

The Future Earth Program

Feed back from ProClim-, the Swiss National IGBP Contact to IGBP and the Future Earth transition team

Essentials

- A full endorsement of the Global Environmental Change Programs is essential to keep the science base of WCRP, IGBP, IHDP, DIVERSITAS, ESSP and related core competence of relevance for IPCC, IPBES etc.
- The GEC Projects must be represented in the scientific steering committee on the same footing as the other members to guarantee an evolution of the science.
- Stakeholder and policy dialog require regional structures. Regional and national nodes (such as the national committees) must become an integral part of the program.

General Comment:

We fully endorse the urgency to act and that science must go far beyond process understanding and impact assessment. To support societies in their decisions, science must provide transformation knowledge which requires a co-design and co-production of new projects in a transdisciplinary way. An all encompassing new program 'Future Earth' is thus urgently needed. We strongly believe that this competence, while very important, must rely on scientific networks that exist today such as the Global Environmental Change Programs (IGBP, WCRP, IHDP, DIVERSITAS, ESSP).

Thus: If Future Earth does not strongly endorse the present research structures, it may lose its scientific basis. Stakeholder driven research will eventually need the fundamental science expertise gathered by the present global change structure (*see the general comments further below*). So, while top-down information flow is necessary to convey the needs of policy makers and other stakeholders to the scientific basis and initiate new research efforts, it is bottom-up research as carried out in the core projects that will provide the fundamental knowledge basis and creative solutions for the future. Thus a meeting of both end-members on equal footing is absolutely required (and has to be implemented in the governance structure) to make Future Earth a success.

Where can the national committees contribute to Future Earth?

Stakeholder needs are often very specific for different regions of the world and policy dialog has a national flavor as it predominantly deals with impact, adaptation and regional mitigation options. The National Global Change Committees thus gain importance for the international programs.

How can this relationship work?

On national and regional level the cultural and political differences are often much more important than differences in the knowledge base. The stakeholder and policy interactions take place naturally on this scale. There is a great need for an international network to compile and exchange best practices (and failures) throughout the world.

What are the benefits to national researchers, funders, policymakers AND international research programs of organizing in the way you have?

We try to foster interactions between scientists, policy makers, federal agencies in Switzerland and encourage scientists to engage in international programs and assessment activities. We believe that this is of mutual benefit as everybody learns and progresses through the dialog.

How can the international programs make these links more effective?

1. It is crucial to have an international network to structure the dialog on a global level and to bring in the global perspective.
2. We need internationally agreed upon mechanisms and scientific practices to make scientific results comparable and to quantify successes and failures of change.¹
3. The international assessment reports depend on the international programs to recruit their leading authors.

What do you need from us and how should this relationship work in an ideal world?

1. It could be very useful to support the development and exchange of fact sheets about specific topics that can be adapted by the different national committees (add regional focus and regional experts)
2. Involve national committees as interlinks to the place based regional research activities
3. Moderate a structure to exchange best practices (mentioned above)

Are your business models applicable elsewhere, developing countries for example?

We believe that our, the **ProClim-** approach could be very attractive for other countries.

Central elements of our national committee (in our case of ProClim²) are:

- A network of scientists in all disciplines working on topics related to climate, global change and sustainability (including their research fields and interests)
- National contact to IGBP, IHDP and science link to WCRP
- National science contact to IPCC (on behalf of the federal agency)
- Established contacts to other regions with similar regional conditions and research questions
- A strong interaction with national agencies (organizing hearings on specific topics of interest to the agency)
- An institutionalized dialog with the parliament
- Well established contacts to the media
- Connections to stakeholders in the private sector
- The national committee should play the role of an enabler for the dialog between all these groups (and make it available to the entire research community)
- Host of the advisory body on climate change to the ministry

For *biodiversity* the sister structure **Forum Biodiversity**³ is the interface to Diversitas and IPBES.

In terms of *best practices* we see the **td-net**⁴ (*network for transdisciplinary research*) as a first node of an international structure to exchange best practices.

In terms of *north-south research* we see the **KFPE**⁵ (*commission for research partnerships with developing countries*) as model example to conduct research activities in partnership between developed and developing countries.

In terms of climate mitigation efforts the **energy commission** of the Swiss Academies complements ProClim-⁶ (ProClim- runs its secretariat).

¹ This will be of equal importance as the thousands of individual measurements with common standards are for today's weather forecast.

² ProClim- Forum for Climate and Global Change : www.proclim.ch (see 'about proclim')

³ Swiss Biodiversity Forum www.biodiversity.ch/

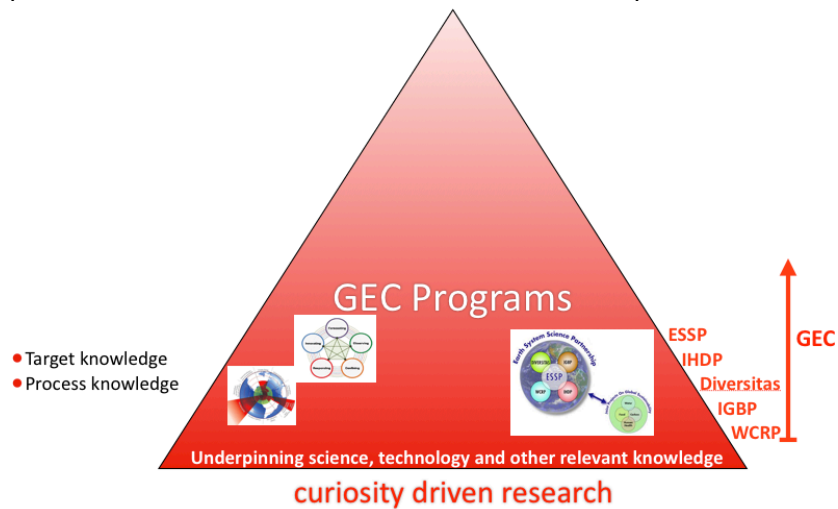
⁴ td-net: www.transdisciplinarity.ch/e/index.php (see about td-net)

