

RESOLVE


RESOLVE foresight initiative
 Responses to Environmental and Societal
 Challenges for our Unstable Earth

RESOLVE Synthesis Report
A brief presentation

ESF-COST "*Frontier of Science*"
 initiative & ESF *Forward Look*
 developed after a request from the French CNRS




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Leen HORDIJK
RESOLVE SSC Chair


www.esf.org/resolve

ESF – European Science Foundation COST – European Cooperation in Science & Technology

RESOLVE objectives


RESOLVE Objectives
 → strategic advice for research and education
 transformations enabling 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 global environmental change;
2. Articulate **new science questions** related to global environmental change, and especially those 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.




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RESOLVE 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.



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Take Home Message: Six RESOLVE Recommendations

1. Build an **institutional framework** for an open knowledge society
2. Re-organise research so that disciplines **share knowledge and practices** and, from the onset, work together with each other and with stakeholders
3. Initiate **long-term integrated demonstration projects**
4. Develop **sustainability education and learning** in an innovative, open knowledge society
5. Respond to the **challenges and opportunities created by Internet** for an open knowledge system that enables transitions towards sustainability
6. Create a dynamic, adaptive and integrated **information and decision-support system** on global change issues


Six RESCUE Recommendations



1 – 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**

Six RESCUE Recommendations



1 – Good Practice Example

Innovative Institutional Framework

- Conservation and Use of *Coffea Arabica* in the Montane Rainforests of Ethiopia (CoCE), SW Ethiopia
- Implementation-oriented with strong stakeholder involvement
- Overcame several barriers through innovative solutions such as setting up an NGO to implement the scientific results and two rounds of project funding
- For more information, see RESCUE report p. 37


Six RESCUE Recommendations



2 – Disciplines share knowledge and practices & work together with each other & stakeholders, from the onset

- Increase targeted support for social sciences and humanities that contribute to understanding the underlying human drivers of global change and their 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


Six RESCUE Recommendations



2 – Good Practice Example Lund University Centre for Sustainable Studies (LUCSUS), Sweden

- Platform for education, research and open cooperation on problems related to sustainability challenges
- New ways to integrate knowledge across social and natural sciences as well as between critical & problem-solving research
- For more information, see RESCUE report p. 38


Six RESCUE Recommendations



3 – Long-term integrated demonstration projects

- Develop a network of long-term integrated studies and demonstration projects exploring transitions towards sustainability
- 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.

Six RESCUE Recommendations



3 – Good Practice Example Swiss “North-South” National Centres of Competence in Research (NCCR)

- Dedicated to finding sustainable, practicable solutions to specific challenges of global change
- Long-term, implementation-oriented demonstration projects are required, with new criteria for evaluating success and need for monitoring and learning from such experiences
- For more information, see the RESCUE report p. 38


Six RESCUE Recommendations



4 – 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


Six RESCUE Recommendations



4 – Good Practice Example Knowledge, Learning & Societal Change (KLSC) Project (IHDP endorsed)

- creates a collaborative community of people from the sciences, humanities and social practice
- aims to better understand and explain the gap that currently exists between knowledge and action on global change issues
- For more information, see the RESCUE report p. 39


Six RESCUE Recommendations



5 – Internet challenges and opportunities for an open knowledge system enabling transitions towards sustainability

- 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

Six RESCUE Recommendations




5 – Good Practice Example

Review process of the open access journal *“Climate of the Past”* (CP)

- One of many recent examples of using the internet for publication of research results
- To foster scientific discussion; enhance the effectiveness and transparency of scientific quality assurance; enable rapid publication; make scientific publications freely accessible
- For more information, see RESCUE report p. 39


Six RESCUE Recommendations



6 – Dynamic, adaptive and integrated information and decision-support system on global change issues

- 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

Six RESCUE Recommendations



6 – Good Practice Example

Peg – A community indicator system for the people of Winnipeg

- A participative, flexible information system, with high community value (engagement; trust information source; innovative solutions to local and global challenges).
- Measures, monitors and reports on indicators of well-being that reflect the values and aspirations of the people of Winnipeg.
- For more information, see RESCUE report p. 40.

