International Co-operation in Science, Technology and Innovation to Address Global Challenges

Food, Water, Energy and Community

October 5 2011; 10.00 – 16.00 at Lerchendal Gård, Strindveien 2, Trondheim, Norway NTNU, The Norwegian University of Science and Technology



Arranged by the NTNU Department of International Affairs, in co-operation with the Norwegian Ministry of Education and Research and The Norwegian Year of Science, and in association with the OECD STIG project



## PROGRAMME:

10:00 Part 1: Macro: International governance of research and innovation collaboration Chair: Per Koch

- Welcome by Hilde Skeie, NTNU
- On global challenges and international research and innovation policy development by Per Koch, Norwegian Ministry of Education and Research and Chair of the OECD STIGproject on STI and global challenges.
- On the OECD STIG project and multinational STI collaboration in the areas of energy, water and food, by Andreas Stamm, lead researcher in the OECD STIG project

# 10:45 Part 2: Micro: The development implementation of new competences and new technologies for clean water, energy and food

Chair: Rita Westvik

- Short presentations of case studies:
  - FEED (Food and Energy Eco Dynamics), Addressing increased food production and efficient (re)use of water and energy in closed environments.
  - Innovation in Brazil, by Trond Furu, Hydro (to be confirmed)
  - Increased food production in urban and arid areas by Bruce Edgar, Phoenix Planning Design
  - SINTEF's Clean Water Project by Bjørnar Eikebrokk
  - From waste to food by Ketil Stoknes, Lindum/ the University of Oslo and Anne Wirstad, Life Synthesis
  - Tailored energy solutions in different contexts, by Rannveig Kvande (Fesil)
  - The Living Soil Project, Anders Næss, Director of Økologisk Spesialkorn Skandinavia, Norway
  - The thermodynamics of Solar Buildings and the passive house designs, by Xavier Dequaire, Oslo and Akershus University College of Applied Sciences
  - Aquaculture in poor rural areas, by "Professor Kjell Nilssen, NTNU

## 12:30 Lunch

#### 13:30 Part 2 Continues

- Remaining presentations
- Discussion facilitated by Rita Westvik

#### 14:30 Part 3: Technology and culture – on community work

Chair: Rita Westvik

Moon of the Mountains University, Bioscience Park, Uganda, by Nyonga Rugumayo Amundsen





- Lessons learned in knowledge sharing and creation by research manager ٠ Dr. Arne Lindseth Bygdås and research scientist Aina Landsverk Hagen, SINTEF
- Discussion facilitated by Rita Westvik

#### 15:30 Part 4: Making use of the seminar findings

Open discussion

Chair: Hilde Skeie, NTNU

How can the experience from these case studies be made relevant for global research and innovation policy development for facing global challenges?

- How to help processes in the OECD, the UN and the EU.
- Possible link to Rio+20 United Nations Conference on Sustainable Development?
- Findings from relevant projects presented during The Barents Spektakel in 2013, ref. presentation by Rune Rafaelsen



## Background

On October 5 2011 NTNU, in cooperation with the Ministry of Education and Research and the Norwegian Year Of Science, will arrange a seminar on the research of global challenges.

The main focus will be on the need for knowledge and technology to ensure mankind clean energy, clean water and adequate nutritious food. The seminar will provide concrete examples of research and innovation projects that aim to produce relevant knowledge and good technological solutions.

The technological solutions cannot be viewed in isolation from the geographical and socio-cultural framework. Participants will be asked to discuss what kind of changes that are needed for communities to be able to integrate and make use of such knowledge in a sustainable manner. There will be examples from developing countries and from rich nations such as Norway.

One aim of the seminar is to provide an input to the OECD's project for international research and innovation cooperation on global challenges, STIG. STIG aims to make recommendations on how to initiate, establish and manage the collaboration of this type. The seminar will therefore provide examples that illustrate the interaction between different needs, different technologies and different ways of organizing cooperation.

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