FAST DANUBE

Technical Assistance for Revising and Complementing the Feasibility Study Regarding the Improvement of Navigation Conditions on the Romanian-Bulgarian Common Sector of the Danube and Complementary Studies

Co-financed by the European Union
Connecting Europe Facility

Administrația Fluvială a Dunării de Jos R.A. Galați

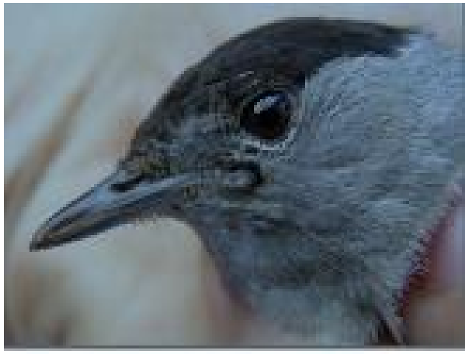
FAST DANUBE

Bilateral Meeting between the Competent Environmental Authorities in Romania and Bulgaria

11-12 October 2017, Pleven

Welcome/Agenda

- Heath and Safety Moment
- Purpose of Meeting
- Introduce the Project
  - Project history (FS 2011)
  - Project team
- Project Status and Calendar for implementation
- EIA/AA Procedural Approach
- EIA/AA Technical Approach
- Schedule/Approach conclusions & End of meeting



H&S Moment

Driving is risky. Road traffic injuries are the ninth leading cause of death globally and are predicted to rise.[1]

8 ways to prevent vehicle-related accidents and injuries

1. Plan your trip. Before leaving, give yourself five minutes to plan your route. Have an idea of where you’re headed so you don’t rely on GPS or your smartphone. Check the weather so you can factor it into your plans.
2. Don’t participate in conference calls, text or use other wireless devices while driving. Turn off or silence your mobile device while driving. Pull off the road to a safe location if you need to use your phone.
3. Wear your seat belt - every trip - every time - no matter the distance. The risk of injury is eight times greater for people riding unrestrained in the back seat.
4. Adjust your seat, mirrors and steering wheel before starting the vehicle and driving.
5. Wear appropriate footwear for driving. Avoid flip-flops and high heels.
6. Eat breakfast. A fueled body and a focused mind are your best assets behind the wheel.
7. Get enough sleep. Fatigue results in slower reaction times and delays processing information. 20 percent of motor vehicle crashes happen because of drowsy driving.
8. Schedule business travel so you arrive at a reasonable time and don’t drive while fatigued.

1. Data from World Health Organization

Purpose of Meeting

- Understand procedural and technical requirements of EIA/AA procedure to be developed in both countries – Romania and Bulgaria - discuss and agree the approach in both countries;

- Agree the date to start the EIA/AA procedure in Romania and Bulgaria;

- Discuss the transboundary impact (Espoo requirements) and agree on the approach;

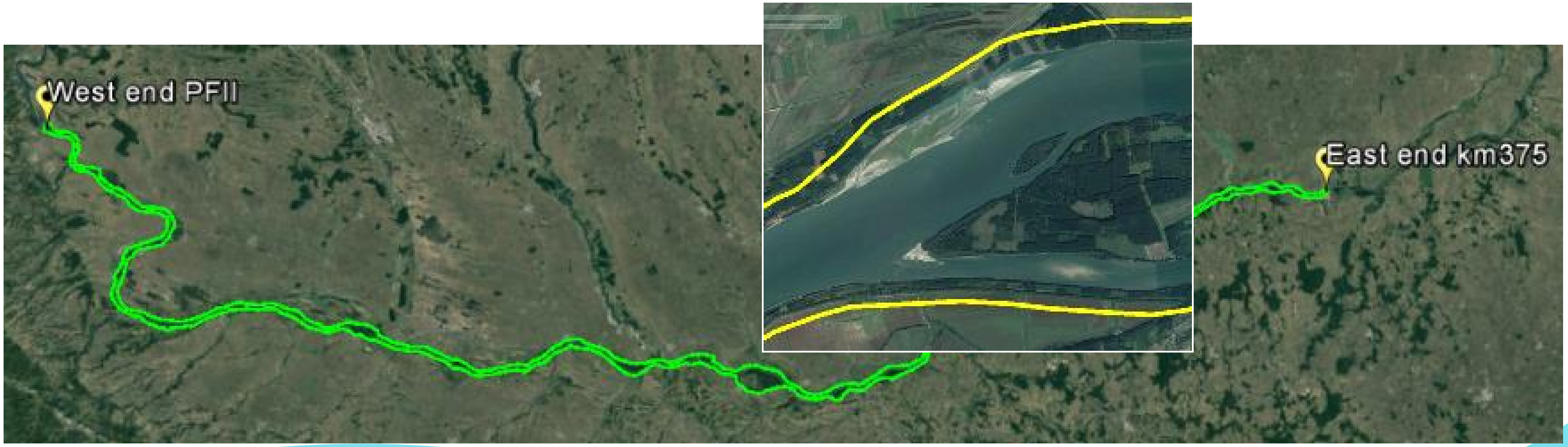
- Discussions on implementation of Water Framework Directive requirements – art. 4.7

