

## Sustainability Science and ICSS10

Sustainability Science is a new Science whose importance and role is raising in the world. It is based on an integrated and trans-disciplinary approach, with the aim to analyze and to understand the links among environmental sciences, economics, social sciences and political sciences, having a global vision with different point of views. Sustainability Science can help in understanding this linkages, create methods and visions for analyzing the trade-off and develop policy-makers support tools to solve the concomitant risks to human well-being and security issues.

In this contest, it will be held the second edition of the International Conference on Sustainability Science, hosted by CIRPS in the Faculty of Engineering of Sapienza University of Rome.

ICSS10 is an international initiative, promoted by the IR3S of the University of Tokyo, follows the “Sapporo Sustainability Declaration”, signed during the G8 University Summit in the 2008, that recognizes the issue of sustainability as a priority politic interest and the fundamental role of University.

The first edition of ICSS has been in February 2009, hosted by University of Tokyo, where representatives of 80 Universities, Research Centres and Industries of the wide world, met to depth the different disciplinary approaches to the Sustainability Science and to identify the tools that allow to strengthen the potency of the actual Networks on this field.

With the Conference of Rome ICSS 2010 will be a new passage to realize the connection between scientific field, industry and the policy-makers. It will be dedicate a Panel to the relations between Industry and Academia to stress the importance of a effective cooperation among the Major Industrial Groups and the Research, to achieve a real transition towards Sustainability. It will be create new methodologies for a greater analytic and functional integration of this new Science. Moreover will be provide a formalization of the Network of Networks.

### ICSS10 - International Conference on Sustainability Science 2010

#### Draft of Program

Date: **June 23-25, 2010**

Venue: Faculty of Engineering - Sapienza University of Rome

Organized by the Interuniversity Research Centre on Sustainable Development (CIRPS), the Integrated Research System for Sustainability Science (IR3S) and Arizona State University

**Day 1st: June 23**

<b>Morning</b>	
Opening remarks	Prof. Naso and prof. Farioli
Message from G8 University Summit	Prof. Profumo
Message from ICSS 2009	Prof. Komiyama
Key note speech (various identified)	Julia Marton-Lefèvre (Director General IUCN) Achim Steiner (Executive Director UNEP) Klaus Toefler (former Executive Director UNEP)
<b>Afternoon</b>	
<b>14.30/16.30</b> <b>Session I:</b> Complex thinking for a complex reality: epistemological and methodological challenges for sustainability science	<b>Chair:</b> A. Wiek (ASU) <b>Co-chair:</b> F. Farioli (CIRPS)
<b>16.30/17.00</b> <b>Coffee Break</b>	

<b>17.00/19.00</b> <b>Session II:</b> Use-inspired basic research for sustainable development / Solution-oriented research for sustainable development	<b>Chair:</b> P. Martens (Mastricht), I. Rotmans (Rotterdam) <b>Co-chair:</b> S. Macchi (CIRPS)
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**Day 2nd: June 24**

<b>Morning</b>	
<b>09.00/11.00</b> <b>Session III:</b> Global sustainability governance	<b>Chair:</b> O. Aginam (UNU), M. Muthoo, C. Juma <b>Co-chair:</b> S. Grego (CIRPS)
<b>11.00/11.30</b> <b>Coffee Break</b>	
<b>11.30/13.30</b> <b>Session IV:</b> Innovation for Sustainability	<b>Chair:</b> K. Takeuchi (UNU) <b>Co-chair:</b> K. Fukushi (IR3S)
<b>Afternoon</b>	
<b>14.30/16.30</b> <b>PhD seminar</b>	<b>Chair:</b> M. Yarime (IR3S) <b>Co-chair:</b> A. Wiek (ASU)
<b>16.30/17.00</b> <b>Coffee Break</b>	
<b>17.00/18.30</b> <b>Poster Session</b>	
<b>18.30</b> <b>Social Event</b>	

