

22nd Annual Int'l Sustainable Development Research Society Conference (ISDRC)

<http://www.isdrsconference.org/page/54/conference/>

Bert de Vries, Lisbon 13-16 July 2016

The 22nd ISDRS conference, titled **Rethinking Sustainability Models and Practices: Challenges For The New and Old World Contexts**, in Lisbon was very well organized, in the nice setting of the Universidade Nova de Lisboa and with a festive dinner in the old monastery of San Jeronimo. Nothing to complain about for the 450+ conference participants (predominantly from Europe and South-America), I would say. The program was well-structured and presented. The format was, after a keynote speech on the opening morning, to start with presentations, then have two keynote speeches, and continue with presentations. Besides the 6 keynote speeches, there were a total of 332 presentations and over 50 posters.

Classifying these presentations has perhaps been the most difficult task. It seems to be a stage in sustainability science: from a wide background of disciplines and angles, researchers are studying events and processes that are related to (un)sustainable development. The conference program makes it clear that no overarching framework is available yet, according to which such a variety of presentations can be categorized in a satisfactory way. Hence, it was sometimes surprising to find oneself in unexpected company – which can be a blessing if one believes in serendipity. Add to this the large variety in cultures and regions and one has all the ingredients for an interesting, lively, networking and perhaps scientifically advancing conference. See for an overview of the 26 core themes and tracks <http://www.isdrsconference.org/page/29/themes-and-tracks/>.

Was the conference worth the several hundreds of tonnes of additional carbon dioxide emissions? 'The planes fly anyway' is no longer an acceptable rationalization; the hypothesis that these conferences have a net emission savings in the long term is still to be proven. There were at least 7 participants affiliated with Utrecht University, one of them Walter Vermeulen who as President of the ISDRS has surely made his contribution to the success of this conference.

Below are a couple of summaries and references that might be of interest to colleagues at Copernicus and other sustainability science researchers. Evidently, it is not more than a personal snapshot of the many presentations and discussions. The website gives access to abstracts of presentations and short bios of the keynote speakers.

First keynote by Lan Xue: Policy Challenges in Implementing SDGs – A View from Transitional China

Interesting presentation about the SDGs (content, process) and how China is planning to implement these. SDGs are unique global experiment, both top-down and bottom-up and inclusive ('leaving no one behind'), characterized by keywords complexity, diversity and connectivity. Big challenges in terms of funding, organization a.o.. Particularly relevant is his analysis of

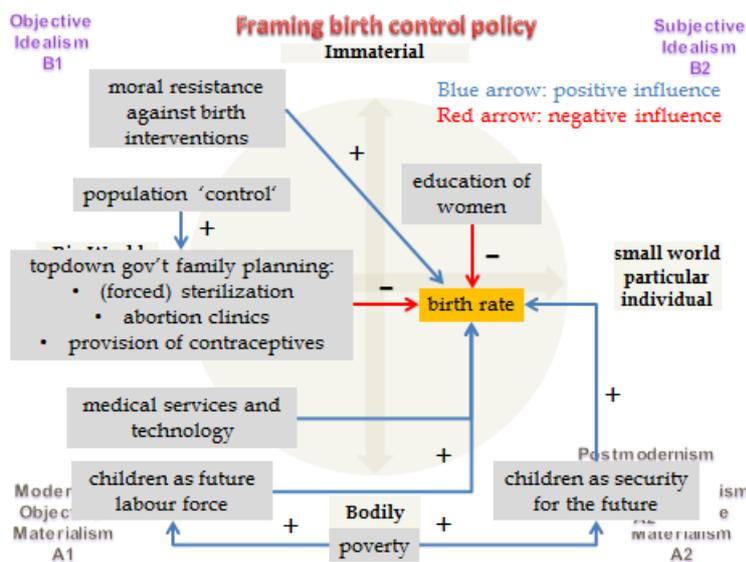
- The major recent (since 1980) changes in China: massive move to cities, transition via manufacturing to services and away from agriculture, and from closed to open (trade, tourism a.o.). Interesting statistics.
- Reforms in mindset and institutions at government level, with a recent trend towards innovation, green and inclusive etc. and a role for NGOs. An example is the set-up of a China Energy Modelling Forum (CEMF).

Keynote Viriato Soromenho Marques: Who Are We? The doctrine of the Laudato Si on the nature and tasks of sustainability sciences and scientists (www.viriatosoromenho-marques.com)

This presentation gave an overview of thinking about the relationship between science, humans and nature in the Roman-Catholic / Christian tradition. It was built up around a series of quotes from theologians, philosophers and scientists over the last 6 centuries (Campanella, Bacon, Descartes, Comte, Bernal), ending with statements from 20th century papal encyclicles e.g. by John XXIII on war and peace in 1963 and later popes. The speaker argued that respect for nature has always been part of the catholic religious tradition – Saint Francis with his emphasis on humility can be considered the patron of ecology (mentioning the book by Lynn White: The historical roots of our ecological crisis). He emphasizes how science has woken up with the insights from people like Crutzen and Hansen: there is a global environmental crisis, technology will not solve it ('technology fallacy') and it cannot be solved when the ethical aspect is forgotten.

