

## Wolfgang Cramer – Vulnerability studies today and tomorrow

### Apéritif talk given on Friday 30<sup>th</sup> September closing the AVEC Summer School 2005

Looking back at the AVEC Summer School, several dichotomies on the issues discussed have been noticed. Their consideration will be very useful regarding the future of vulnerability studies.

#### A) Thematic dichotomies

- ◆ Humans / Environment  
→ Still often recognized as counteracting systems, need to be balanced and reconciled in order to comply with the rising demands for ecosystem services by the human population.
- ◆ Adaptation / Mitigation  
→ Efforts to adapt to climate change should not replace mitigation efforts but run in parallel! To go beyond Kyoto mitigation is indispensable!
- ◆ Vulnerability / Sustainability  
→ AVEC aimed to present “Vulnerability” as a concept that works instead of just a fuzzy term. The Summer School was not about “Sustainability” although it holds the advantage to be a positive concept in comparison to “Vulnerability”, but the Sustainability concept “is so huge that it seems scary and looking at what is sold as sustainability science there is a lot of garbage in there” (citation Wolfgang).

#### B) Methodological dichotomies

- ◆ Scenarios / Forecasts  
Users/stakeholders usually prefer forecasts instead of scenarios. As a matter of fact with respect to global change it is just impossible to make reliable forecasts. In social sciences, scenarios are often more accepted and established than in natural sciences.
- ◆ Reactive / Proactive  
The integration of the differentiation between reactive and proactive actions in global change scenarios, like it has been done in one of the working groups as well, motivates and encourages to develop tools to handle / distinguish these two types of actions.
- ◆ Modeling / Observation → *perceived dichotomy but actually more of a “non-dichotomy”*  
Most of the times when thousands of measurements are taken they will be interpreted and run in models afterwards. Actually, observationists use models while modelers should work with data from observations.
- ◆ Hard Sciences / Soft Sciences  
While hard sciences are particularly rigorous analysis and interpretation approaches based on hard facts (although many times more looking like that than really being hard fact based!), soft sciences use all knowledge available to interpret as plausible as possible and are thus based on “good argument”.
- ◆ Quantitative / Qualitative  
Quantitative analyses are often just impossible to realize due to the complexity of the system in focus. However, as we have seen, it is possible to work with uncertain / “soft” data!

**C) Findings**

- ◆ Holocene / Anthropocene  
Vulnerability of Human/Environment-System studies looking at future scenarios are doubtlessly interesting but the view on the historical context can provide significant insight in root causes for the current situation and thus helps to explain how we once got there, asking for the point in time when it started to matter that humans influence the environment.

**Serious issue (no finding?):**

- ◆ Ecosystem Services / intrinsic value of ecosystems  
The Summer School actually shouldn't only present the more economic side of Ecosystem Services but the choice on (the more economically visible) Ecosystem Services was to work on a clear concept that can be implemented. In comparison there is still much debate on how to deal intrinsic values of ecosystems as it is very difficult to quantify these values which would simplify their acceptance by policy makers and other stakeholders.

**D) Perspectives (who is having the perspective on vulnerability science?)**

- ◆ Policy makers / general public  
Many times, academia and science is driven by policy although there is a clear role for non-policy-driven research.
- ◆ Scientists / general public  
Some interfaces are obviously "not wished" (like e.g. an expert stating in front of the media that wants to report on climate change evidence that some event is not related to climate change!) Citations that are consequently made out of context may lead to a false information transfer!
- ◆ Europe / developing countries  
Having heard a lot e.g. about the Swedish lifestyle a strange feeling arises with respect to the situation in developing countries. Awareness should be given for the bigger picture. Although problems cannot be solved from one day to the next there might be a way out of poverty on the long run.
- ◆ Mindfulness / ?  
Technology and science do not provide solutions for every problem. Especially in the western world people seem to think that everything works with training and financial capacity. Mindfulness alone surely won't help to resolve any problem either but awareness for what is happening helps to get further.  
For many questions there is no technical answer. We should ask ourselves about our own roles and allow things to come to us instead of forcing them.