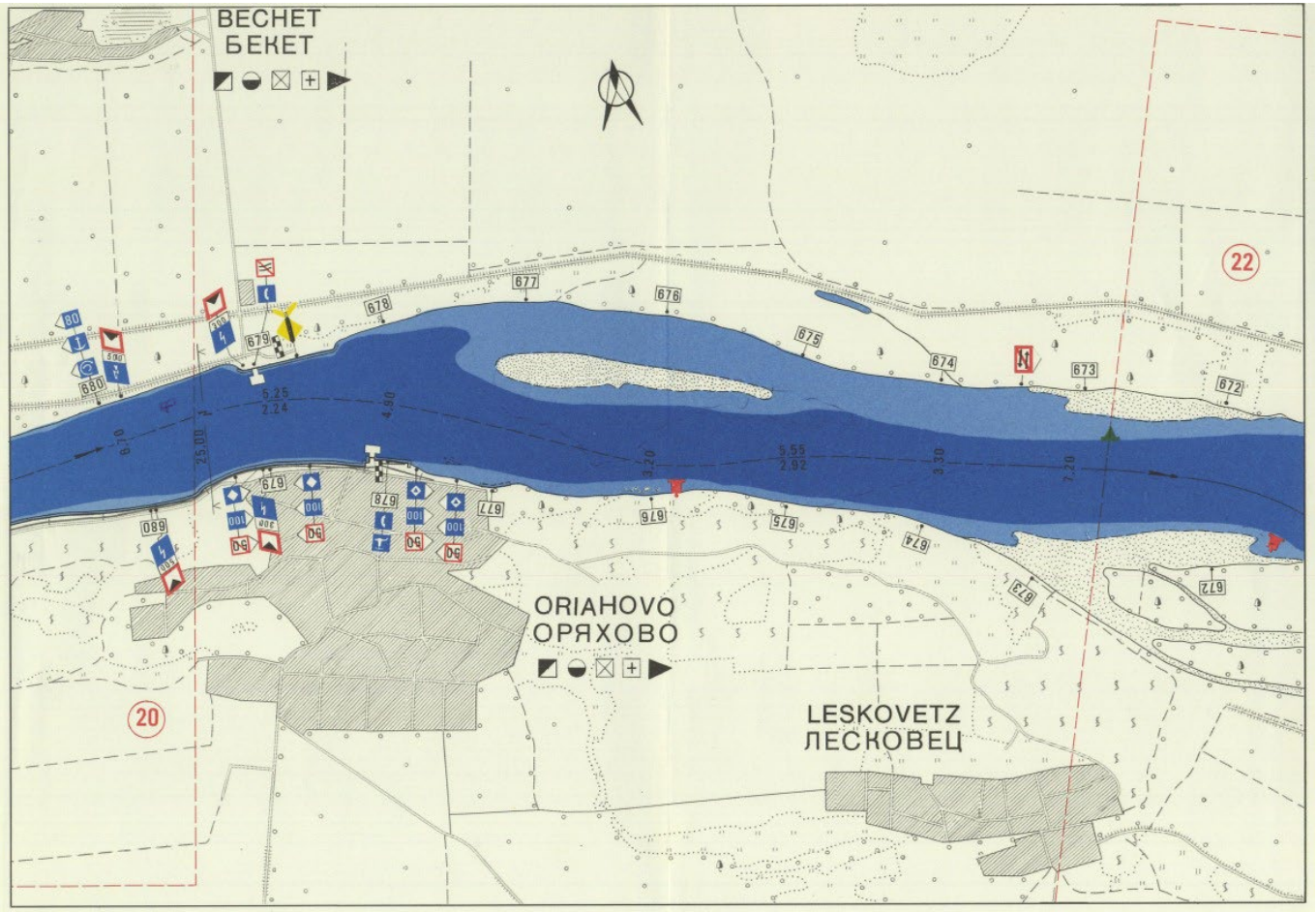
River training structures

- Three groynes on Romanian bank;
- Chevron (U-shaped dike) near km 678;
- Artificial island by building a protection 'nose' (u-shaped type structure) upstream at km 673.6;
- Bank protection on Romanian side, from km678.2 to km674;

