

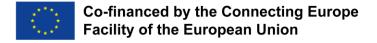






## **FAST DANUBE**

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









## FAST DANUBE

WORKSHOP ON OPTIONS APPRAISAL / SELECTION FOR FAST DANUBE PROJECT

20 Sep'18, Bucuresti

Time	Topic	Responsible		
09:00 - 09:30	Registration / Coffee	All		
WORKSHOP ON «Options Appraisal / Selection for FAST DANUBE project»				
09.30 - 9:45	Introduction:  - Welcome  - H&S moment  - Project status	Mr. Dan TARARA Mr. Romeo SOARE		
09.45 – 11.00	<ul> <li>Session 1:</li> <li>Initial option preferences, morphological (Prof Colin Thorne via skype)</li> <li>Revised options, modelling / engineering / CBA</li> <li>Environmental studies</li> <li>Q&amp;A</li> </ul>	Mr. Paul RAYNER Mr. Damian DEBSKI Ms. Roxana DORNEANU Ms. Charlotte HANDY		
11.00 – 11.30	Coffee break			
11.30 – 13.00	Session 2:  - Multi-criteria analysis: introductory session	Mr. Dan TARARA Mr. Paul RAYNER Ms. Roxana DORNEANU Ms. Charlotte HANDY		
13.00 – 13.45	Lunch			
13.45 – 15.30	Session 3:  - Multi-criteria analysis: interactive session  Session 4:	Mr. Dan TARARA Mr. Paul RAYNER Ms. Rayana DORNE ANU		
15.30 – 16.00	Session 4:  - Consensus view on long term sustainable options	Ms. Roxana DORNEANU Ms. Charlotte HANDY		
16.00	Closing statement	Mr. Romeo SOARE		





## FAST DANUBE

Scurta prezentare –

WORKSHOP ON OPTIONS APPRAISAL / SELECTION FOR FAST DANUBE PROJECT

INTRODUCTION – PROJECT STATUS

Paul S Rayner, Hydraulics/Hydrodynamics Expert, Technical Lead

20 Sep'18, Bucuresti



# Introduction – project status

## Topics to be covered:

- Introducing our experts and JASPERS / COWI
- Overview of approach
- Project to date: modelling, environmental studies, MCA
- Work in progress: options appraisal







#### **5 ENVIRONMENTAL 7 CONTRACTUAL AND BID** 1 FEASIBILITY STUDY 2 FIELD STUDIES **4 MATHEMATICAL MODELLING** 9 PUBLICITY ASSESSMENTS **DOCUMENTATION** KE 2: Hydraulics and hydrodynamics KE 7: Appropriate Assessment KE 5: Hydrografic measurements Cristina Peltea/ CH2M **KE 11: Communications KE 6: Numerical Modelling** Paul Rayner / CH2M Ben Benatt / CH2M Gheorghe Viorel Ungureanu / Nicoleta Vasile / CH2M Damian Debski / CH2M Simona Ciocan / CH2M Marine Research KE 3: Hydrotechnical constructions KE 8: Environmental Impact Jon Wicks / CH2M Nicoleta Vasile / CH2M Stuart Suter / Independent Assessment Geotechnical, Hydrological, Hakeem Johnson / CH2 Erica Joanna Walker / CH2M Topographic, Hydrodynamics Viorica Sassu / CH2M KE 4: Geomorphology and sediment Studies, Sediment Measurements KE 9: Ichtyology transport Guy Green / Ch Monica Ciufuliga / CH2M Glenn Langler / CH2M Colin Thorne / Independent Viorel Ungureau/ Marine Research Design engineers Hydrologyst **Environmental experts** Zoran Lucik / IC Consuleten Ionel Zlate / CH2M Monica Ciufuliga / CH2M Cristina Angheluta / CH2M Valentin Bogdan / Geosond **8 PERMITTING** Roxana Dorneanu / CH2M Paul Constantinescu / CH2M **DOCUMENTATION** Radu Iordache / INGEO Gabriel man / CH2M Costel Cozma / CH2M Alex Paraschiv / CH2M Roxana Ta Monica Ciufuliga / CH2M Cristina Vlad CH2M Dobri Dorin/ CH2M **6 COST-BENEFIT ANALYSIS 3 TRAFFIC STUDY** Vlad Stoica / CH2M Corina Galgau / CH2M Civil engineer Vlad Stoica / CH2M KE 10: CBA expert experts Cristi Popescu / CH2M Erika Marin / Independent Bayram/CH2M Mark Raitok / CH2M Vasile Ionut / CH2M Anthony Fidler/CH2M Razvan Spiridon / CH2M Cathy He derson/CH2M Other independent experts from Bulgaria as needed **KE 2: Hydraulics and hydrodynamics Project Director KE6: Numerical Modelling** Paul Rayner / CH2M Serban Tiganescu **Damian Debski KE 3: Hydrotechnical constructions Project Manager Stuart Suter / Independent Environmental Expert Dan Tarara** Roxanna Dorneanu **KE: Appraisal expert KE 4: Geomorphology and sediment** Sturgeon / Fish Expert **Peter von Lany** transport Radu Suciu Colin Thorne / Independent

Design engineers

**Rob Davinroy / Independent** 

(formerly US Army Corps)

6

**Environmental Expert** 

Charlotte Handy



#### INNOVATION AND NETWORKS EXECUTIVE AGENCY

**INEA** 



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

Located on a pre-identified section of the Rhine-Danube Corridor (Bulgarian /Romanian common section), the Action aims to accelerate the removal of an existing bottleneck along this cross-border section of the Danube as it will identify the works to achieve stable navigation conditions all year round.

