

October 19, 2016

Inland Waterways Projects in Ukraine

**EASTERN PARTNERSHIP MEETING
MINISTRY OF INFRASTRUCTURE OF UKRAINE**



**MINISTRY
OF INFRASTRUCTURE OF UKRAINE**

US Army Corps of Engineers

- 2 week mission in June 2016;
- Mission members included engineers with considerable expertise with locks and dams;
- Visited 5 of 6 locks;
- Met with UkrVodshlyakh operating personnel and management;
- Projected costs were done by UkrVodshlyakh and not verified by the USACE;

US Army Corps of Engineers (contd.)

Key take aways:

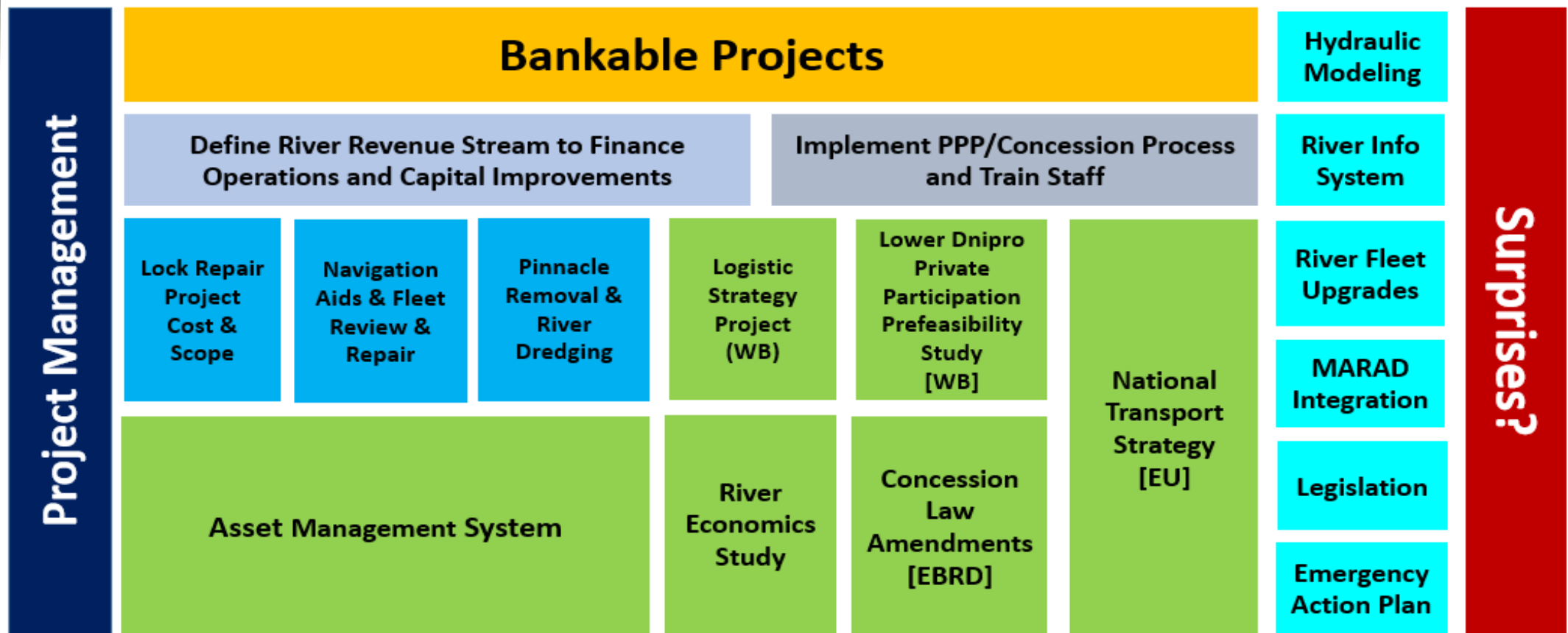
- ASSET MANAGEMENT SYSTEM – (est. \$350K for USACE program and training)
- BOUYS – many areas of Dnipro has damaged, missing or unlighted bouys impeding navigation (est. \$1.9M-\$5.2M depending on type);
- PINNACLES – removal of underwater obstructions to guaranteed depth of 3.65m (est. 1,000 cubic yards @ \$1,700 per cubic yard based on US experience on Mississippi with hydraulic hammer);
- HYDRAULIC MODELING – Comprehensive model of river system (est. \$6.9M-\$11.4M);
- EMERGENCY ACTION PLAN – Need to develop comprehensive EAP given concerns over mission failure (Cost TBD depending on scope and format).