Project History

- 2007 – Preparatory work for the Project started in 2007, when Romanian Ministry of Transport contracted technical assistance for the preparation of a Feasibility Study.
- 2011 – Final draft Feasibility Study report was completed in November 2011. **Existing information from the preliminary study**: Environmental Impact Assessment (EIA). Appropriate Assessment (AA) on Natura 2000 sites. The preliminary Feasibility Study defined and analyzed 6 alternatives for improvement of navigation conditions.
- 2011 – "Optimised Alternative" was selected in 2011 on the basis of the recommendations of the Consultant; uncertainties on the Appropriate Assessment conclusions still remained. Romanian and the Bulgarian environmental authorities considered the report on impact on the Natura 2000 sites as incomplete. **Needs for reviewing solutions.**
- 2014 – AFDJ Galati - leader (empowered by APPD – Bulgarian partner) and INNOVATION AND NETWORKS EXECUTIVE AGENCY (the European Commission has delegated to INEA this task) signed a new contract: *''Technical Assistance for Revising and Complementing the Feasibility Study Regarding the Improvement of Navigation Conditions on the Romanian-Bulgarian Common Sector of the Danube and Complementary Studies – FAST DANUBE''* (Beneficiary: AFDJ Galati; Project duration: 1st November 2014 – 31st December 2018; Total Budget: EUR 5.252.000; Financing EU – 85 % and Romanian Government – 25 %; Contract activities: **Feasibility Study**, **the Environmental Impact Assessment**, **Preparing the Public Procurement Procedure for Design and Construction**, Project Management and **Communication**).
- 2017 – AFDJ Galati and Halcrow signed the contract: *"Technical Assistance for Revising and Complementing the Feasibility Study regarding the Improvement of Navigation Conditions on the Romanian-Bulgarian Common Sector of the Danube and Complementary Studies"* (the bidding process started in 2015). The contract was signed by both parties on 7th March 2017 and it was registered by AFDJ under the registration no. 19/07.03.2017 and by Halcrow under the registration no. 943/HRO/07.03.2017.

Consortium

- Halcrow Romania S.R.L. (CH2M)
- Marine Research S.R.L. (hydrography, hydrodynamics and sediment surveys)
- iC Consuleten (hydrography surveys)
- Ingeo Proiect S.R.L. (topographical surveys – LiDAR scanning)
- Geosond S.R.L. (geotechnical surveys)
- Marin Erika P.F.A. (financial expert)
- Support for EIA and AA from Dicon – Bulgaria and EPC Consulting - Romania

