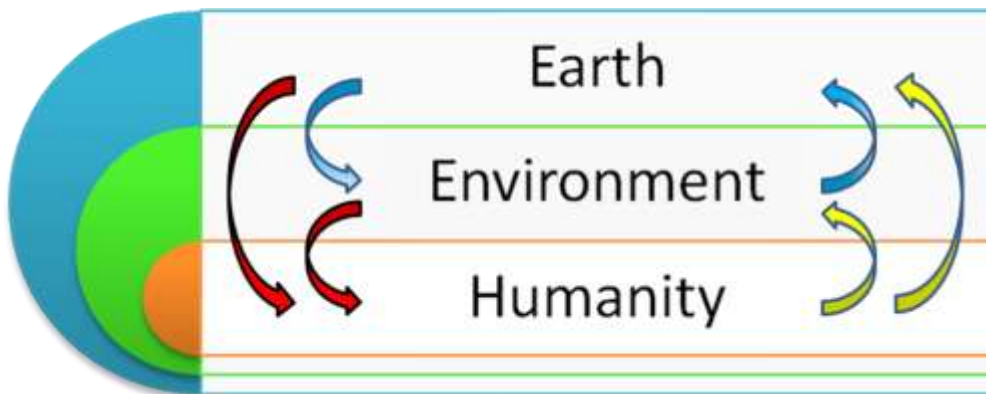


RESCUE foresight initiative

Responses to Environmental and Societal Challenges for our Unstable Earth

ESF-COST “*Frontier of Science*”
initiative & ESF *Forward Look*
developed after a request from the French CNRS
September 2009 – October 2011



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RESCUE Objectives

→ strategic advices for research and education transformations for transitions towards sustainability

1. Propose processes for natural, social and human sciences to improve their ability and capacity to work together (**interdisciplinary synergy**), to respond to the pressing policy and societal needs related to the global environmental change;
2. Articulate **new science questions** related to global environmental change, and especially those of a transdisciplinary nature and of relevance to policy and society;
3. Explore effective, **new institutional approaches** towards integrated, interdisciplinary research, and to facilitate the 'revolution' in education and capacity building it requires.

RESCUE Thematic Activities

- 1. New contributions with a central focus on humans and society with regard to the challenges of the Anthropocene;**
- 2. Collaboration between the natural, social and human sciences in global change research;**
- 3. Requirements for research methodologies and data for addressing the global change challenges;**
- 4. Moving towards a 'revolution' in education and capacity building in response to global change; and**
- 5. Opening global change research at the interfaces between science, policy, and society, in an open knowledge system.**



RESCUE Recommendation 1: Build an institutional framework for an open knowledge society

- **Develop an implementation-oriented research agenda and a corresponding institutional framework;**
- **Promote participatory approaches and stakeholder engagement in global change research and its design and evaluation;**
- **Give more credit in both funding schemes and academic careers for transdisciplinary and integrated global change research;**
- **Develop new criteria for evaluating “excellence” in participatory, implementation-oriented processes to support transitions towards sustainability.**

RESCUE Recommendation 2: Re-organise research so disciplines share knowledge and practices; work together with each other and with stakeholders, from the onset

- **Increase targeted support for those social sciences and humanities that contribute to understanding the underlying human drivers of global change and the related, complex governance implications ;**
- **Include a collective research framing process with researchers from natural and social sciences and the humanities as well as actors from civic society, the private and public sectors;**
- **Develop and implement widely the proposed ‘Radically Inter- and Trans-disciplinary Environment’ model for global change research**

RESCUE Recommendation 3: Initiate long-term integrated demonstration projects

- **Develop a network of long-term integrated studies and demonstration projects;**
- **Encourage experimentation with different approaches for analysing and building the capacity of regions to deal with environmental change and achieve sustainability transitions;**
- **Monitor these demonstration projects and ensure learning from experience, including for stakeholders.**

RESCUE Recommendation 4: Develop sustainability education and learning in an innovative, open knowledge society

- **Promote learning as a central element of an open knowledge society, and for adapting to the complex and changing human condition in the Anthropocene;**
- **Establish a broad dialogue about the education, praxis and capacity building frameworks and institutions needed for an open knowledge and learning society;**
- **Develop new skills and capacities to facilitate the processes of policy and society engagement in global change research and in transitions towards sustainability.**

RESCUE Recommendation 5: Respond to the challenges and opportunities created by Internet

- **Discuss the role of Internet in an open knowledge society, especially with regard to issues of credibility and legitimacy of scientific and informal knowledge ;**
- **Promote the use of Internet as a means of access to knowledge, a repository of knowledge, a research tool and an agora focusing on global environmental change;**
- **Embrace the opportunities offered by Internet for creating networks among communities of research, education and practices and for bringing them together.**

