

## **Minutes of the General Assembly of BONSAI 2016-05-03 15:00 CEST via Skype**

### **1) Opening**

Due to technical problems, the General Assembly was moved from GoToMeeting to Skype. All members were informed by mail in real time. By 15:17 the majority of paying members were present. Bo Weidema opened the General Assembly on behalf of the Board, noting that the General Assembly had been called via LinkedIn and direct mail to the members on 27<sup>th</sup> of May 2015, and that the General Assembly therefore is validly constituted.

### **2) Activity report from the Board**

Bo Weidema gave the following report on the activities of the founding Board:

“BONSAI has been presented as part of the scientific programme at the Conference of the International Society for Industrial Ecology in Guildford, July 2015, and at the LCM 2015 conference in Bordeaux in September.

An expert activist workshop has been held in Amsterdam in September 2015, sponsored by 2.-0 LCA consultants. The workshop produced recommendations for the scope of the data and algorithms to be stored and handled by BONSAI. A summary is available in our LinkedIn group: <https://www.linkedin.com/groups/6808595/6808595-6052347473182154756>

The following is a brief short summary of the recommendations:

#### *1. Data storage:*

- Suggested the core database to be a triplestore (RDF store) containing supply-use data, with a separate flow-by-flow matrix to store information on complementarity/substitutability of products.

#### *2. Data addition:*

- Keeping the format and quality requirements on data as low as possible to stimulate data supply and instead score and review the quality of the data subsequently.
- Allowing public editing of user supplied data (not data from other databases), both at datapoint level and batch-editing of larger selections of datapoints, using difference files and version-control.

#### *3. Data integration:*

- Software-assisted matching of names and classifications of activities and flows to maintain detailed concordance tables (stored in RDF).
- Allowing conflicting data sources to co-exist in the triplestore, using algorithms to derive preferred datapoints, based on data quality scores and thresholds for inclusion/exclusion.
- Using global product and activity breakdowns based on industry data sources and more detailed country-specific data for automatic disaggregation and gap-filling, allowing the data at many different levels of detail to be integrated.
- Storing mis-balances as work-items, minimising the use of re-balancing algorithms and postponing them to the end of the workflow.



#### 4. Data access:

- Web platform to publish “Product footprints” based on open source algorithms and software.
- For expert users the full data and all intermediate processing steps to be available in csv format.

The expert activists discussed the features that a first public beta-version needs to have in order to demonstrate proof-of-concept of the key aspects that will differentiate BONSAI from other similar databases:

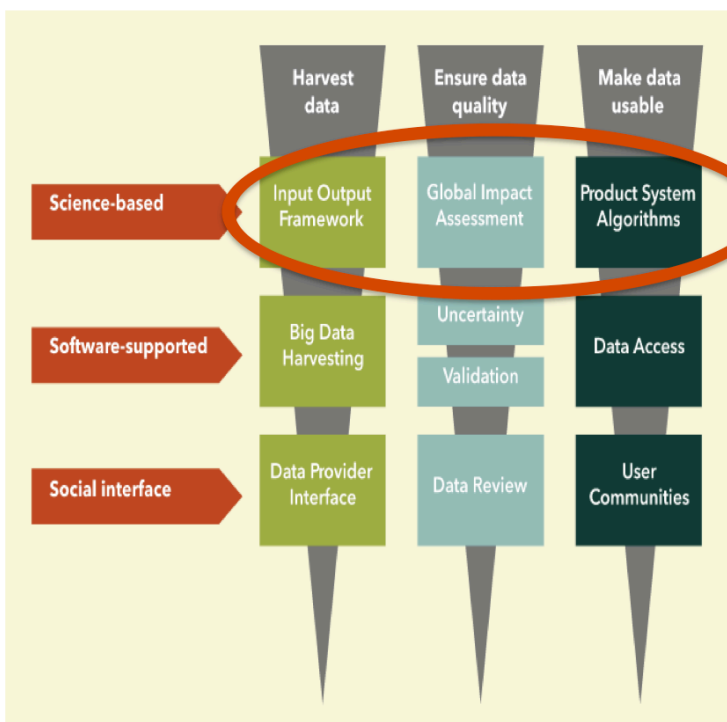
- The modular approach to software design
- The low barrier to data entry with subsequent open review
- The completeness (integrating MRIO and detailed data)
- The final natural language footprint query interface
- The transparency of the underlying data and routines

This also implies that the data need to be provided with fully open license (CC-BY) also allowing commercial use. However, to show the full quality potential of BONSAI, it may be necessary to have access to a larger pool of data in the short term, which could mean to work in parallel with data that are provided with more restrictive licenses.

