

RESCUE Alignment Workshop

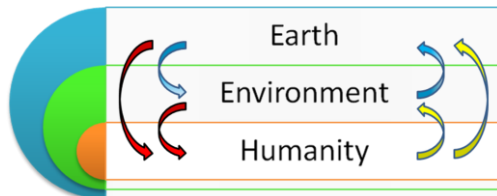
16 June 2010; EC-JRC IES, Ispra (IT)

RESCUE Working Groups inputs for the Thematic discussions

Collaboration between the natural, social and human sciences in global change studies

- Michael Goodsite, Poul Holm, Sierd Cloetingh and Working Group members

Last update: 16th June 2010



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WG Key Achievements

2/13

Initial objectives

- ✓ Address 10 questions related to collaboration
- ✓ These dealt with:
 - ✓ Practice (what is it, are we doing, need to do?)
 - ✓ Programming (How and what to fund)
 - ✓ Balance (Between classical mono-disciplines and scalars involved)

Preliminary WG recommendations

- ✓ Definitions of interdisciplinarity: RITE model
- ✓ The critical role of research councils in defining areas of research that support a "broad church" approach to interdisciplinarity
- ✓ Differences that emerge from different disciplinary perspectives



WG Comments & Suggestions

General Comments

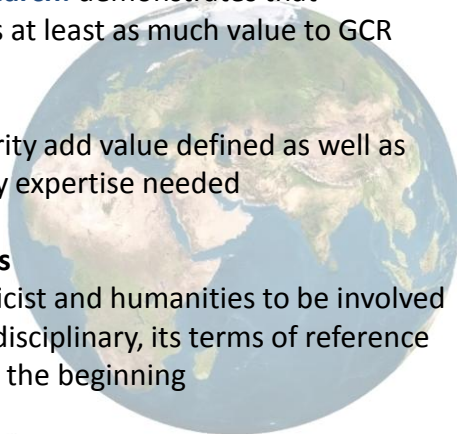
✓ **Radically Inter and Trans-disciplinary Environments (RITE) for European Global Change Research:** demonstrates that interdisciplinary research adds at least as much value to GCR

Suggestions to other WGs

✓ Areas where interdisciplinarity add value defined as well as areas where mono-disciplinary expertise needed

Lessons learned in the process

✓ Need for social science, ethicist and humanities to be involved in creating the spaces of interdisciplinary, its terms of reference and forms of articulation from the beginning



Interdisciplinarity – defined?

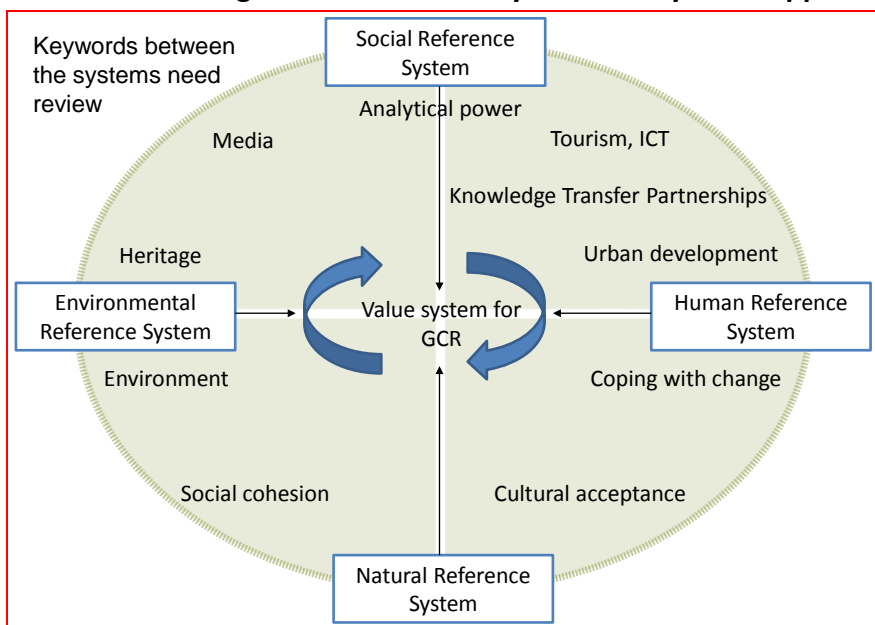
- **Radical interdisciplinarity (RI)**
- **Constrained interdisciplinarity (CI)**
- **Monodisciplinarity (MD) (classical approach)**
– **when we want to be innovative, we talk to the people "next door".**
- Where is transdisciplinarity?
- Intradisciplinarity
- Why would we, should we talk together?

