Systems Ecological Perspectives on Sustainability

24-26 September 2014

Finnish Environment Institute (SYKE), Helsinki, Finland

**Programme – final (updated 19th September 2014)**

Wednesday

**Session A: Need for holistic system-ecological approach**

*8:30-9:30 Registration desk is open! Coffee!*

Room: AUDITORIO

**9:30-9:50** Welcome words: **Per Mickwitz**, research director of SYKE; **Petteri Vihervaara**

**9:50-10:50** Key note 1: **Felix Müller**: “Sustainability indicators for socio-ecological systems”

10:50-11:30 Theme A2 begins: ***Boundaries and indicators of complex socio-ecological systems*** (Chair: Petteri Vihervaara)

* ***10:50-11:10* Franzese** & Häyhä: “A multicriteria and system-based perspective to ecosystem services assessment”
* ***11:10-11:30* Mononen**, Auvinen, Ahokumpu, Viirret, Rönkä, Tolvanen, Aarras, Kamppinen, Kumpula & Vihervaara: “National ecosystem service framework to enhance efforts towards sustainable planning”

**11:30-12:15** Aperitif talk 1: **Maria Holmberg**: “On system boundaries - how questions asked determine answers found”

*12:15 Lunch (self-paid)*

--- 1 h lunch break ---

13:15-14:15 Key note 2: **Larry Li**: “Towards a biophysically-sounded approach to ecological complexity and sustainability”

*14:15 Coffee*

--- 25 min break ---

PARALLEL SESSIONS:

Room: MUUTTOHAUKKA

14:40-16:20 Theme A1: ***Case studies & real world applications*** (Chair: Laura Mononen)

* ***14:40-15:00 Saarela*** & Saarikoski: “Integrating ecosystem services research into forest policy and management: The case of forest bio-fuel production in Finland”
* ***15:00-15:20 Benitez-Capistros***, Hugé, Dahouh-Guebas & Koedam: “Divergent viewpoints on the role of the Galapagos giant tortoise on the conservation and development of the Galapagos Islands”
* ***15:20-15:40 La Notte***: “How to make ecosystem services available for policy makers at sub-national level: The case of Agri-Environment-Climate payments of Rural Development Programs”
* ***15:40-16:00 Harmáčková*** & Vačkář: “Ecosystem Service Trade-offs under Future Management Scenarios in Tøeboò Basin Biosphere Reserve, the Czech Republic”
* ***16:20-16:40 Viirret***, Fagerholm, Käyhkö, Mankinen, Mononen & Vihervaara: “The role of spatial biotope data and landscape characterization for linking biodiversity and ecosystem services in Finnish Archipelago Sea area”

Room: AUDITORIO

14:40-16:20 Theme A1Extra: ***How to enhance agrifood resilience? - Operationalising resilience approaches*** (Chair: Anu Akujärvi)

* ***14:40-15:00 Rimhanen***, Kuisma, Mäkinen & Kahiluoto: “Social, economic and ecological attributes of resilience in dairy systems”
* ***15:00-15:20 Mäkinen***, Kaseva, Virkajärvi & Kahiluoto: “Managing resilience through response diversity”
* ***15:20-15:40 Kuisma***, Rimhanen, Ponomarev, Surovtsec & Kahiluoto: “Integrated nutrient and energy economy of dairy farms – a key to resilience?”
* ***15:40-16:00 Paavola***, Himanen, Kahiluoto & Miettinen: “Making sense of resilience in barley breeding: Towards usability of the concept of response diversity”
* ***16:00-16:20 Kahiluoto***, Kuisma, Kuokkanen, Mikkilä & Linnanen: “For taking planetary boundaries seriously: introducing the social boundary of right to food”

--- 10 min break ---

Room: AUDITORIO

16:30-17:10 Theme A2 continues: ***Boundaries and indicators of complex socio-ecological systems*** (Chair: Anu Akujärvi)

* ***16:30-16:50 Raitanen***: “Towards ecosystem approach based paradigm in international biodiversity law”
* ***16:50-17:10 Saarikoski***, Jax, Primmer, Harrison, Vihervaara, Mononen, Furman & Barton: “Defining Ecosystem Services and Benefits: Ground-testing the Cascade Model in the Context of Boreal Forest Social-ecological Systems”

Room: Hall, 1st floor

17:10-18:30 POSTER SESSION *(Fruits & juice)*

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Thursday

**Session B: System’s measures: Energy, exergy and information** (Chair: Maria Holmberg)

Room: AUDITORIO

**9:00-10:00** Key note 3: ***Sven Erik Jørgensen***: “Thermodynamics and exergy of ecosystems”

*10:00 Coffee*

--- 15 min break ---

**10:15-11:15** Key note 4: ***Arto Annila***: "The energetic principle of nature"

**11:15-12:00** Aperitif talk 2: ***Jouni Lehtoranta***: “If you have an extra electron where do you put it?”

*12:00 Lunch (self-paid)*

--- 1h lunch break ---

13:00-13:40 Theme B1: ***Energy and resource efficient systems*** (Chair: Jouni Lehtoranta)