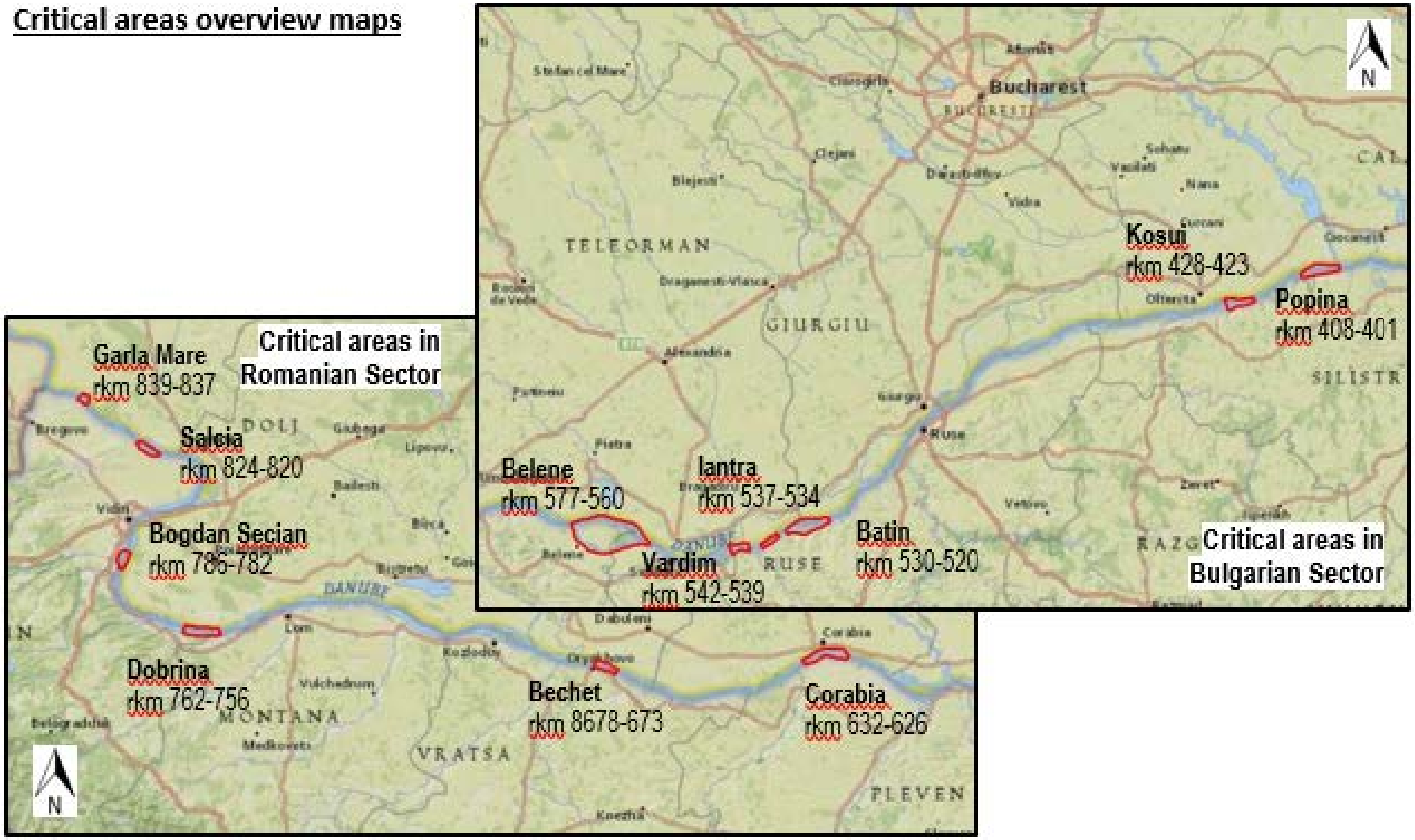


Project Context

- **Danube Commission recommends:** a navigation channel width of 180m with minimum depth of 2.5m for the Romanian-Bulgarian sector, with reduction to 150m width where the minimum depths cannot be ensured.
- **Responsibility:** maintaining adequate navigation conditions from km 863 to km 610 and from km 610 to km 375, between AFDJ Galati of Romania and IAPPD Ruse of Bulgaria respectively.
- **Project objective:** update the recommendations of the 2011 Feasibility Study, and **to identify a longer-term solution and package of management measures which are technically, environmentally and financially acceptable and sustainable.**

