



Pilot activities perspective of the external evaluator MMPI - Croatia

DISC '19

Timisoara 18.12.2019, Sinisa Spegar

Evaluation target and scope

Pilots



Evaluation Perspectives



Users'

Questionnaires

Published shallow section information



Technical

Water level information

Data transmission WAMS to WAMOS

FIS portal monitoring



Managerial

Planning accuracy

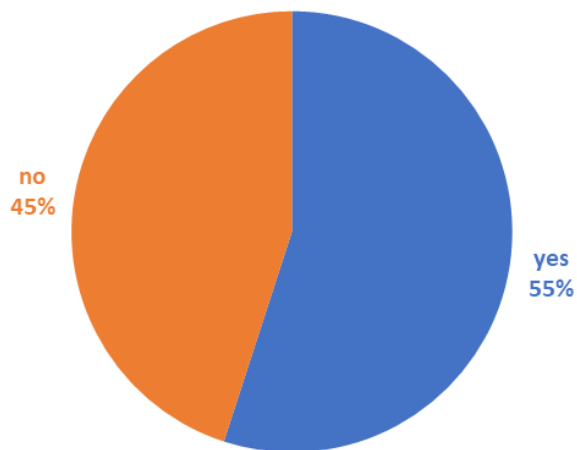
Efficient deployment

Required resources

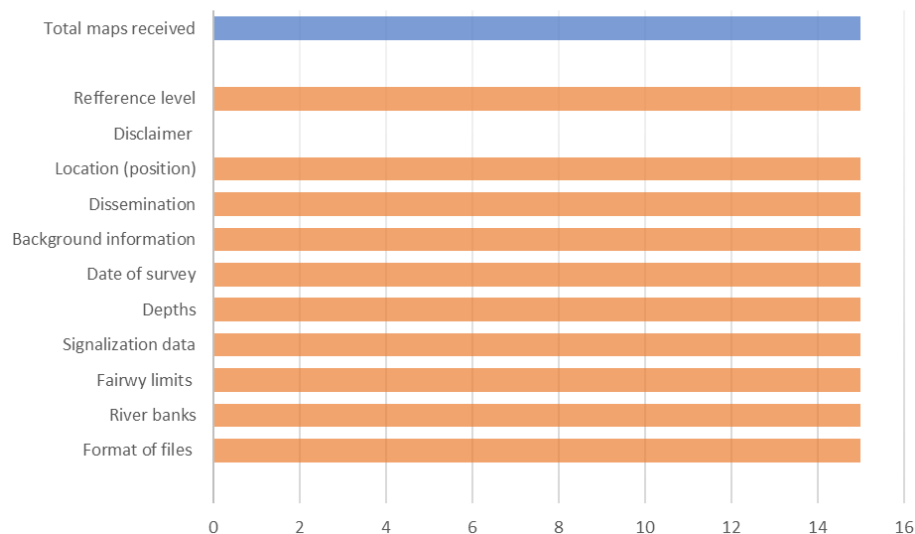
Users' Perspective (1/3)

- 16 questionnaires received (inputs on monitoring, forecast, marking)
- Users noted better quality of the bottleneck information
- Harmonised maps, based on sample of 15 maps

Increased quality of the provided bottleneck information on FIS Portal/national websites (%)



Compliance of displaying shallow sections information per parameters



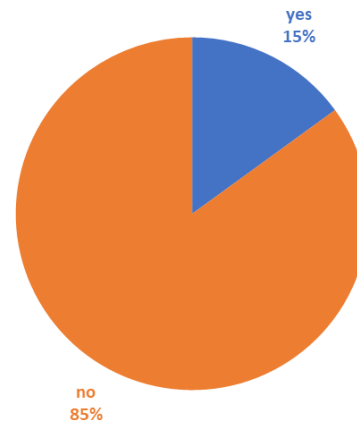
Users' Perspective (2/3)

- Users noticed increased update rate of water level information
- Improved water level forecast
- Water level forecast used in 95% cases for transport and loading decisions

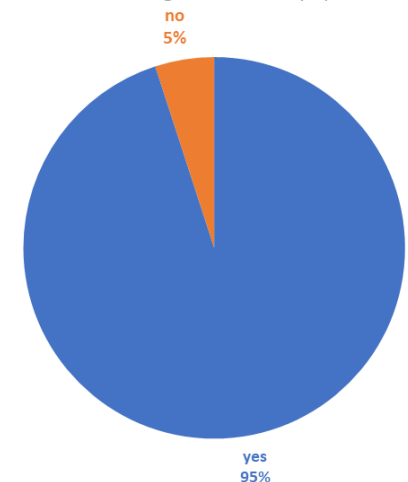
Increased update rate of the water level informat
FIS Portal



Users noticed the improved water level forecast
in Hungary and the new water level forecasts in
Croatia, Romania and Bulgaria (%)



Do users use the forecasts for transport and
loading decisions? (%)



Users' Perspective (3/3)

- Availability of navigation signs is in 90% cases either good or very good, 10% satisfactory;
- Accuracy of the placing floating signalization is good or very good in 90% of cases, 10% satisfactory.