**Day 3th: June 25**

<b>Morning</b>	
<b>09.00/11.00</b> <b>Session V:</b> Sustainability science education	<b>Chair:</b> W. Clark, J. Steinfield, T. Mino <b>Co-chair:</b> S. Grego (CIRPS), Y. Mochizuki (UNU)
<b>11.00/11.30</b> <b>Coffee Break</b>	
<b>11.30/13.00</b> <b>Session VI:</b> Cross-cutting plenary	<b>Chair:</b> V. Naso (CIRPS) <b>Co-chair:</b>
<b>13.00/13.30</b> Conclusion of first part of the Conference and presentation of a Final Statement	
<b>Afternoon</b>	
<b>Open Forum on Sustainability Science</b>	
<b>14.30/16.30</b> <b>Panel 1:</b> Industry and Academia for a transition towards sustainability	<b>Chair:</b> F. Orecchini (CIRPS) <b>Co-chair:</b>
<b>16.30/17.00</b> <b>Coffee Break</b>	
<b>17.00/19.00</b> <b>Panel 2:</b> From Science to People: experiences from civil society	<b>Chair:</b> J. Buizer (ASU) <b>Co-chair:</b>
<b>19.00</b>	

<b>Announcement of next ICSS in Arizona and closing remarks</b>	
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## Objectives of the Conference

The Conference has six primary objectives:

1. Strengthen the framework of sustainability science and identify the epistemological pillars of sustainability science, as well as discuss the methodology aspects.
2. Present case studies of trans-disciplinary research practices to address the complexity of human-nature interaction
3. Review and discuss the current status of high education in sustainability science with regard to diverse visions, approaches, and methodologies used
4. Discuss the possibilities and challenges of an effective collaboration civil society, industry, policy makers and academia for a transition towards sustainability.
5. Examine the central issues and challenges of global sustainability giving equal attention to the perspectives of the South
6. Identify specific and concrete activities and instruments to consolidate the collaboration among research institutions and Networks.

## Sessions Description:

- *Session I: Complex thinking for a complex reality: epistemological and methodological challenges for sustainability science*  
Sustainability science is a metascience and deals with trans-disciplinarity how to connect different disciplines, what kind of methodologies are needed to interface different disciplines and linking among them (for example using same concepts share some visions). We need to be specific and to find people who are willing to coordinate research agenda, we cannot start from the beginning, so we should focus on particular aspects of epistemology and methodology. State of definition is not as a starting point for us, but we can provide key examples of methodological definitions of sustainability for assessment of projects, and then compare and assess them.
- *Session II : Use-inspired basic research for sustainable development / Solution-oriented research for sustainable development*  
Used inspired research means that research is demand-driven, the starting point is socioeconomic desired outcomes by society. It will be not a theoretical session but case studies will be provided. Not linking to action in a laboratory but experience of demand driven research will be presented and discussed. It will deal not only with innovation solutions. There are solutions that are not technological, every solution at small or bigger scale, is an integrated socio economic educational political behavior techno solution. How to make innovation the method to do so how to analyze and implement innovation phenomena or use-inspired research is topic of this session.
- *Session III: Global sustainability governance*  
Global sustainability governance, the gap from north and south, hot issues on North south relationships (as climate change, debt, equity, poverty, financial crisis) is subject of sustainability science. The session will analyze the global sustainability governance between north and south, the link between development and sustainability. Proposed topics of the session: Governing the commons: institutions, strategies and challenges; Global and local governance for the transition to sustainability; Methodology for the multidimensional aspects. Some Rectors from the South will be invited
- *Session IV: Innovation for sustainability*  
It will deal with technological social and knowledge innovation for sustainability. Proposed topics: Application of the concept of Sustainability Science. How sustainability is implemented in society (mechanisms, process and actors). Some examples that address the 3 aspects of innovation in order to reach sustainability will be provided.  
Sustainability science aims to find sustainable solutions (solutions not only in one sector but integrated, multidimensional solutions) that need to be implemented by operators, and to create a framework to use those solutions in different contexts and situations. Sustainability science identifies

problems, tries to find general solutions, suggestions and innovation, operators take them into account and come to some technological solutions in practice, in society.

- *Session V: Sustainability Science Education*  
Keep only Education in the title since Research component is in the other Sessions. Topic of the session: education for *Sustainability Science* how to educate on *Sustainability Science*

### **Panels description:**

- *Panel 1: Industry and Academia for a transition towards sustainability*  
Industry and Academia will meet for speaking and comparing on how reach a transition towards sustainability, for demonstrating the importance of a effective collaboration between Industry and Academy, to illustrate the industry solutions already found.
- *Panel 2: From Science to People: experiences from civil society*  
NGO and several organizations of civil society will illustrate the real experiences in the field of sustainability and how obtain a sustainable society, and the importance of the passage from scientific theory to a real application in the society and which tools are necessary to obtain it.

### **Advisory Board**

- *W. Clark*, Harvard University, USA
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- *F. Orecchini*, CIRPS Sapienza University of Rome
- *S. Grego*, CIRPS Sapienza University of Rome
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