* ***13:00-13:20 Vihervaara***: “Schrödinger and sustainability – 70 years later”
* ***13:20-13:50*** *Invited speech:* ***Ari Lampinen***: “Solar- vs. bio-economy: ecological implications”

--- 5 min short break ---

13:55-14:55 Key note 5: **Wolfgang Lucht**: “Planetary boundaries and human ecology”

*14:55 Coffee*

--- 15 min break ---

15:10-17:10 Theme B2: ***Biodiversity, ecosystem functioning and resilient systems*** (Chair: Tuomas Mattila)

15:10-16:10 Key note 6: **Hanna Tuomisto**: “How to quantify biological diversity: taxonomical, functional and evolutionary aspects”

* **16:10-16:30 Shorokhova** & Vanha-Majamaa: “Resilience of boreal forest ecosystems: a new approach to measuring”
* ***16:30-16:50 Sabo***, Lepeška, Turisová & Uhliarová: “Assessment of ecological complexity, integrity and ecosystem services”
* ***16:50-17:10 Dittrich***, Seppelt, Václavík & Cord: “Environmental archetypes explain large and regional-scale biodiversity patterns in Germany”

19:00 Conference dinner at Restaurant Savu

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Friday

**Session C: Challenges of society and solutions for future** (Chair: Petteri Vihervaara)

Room: AUDITORIO

9:00-10:00 Key note ***Arto Naskali***: “Promise of ecological economics – from fossils to Sun”

10:00 *Coffee*

--- 20 min break ---

10:20-11:00 Theme C1: ***Defining and practicing sustainability at different scales*** (Chair: Elina Viirret)

* ***Häyhä***, Cornell, Lucas & van Vuuren: “Linking Sustainable Development Goals and planetary boundaries to explore energy pathways”
* ***Saikku***, Mattila, Akujärvi & Liski: “Human appropriation of net primary production in Finland during 1990-2010”

11:00-11:45 Aperitif talk 3: ***Tuomas Mattila***: “Applied systems thinking at the farm level: orchestrating a dance between steel, soil, water and energy flows”

*11:45 Lunch (self-paid)*

--- 1 h lunch break ---

12:45-13:45 Theme C2: ***Towards sustainable economics*** (Chair: Laura Saikku)

* ***12:45-13:05 Hoffmeister***: “Econics: Using ecosystem theory to support sustainable development in socio-economic systems”
* ***13:05-13:25 La Notte***: “The notions of stock and flows when accounting for ecosystem services”
* ***13:25-13:45 Stadler*** & Wood: “EXIOBASE - Analysing environmental impacts of the global, interlinked economy”
* ***13:45-14:05 Jørgensen:*** Analysis of the Sustainability and the Carbon Processes of the Danish Renewable Energy Island Samsø

Goodbye Coffee

--- 15 min break ---

14:20-15:00 Summary, Closing & Farewell (Chair: Petteri et al.)

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***POSTERS***:

* ***P1 Furman,*** Saarikoski & Saarela: Ecosystem services: From Concepts to Real-world Applications (A1)
* ***P2 Zelený***: Evaluating ecological integrity at the regional scale with the use of participatory approaches (B2)
* ***P3 Conway*** & Romero: Greening Collegiate Sports: A Rainwater Harvesting Study in Central Texas (A1)
* ***P4* Bailey** & LaPoint: Comparing Greenhouse Gas Emissions among Texas Universities (A1)
* ***P5 Oinonen*,** Peltonen, Heikinheimo, Uusitalo, Lindroos & Joona Salojärvi: Pragmatic Approach for Cost-Effectiveness and Cost-Benefit Analyses for the Marine Strategy Framework Directive using Bayesian Networks
* ***P6 Kotamäki***, Pätynen, Taskinen, Huttula & Malve: Hierarchical Bayesian and structural equation modeling in environmental management and decision making
* **P7 Kopperoinen**, Baró, Gómez-Baggethun, Barton, Niemelä, Izakovicova & García-Blanco: Nature-based solutions in urban areas through an ecosystem services approach: Case studies on sustainable urban planning and management.
* **P8 Akujärvi**, Repo, Liski: Recognizing trade-offs in multi-objective forest management in Southern Finland
* **P9 Malve**: Tools for participatory river basin management
* **P10 Koljonen,** Sammalkorpi, I., O´Reilly, T., Molloy, M., Simone, M., Adamek, Z., Molnar, G., Egerszegi, E., Tuvikene, L., Griscti, A., Dahlqvist-Sorensen, O.& Matikka, V.: Lake ecosystem services in regional policies