Availability of navigation signs
in the Croatian sector

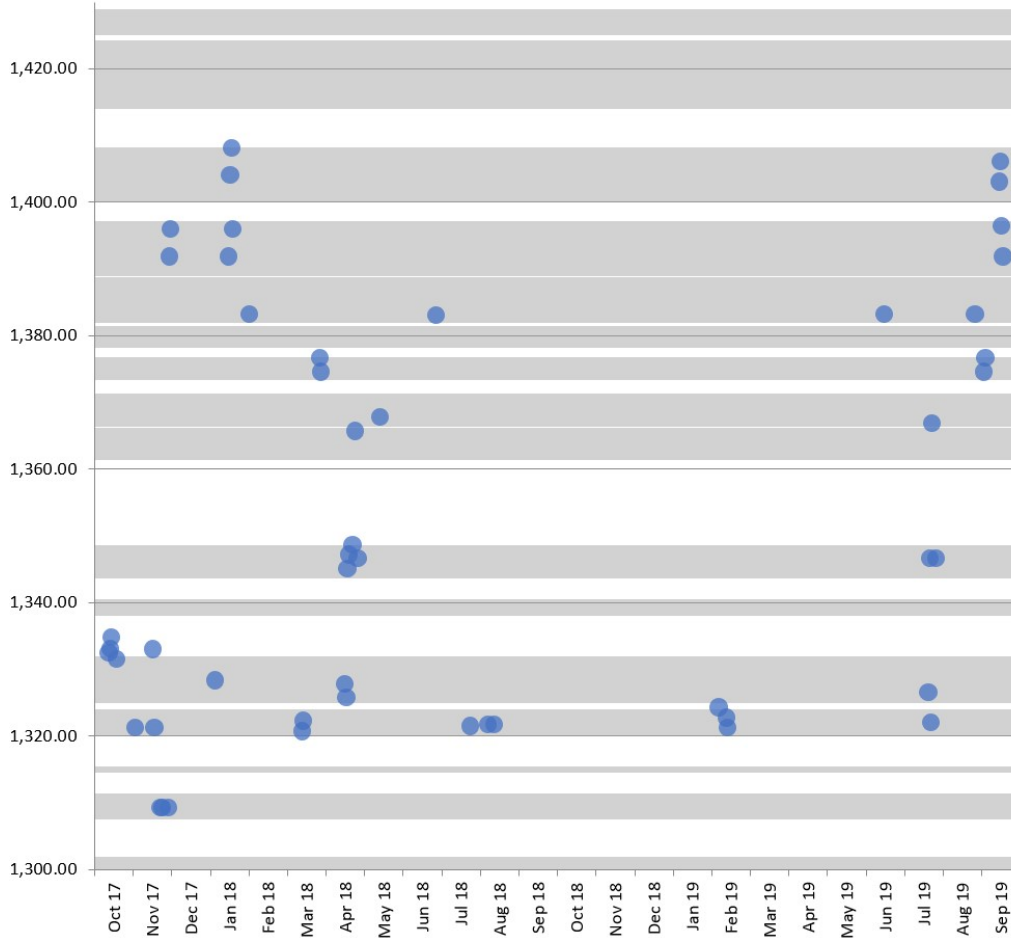


How accurate buoys are placed



Managerial perspective – monitoring (1/2)

Surveying activities (MB)

