

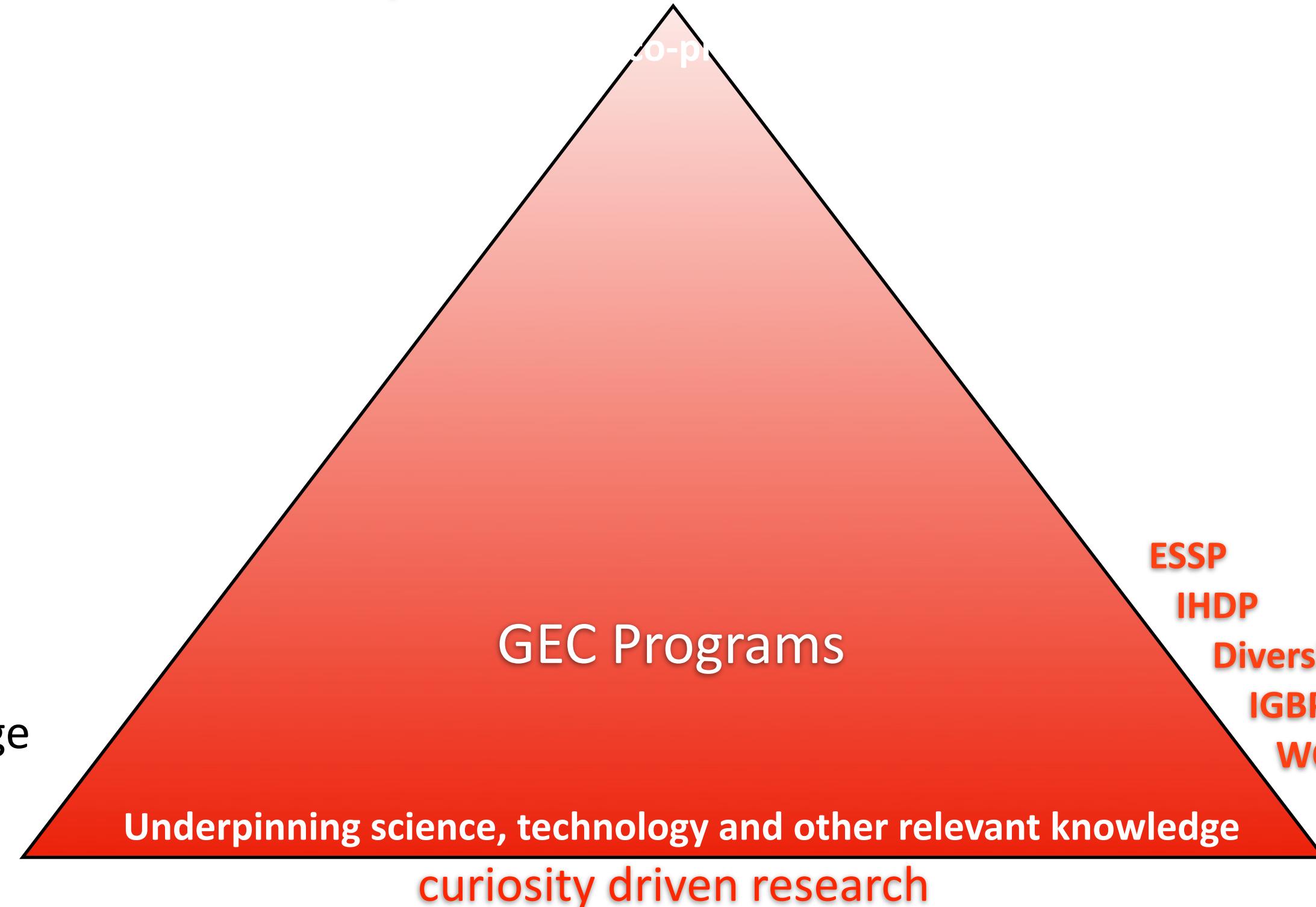
ProClim- **Swiss Network for Climate and Global Change**

Are national initiatives the key to Future Earth's success?

Future Earth Regional Workshop Paris 13 - 14 May 2013

Christoph Ritz
ProClim- Forum for Climate and Global Change
Swiss Academy of Sciences (SCNAT)

Policy /Stakeholder driven research



Policy /Stakeholder driven research

Co-designed and co-produced projects

- Solution oriented
- Integrative knowledge on multiple key problems (e.g. Climate+Biodiversity+Behavior)
- Transformation knowledge

Future Earth Initiative

ESSP
IHDP
Diversitas
IGBP
WCRP

GEC
Programs

Underpinning science, technology and other relevant knowledge

curiosity driven research

Policy /Stakeholder driven research

Co-designed and co-produced projects

- Solution oriented

Many mitigation and adaptation measures are implemented nationally.