It is part of a Global Project to implement the Fairway Rehabilitation and Maintenance Danube Master Plan.

The Action consists of 4 activities from the completion of the Environmental Impact Assessment and building permits documentation to the drafting of the tender designs for future works.

The Action is a precondition for the implementation of any physical interventions aimed at improving the navigability of the Bulgarian/Romanian Danube common section.

REPUBLIC
OF SERBIA
CEF Network:
Roads
Railways
Inland Waterways
Action: 2014-EU-TMC-0297-5

ROMANIA

Ploiesti
Pleven
BULGARIA
Vama
Stara Zagora o

50 % 100
Boulgan
Action: 2014-EU-TMC-0297-5

Source: INEA

Source

https://ec.europa.eu/inea/en/connecting-europe-facility/cef-

ransport/technical-assistance-revising-and-complementing-feasibility

#### FAST-DANUBE: GOALS OF PROJECT

The overall goals and targets of the project are to:

- Implement a strategy to improve navigation based on (i) increasing traffic safety and (ii)
  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 per year
- As a result, enable an increase in the total goods transported; to be targeted as a 20% increase
  in traffic compared with 2014 usage levels; presumably measured in tonnage.
- Ensure that the preferred navigation improvement strategy:
  - (i) Is harmonized with European regulations (free of charge navigation, common rules of navigation).
  - (ii) Conforms with all permits and licenses required under Romanian and Bulgarian law.
  - (iii) Qualifies to obtain necessary urban planning approvals and certification.
  - (iv) Meets the requirements of Appropriate Assessment protocols to obtain environmental approvals and permits from authorized institutions in Romania and Bulgaria.
  - (v) Is formulated based on full consultation with appropriate Authorities and the public.





## FAST-DANUBE: OBJECTIVES/DELIVERABLES OF TECHNICAL ASSISTANCE SERVICES

The objectives/deliverables of the Technical Assistance services mirror the project objectives:

- Provide the Lower Danube River Administration with a comprehensive Feasibility Study
  presenting and justifying at least two long-term, sustainable technical options to improve
  navigation usage and safety at each identified critical location
- To support this with full documentation of all physical surveys, investigations and data; and of calibrated and verified simulation and analytical models including provision of licensed software and training as appropriate
- To provide the Lower Danube Administration with all necessary documentation to support consultation of scenarios and options, and all approvals and permitting documentation to support promotion and allow adoption of the preferred option(s); and
- Furnish all necessary Tender Document and plans to enable the Administration to implement the project and dispense its responsibilities to fulfil the recommendations of the Budapest Danube Commission to increase the traffic of transported goods through the Danube corridor





EV A CTIVITIES AND DELIVED AND ES	Year 1 Year 2	
EY ACTIVITIES AND DELIVERABLES	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	
Inception	X – Inception Report / Risk Management Plan	
Surveys, data processing/mapping - Stage 1	X – Measurements Report	
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	X – Modelling Repart	
Report of Modelling initial options	X - Modelling Initial Options	
Modelling of options: detailed/review; Preliminary Designs	X — Alternative Solutions Report	
Feasibility Study Report (CBA included) - draft version		
EIA: EIA & AA Report (approved and option selected)		
EIA: Final EIA Report (Appropriate assessment included)	X – EIA / AA Reports	
Feasibility Study Report (final version)	X – Feasibility Study Report	
Tender Documents (services and works)	X – Tender Documen	
Consultation and Documentation		



## Project status **Options** appraisal

## Long-list options appraisal:

- high level MCA / screening
- stakeholder consultation

## **Short-list options appraisal:**

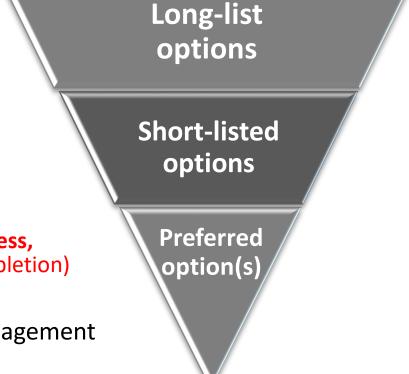
- modelling
- environmental assessment
- traffic study, CBA
- detailed MCA
- stakeholder consultation

### - complete

- work in progress, (nearing completion)

## **Preferred options:**

- tender design, framework for adaptive management
- EU-compliant, EIA/AA, permitting
- stakeholder consultation





Technical Assistance for Revising and Complementing the Feasibility Study regarding the Improvement of Novigiation Conditions on the Romanian-Bulgarian Common Sector of the Danube and Complementary Studies + FAST DAVIDE

#### **Initial Options Simulation Modelling Report**

Galati Lower Danube River Administration, A. A.