[All costs presented are preliminary estimates]

Dnipro Development Initiative

- Dnipro Development Initiative
- Championed by Ambassador Klopenhouwer of the Netherlands
- Focus on revitalizing the Dnipro infrastructure and using river as tool for economic development tool
- Inland Waterways Donor Group
- Patterned after the Concession Law Working Group
- Includes EU, EBRD, EIB, Dutch Embassy, USAID, US Embassy, US Treasury, World Bank
- Goal is to coordinate donor activities for maximum benefit and to create a bankable projects with appropriate financial and operational transparency
- Review opportunities on other Ukrainian rivers

Dnipro Development Initiative Blocks



EASTERN PARTNERSHIP MEETING
MINISTRY OF INFRASTRUCTURE OF UKRAINE



MINISTRY
OF INFRASTRUCTURE OF UKRAINE



I Budget

**INLAND WATERWAYS DONOR MEETING
MINISTRY OF INFRASTRUCTURE OF UKRAINE**



**MINISTRY
OF INFRASTRUCTURE OF UKRAINE**

Ministry of Infrastructure Allocated Funds

Projects	Beneficiary	Funding (mln UAH)
Support operational and safe condition of locks shipping	SE "Ukrvodshlyakh"	64
Overhaul undercarriages supporting-job swing gate bottom of the Kremenchug Waterlock	SE "Ukrvodshlyakh"	3
Reconstruction of Zaporizhzhya Waterlock	SE "Ukrvodshlyakh"	31
Overhaul (replacement) workers handling movable upper gate head of Kanev Waterlock	SE "Ukrvodshlyakh"	15
Overhaul mooring floating Ream guides and their ways Dneprodzerzhinsk Waterlock	SE "Ukrvodshlyakh"	3
Overhaul (replacement) swing gate repair of Kiev Waterlock	SE "Ukrvodshlyakh"	12



I Projects

A photograph of a pond with a white lotus flower in bloom, surrounded by large green lily pads. The background is a dense forest.

**EASTERN PARTNERSHIP MEETING
MINISTRY OF INFRASTRUCTURE OF UKRAINE**



**MINISTRY
OF INFRASTRUCTURE OF UKRAINE**

TA Projects

River Economics Study

Review historical finances and operations to determine root causes for drop in river traffic and competitive position of alternate transport modes.

Asset Management System

Deploy Asset Management System [knowledge transfer] to assess and prioritize key assets. Includes life cycle evaluation, cost to replace/repair and economic impact. Critical in making resource allocation decisions.

Concession Law Amendment

Hogan & Lovell conducting a study to recommend changes to the existing PPP and Concession Laws to facilitate concession options for key infrastructure items.

Funding: World Bank	Funding: TBD	EBRD
Timing: TBD	Timing: 7 weeks [USACE]	Timing: 6 Months (Dec. 2016)
€TBD	\$375,000	€350,000

Projects

Lock Repair Verify Costs

Formulate detailed plan and cost estimates for key river infrastructure associated with the locks. Prioritization and timing determined by the results of the Asset Management System

Funding: EBRD

Timing: October 2016

€75,000

Navigation Aids & Fleet Review & Repair

Survey navigation aid status and develop capital replacement program and finance plan.

Funding: TBD

Timing: TBD

\$2.5 Million (Buoys only)
€4.5-22 Million (Fleet – UkrVodShlyak)

Pinnacle Removal & Dredging

Removal of pinnacles upstream from Dnipro to bring river draft to required 3.68M. Insure required depth in other sections of the river.

Funding: TBD

Timing: TBD

\$2.2-3 Million (USACE – Pinnacles)
Dredging TBD

Projects

Emergency Action Plan

Given concerns over status of mission critical components of locks, review existing EAP.
If necessary, conduct table top exercises and draft EAP for each lock on the Dnipro.

