COST 626, WG2 “Modeling”

List of tasks to finalize state-of-the-art-report

Some of the tasks are to be done by the persons indicated as soon as possible and sent to Martin Baptist. What’s left (no names indicated) after that are tasks to be done by the editing board during the final editing meeting.

- **Yann** and someone else (My notes say Jan Gabriel, which makes no sense, but Yann should know) are going to contribute with regard to the Ecoregion / Landscape scale (Table 1): Key parameters and modelling approaches
- **Yann** will write a discussion on the use of preference curves from PHABSIM which are often focused on subadults.
- In chapter 3, there is a discrepancy between what we are modeling and what is important. **Martin P**. and **Gregory** will work on that.
- **Klaus**, **Franz** and **Matthias** will work on an extra chapter describing what we actually use at present for habitat modeling (fish, invertebrates, macrophytes) and make a clear difference between
    - what is important
    - what are the interfaces
    - what do we presently use
- **Matthias** and **Klaus** will elaborate on limiting factors in habitat modelling, including examples on that, make a chapter based on fig. 2-3.
- A decision was made to concentrate the entire report on Salmonids but include everything else that was contributed, a statement clarifying this should be made in the foreword.
- WG2 report should be focused more on the modeling techniques.
- The report should be a preparatory piece for the decision making tool.
- **Wim** will write about the decision making trees used by Philip *Hunt* (my notes are a bit unreadable here)
- **Helmut** is adding an additional column on the key parameters table on how to measure them.
- **Peter Goethals** provides information on decision trees.
- **Stefan** will contribute more about logistic regression, since he has used that technique.
- **Anton** is contributing a paragraph on biological process and bioenergetics models.
- We have to mention that todays best practice is using “expert judging” to include the parameters that we know are important but we don’t (can’t) model, especially in Potamal Rivers (some more detail on practice in Potamal Rivers would be beneficial)
- **Janos** will write an introduction on CFD model types and describe what they can do and what not (1-D, pseudo 2-D, 2-D, 2.5-D, 3-D). Small figures to illustrate the principles of the results would be very helpful. No equations, but descriptive. Describe the use of simple models for the hydraulics and then add analytical expressions for postprocessing of results.

- In all chapters, there should be more figures for illustration, look at WG1 report. **Provide any nice figures if you have them!**
- Discuss between WG 2 and WG 3 who writes on “How to use the models”, use eventually good-modeling-practice handbook as a reference.
- We will use the Research needs in later reports, not in the state-of-the-art report.
- Yann said: the statistical analysis of field data for generating preference curves is often based on classes which are too wide. As an example: 0-5 cm/s is not one class, there is quite a difference between 0 and 5, whereas 60 to 80 cm might be one class. How could we address this problem? Any suggestions? Class-free statistical methods, narrower classes, divide raw data and analyze separately?
- Skip chapter 6 and include it in chapter 2
- Chapter 7 will be called “modeling across scales”: **Franz** + **Klaus** will write it, introduction will be that we do not really use models to do that yet and that we are not very good at it, we can’t model this and that…..
- Chapter 7: **Yann**, Lidar on Durance -> downscaling, are you writing a few lines on that?
- **Kjetil** contributes to model validation.
- Chapter 8: **Anton** contributes to multivariate models and uncertainty, **Martin B** will contribute to uncertainty in habitat models as well.