

## Minutes WULCA-ecosystem sub working group

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Date: 30.09.2015, 3.30-5.00pm CEST

### Agenda:

1. Reminder: what we aim and what we have
2. Water compartments of the FF model
3. Next steps

### Meeting:

“EQ\_slides meeting 20150930” and recording uploaded on the wulca site together with the minutes.

#### **1. What we aim and what we have**

- Suggestion to change the main objective of the paper to a less ambitious one because of time constraints. Instead of developing a framework (specific guidelines), identifying prospects for improvement of water use related EQ LCIA methods. The main contribution will be on the FF part of the CF.
- We already have the intro: midpoint (stress not enough), endpoint (not consistent), objective and mat&methods: description of the cause effect-chains and justification of developing a CF based on sequence of sub-factors

#### **2. Water compartments of the FF model**

- Agreement on the definition of FF (slide 6). TO BE discussed if we can go in more detail on the temporal scale for FF calculation
- Nested (flexible) model (from simpler version to more detailed ones). We should be able to remove building blocks and to add them (if eg more info available)
- World to be represented? (slide 9): option b is more relevant for LCA (marginal impacts) (current water balance with abstractions and dams), but the 3 options are possible (eg. option A for people studying deforestation in the Amazon is relevant). We propose the 3 and leave the choice for future developers. Specify that b) is the typical one in LCA.
- Discussion:
  - Saturated zone (slide 7): the three options given (A B, C) are too specific, more conceptualisation needed to have a figure that may represent the globe. Option B (mathematically) encompasses A and C, the only difference is the confining unit at different height -> in the drawing, represent the saturated zone in a generic standardized way B that may then be adapted to the local setting (eg: if only bedrock all flows set to 0). The configuration is specific of a given spatial scale and it may change downstream (eg: type B in a cell and type A in the cell downstream)
  - Simplified vs sophisticated model. ML: Sophisticated FF model is to better capture interactions between compartments. FF soil->vegetation and FF vegetation-

>atmosphere instead of FF soil->atmosphere in the simplified model. Similarly, only percolation soil->saturated zone in the simple model and capillary rise added in complex model.

- Prioritisation in the calculation of flows (slide 10): difficult to define which are globally more relevant. Focus on flows in arid areas (less water-> more impacts->more relevant from LCA perspective). In of temporal scale, spatial scale?
- Air compartment globally linked, less level of detail than other compartments. Which is important is where water goes to not where it comes from.
- Final discharge is only sea/ocean separated from freshwater (major streams only in surface water bodies)

### **3. Next steps**

- Version 2 of the water compartment model
- Provide guidance /identify options on the temporal resolution of the flows

Next meeting: Doodle for next meeting in approx. one month