Critical Areas

Critical areas overview maps



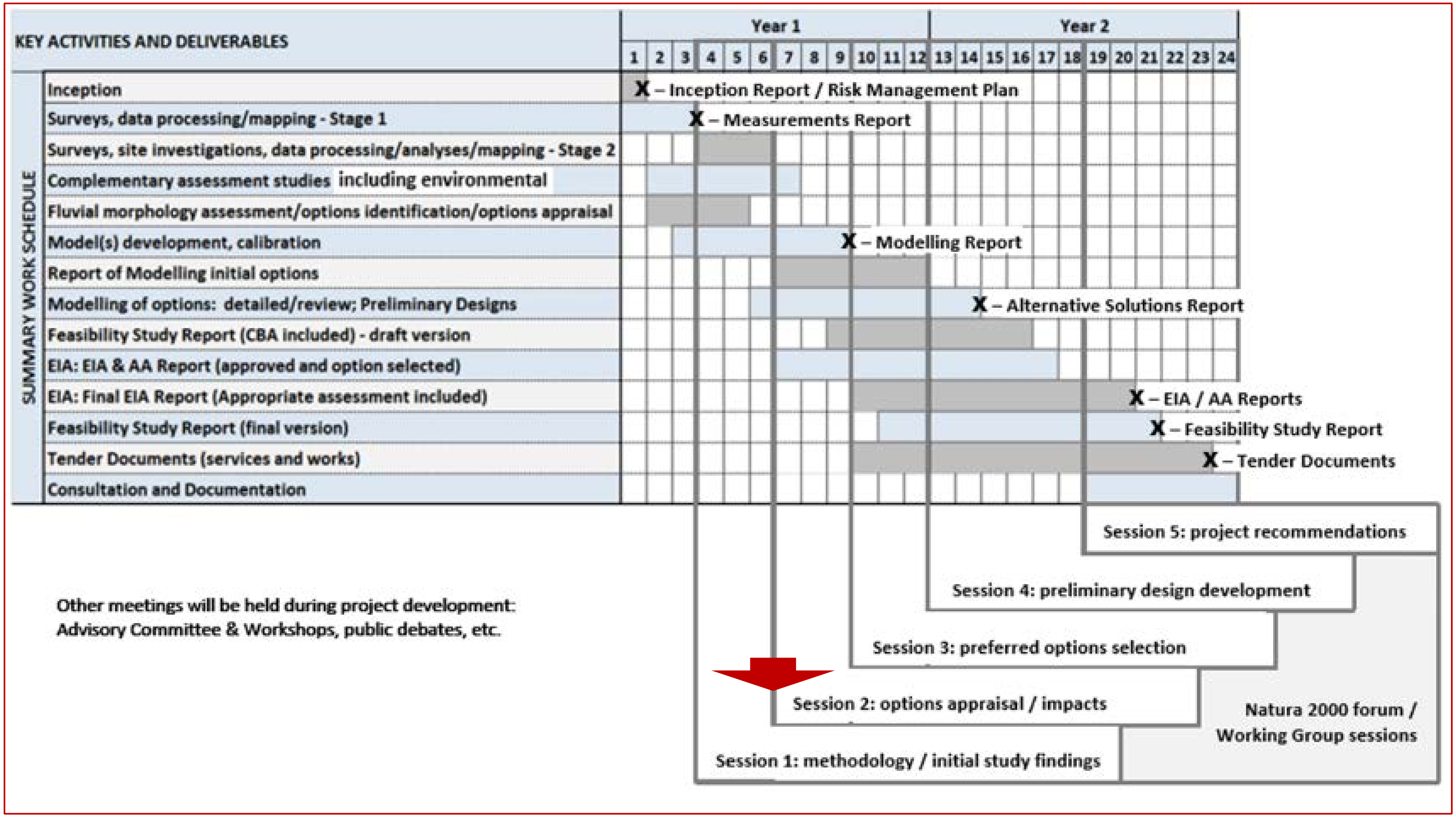
Project Objectives

- Undertake a **Feasibility Study** presenting **sustainable technical options to improve navigation** at each identified critical location.
- Conduct **surveys, investigations** and **data collection**
- **Verified simulation and analytical models**
- **Permits** to support promotion and allow adoption of the preferred option(s).
- **Tender Documents** and **plans to implement** the project.