Integrating multiple
Climate

- Transferring knowledge
- The national stakeholders and policymakers must thus be on board.

=>

Without good national structures Future Earth may not fly

- Target knowledge
- Process knowledge

GEC
Programs

INBP
Diversitas
IGBP
WCRP

Underpinning science, technology and other relevant knowledge

curiosity driven research

How ProClim- and the associated Advisory Board OcCC can support Future Earth

ProClim- Approach since 1993

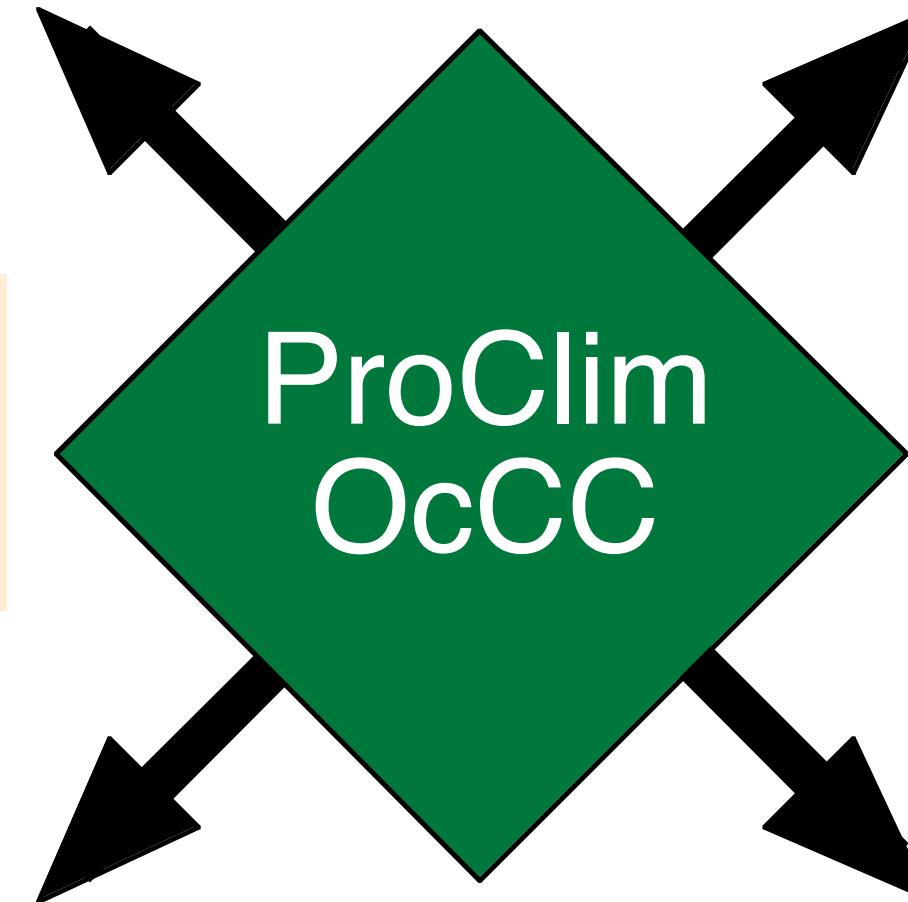


Swiss Academy of Sciences
Akademie der Naturwissenschaften
Accademia di scienze naturali
Académie des sciences naturelles

Parliament
Government

Media/Public
Economy

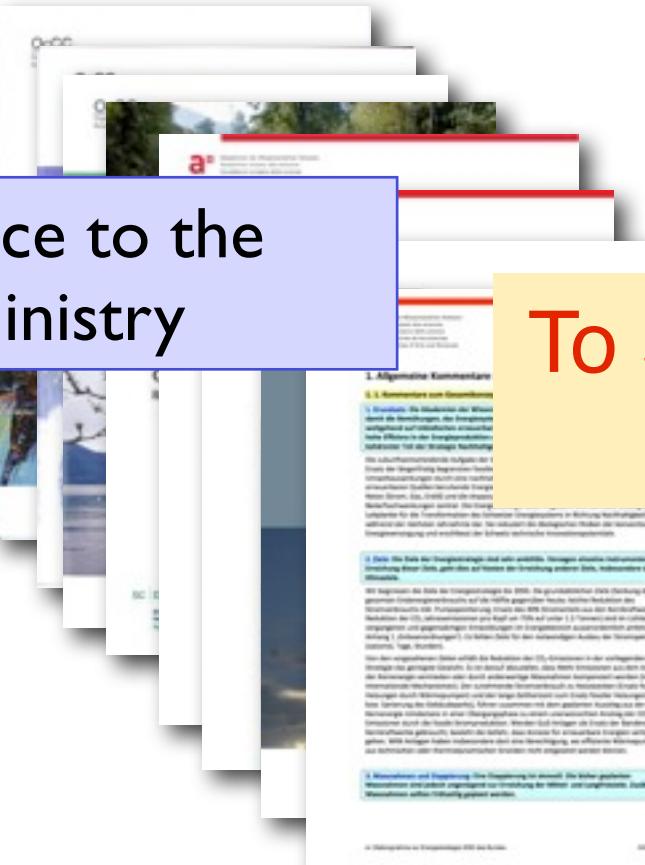
ProClim- acts as a mediator
between the scientists and
the stakeholders