⁵ KFPE: www.kfpe.ch/

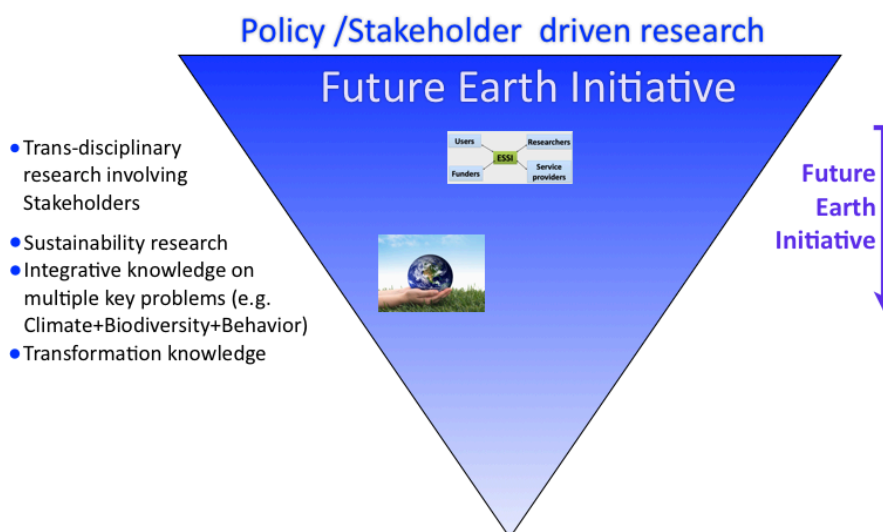
⁶ a+ Energy: Energy Network and commission: www.proclim.ch/energy.html

General Comments

We fully agree with the need for new modes of interaction between the science community and the stakeholders. We question however, if the replacement of the present Global Environmental Change (GEC) Programs by the Future Earth Program, as presented in London, allows this new mode of operation to be successful.



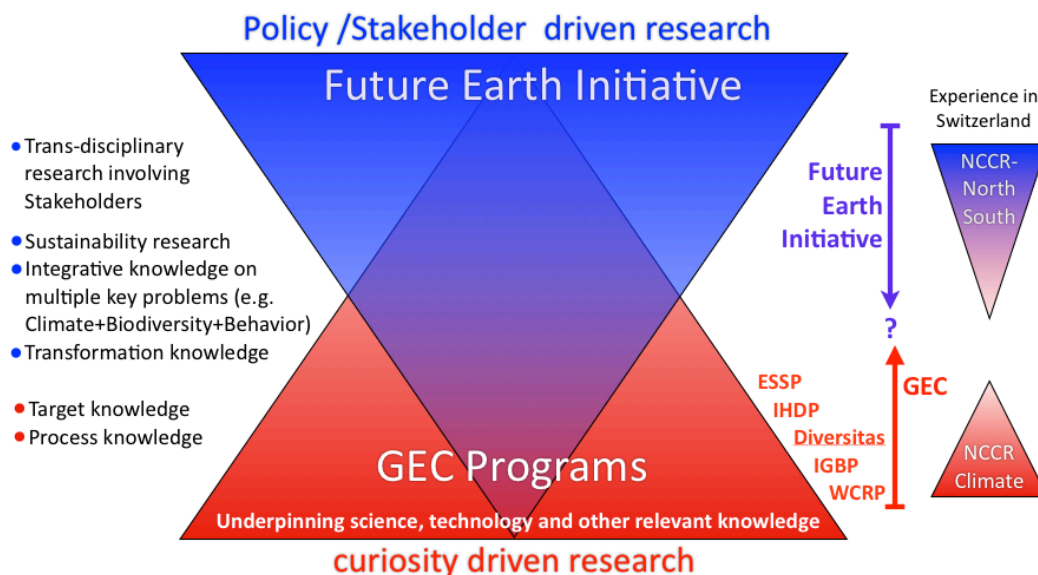
Today's GEC research programs have their basis on curiosity driven research. Their primary focus lays on process understanding and target knowledge (red bullets).



To slow the pace and scale of planetary change requires many additional contributions from the science community (blue bullets) - especially transformation knowledge is crucial. The Future Earth initiative plans to base the program on stakeholder interaction, policy dialog and related scientific contributions.

Is Future Earth able to unite all competences?

Future Earth shifts the lead from science driven research (red triangle) to policy and stakeholder driven research (blue triangle) which is envisioned to reach down to the competences of the different disciplines.



Experience from Switzerland

During the last 12 years Switzerland conducted two large research programs that can be seen as example for the 'old' and 'new' research programs. The NCCR-Climate followed the science driven approach (red triangle) and the NCCR-North South (blue triangle) the stakeholder driven approach). Both programs were very successful and contributed substantially to international assessments (IPCC for the NCCR Climate and IAASTD in the case of the NCCR North South). On the down side, the two programs were not able to conduct joint projects (despite the fact that the headquarters were both located in the natural sciences department of the same University). Too different was the scientific approach.

Lessons learned:



The Future Earth program should involve representatives of the GEC Core Projects on their steering groups. This is imperative for transdisciplinary science, as it must reach out not only to the stakeholders, but also to all levels of science to incorporate the relevant competences. If this is not the case, then the Future Earth Program runs a high risk of losing the collective scientific competence of today's GEC Programs. It may further lose its credibility as pool of experts to draw from for the international assessment reports such as IPCC, IPBES, IAASTD.