Report number: HRO/029/R/20180413 Apr'18

#### Ch2m:

Halcrow România sd ACH2MHILCompany str. Carol Davila, pr.85 Cam. A, Etaj 2, 050453 sector 5, Bucuresti, România T +40 311 065 376 F+40 311 034 189 www.ch2m.com





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**Project reports** 



#### Addendum Report Method Statement

be River Administration, A. A.

Report number: HRO/027/R/20171222 Mar'18

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senting the Feasibility Study s - FAST DANUBE

nube River Administration. A. A.

Report number: HRO/027/R/20171222

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www.ch2m.com

un-Bulgarian Common Sector

minary Report

Prepared for dministration, A. A.

er: HRO/003/R/20170317 Oct'17

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- first campaign

Romanian-Bulgarian Common Sector s - FAST DANUBE

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& measurements

Prepared for Administration, A. A.

mber: HRO/006/R/20170712 12 July 2017

#### Ch2m

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FINAL

n Report

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03/R/20170317 31 March 2017

Prepared for

ACHOMHLCompany str. Carol Davila, nr.85 Cam. A, Etaj 2, 050453 5. Bucuresti, România T +40 311 065 376 F+40 311 034 189 www.ch2m.com

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## Addendum Report Method Statement

Prepared for

Galati Lower Danube River Administration, A. A.

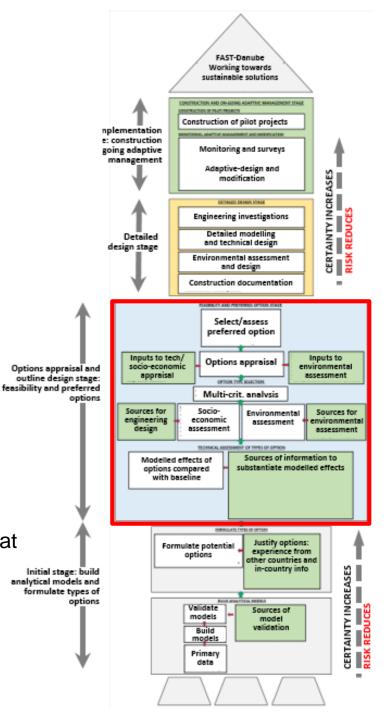
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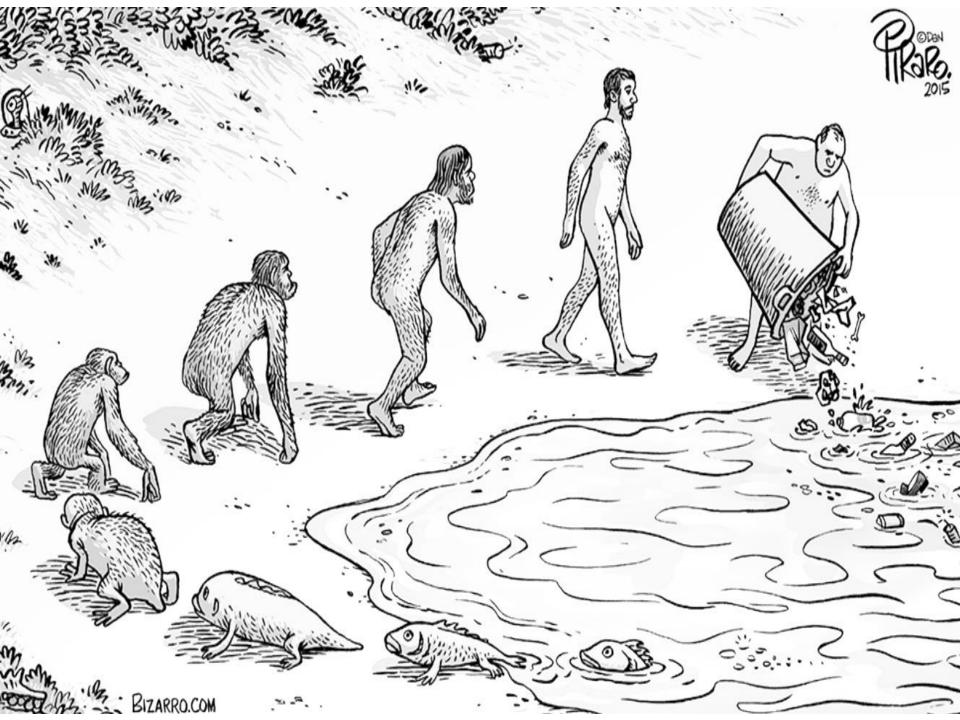
Mar'18

ch2m:

- Initial stage: build analytical models and formulate types of options
- Options appraisal and outline design stage: feasibility and preferred options
- Detailed design stage
- Implementation stage: construction and ongoing adaptive management

As with any project, success relies on adopting an appropriate method set against the project objectives that will develop a solution, from inception to implementation, in a way that progressively reduces the project risks (uncertainties). Risks can be associated with technical feasibility, environmental acceptability, economic viability, affordability, constructability, etc.





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