RESCUE Scientific Steering Committee




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



RESCUE contacts




ESF-COST "Frontier of Science" initiative RESCUE Coordination / Contact

Dr. Bernard Avril
 RESCUE Coordinator
 European Science Foundation (ESF)

Dr. Matthias Haury
 European Cooperation in Science and
 Technology (COST)

Email: fl-rescue@esf.org;
Website: www.esf.org/rescue

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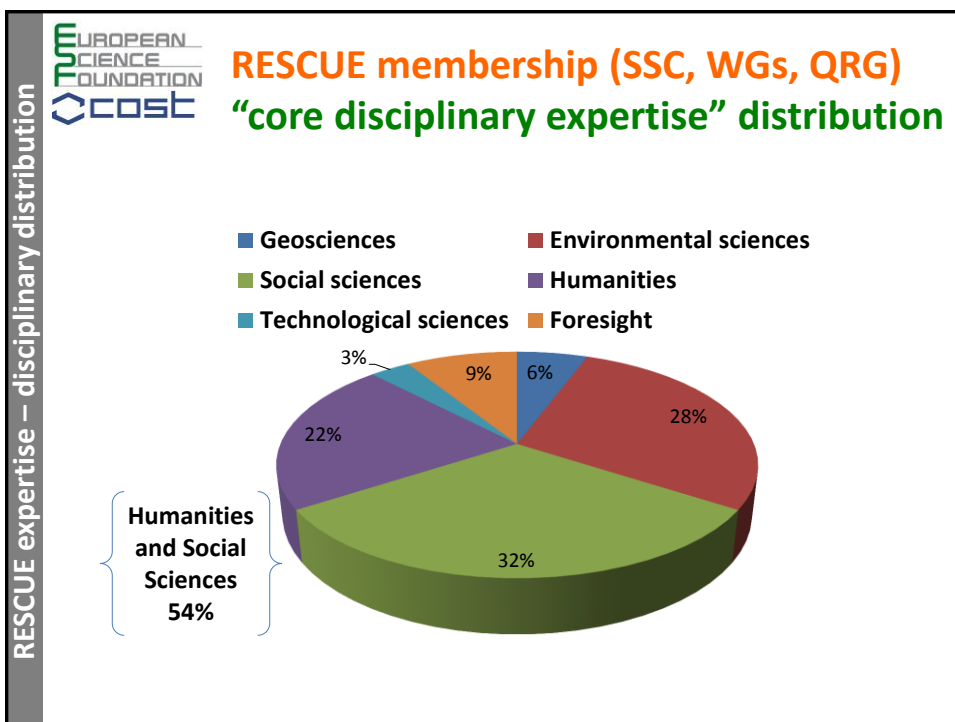








RESOLVE Synthesis Report – Launch Event
16th February 2012, Brussels

ESF Forward Look – ESF-COST 'Frontier of Science' joint initiative
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RESOLVE next steps – a few suggestions



Some possible way forward:
A preliminary RESOLVE roadmap proposal



- RESOLVE primary audience: science policy makers and funders in Europe
- 10 steps to support robust responses to the challenges of global environmental change and transitions towards sustainability.

RESOLVE next steps – a few suggestions



A preliminary RESOLVE roadmap proposal
(1/2)

1. Develop a common European vision of an open knowledge system
2. Survey on what societal actors expect from global change research
3. Pan-European mapping study of interdisciplinary research and education
4. Provide support and incentives for interdisciplinarity in research design
5. Develop and operationalize the 'Radically Interdisciplinary and Transdisciplinary Environment' (RITE) framework
6. Increase national and European support for the study of human-environment interactions, human behaviour and social arrangements

RESOLVE next steps – a few suggestions



A preliminary RESCUE roadmap proposal (2/2)

7. Establish a set of **10-20 long-term demonstration projects** covering different scales, sustainability needs/problem domains and policy contexts across the world
8. Run a **facilitated dialogue on the changes required in sustainability-related learning**, with educators, education policy makers and broad range of societal actors
9. Establish an international working group to **consider the challenges and opportunities of the Internet** in the fields of global change research and education
10. Establish an international working group to **work out the design of dynamic, adaptive information systems**






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