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Desing & Works execution

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Bechet

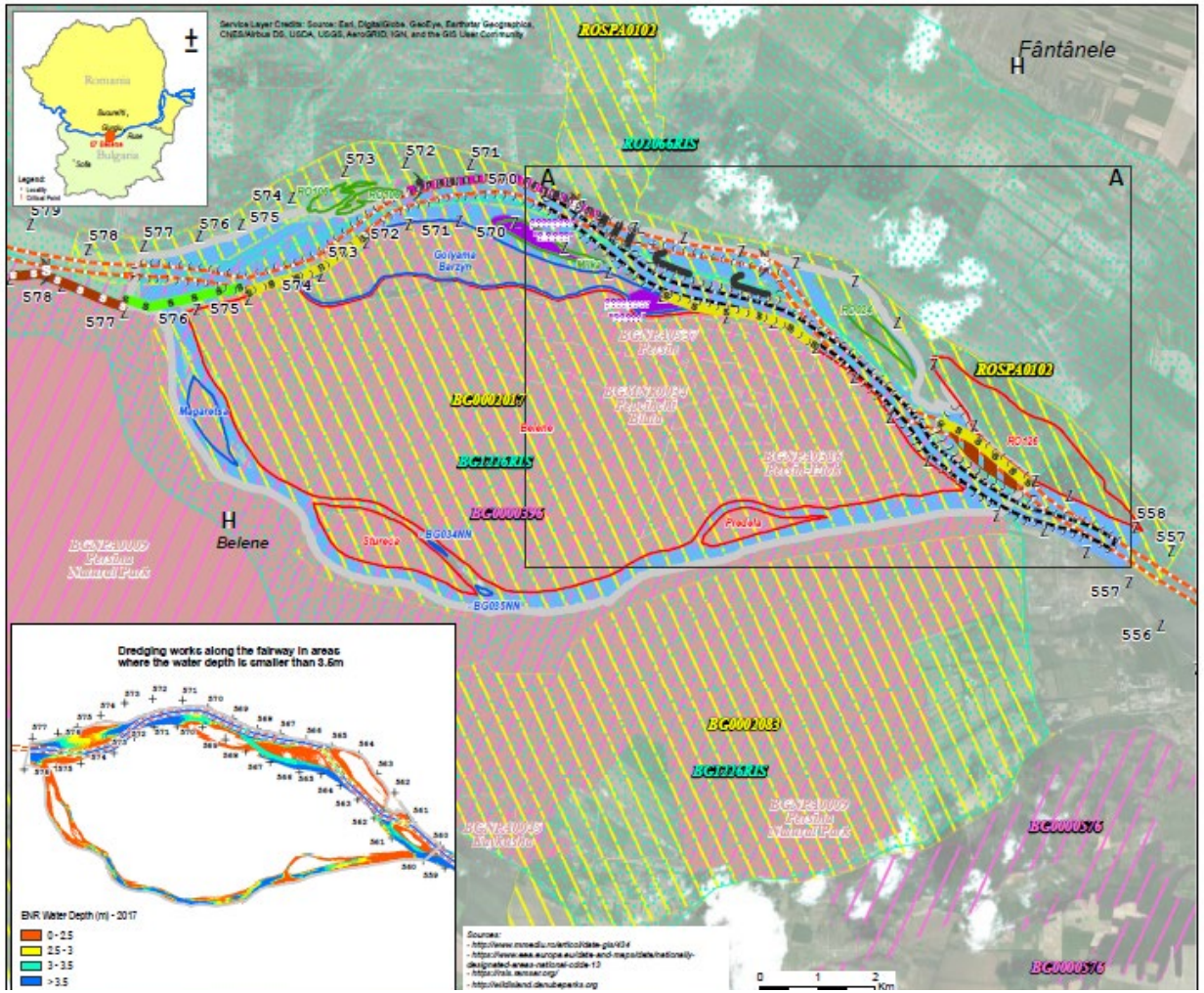
Capital dredging works

- **Fairway realignment over ~7.4 km, for reinstate the fairway.**

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Desing & Works execution