Swiss
Research

International Programs

Nationale Assessments



Advice to the Ministry

Parliamentary Meetings

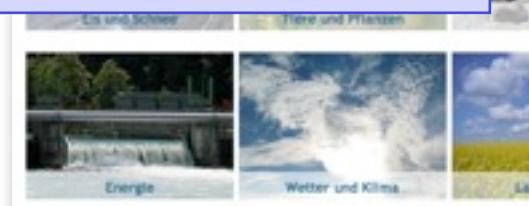
58 meetings in 16 years

10 regionale meetings in 6 y



Klimaportal

facts and figures
for the public



Klimaänderung 2007

- I. Wissenschaftliche Grundlagen
- II. Auswirkungen, Anpassung, Verantwortlichkeiten
- III. Verminderung des Klimawandels

Zusammenfassung



Dialog with
economy ...

To stimulate change requires a multitude
of dialogs and activities



... and the media



IPCC
Swiss Authors



Interface to
WCRP, IGBP, IHDP,
DIVERSITAS



Services for scientists

Workshops on emerging topics

1. Allgemeine Kommentare zur Energiestrategie 2050

1. 1. Kommentare zum Gesamtkonzept

1. Grundsatz: Die Akademien der Wissenschaften Schweiz unterstützen die Energiewende und damit die Bemühungen, das Energiesystem grundlegend umzubauen und im Jahresmittel eine weitgehend auf inländischen erneuerbaren Quellen beruhende Energieversorgung sowie eine hohe Effizienz in der Energieproduktion und -nutzung anzustreben. Die Energiestrategie soll ein kohärenter Teil der Strategie Nachhaltige Entwicklung bilden.

Die zukunftsentscheidende Aufgabe der Energiepolitik ist aus Sicht der akademien-schweiz der Ersatz der längerfristig begrenzten fossilen Brenn- und Treibstoffe mit ihren negativen Klima- und Umweltauswirkungen durch eine nachhaltige, im Jahresmittel vorwiegend auf inländischen erneuerbaren Quellen beruhende Energieversorgung. Die gute Einbindung in die europäischen Netze (Strom, Gas, Erdöl) und die Anpassung der nationalen Netze ist zur Sicherstellung der Bedarfsschwankungen zentral. Die Energiestrategie stellt insgesamt eine sinnvolle strategische Leitplanke für die Transformation des Schweizer Energiesystems in Richtung Nachhaltigkeit während der nächsten Jahrzehnte dar. Sie reduziert die ökologischen Risiken der konventionellen Energieversorgung und erschliesst der Schweiz technische Innovationspotentiale.

2. Ziele: Die Ziele der Energiestrategie sind sehr ambitioniert. Versagen einzelne Instrumenten zur Erreichung dieser Ziele, geht dies auf Kosten der Erreichung anderer Ziele, insbesondere der Klimaziele.

Wir begrüssen die Ziele der Energiestrategie bis 2050. Die grundsätzlichen Ziele (Senkung des

science community takes
position in a bottom up process

der Kernenergie vermieden oder durch anderwertige Massnahmen kompensiert werden (inkl. Internationale Mechanismen). Der zunehmende Stromverbrauch zu Heizzwecken (Ersatz fossiler Heizungen durch Wärmepumpen) und der lange Zeithorizont zum Ersatz fossiler Heizungen (Ersatz bzw. Sanierung des Gebäudeparks), führen zusammen mit dem geplanten Ausstieg aus der Kernenergie mindestens in einer Übergangsphase zu einem unerwünschten Anstieg der CO₂-Emissionen durch die fossile Stromproduktion. Werden GuD Anlagen als Ersatz der Bandenergie der Kernkraftwerke gebraucht, besteht die Gefahr, dass Anreize für erneuerbare Energien verloren gehen. WKK-Anlagen haben insbesondere dort eine Berechtigung, wo effiziente Wärmepumpen aus technischen oder thermodynamischen Gründen nicht eingesetzt werden können.

