

Earth System Science Partnership (ESSP)

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World Climate Research Programme

ESSP is a joint initiative of





What is Earth System Science?

“an integrated study of the Earth System, the changes that are occurring to the system, and the implications of these changes for global sustainability.”

It includes not only the natural sciences but also the human dimensions so that we can understand the physical-ecological-anthropogenic systems as complex and dynamic entities.



Earth System
Science Partnership

Earth System Science Partnership

Earth System Science Partnership

DIVERSITAS

IGBP

ESSP

WCRP

IHDP

IRS

Joint Projects On Global Sustainability

Water

Food

Carbon

Human Health



ESSP is a joint initiative of





GEC Research Programmes



The mission of DIVERSITAS is to: 1) promote an **integrative biodiversity science**, linking biological, ecological and social disciplines in an effort to produce socially relevant new knowledge; and 2) to provide the **scientific basis for the conservation and sustainable use of biodiversity**.



The vision of the International Geosphere-Biosphere Programme (IGBP) is to **provide scientific knowledge to improve the sustainability of the living Earth**. IGBP studies the **interactions between biological, chemical and physical processes and interactions with human systems** and collaborates with other programmes to develop and impart the understanding necessary to respond to global change.



GEC Research Programmes



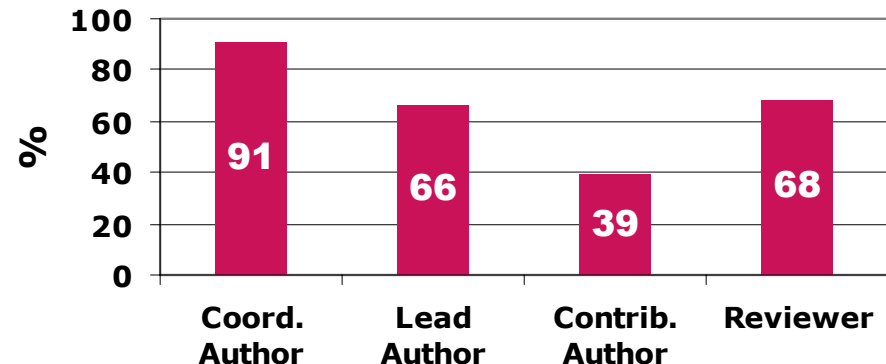
The International Human Dimensions Programme on Global Environmental Change (IHDP) is an **international, interdisciplinary science programme dedicated to promoting, catalyzing and coordinating research on the human dimensions of global environmental change.** IHDP takes a social science perspective on global change and it works at the interface between science and practice.



The World Climate Research Programme (WCRP) identifies knowledge gaps, prioritizes needs and leads world-class research into **climate variability and climate change to meet end-user requirements and policy needs.**

The World Climate Research Programme (WCRP) aims to:
Improve the predictability of climate
Enhance understanding of human impact on climate.

WCRP % in IPCC WG1



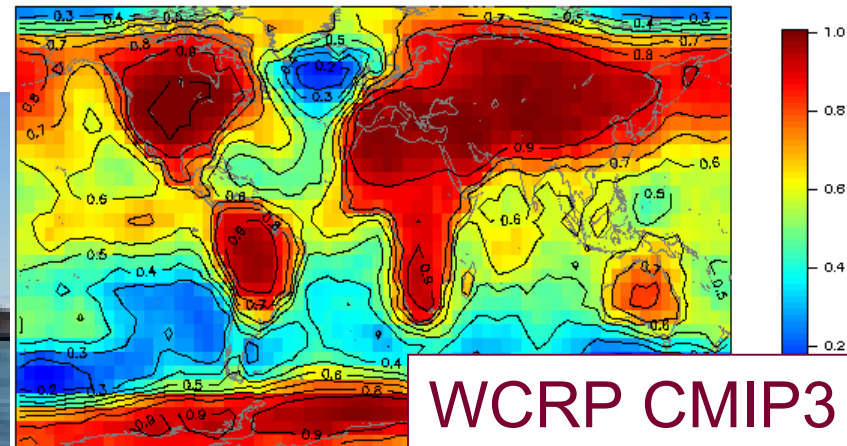
- “Climate Change” Convention already uses:
 - IPCC Assessments; SBSTA; The science gives credibility, legitimacy and salience
 - Much of science catalyzed/coordinated by ESSP (WCRP, IGBP, IHDP, DIVERSITAS) & other international orgs
 - Many national and regional studies and national group efforts e.g. ECMWF, IRI, IAI, APN etc
- How to encourage and improve this dialogue?

Examples of Existing Plans for Dialogue/Training

- Learning from AR4 Joint Workshop, WCRP with GCOS, IGBP and IPCC
 - Sydney 4-6 October (after Greenhouse 2007)
 - Goals: identify research & obs gaps relevant to UNFCCC
- LDC Training with AR4 scenarios archive
 - Trieste (ICTP) 26-30 November (before COP-13)
 - Goal: share rich resource with those not yet linked
- UNFCCC/IHDP et al. Bonn dialogues on GEC
- Programs in developing countries
 - AMMA
 - Seasonal Prediction
 - AfricanNESS
 - MAIRS
 - LBA



Probability that JJA temperature exceeds 2 degrees C (A1B)



Enhancing Dialogue 1

- Agree IPCC is and should remain process for formal *Assessment* of science
- Suggest complement with direct, *two-way* dialogue between parties and international research programmes. Aid mutual understanding through *sustained (regular/ongoing)* dialogue (more efficient and effective) at SBSTA meetings.
- Goals
 - Communicate new and relevant research findings
 - Highlight relevance of these findings
 - Be more timely/up to date (but not comprehensive)
 - Focus on key cross-disciplinary science
 - Learning how to live with uncertainties in climate change
 - ESSP highlight research priorities and gaps for national consideration
 - Encourage Parties to work with international programmes
 - Address particular issues/Hear Parties concerns/needs

- Programmes are and wish to be policy relevant, building on ongoing, quality science
- Cautions
 - Should take care not to politicise the science
 - SBSTA not attempt to prescribe research priorities for research bodies (can highlight concerns for consideration by research bodies
 - up to Parties to set their own national research priorities)
 - Need two way communication

- How might it work
 - Agree on a particular topic (Parties/Research organisations; in session workshop)
 - ESSP/SBSTA organise “the Dialogue” (in session workshop or training event or ? On, for example, some aspect of the NWP, Regional projections, biofuels)
 - State of the science, examples of application, limitations, deficiencies/inadequacies, research needs that parties are encouraged to pursue, training opportunities)
 - Parties respond by asking for further discussions or implement their national research priorities (examples from SBSTA24 Events)

- ESSP will continue to contribute the basic, integrated, cross-disciplinary science required for adaptation, mitigation, vulnerability/risk assessment
- ESSP keen to participate in a two way dialogue.
- Believes this dialogue will strengthen the quality, relevance and delivery of the science, as well as the Parties understanding of the science