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Belene

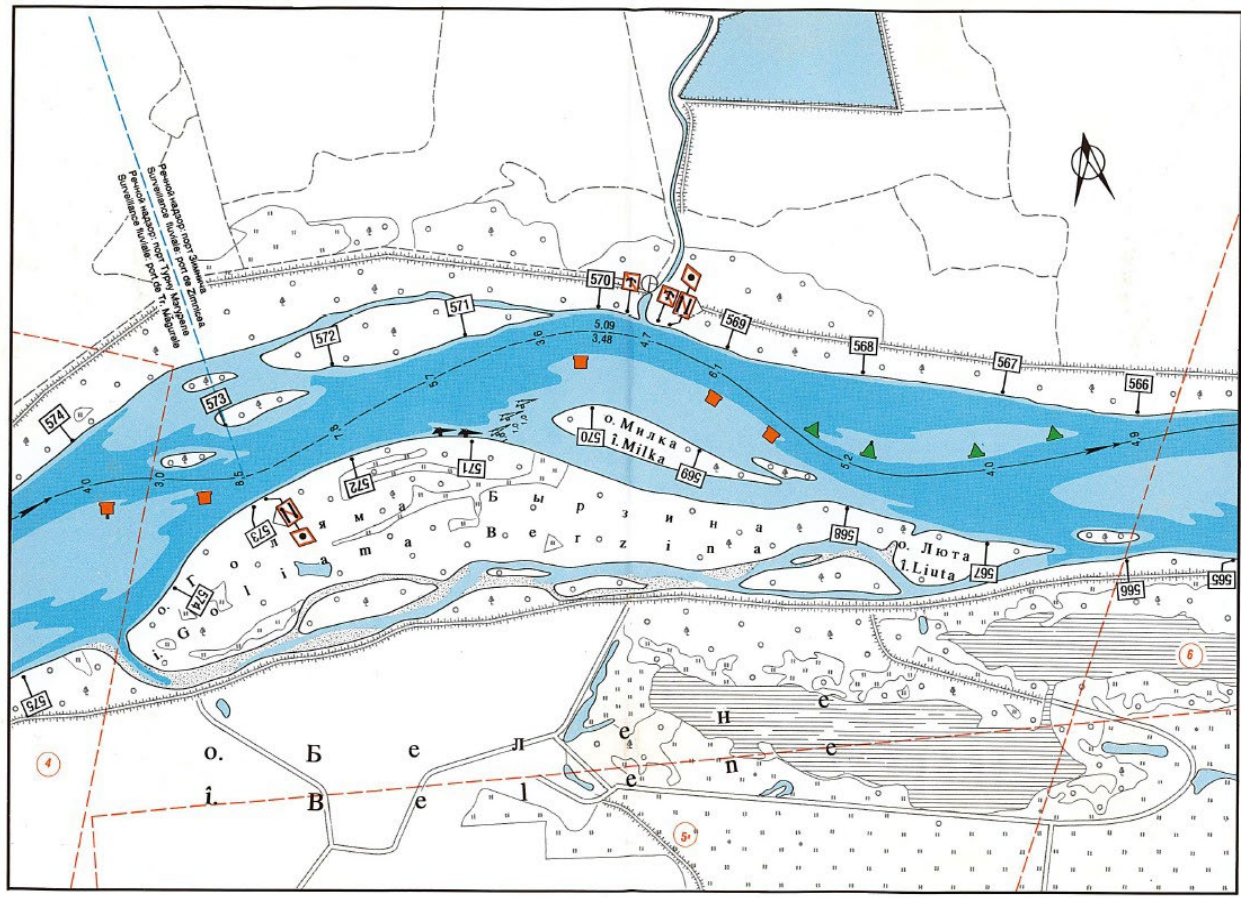
River training structures

- Three groynes on Romanian bank upstream of km568, up to km568.5;
- Two chevrons from km568.5 to km565.8; ~1500m distance between them;
- Bank protection on Romanian side from km569.9 to km568.5