Project Activities

- Field activities: Hydrological, hydrodynamic and bathymetry surveys, sediment surveys, topography – LiDAR scanning, geotechnical drilling
- Environmental Surveys for EIA and AA
- River morphological study
- Modelling
- Feasibility Study
- Tender documents (design & works supervision)
- Publicity

Calendar



KEY ACTIVITIES AND DELIVERABLES
Year 1
Year 2
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
SUMMARY WORK SCHEDULE
Inception
Surveys, data processing/mapping - Stage 1
Surveys, site investigations, data processing/analyses/mapping - Stage 2
Complementary assessment studies including environmental
Fluvial morphology assessment/options identification/options appraisal
Model(s) development, calibration
Report of Modelling initial options
Modelling of options: detailed/review; Preliminary Designs
Feasibility Study Report (CBA included) - draft version
EIA: EIA & AA Report (approved and option selected)
EIA: Final EIA Report (Appropriate assessment included)
Feasibility Study Report (final version)
Tender Documents (services and works)
Consultation and Documentation
X – Inception Report / Risk Management Plan
X – Measurements Report
X – Modelling Report
X – Alternative Solutions Report
X – EIA / AA Reports
X – Feasibility Study Report
X – Tender Documents
Session 5: project recommendations
Session 4: preliminary design development
Session 3: preferred options selection
Session 2: options appraisal / impacts
Session 1: methodology / initial study findings
Natura 2000 forum / Working Group sessions
Other meetings will be held during project development:
Advisory Committee & Workshops, public debates, etc.

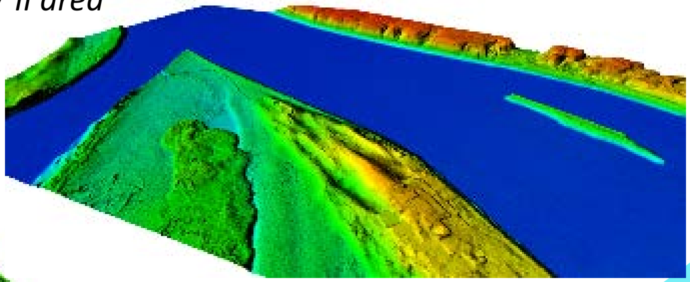
Field surveying by aerial LiDAR scanning

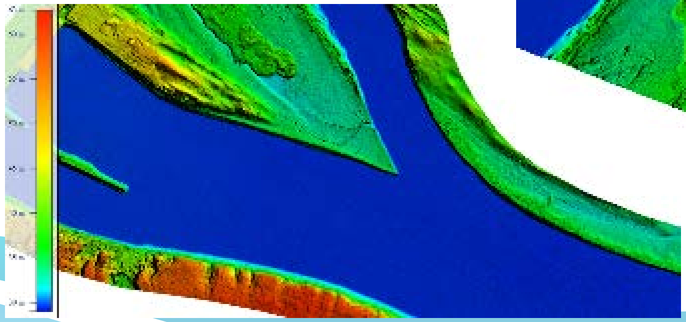
Cessna T206H

LiteMapper 6800i LiDAR system installed inside the plane

Piper Navajo PA-31

DTM grid extract in Portile de Fier II area





Sediment measurements

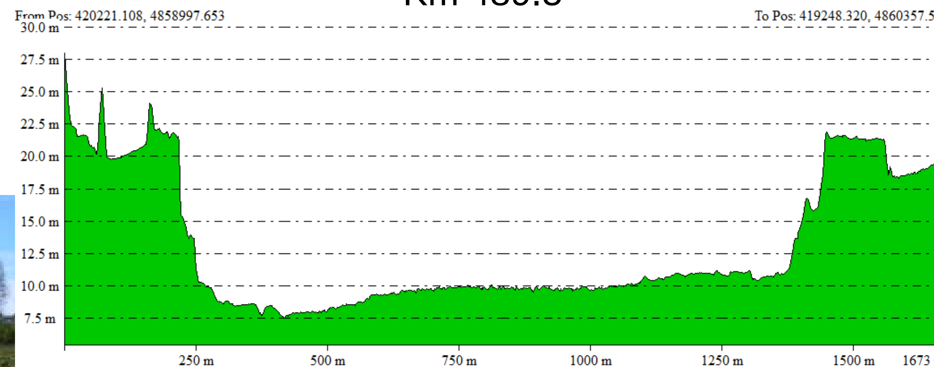
Hydrographical survey

SHADOW 1 (MR)