Funding: TBD

3 weeks

TBD

Hydraulic Modeling

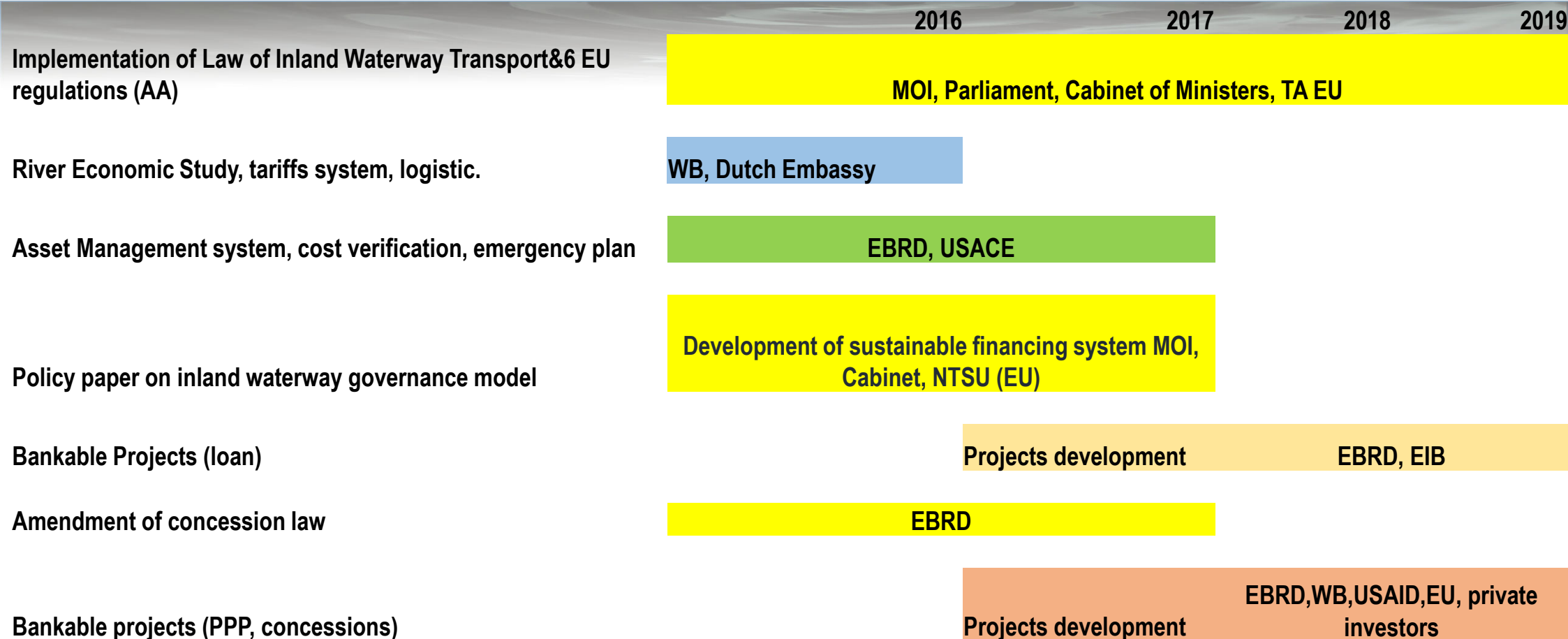
Creation of a mathematical model of the Dnipro used to analyze the river's hydraulic behavior. Physical models allow for evaluation and planning of current and sediment movements.

Funding: TBD

TBD

\$6.9-\$11 Million

Draft Timeline



EASTERN PARTNERSHIP MEETING
MINISTRY OF INFRASTRUCTURE OF UKRAINE



MINISTRY
OF INFRASTRUCTURE OF UKRAINE

I Legislation

**EASTERN PARTNERSHIP MEETING
MINISTRY OF INFRASTRUCTURE OF UKRAINE**



**MINISTRY
OF INFRASTRUCTURE OF UKRAINE**

Inland Waterway Obligations Under AA

Proposed legislation will be a legal background for implementation of:

- Directive № 2006/87/EU technical requirements for vessels on IWWs;
- Directive № 87/540/EEC on the access to the usage of the carrier during;
- Directive 96/75/EC of 19 November 1996 on the systems of chartering and pricing in national and international inland waterway transport in the Community

Accomplished to date:

- Directive № 96/50/EU on harmonization on conditions for receiving national captain licenses for cargo and passengers transportation on IWWs;
- Directive № 2005/44/EU on harmonized river informational services



I Thank you!

**EASTERN PARTNERSHIP MEETING
MINISTRY OF INFRASTRUCTURE OF UKRAINE**



**MINISTRY
OF INFRASTRUCTURE OF UKRAINE**