RESCUE Recommendation 6: Create a dynamic, adaptive information system

- **Build on the existing environmental, economic and societal information systems;**
- **Develop a dynamic, adaptive information system, regularly and easily updated, as a forum for communication about global environmental change;**
- **Use indicators and markers for experts, decision-makers and lay people to inform each other readily about the state of the social-environmental system, the likely short-to medium-term changes, the ‘intervention’ points and potential consequences of alternative societal and political choices.**

RESCUE Leadership

Chair: Prof. **Leen Hordijk** (Inst. Environ. & Sustainability, EC-JRC, IT)

Vice-Chair: Prof. **Gísli Pálsson** (Social & Env. Anthropol., U. Iceland, IS)

Thematic Leaders:

Prof. **Michael Goodsite** (Aarhus U., DK)

Prof. **Sierd Cloetingh** (Free University, Amsterdam, NL)

Prof. **Poul Holm** (Trinity College Dublin, IE)

Prof. **Claudia Pahl-Wostl** (University of Osnabrück, DE)

Prof. **Theo Toonen** (Delft University of Technology, Delft, NL)

Prof. **Karen O'Brien** (University of Oslo, NO)

Prof. **Jonathan Reams** (N.U. Science & Technology, Trondheim, NO)

Dr. **Jill Jäger** (Vienna, AT)

Prof. **Frans Berkhout** (Free University, Amsterdam, NL)

+ Prof. **Joseph Alcamo** (UNEP Chief Scientist, KN)



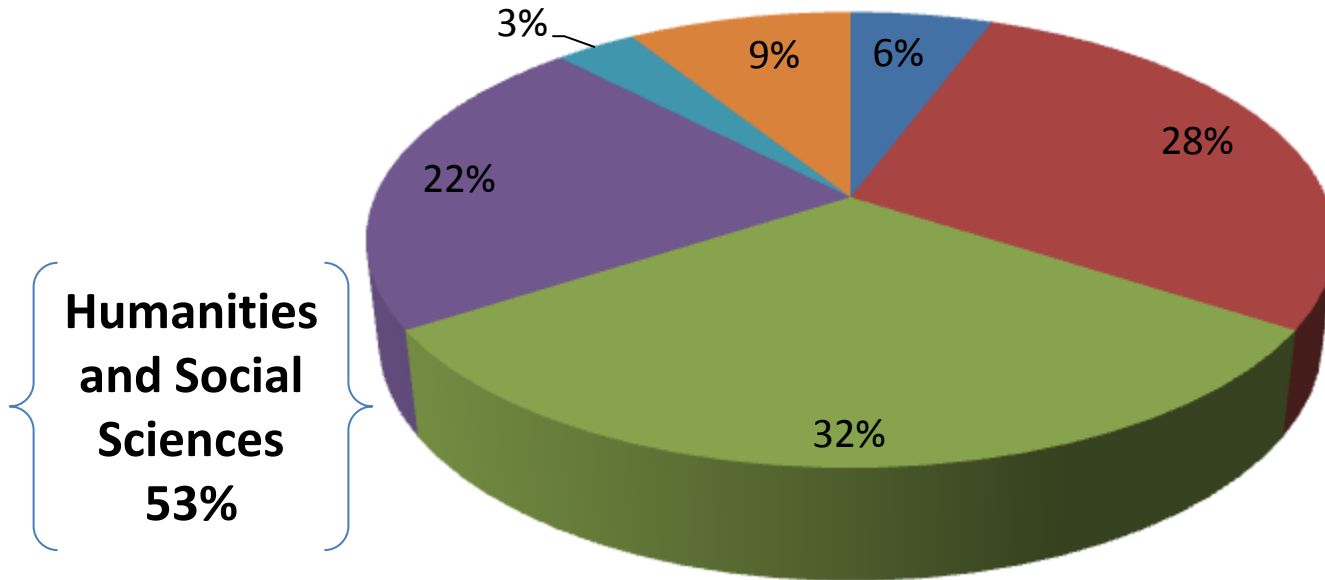
RESCUE Quality Reference Group (QRG)

→ set up to help ensure the optimal quality and impact of the RESCUE activities and outputs

- Dr. **Patrick Monfray** (FR), initiator, CNRS/ANR representative
- Prof. **Sonja Lojen** (SI); Dr. **Aslihan Kerc** (TR), LESC members
- Prof. **Luisa Lima** (PT), SCSS member
- Prof. **Ulrike Landfester** (CH), Dr. **Marko Tadić** (HR), SCH members
- Prof. **Maria Kaminska** (PL); Prof. **O.J. Nielsen** (DK), PESC members
- Dr. **Ipek Erzi** (TK), ESSEM Chair; John Ingram (UK), ESSEM member
- Dr. **Mehmet Güran** (TK), ISCH member
- Prof. **Giuseppe Scarascia-Mugnozza** (IT), FPS member
- Dr. **John Williams** (FR), FA member
- Dr. **Marc Heppener** (ESF), Dir. of Science & Strategy Development
- Dr. **Matthias Haury** (COST), Head of Science Operations