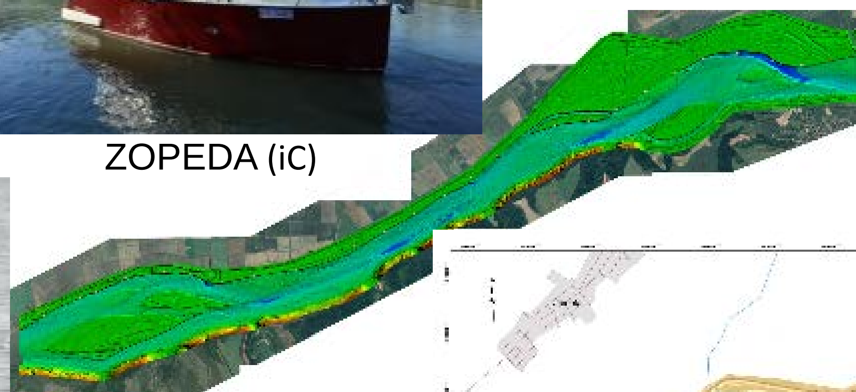
ZOPEDA (iC)

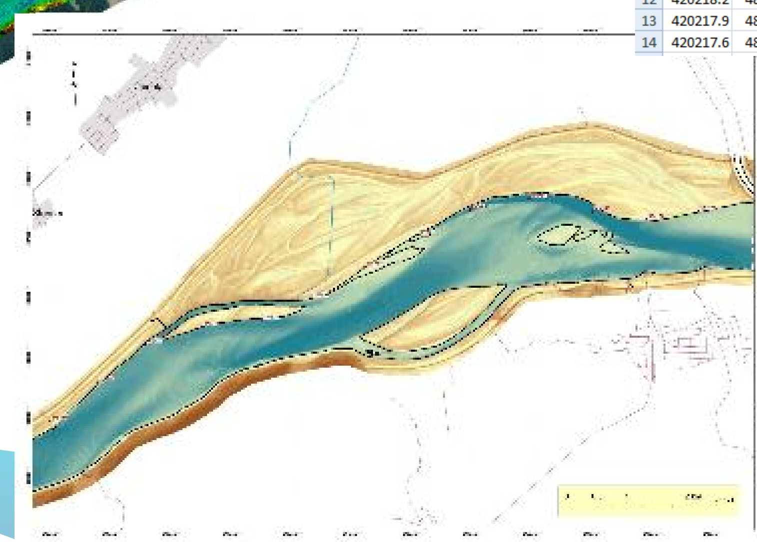
Buster XL (MR)

