



## **“Responses to Environmental & Societal Challenges for our Unstable Earth” (RESCUE)**

**A joint COST-ESF "Frontiers of Science" initiative**

The “Responses to Environmental and Societal Challenges for our Unstable Earth” (RESCUE) foresight initiative (2009-2011) aims to help Europe address the societal and scientific challenges related to global environmental change. In RESCUE, the focus of attention is on people and the goal is to stimulate an integrated, innovative response from natural, social and human sciences.

### **RESCUE key objectives**

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

In order to help substantively and rapidly the policy and societal transitions towards sustainability, the RESCUE initiative proposes major changes in the current research paradigm through developing and implementing a broad framework of research and an open knowledge and learning system drawn from the diversity of actors, institutions, and intellectual (re)sources in society.

### **RESCUE recommendations**

#### **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.

#### **2. Re-organise research so that disciplines share knowledge and practices, and, from the onset, work together with each other and with stakeholders**

- 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

### **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.

### **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.

### **5. Respond to the challenges and opportunities created by Internet for an open knowledge system for 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.

### **6. Create a 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;
- 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.

Overall, this **RESCUE foresight initiative** aims to contribute also to the current international efforts preparing transitions toward sustainability, among which emerge especially the forthcoming **'Rio+20' United Nations Conference on Sustainable Development (UNCSD)** and the **"Earth System Sustainability Initiative" (ESSI)**, newly established by the International Council for Science (ICSU) and a global alliance of partners. This new 10-year international collaborative initiative will aim to effectively deliver solution-oriented research on global environmental change for sustainability and to provide global coordination for science to respond to the most pressing societal and environmental challenges. This echoes markedly some of the findings and conclusions of RESCUE regarding the global change research agenda setting.

For further information about **RESCUE**: visit [www.esf.org/rescue](http://www.esf.org/rescue); contact us at [fl-rescue@esf.org](mailto:fl-rescue@esf.org).