

# Ph.D. Seminar

Chair: YARIME Masaru

Co-Chair: Arnim WIEK

International Conference on Sustainability Science  
(ICSS) 2010

Rome, June 23-25, 2010

# Background

- Emerging field of sustainability science aimed at:
  - Understanding the fundamental characteristics of complex and dynamic interactions between natural, human, and social systems
  - Developing solutions for the pressing sustainability challenges our societies face
- Sustainability science cutting across different academic disciplines
  - Various concepts and methodologies proposed to address multifaceted aspects of sustainability
  - Diversity posing a challenge to those involved in developing sustainability science as an academic field, particularly young researchers who will play a crucial role in the future
- Facing similar institutional challenges in developing academic programs on sustainability science in universities & research institutes
  - Establishing sustainability science as an academic field (convergence of paradigm?)
  - Collaboration between researchers across disciplines and beyond academia
  - Development of career paths for students and young researchers.

# Objectives

- Providing an interactive forum for participants to exchange, share, and discuss diverse approaches, concepts, and methodologies used in the field of sustainability science
- Exploring opportunities for mutual collaboration in establishing and institutionalizing the academic field of sustainability science
- Discussing their own research with other students, addressing the set of guiding questions
- Encouraged to engage in a constructive discussion on how to improve their research, with differences and similarities to be recognized
- Exploring a scope for complementarities and collaborative activities for broadening and strengthening the academic basis of sustainability science in the future

# Guiding Questions

- **Problem Orientation:** What sustainability problem does your research address?
- **Systemic Complexity:** Does your research explicitly address issues of systemic complexity (interdependency, nonlinearity, tipping points, inertia, heterogeneity, diversity, cross-domain interactions, etc.)?
- **Dynamics:** Does your research explicitly address issues of dynamics (feedback, path-dependency, reciprocity, threshold, legacy, time lag, resilience, etc.)?
- **Long-term Perspective:** Does your research explicitly reflect a long-term perspective (inter-generational equity, future generations, long-term impact, etc.)?
- **Inter-/Transdisciplinarity:** What inter-/transdisciplinary approach do you adopt in your research?
- **Anticipation:** What future-oriented/anticipatory knowledge do you generate or incorporate, and what methods of anticipation (e.g., scenario analysis) do you apply or rely on in your research?
- **Normativity:** What value-laden, normative knowledge (sustainability goals, targets, criteria, etc.) do you generate or incorporate, and what assessment methods (e.g., multi-criteria sustainability assessment) do you apply or rely on in your research?
- **Action-orientation:** What action-oriented/strategic knowledge do you generate or incorporate and what methods do you apply or rely on in order to solve the addressed problem in your research?
- **Knowledge Co-production:** Have knowledge and practical solutions been co-produced between scientists and practitioners/decision-makers through your research?

# Schedule

- 9:30-9:40 *Introductory Remarks* (Yarime / Wiek)
- 9:40-10:10 *Interactive Session 1*
  - Participants will discuss their research in pairs, addressing the guiding questions below
- 10:10-10:30 *Plenary Discussion 1*
  - Results of pair discussions will be shared: key challenges (gaps) in addressing the guiding questions
- 10:30-11:00 *Interactive Session 2*
  - This time participants will discuss potential improvements (how to bridge the gaps and address the guiding questions) in groups of four students (one student presents his/her challenges/gaps and the other students suggest how to bridge the gaps)
- 11:00-11:30 *Plenary Discussion 2*
  - Group discussions are synthesized: common strategies to bridge the identified gaps

1. **Christian Binz**, Cirrus Swiss Federal Institute of Aquatic Science and Technology (EAWAG) Switzerland
2. **Kana Hashimoto**, Department of Urban Engineering, Graduate School of Engineering, University of Tokyo Japan
3. **Jampel Dell'Angelo**, Interuniversity Research Centre on Sustainable Development (CIRPS) Sapienza University of Rome Italy
4. **Tracy-Ann Hyman**, Graduate Program in Sustainability Science, Graduate School of Frontier Sciences University of Tokyo Japan
5. **Barbara D'Ippolito**, Interuniversity Research Centre on Sustainable Development (CIRPS) Sapienza University of Rome Italy
6. **Keisuke Kuroda**, Department of Urban Engineering, Graduate School of Engineering University of Tokyo & Swiss Federal Institute of Aquatic Science and Technology (EAWAG) Japan, Switzerland
7. **Sara Evangelisti**, Interuniversity Research Centre on Sustainable Development (CIRPS) Sapienza University of Rome Italy
8. **Emmanuel Mutisya**, Graduate Program in Sustainability Science, Graduate School of Frontier Sciences University of Tokyo Japan
9. **Aida Karapinjalli**, Interuniversity Research Centre on Sustainable Development (CIRPS) Sapienza University of Rome Italy
10. **Niranji Satnarachchi**, Graduate Program in Sustainability Science, Graduate School of Frontier Sciences University of Tokyo Japan
11. **Gabriela Wuelser**, Institute for Environmental Decisions ETH Zurich Switzerland
12. **Izuho Sotani**, Graduate Program in Sustainability Science, Graduate School of Frontier Sciences University of Tokyo Japan
13. **Vladimiro Pellicciardi**, Interuniversity Research Centre on Sustainable Development (CIRPS) Sapienza University of Rome
14. **Takanori Tomozawa**, Department of Technology Management for Innovation University of Tokyo Japan
15. **Liana Ricci**, Department of Architecture and Urban Planning Sapienza University of Rome Italy
16. **Annemarie van Zeijl-Rozema**, International Centre for Integrated assessment and Sustainable development (ICIS) Maastricht University The Netherlands
17. **Andrea E. Ulrich**, Natural and Social Science Interface, Institute for Environmental Decisions ETH Zurich Switzerland