



*Ecosystem sub-working group meeting
June 13th, 2014*

Present: Mike, Manuele, Anne-Marie, Stephan, Christian, Montse, Philippe, Cécile

Ongoing projects outside WULCA, by WULCA members:

1. Christian Bouchard/CIRAIG: LCIA of water use on ES (paper presentation)

Objective:

Analyze the complementarity and compatibility of proposed methods for the Life Cycle Assessment Impacts (LCAI) of water use on ecosystems

Content:

1. Description of the proposed characterization factors by different authors for each analyzed work
2. Complementarity of the proposed approaches
3. Compatibility of the proposed approaches

-> it is a CIRAIG paper not working group paper -> see slides for details (update only).

Delivered by end of summer

2. Paper on update of wetland ecosystem impacts. Updates on wetland numbers and endpoint models and includes also vascular plant species for terrestrial ground-water dependent ecosystem. Submitted by end of summer. Many WULCA members (Francesca, Rosalie, Stephan) but not a WULCA deliverable.
 - a. Should be included in comparison with Christian, Stephan\Christian to ask Francesca for latest version to be sent
3. Montse: will work on fate but still to be defined. Probably similar to the Usetox framework as presented in Basel
 - a. This will likely be part of WULCA deliverable and lined up with WULCA's needs, to be confirmed in the coming weeks
4. Exotic species work by Hanafiah et al. Presented as poster: freshwater CF of shipping -> Montse to send to everybody. Could be included in comparison with Christian as impacts associated with in-stream use.
5. Inga: PhD project to be confirmed, in collaboration with Montse and the Montpellier Chair ELSA PACT, on the topic of surface/groundwater interactions and/or fate factors (potentially larger than just ecosystem modeling).
6. Mike: Mike will be doing his Ph.D until 2017. He aims to investigate the role of ecosystem and cropland/pasture green water use in the Upper Xingu basin of the Brazilian Amazon, and how deforestation may/may not impede precipitation recycling in the Amazon biome. He hopes to:
 - 1) investigate the concept of green water scarcity, 2) apply WULCA's ecosystem framework to

soybean/beef production in the basin, 3) research if atmospheric feedbacks can be included in the WULCA framework to quantify ecosystem impacts from reduced precipitation recycling (as a result of changes in net soil water from deforestation). Mark Johnson (UBC), Andrew Black (UBC), Michael Coe (Woods Hole Research Center) and Cecile Bulle (UQAM) are on his committee.

7. CIRAI: start of a project to come as soon as PhD candidate is found. Continuity of the Maendly and Humbert unpublished work on CF for hydropower production, in collaboration with S.Humbert. Project description was sent around to WULCA members.

Work Management:

Lead sub-group activities

Anne-Marie to act as a member of this sub-group but not as a leader

Who wants to be the leading person?

Manuele suggests that one person leads the activities that leads to a framework paper (all members of sub-group are co-authors) and then specific tasks should be performed (for specific impact pathways for example) by PhD students and other researchers.

Everybody agrees.

- Who is willing to lead the framework group? ->
 - Manuele offers to act as the project leader, coordinating the work, meetings
 - Montse's project could/may be directly linked with the framework work and she may be able to be the person leading the publication but only knows in two weeks

Discussion point Manuele:

- we need eco-hydrologist's input on top of LCA expertise
- Anne-Marie contacted experts and the "father" of ecohydrology, but it is a different field and finally did not answer any more
- Mike: has ecology backgrounds and his group has expertise with microbiology but they are too busy to heavily contribute
- It is difficult to have expert investing time for all meetings, it is better to concentrate on getting their input on specific parts of the work when it is sufficiently advanced (like the September workshop for stress/scarcity)
- → focus on including experts once further results are there (to get more concrete feedback)

A list of projects will be uploaded and recording of this meeting is put on the webpage