We are heading for a scientific-technological dystopia (see #224 of Laudato Si). The speaker ends with a playdoyer to (re)consider spirituality as an essential ingredient in sustainability science and in any aspiration towards a (more) sustainable world. In the discussion there was, understandably, a question about his view on the papal position with respect to birth control, given its direct consequences for nature cq. biodiversity. To me, the most interesting of this keynote speech was the very emphasis on the role of spiritual values in the quest for sustainable development in a conference of (mostly social) scientists – I haven't seen this since the large New Age inspired conferences in the 1980s. I – still – fully subscribe to it.

As sequel to the discussion on birth control, I made a simple causal-loop diagram within the worldview framework, to clarify the role of values and beliefs with respect to one's position in the debate on (over)population growth.



Keynote Bruininckx (EEA): Europe's emerging transition agenda – Making sense of the Green, Blue, Circular, Resource Efficient, Low Carbon Economy?

Bruininckx, a former environmental activist and political science professor, gave an inspiring talk – the audience was obviously pleased with such a person as head of Europe's independent (as he stressed) environmental agency.

His basic approach is the graph of Ecological Footprint (EF) vs. Human Development Index (HDI) – a 'good life' within ecological constraints / environmental limits. The Environmental Kuznets Curve (EKC) works for pollution, not for the footprint. He shows two statements by Ban Ki Moon (2013): the UN had successful MDGs but with an unsustainable model. Bruininckx shows the picture with three circles: overlap env soc and econ approach of sustainable development – this is in his view very misleading. Also the idea of an EF of 1.4 is misleading: we are degrading planet which

degrades energy, mobility, food and urban systems. He shows graph of institutional developments (up) vs. state of planet (down) – what is conclusion?

The speaker gives a brief overview of State Of European Environment Report (SOER) and vision of 7th Environment Action Program. He calls it a creative representation of the 'environmental piano'. He is proud to have permission, at EEA, to discuss systemic change. Red thread: from persistent problems towards transitions. He shows stylized optimism of academics: draw transition curve... more realistic if one adds system breakdown, backlash and lock-in. The EEA has increasingly focused on long-term integrated approaches. Focal areas: Low-carbon economy and Circular economy (water, materials, ghg, land), with resilience and well-being as corollary concepts. Final summary of conditions: consistency, coherence, implementation with sense of urgency, visionary and engaging, adequate knowledge base. Talk about economic performance, not of economic growth. He shows pictures: capitalism, green growth, high-tech, voluntary simplicity, governance systems, anti-consumptions... This comes close to the explicit acknowledgement of value and belief pluralism.

Keynote Catarina de Albuquerque: Development for all and everywhere – the promise of the SDGs and how to deliver it

A speech by one of the outspoken human rights activists in the UN SDG process. She spoke out, with southern passion, on the very real needs, for water and other basic necessities, in many of the world's poor communities as one of the key elements in the SDGs. Interesting to hear someone who has her ideas not from academic research but from real-world experiences all over the world ('fieldwork'). Clearly, one of the challenges in sustainability science is to connect such 'stories from the real world' about humans and nature with the more abstract schemes of causes and consequences.

Keynote Paula Antunes: Ecosystem Services (ES) as a language to talk about sustainability

The 'possibility that humans and other life will flourish on the Earth forever' is the definition of sustainability by John Ehrenfeld (2008). There are two tasks for sustainability science (Loft et al. 2016). ES concept can assist. Antunes shows three definitions of ecosystem services (Daily 1997, MA 2005, TEEB 2010). See also the scheme in MEA. Later came the Cascade model (Potschin and Haines-Young 2011 – <http://cices.eu/supporting-functions/>). She then gives an overview of history of ES concept, taken up by many organizations (Google Scholar number of publications rose exponentially: 40000 in period 2010-2014). Speaker also critiques the ES concept. Illustrations are given from the EU Openness project (www.openness-project.eu) and the PNSACV project on southwestern coast in Portugal, using ESTIMAP model to estimate pollination services and organizing stakeholder workshop. The maps were particularly useful in bringing awareness and dialogue to the stakeholders. An overview of methods is given (Gomez-Baggethun et al. 2014; Martin-Lopez et al. 2014 – good papers). Different values in ES emerge depending on method: focus on biophysical, socio-cultural and economic indicators. Also instrumental vs. intrinsic values and relational values involving individual and collective (Chan et al. 2016 PNAS). Good use of ES is: reconnect with nature again, from nature for people to nature and people.

