2nd Stakeholder Workshop
Bala Branch 7 October 2015

WG „Velocity & Thresholds“

egis

CNR INGÉNIERIE

Chair: Jürg Bloesch, IAD

Reporting: Laurent Brosse, Egis Group

Pierre Balayn, CNR

My Role

- I am not the responsible leader of this WG
- I have no mandate/contract, neither from AFDJ (ordering party) nor from EGIS (contractor)
- Positive active contribution (volunteering)
- We need best quality of science as basis of decisions
- I have reviewed both draft reports (incl. Ralf Reinartz & Paul Molnar)
- I will chair this session
- Focusing on 5 key issues
- Review/revision of the draft report through e-mail

Important issues

- (B1) Sturgeon swimming performance/capacity
- (B2) Flow velocity (near bottom)
- (B3) Key question:
  can sturgeons pass the sill III?
- (B4) Sturgeon habitats Bala-Borcea system
- (C1) Alternative solutions

Summary

- (B1) Sturgeon swimming performance/capacity
- Some literature results from laboratory experiments
- Cruising – sustained – burst speed
- Difficult to measure as sturgeons do not swim straight forward
- The design of Deak is doubtful and not adequate
- Not a key issue here

Summary

- (B2) Flow velocity (near bottom)
- Measurements at the sill vs. model predictions
- Deak measured in other profiles
- Raw data obtained could not be assessed – but they cannot provide near bottom flow velocities
- Deak operates with v-mean and v-max which is irrelevant
- Threshold velocity sturgeons can overcome about 1.8 m/s (most suitable 1.0-1.5 m/s)
- Large scale: Changes of flow velocity in both Bala-Borcea System & Old Danube Branch, in particular near Vadu Oii (attractive current at bifurcation entrance)

Summary

- (B3) Key question:
  can sturgeons pass the sill III?
- Intermediate stage (2013) vs. finished sill Bottom 0 B.S.C.level (2015)
- Deak‘s sturgeon tagging & tracking was biased (handling, low recording, position of receivers)
- Deak‘s conclusions are not sustained by science
- 8 specimens (<10%) recorded by chance (stage 2013) we need >70% of tagged specimens
- Scientifically based conclusion: sturgeons cannot pass the sill III (NoGo, Project „Sturgeon 2020“, EUSDR)

Summary

- (B4) Sturgeon habitats Bala-Borcea system
- At risk to be impacted
- Hard to predict
- Also a sediment issue (fine sediments)
- The output of Habersack‘s report on sediment modeling is crucial for habitat analysis
- This is a NoGo (Project „Sturgeon 2020“, EUSDR)
- Needs more modeling (large-scale)

Summary

- (C1) Alternative solutions / Fish Pass / Habitats
- FP at high risk of being not functional
- Few experience with sturgeon FP (mainly USA)
- FP needs hydraulic measurements & modeling to define the entrance (time consuming & costly)
- FP may attract poachers (surveillance needed)
- FP is not recommended (ultimate option)
- Artificial spawning grounds may be created (difficult)