As follow-up on the workshop, a wiki has been set up for communicating decisions and development issues for the involved developer community. NTNU has supplied a box space for initial experimenting with the core database. Currently, we are experimenting with the speed of the triplestore format for querying the RDF store. The prototype database is still waiting for finalisation of the I/O format and field naming conventions, to allow for the first experimenting with the different features described above.

Progress is currently slow due to the exclusive reliance on volunteers.

Out of the 10 planned Working Groups, last years activity has focussed on the top three:



- The Input-Output Framework WG has been established and has set objectives.
- The Global Impact Assessment WG is working on a taxonomy for impact pathway modelling (to ensure completeness in this area too).
- The Product System Algorithm WG has not been established yet, but some work is on-going in the Ocelot project at <https://ocelot.space/>. Pascal Lesage will follow this development on behalf of BONSAI.



BONSAI has only few formal (paying) members. Probably we need to have some early deliverables to stimulate more interest. Two applications for research funding from the EU infrastructure funds have been produced with NTNU as lead. No response yet. Income from crowd-funding (at <https://bonsai.uno/contribute/>) was less than 2.500 EUR in 2015, 1000 times less than our desired annual budget of 2.4 million EUR. For funding, we have in the initiation phase relied on the sponsorship from 2.-0 LCA consultants, e.g. for the workshop in September. In the coming period, we may need to focus on ‘packaging’ the early deliverables, so that they become more attractive both to the developer community and to sponsors that can see a commercial interest in building on our open access resources.”

Peter Fantke commented on the recommendation to keep the format and quality requirements on data as low as possible, that it was important to balance this with other ways of ensuring the quality of the data. Andrew Henderson said that in the intergovernmental discussions, the suggestion to pay for reviewing had been discussed. Bo Weidema said that several ideas about making review more simple and rewarding via social media technology have been proposed for testing, but that this is not in focus during the initial implementation phase.

Peter Fantke asked about how the coordination between the working groups is ensured, for example how the work of the Global Impact Assessment WG is aligned with the technosphere modelling in the Input Output Framework WG. Bo Weidema said that in the original plan, BONSAI staff is intended to play such coordinating roles. Also the Board can function in such a coordinating role, since each WG has a specific contact person in the Board. With regard to the specific issue of ensuring that the impact pathway modelling of the Global Impact Assessment WG links to the technosphere pressure indicators, this is on the task list of the Global Impact Assessment WG.

With these additions, the activity report was approved.

### **3) Election of 1 board member**

Dr. Thomas Gloria has asked to step down from the BONSAI Board due to new commitments at Harvard University. To fill the vacant position, Dr. Llorenç Mila i Canals from UNEP was elected.

### **4) Membership fees for 2017**

It was decided to maintain the same membership fee level for 2017 as in 2016, namely 150 Euro.

### **5) Discussion and adoption of recommendations for the Board on priorities on funding, personnel, member communications, and working groups**

For funding, the most important is to work towards a beta-version of the database that can demonstrate its planned features and usability, and to ‘package’ the deliverables so that they become more attractive for both developers and sponsors.

A call for sponsors have been made, and 2.-0 LCA consultants have offered the in-kind contribution of 1 full-time person for 1 year, starting autumn 2016. This will be used to increase fund-raising efforts as well as to stimulate the work towards the early deliverables. This offer was gratefully accepted.



All members are asked to be more active in starting discussions and sharing information in the LinkedIn group and other relevant media. We should also mention once a year that no formal membership of BONSAI is required to be member of the LinkedIn group or the BONSAI Working Groups.

**6) Any other business**

None