Keynote Philip Fearnside: Challenges for sustainable development in Brazilian Amazonia.

A presentation on the decline of large parts of the Amazonian forest and the threats for the future, by one of the renowned experts and publishers on this topic. It is evident, for instance with respect to planned hydropower dams, that the political and business forces in Brazil are still predominantly choosing for unsustainable forms of development.

Presentations:

One of the challenges for a conference with several hundreds of presentations is, apart from categorization, a quality assessment. Several criteria are possible: methodological rigour (the

easiest), empirical content, 'story' relevance, 'theory' relevance, innovativeness, transdisciplinarity – and even the idea to provide young PhD students a forum for presentation and communication (and cv items). Besides, each presenter had only 15-20 minutes including discussion. As a consequence, there was – in my experience – a sometimes startling difference in 'scientific quality' as defined usually in (social) science.

Fortes et al. 3b-01

Indicator framework to explore sustainability of energy scenario's (probably related to EU-project by Paula Antunes). Last may Portugal managed to be completely on renewable energy for 5 days (mostly hydro and wind).

In sesión 6d-01 Lifestyles and consumer behaviour, several analyses were presented on the determinants of consumer behavior e.g. in Finland, Japan, Portugal and France. The study in France, by Thomas Le Gallic, introduced a statistical model developed to address long-term **lifestyles changes** and their consequences on the consumption of goods and services and on the **energy services demand**. The authors use of national mobility housing and consumption surveys to identify significant patterns. The interesting aspect of this approach / model is that it explicitly tries to link future energy demand to the changes in composition of households with different lifestyles, as identified on the basis of demographic (age, gender etc.), mobility (# of trips, transport mode), housing etc. For those interested: the conference paper is available via b.j.m.devries@uu.nl.

Robert Engelman 6c-04

Recent report cq. meta-analysis on what science (939 papers) says about **family planning** by Worldwatch Institute (<http://fpesa.net>) with attention for shared values and the relationship with environmental sustainability. There is hardly any empirical evidence on common ideas about family planning; there is no community of interested researchers. Hence WWI made a model of hypotheses.

Nuno Videira 6d-06

In Videiro's group they have long-term experience with system dynamics modelling. In his presentation he described the rather simple causal loop diagram they constructed to understand the mechanisms at work in the **sharing economy** initiatives such as Airbnb and Uber. Those who are interested: I have a paper on using system dynamics in combination with participatory modelling to support sustainability assessments and a paper on improving understanding on degrowth pathways: An exploratory study using collaborative causal models.

Bert de Vries 1a-08

This presentation – which came after a presentation on green coagulants in water treatment – was about the **use of worldviews**, as combinations of values and beliefs, in engaging students and people in general in sustainability issues. A pdf of the presentation is available on request (b.j.m.devries@uu.nl) or from the website www.sustainabilityscience.eu.

Tomohiro Akiyama, Ali Kharrazi 1a-08

Kharrazi presented the interim results of a Project in the Heihe River basin in northwestern China on the historical **interaction** in this dryland **between human activities and the hydrological cycle**. To interpret the observations of water flows and human activities, Akiyama has designed a framework based on the insights of Ken Wilber, which has surprising similarities with the worldview framework of Van Egmond and De Vries. It has been applied for two rather in-depth studies of river basins in China and Russia. The authors assume that the scientific facts are part of the 'objective-exterior' world of events; people's views and behaviours are part of the 'subjective-interior' description; and changes in cultural and personal values belong to the other two perspectives. The relevant papers are available on request.

Lukas Figge 7d-09

Figge presented part of his PhD work at ICIS Maastricht University, on an application of **cultural perspectives** in relation to social robustness. To the four familiar perspectives of cultural theory, two (Dynamic integrator and Autonomous) have been added. Then, several thousands of pages of policy documents from various for a (climate change, global economy and green economy institutions) have been searched for perspective specific statements. One goal is to find 'clumsy strategies' i.e. strategies with respect to globalization that reflect all perspectives. It is found that in climate change docs, the Dynamic Integrator dominates, whereas in the global economy docs the individualist dominates.

Katerina Biely 7d-09

Biely investigates the role of **market power** in relation to (un)sustainability, in particular within a food supply chain where there is a large variation in number of stakeholders across the chain (project: www.sufisa.eu). If firms have and exert market power, it influences the price; it also provides an escape from a relentless race-to-the-bottom competition. Hence, the impact of market power can probably be positive as well as negative – but one has to deal more explicitly with (hypothesized) mechanisms to understand this better.