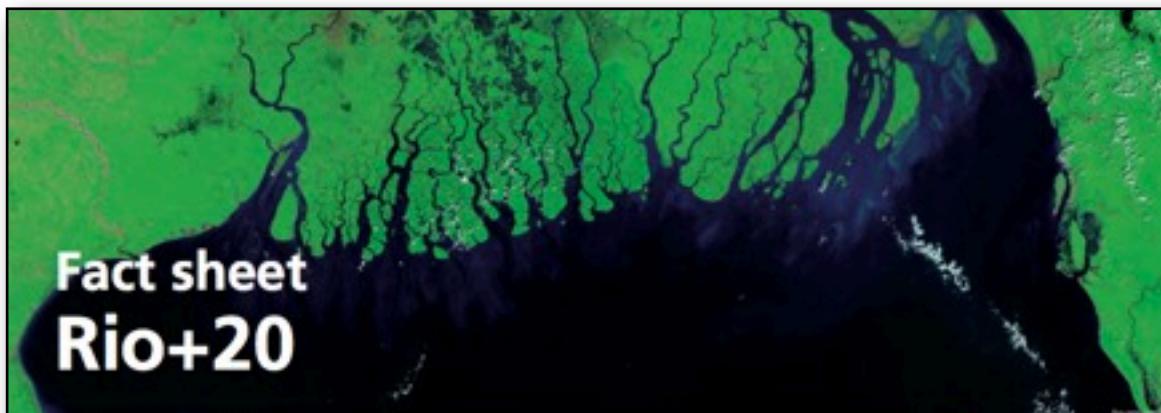
3. Massnahmen und Etappierung: Eine Etappierung ist sinnvoll. Die bisher geplanten Massnahmen sind jedoch ungenügend zur Erreichung der Mittel- und Langfristziele. Zusätzliche Massnahmen sollten frühzeitig geplant werden.

ProClim- initiated and runs the secretariate of the energy commission of the academies.

Coordinates the scientific position on new laws.

The academies take position: proposed energy strategy 2050 (2013)

How could the global programs involve national nodes more effectively? - an example



Fact sheet
Rio+20

Fact sheet No. 1, 2012

Water security for a planet under pressure – and the consequences for Switzerland

On the global level, an increasing population, economic growth and climate change will add to the pressure on freshwater resources. We cannot continue to use water as wastefully as we have in the past.

The challenge
During the past century, the global population has tripled, but the use of water has increased six-fold. At the same time, the quality of available water resources has been impacted through human activities, such as the use of agrochemicals and the release of wastewater. In addition, climate change affects water availability. Already today, around 1.2 billion people have no access to safe drinking water and adequate sanitation, which causes a lot of health problems, and one fifth of the world's population live in areas of physical water scarcity.

Expected future developments
Population growth and dietary changes
Today, 7 Billion people live on this planet. According to the United Nations, the population will reach 9.3 billion by the middle of this century and over 10 billion by 2100. This means that, in combination with dietary changes towards consuming more livestock products, the agricultural output will have to increase by 70% by 2050 and the demand for water will grow by 70–90%, if no efficiency measures are implemented. According to current estimates, two thirds of the world's population will live in areas of high water stress by 2025.

Water is essential to ensure food supply, but is also indis-

Climate and environmental change

Information for stakeholders

Therefore, water management must be improved in order to ensure sustained human well-being, food security, economic growth and political stability.

Glaciers are expected to continue retreating. Climate change also means sea level rise, which will affect many cities and populated areas along coastlines, mainly in developing

sc|nat

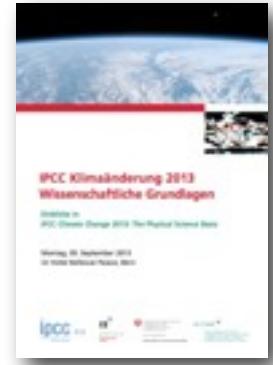
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This fact sheet prepared by ProClim-, KEPE and City is inspired by the Planet under Pressure Policy Brief series:
www.planetunderpressure2012.net/policybriefs.asp

Rio+20 fact sheets with global and national elements

Idea: can be reused by other national committees adding their national flavor

Comment:
the policy briefs of the programs were too long for policy makers



Summary

The Future Earth initiative depends much more on regional nodes than the 'old' global change research programs.

National committees are not enough.
Professional structures are needed to support the individual scientists in the dialog with the stakeholders.



The Swiss academies formed in 2008 a platform "Science and Policy" (with many joint activities) that encompass

- ProClim- Forum for Climate and Global Change
- Swiss Biodiversity Forum
- Transdisciplinarity Network (TD-Net)
- Commission for Partnership with developing countries (KFPE)

We presently discuss on whether to fuse these entities into a "Future Earth Forum" (downside: well established labels are replaced)