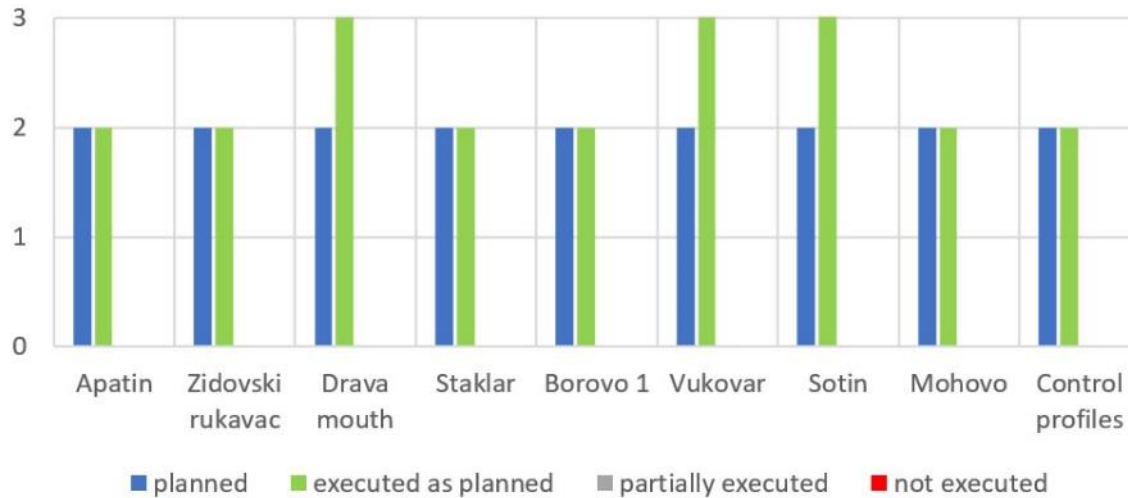


- Return to homeport daily
- Low operation costs (2260 lit used for 50 days of operation-about 50 lit. per day of survey);
- Condition of and changes in the riverbed tracked more efficient (in average 4,5h hours of survey per day of survey);
- Improved accuracy of surveys (more accurate equipment is used);
- More detailed (ENC) charts are provided, including accurate depth data on FIS Portal (average age of 75,5 days of relevant bottlenecks).

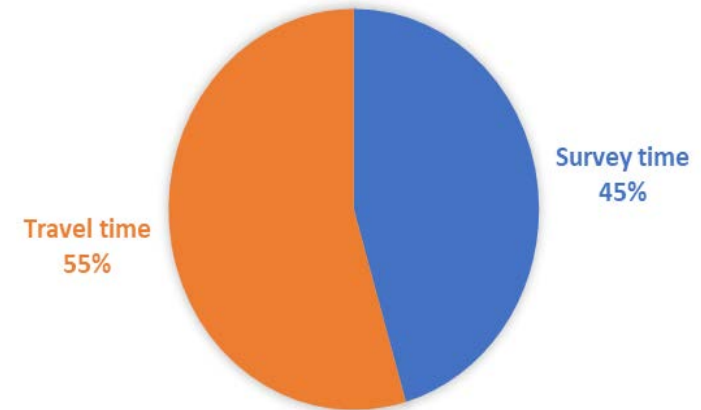
Managerial perspective - monitoring (2/2)

- All planned activities performed (critical sectors + control profiles);
- Focus of pilot activities was on critical sectors (8 critical sectors surveyed 19 times);
- Travel to surveying time ratio is very good. (45% represents survey time)

Planned vs. performed surveys

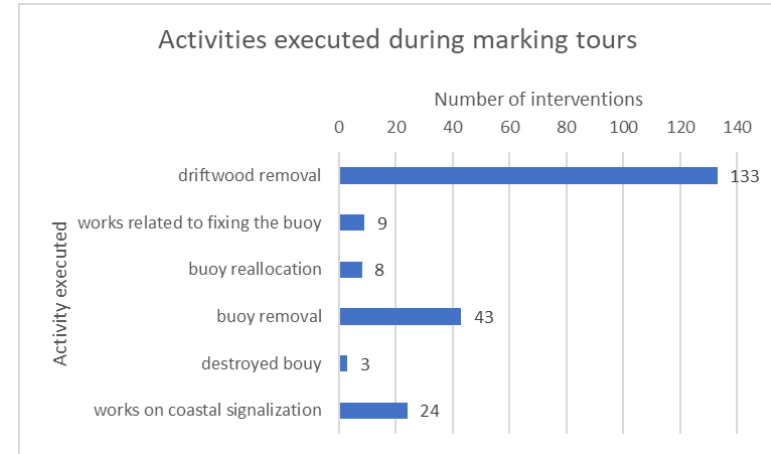
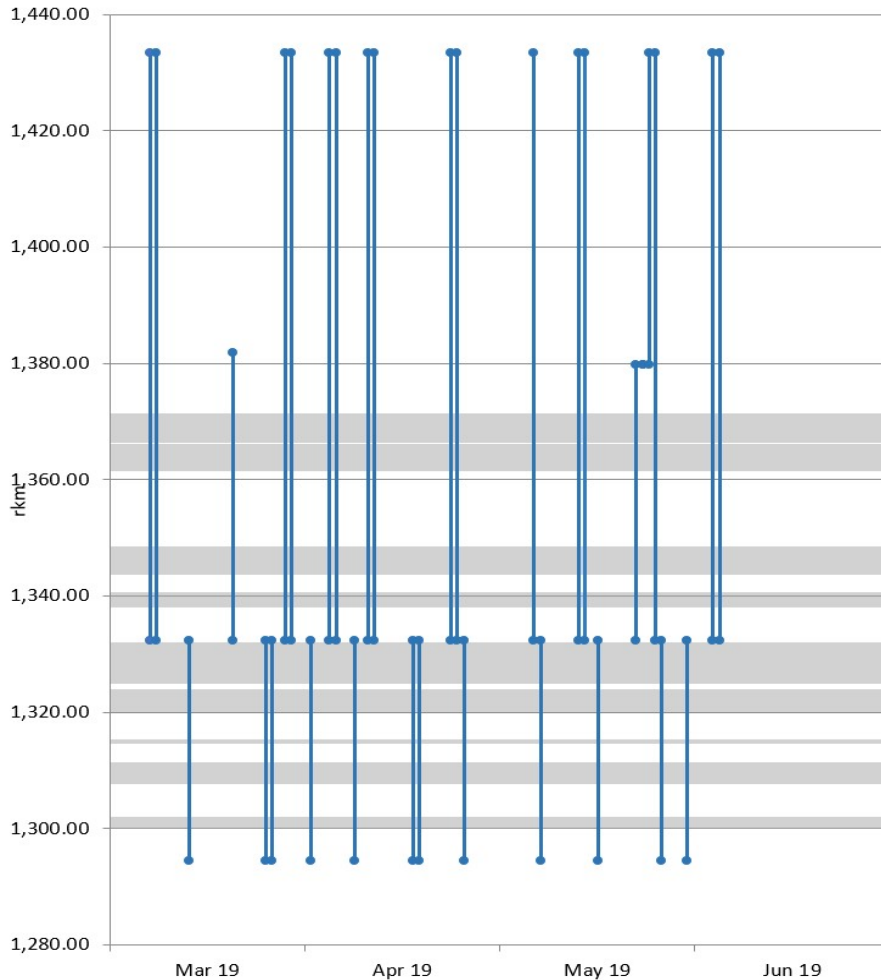