RESCUE membership (SSC, WGs, QRG) “disciplinary expertise” distribution

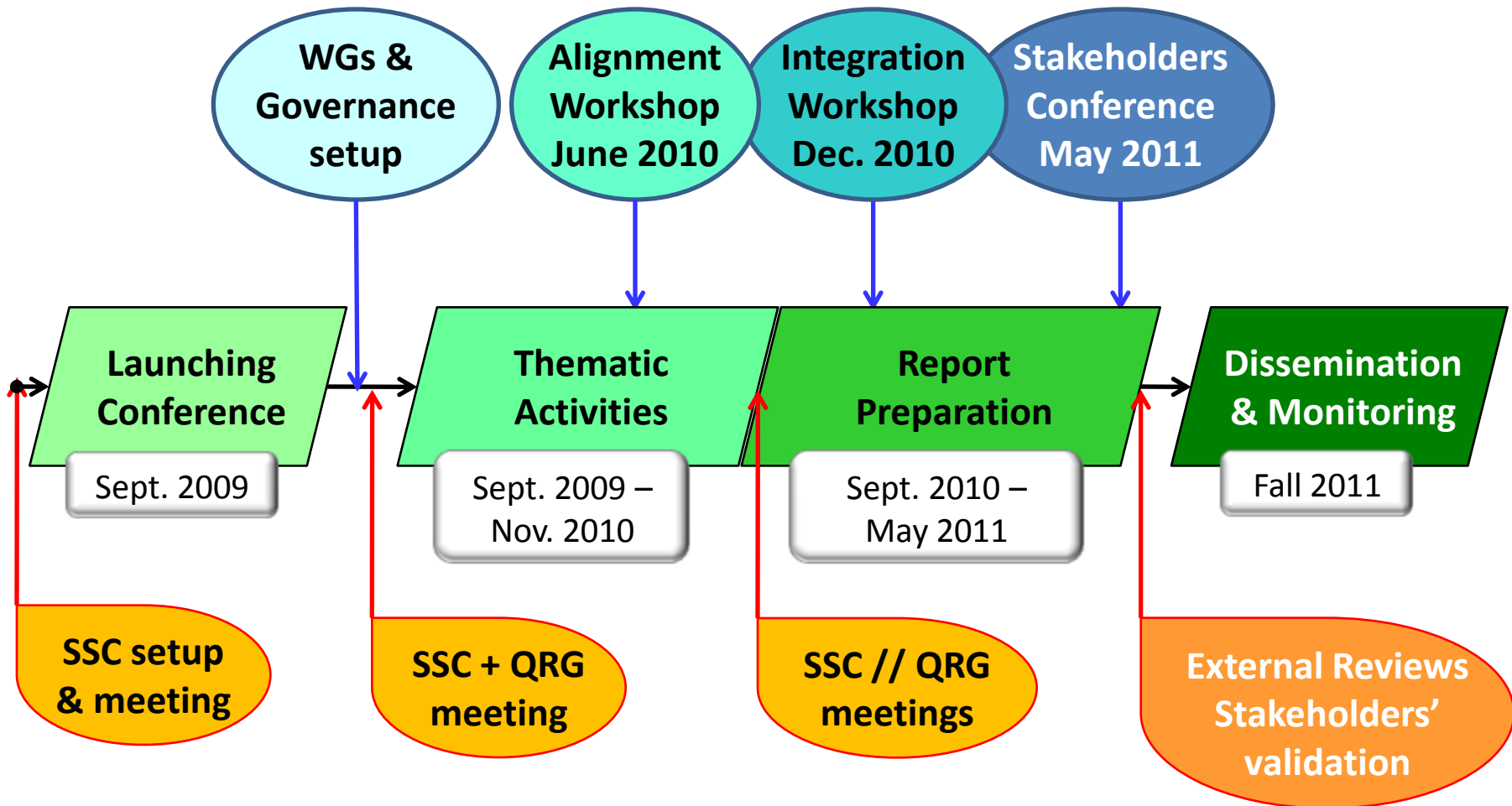
- Geosciences
- Environmental sciences
- Social sciences
- Humanities
- Technological sciences
- Foresight



In cooperation with: ICSU, ISSC, CIPSH, GCR programmes & ESSP, European Alliance - GCR, science funding & performing agencies, EC

RESCUE general timeline

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ESF-COST “Frontier of Science” initiative

RESCUE Coordination / Contact

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Forward Looks enable Europe’s scientific community, in interaction with policy makers, to develop mid- to long-term views and analyses of future research developments with the aim of defining research agendas on national and European level.