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Desing & Works execution

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Belene

Capital dredging works

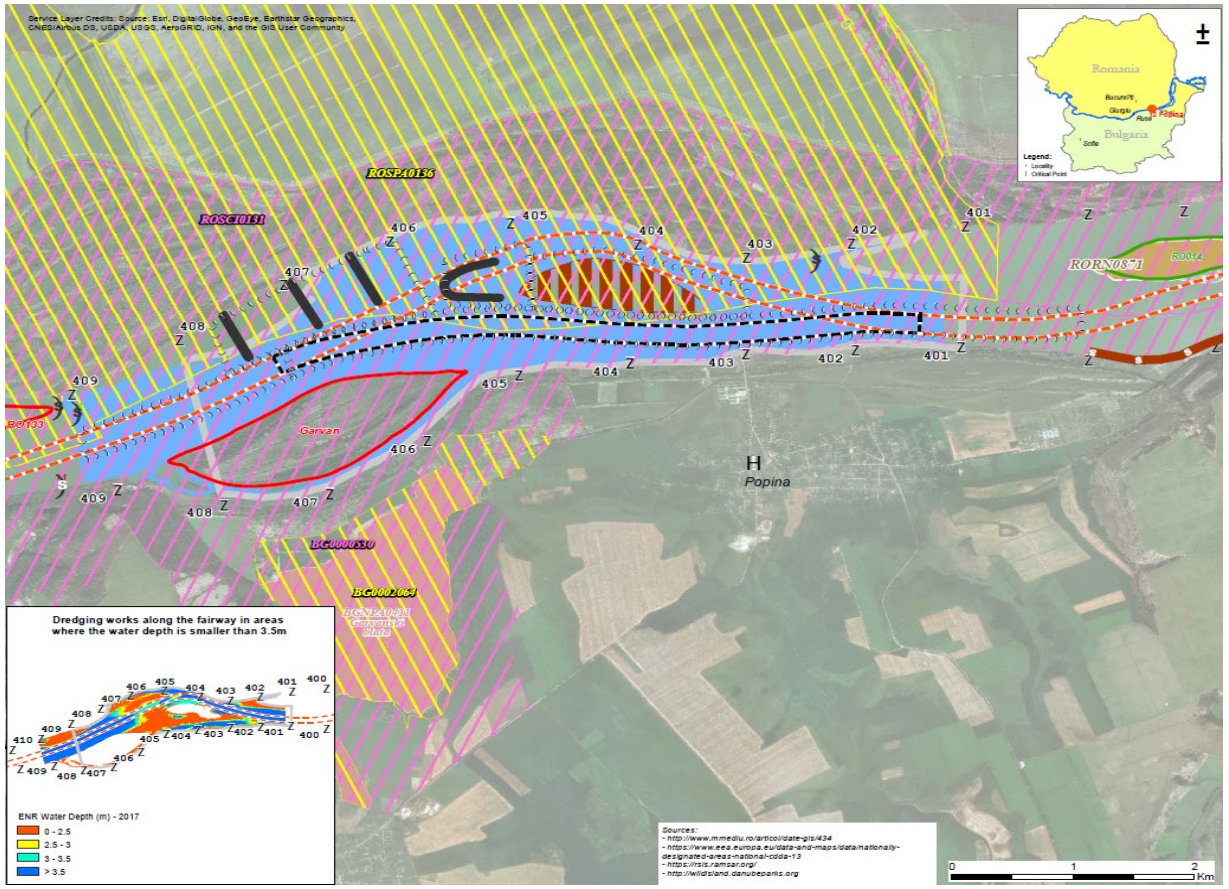
Realignment of fairway in two areas from:

- **km569 to 564;**
- **km561.5 to 556.7.**

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Desing & Works execution

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Popina

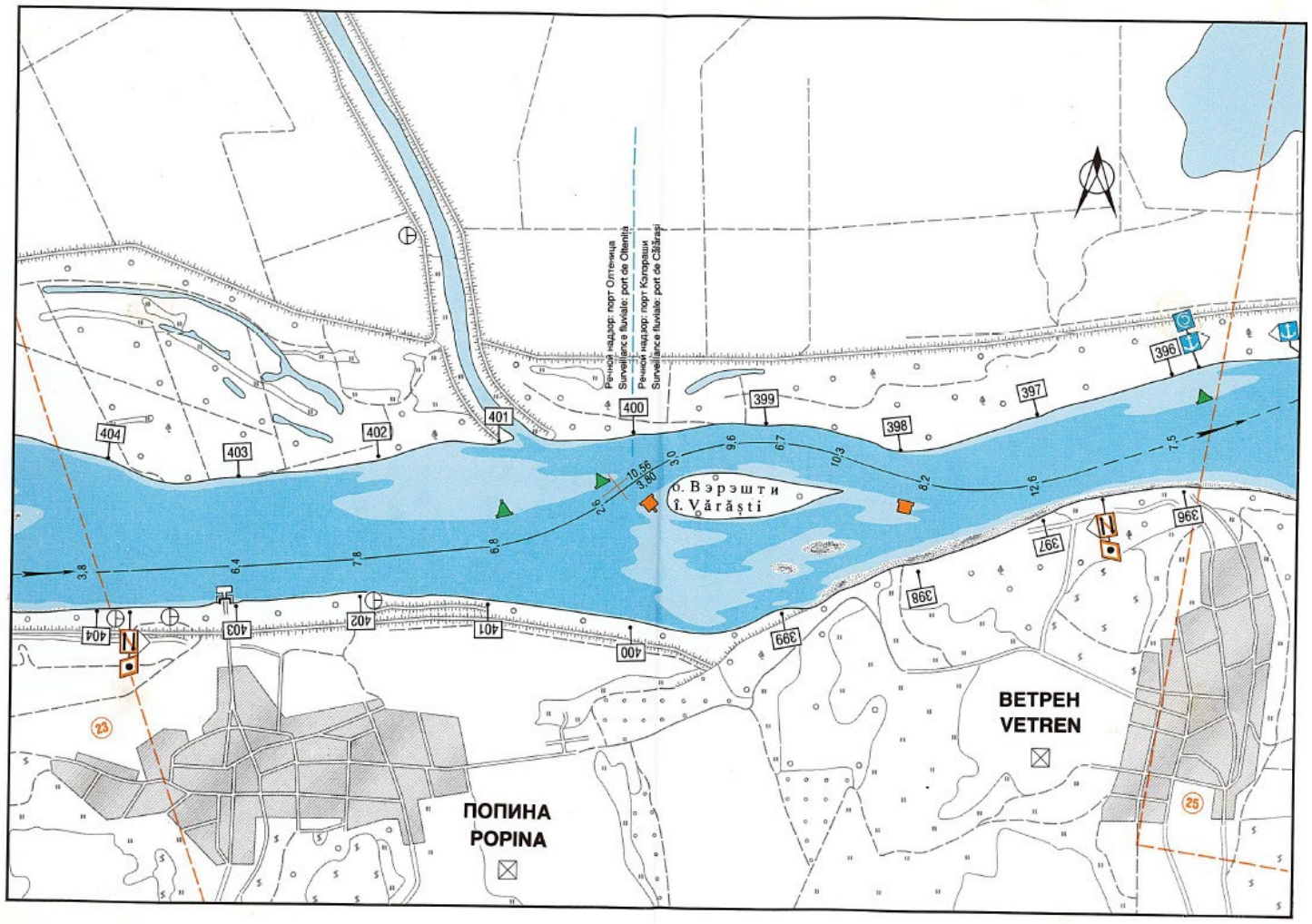
River training structures

- Three groynes on Romanian bank from km407.5 to km406.5;
- One chevron upstream of km405;

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Desing &Works execution

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Popina

Capital dredging works

- **Realignment of fairway from km407.5 to 401**

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Design & Works execution

Co-funded by the European Union

For the development of the technical design and execution of the works, a contract will be signed

Design and Works Contract

Contract duration – ***108 months*** (May 2026 – April 2035)

- 22 months - Developing the technical design - including th

developing the numerical 1D, 2D and 3D models and installing the infrastructure for landslide

obtaining the construction permits

- 24 months - Execution of works
- 62 months - Warranty period and project closure



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Works supervision

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- ✓ ***Verification and approval of design documentation***,
  - including site investigation reports
  - modelling reports
  - calculation for sizing the works
  - technical specifications per type of works and locations
  - detailed drawings etc.
- ✓ ***Supervise the procedures*** for obtaining the permits and works authorization, up to the Building Permit, in each country
- ✓ ***Supervision of works*** on site
  - in terms of quality and quantity in accordance with the Romanian and Bulgarian legislation

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Communications

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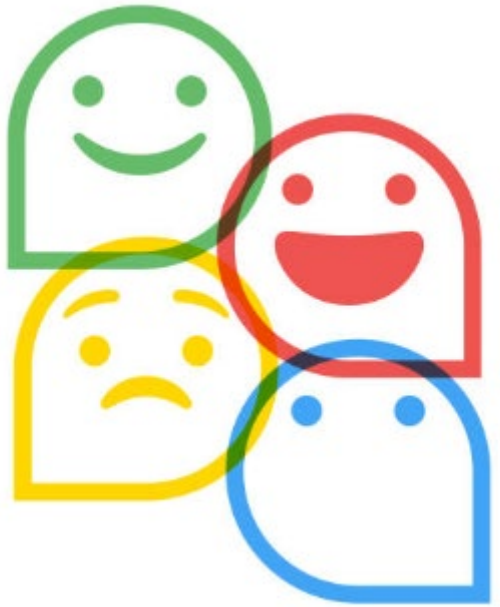
Natura 2000 Forum



Subject-specific Working Groups - to bring together experts from various filds in reaching conclusions and contribute to the project implementation

- morphology / modelling
- engineering / technical solutions
- environmental / social
- sturgeon / fish

Stakeholders Forum



Annually one workshop in Romania and one in the Republic of Bulgaria

Forums/Competitions for children, organized in schools

Annually one event in Romania and one in the Republic of Bulgaria

On site visit

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Thank you for your attention!

Romeo SOARE - AFDJ Galati

2nd SCOM Meeting , 10th of December, 2025, Bucharest

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