Travel time – surveying time ratio



Managerial perspective - marking

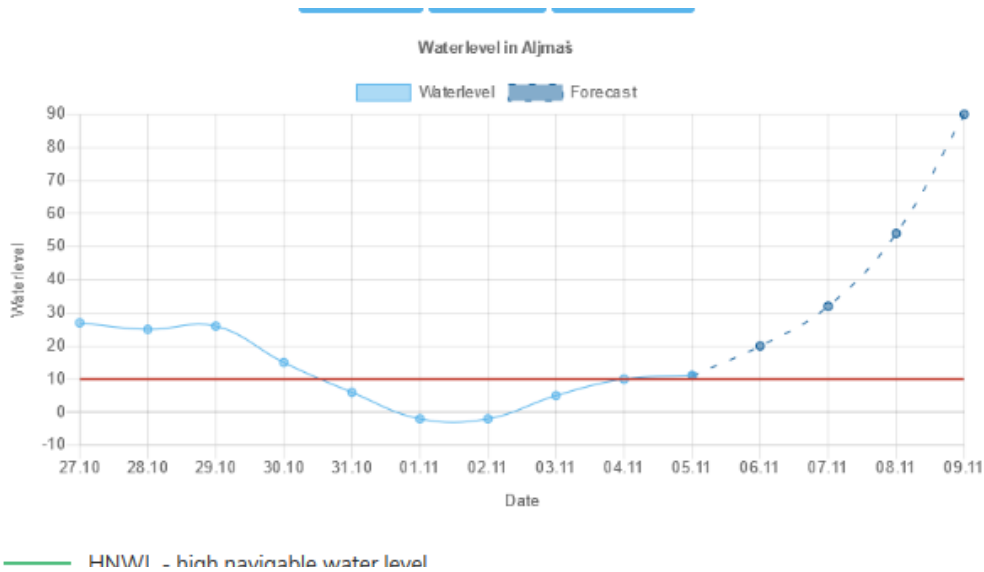
Fairway marking tours, rkm 1433.0 - 1295.5



- Increased efficiency of the marking system (during critical 78 days period 20 tours performed);
- Reduced reaction time needed for urgent marking interventions (3,29 days in average);

Technical perspective - forecast (1/1)

Forecast available to users for 3 gauges on MMPI web site up to **5 days ahead**



		LEAD TIME	
		1-2 days	3 - 5 days
ERROR STATISTIC	SD	20 > 10cm	40 > 25cm
	RMSE	20 > 12cm	40 > 25cm
	NTD	0.95 > 0.94	0.85 > 0.70

→ Model accurate in line with requirements

Summary, conclusions and recommendations

Monitoring and water-level information/forecast

- Water level forecast available to users now (quantum leap is made!)

Marking

- Single-beam supports monitoring efficiently

Recommendations

- Set measures to bring down equipment repair time of vessels