Sources: *Tænk på tværs i forskning og uddannelse*. Dansk ErhvervsAkademi & Forum for Business Education, 2008 and LESC page 14. Strategic Science Position the view ahead

The RITE model

- Why don't we use the translational research model that is used in medicine to achieve the same results as medical science does for patients.
- The Earth is the patient that should be kept healthy not just healed.
- **The RITE model attempts to develop a translational research strategy/model for GCR**
- **The RITE model is still being developed**

We need a convergence of Reference Systems – a systems approach



A systems approach is not always an interdisciplinary approach!

Interdisciplinarity is good for you...at least in Denmark

- Interdisciplinary research environments (RI and CI) attract almost double as much funding per researcher (~ 58.3 *kEuros*) than monodisciplinary (MD) (~ 36.8 *kEuros*)
- RI & CI are far better at attracting international partners (80% RI&CI have international partners versus 40% MD)
- RI&CI receive double as much international funding as MD (~ 9.0 *kEuros* versus ~ 4.6 *kEuros*)
- But will it still be good for you in the future?
- How does an emerging researcher become interdisciplinary without hurting their career?

source: personal communication, Prof. Poul Holm – study in progress, not for further citation.

... to get it "RITE"

- Less than 10% of all Danish research environments collaborate across 'hard' and 'soft' sciences (RI)
- Only 5% research council-funded projects are RI
- But interest is growing: RI&CI have grown 12% from 2001 to 2005

source: personal communication, Prof. Poul Holm – study in progress, not for further citation.

WG Missing Elements & Steps

Missing Elements

- ✓ Go back to the start: consensus on definitions
- ✓ Final development of RITE model

WG remaining Timeline

- ✓ Writing group meetings and submission for peer review after writing group meetings:
2-4 September, Paris and 11-12 November, Italy

WG Action list

- ✓ Discuss and define the points submitted by members to further develop RITE model – new fields needed?
- ✓ Align with experience from other WG
- ✓ Complete and submit publication



Example: Digital Humanities

- If you want to change a new generation of historians you cannot train them using the methods of the old generations of historians
- They must be:
 - numerically proficient
 - have a sense of creating a digital database to analyze the history
 - best organize the enormous amounts of data available
- BUT, the classical reading of documents etc. can not be lost. It must be part of the core foundation
- You can't be both a fantastic scholar in the "old way" (note the ones controlling the funding and programming) AND the "new way" (the way of the future) – where the new thinking can be "failed" by the old guard

Collaboration working group report

- To be discussed and approved by WG leadership

Executive summary

1. The introduction

1. audience and goals
2. underlying assumptions
3. The process of producing the report

2. The urgent need for knowledge systems change

1. The challenge: education is key! If we don't do this right here, it will not work.
2. New forms of interdisciplinary research, what is there, what is needed for global change research
3. Dealing with interdisciplinary research a model needed
4. The interaction between interdisciplinary researchers, the educational institution and funding agencies
5. Why the present system is not fit for dealing with global change issues
6. Need for RITE

3. Current state of interdisciplinary research

4. A new vision of interdisciplinary research

5. Overcoming barriers and promoting opportunities

6. Our vision

7. Recommendations for next steps

Appendix: 1 peer reviewed publication on RITE

WG-Related Implementation

Key messages

- ✓ Interdisciplinary research adds value to GCR
- ✓ Monodisciplinary expertise essential

Roadmap for the implementation of recommendations

- ✓ An incentive system from the individual scientist to the international programs need to be developed
- ✓ "What is in it for me?" Defined at different scales

Contribution to the common RESCUE vision

- ✓ Mechanism to investigate the strategic process for natural, social and human sciences to improve their interdisciplinary synergy, to respond efficiently to societal and policy-relevant needs proposed



WG Additional Inputs

**For *Global and Planetary Change*
Radically Inter and Trans-disciplinary Environments
(RITE) for European Global Change Research**

**RITE is needed now and in the future – but perhaps
with a new acronym.**

**Thanks to co-chairs Poul Holm
and Sierd Cloetingh and WG members.**

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used from Kathryn Yusoff and Jill Jaeger's
team for the chapter framework.**