Km 489.5

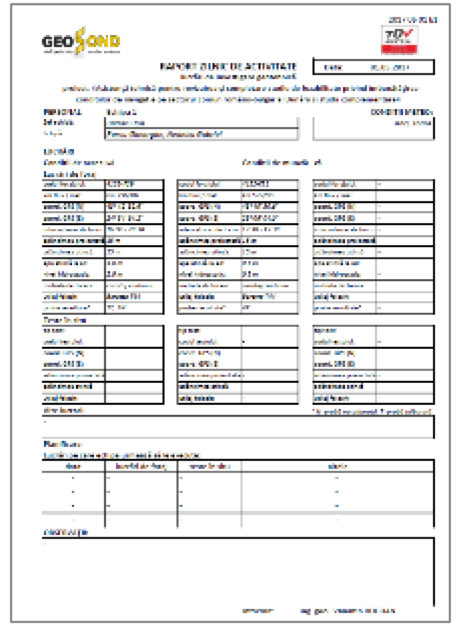


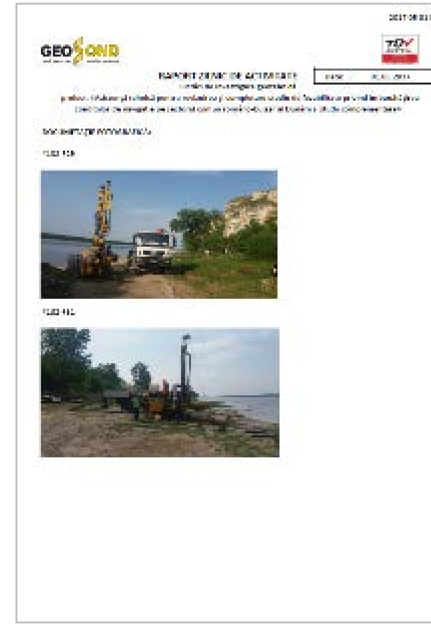
	A	B	C
1	X	Y	ELEV
2	420221.1	4858998	27.993
3	420220.8	4858998	27.728
4	420220.5	4858998	27.457
5	420220.2	4858999	27.192
6	420219.9	4858999	26.909
7	420219.7	4859000	26.658
8	420219.4	4859000	26.355
9	420219.1	4859000	26.039
10	420218.8	4859001	25.769
11	420218.5	4859001	25.461
12	420218.2	4859002	25.149
13	420217.9	4859002	24.864
14	420217.6	4859003	24.601



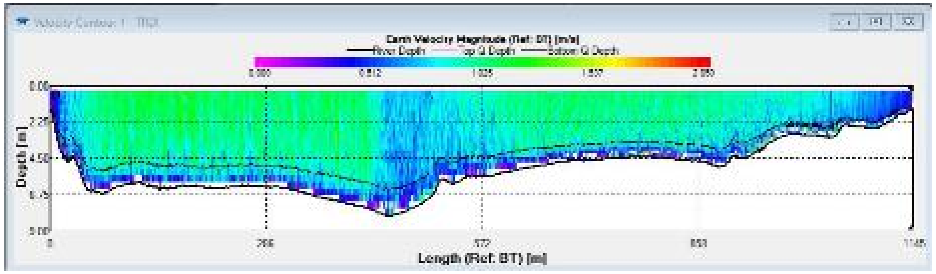


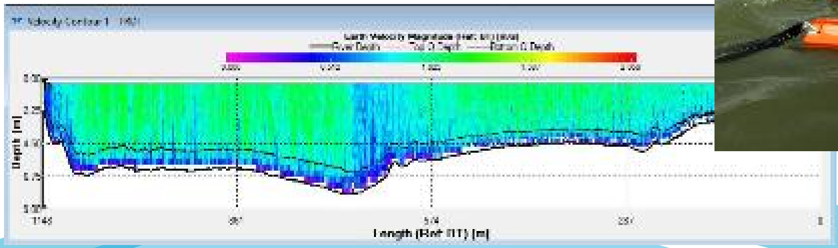
Geotechnical Survey





Hydrodynamics (ADCP) survey





What’s next?

- Building the models: 1D, 2D and Sediment transport
  - **Flood Modeller Pro** software package
  - **MIKE 21 Flow FM** software
- Navigation simulation modelling
  - **SHIPMA (v7)** software
- Environmental Impact Assessment (EIA) and Appropriate Assessment (AA)
- Preparing the Feasibility Study
- Tender documents (design & works supervision)
- Publicity

EIA/AA procedural approach

- EIA Directive, Directive 2014/52/EU - State of the transposition in Romania and Bulgaria

- Procedural requirements – EIA/AA procedure to be developed in both countries (RO/BG):
  - calendar;
  - local competent authorities to be notified;
  - public comment / debates requirements.

- Discussions/consultation on the transboundary impact (Espoo requirements)

EIA/AA technical approach

- Content of EIA/AA documents (from Notification to EIA Decision) in both countries (RO/BG)

- Transboundary impact - methodology, key elements

Schedule/Approach conclusions & End of meeting

Administrația Fluvială
a Dunării de Jos R.A. Galați

Thank you!

Co-financed by the European Union
Connecting Europe Facility