**Cultural, philosophical, ethical and aesthetical aspects of sustainability.**

**Challenges of use and care for Nature in the interface with cognitive neuro dynamics**

An International workshop organised by EURAGRI in collaboration with AGORA for biosystems and the Sigtuna Foundation

Sigtuna, Sweden 28 June 2013

*Background*

During the last few years an increased interest is visible on cultural and ethical and value issues in circles internationally dealing with sustainability issues. This is e.g. seen in the elaborations in the 2012 Rio+20 preparations and final discussions and settling of work frameworks for the next few years. One obvious example is the important elaboration of the new Sustainability Goals for 2015 in the UN system as successor to the current Millennium Goals set. In other arenas as the OECD the interest of value issues have been clearly visible e.g. with regard to development issues. And in the EU the discussions on Horizon 2020 and the emergence of new forward looking structures related to Grand Challenges also has called for deeper reflections on the cultural and ethical basis on the directions of strategy for the Human-Nature connections in a sustainability and resilience type of framework. In this context there is a renewed interest of the important links in the knowledge production systems between natural science- the social sciences and the humanities as well as with technology at large and medicine.

Thus areas dealing with natural resources and the environment have to open up for reflections on how these applied fields - including their enfolding in an international more bio based economy – can be viewed in a wider cultural perspective, setting the framework also for the ambition lines but also restrictions for strategy development not only of instrumental values. Issues about the human capacity to have an inbuilt concern for Nature - sometimes called “biophilia” are one example of this. Such potentially inbuilt capacities of values in humans will have a growing importance when we have to deal with the challenges of the period of the Anthropocene we are now quickly entering.

It is in this situation that EURAGRI has – as part of its general reflections on strategy for agricultural and food research in Europe – taken the chance of a deeper elaboration of the cultural aspects of its field. When the possibility arose to dwell on the link between sustainability considerations with regard to the Humans-Nature interaction and the conceptual development of the evolutionary development of the human brain we were happy to set up a collaboration for a back to back workshop on these matters with the organisers of an international Conference on Cognitive Neurodynamics (ICCN) to be held in Sigtuna at the Sigtuna Foundation 23-27 June 2013. Thus a group of persons from that conference and interested in our “interface” types of issues will join persons from the sustainability and resilience domains and representatives of the EURAGRI circles in the workshop to be held 28 June 2013 in Sigtuna. With regard to the EURAGRI it is our intension to feed the results into the forthcoming EURAGRI workshop on European strategic developments in the agro/food domain to be held in Brussels 4th of July 2013 and later into the annual EURAGRI conference in Vilnius in October in collaboration with the then EU Presidency i.e. the Lithuanian Government.

With regard to the topics of the Sigtuna workshop trying to bridge the gap between Sustainability and Cognitive Neuro Dynammics one entry line will deal with brain development and its cognitive capacities. In this regard it is concerned with what we can learn about humans as an evolutionary entity. It seems very interesting that lately the interest spectrum in that domain has gradually shifted from an interest in the brain activities of one individual only to be more alert to the interactions between many brains, i.e. a more social type of line of interest. (See e.g. Walter Freemans book from 1995 “Society of Brains”).

In the social domain central sustainability issues are dealing with culture, values and world outlooks. It will be a task for the workshop to probe what contact points might emerge between these and the neuro dynamics issues as that link mostly can be seen as disconnected areas of study, reflection and research.

*On the agro/food system*

The agriculture and food production has undergone tremendous changes in the past half century. It is highly productive and characterised by mass production and monocultures. It is made possible by high inputs in terms of technology, energy (fossil fuels), water, fertilisers and pesticides etc. Outputs and inputs are traded globally. However the production gains have come with a high cost, environmentally (eutrophication, loss of biodiversity, loss of soil fertility etc.), as well as socially (drain of rural communities, redistribution of resources from the less developed to the developed world etc.).

In addition, the agricultural and food production system will have to address the global challenges that are associated with a growing and increasingly affluent world population, climate change and the depletion of natural resources. In the not so far future, we will need to provide enough biomass for sufficient and healthy food for everyone, as well as for non-food purposes, such as feed and fibre, in order to replace fossil fuels without further stress on our natural environment.

Since the dawn of the human species, we have managed to survive, spread and proliferate due to our unique ability to adapt and innovate. But what are the driving forces behind this capacity, when meeting challenges from our environment and ourselves? To what extent are they of biological, social, cultural and other origins? What are the implications of these different dimensions of human nature for our relation with us, our cultures and our environment, and will it be possible to create a common ground for constructive action and peaceful co-existence?

*Workshop overriding issues*

During this workshop we would like to address these questions with particular focus on the following:

* What do a rich biodiversity and a beautiful landscape mean to our physical and mental well-being?
* Do our cognitive and mental capacities permit us to create a sustainable society where nature and culture is valued at least as equally important as economy?
* Do we have the capacity, individually and collectively, to prevail under a diffuse and unpredictable threat of a changing natural environment (e.g. through climate change and other challenges) that will affect different parts of the world very differently?
* Will we be able to muster the necessary global solidarity, possibly by imposing a change of lifestyle on some to make the survival possible for others?

**Programme**

9:00 **Welcome**

Alf Linderman, Director Sigtuna Foundation and Bettina Heimann, Secretary General EURAGRI

**Introduction to the workshop**

Uno Svedin, Professor, Board member EURAGRI, and Senior Research Fellow at the Stockholm Resilience Centre and

Prof. Hans Liljenström, SLU and Agora for Biosystems

9:30-10:00 *“What does a Society of Brains mean for the human capacity to face sustainability challenges of our times?”*

Speaker: Prof. Walter Freeman, Berkeley University

10.00-10.15 Pause

10.15-10.45 *“The role of values in reconnecting to the biosphere and its relation to the human condition”*

 Speaker: Prof. Frances Westley, School for Entrepeneurship, environment and Development (SEED) at the University of Waterloo, Canada

10:45-11:15 *“Is there a connection between biologically based aesthetics and sustainability – results from a study on neuro-aestetics applied to the human perception of landscapes.”*

Speaker(s): Prof. Peter Århem/Hugo Zeberg, ´The Karolinska Institute, Stockholm

11:15-12:00 **Discussion session 1:** Comments and reflection around the presentations in the morning

 Moderator: Hans Liljenström

12:00-13:15 Lunch

13:15-13.30 **Introduction to the afternoon discussions:**

*On themes and challenges. On implications of humans’ perception of Nature for addressing the Grand Challenges.*

Introducer: Uno Svedin

13:30-14:45 **Discussion session 2:** Elaboration of the topics launched in the morning – and their expansion. (Also new and forgotten topics).

14:45-15:15 Coffee

15.15-16.15 **Discussion session 3:** Cross going reflections on emerging themes and potentials for further studies, research and innovative action.

16.15-16-30 **Closing reflections and summing up**

 Uno Svedin

16.30 End of Workshop

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Participants:

Stephan Barthel, SRC and History Dept./SU, SRC co theme leader/urban studies. PhD

Ebba Bohlin, Stockholm, artist

Steven Bressler, Florida Atlantic University, Professor, \*

Erika Dahlén, Stockholm, Sweden, artist

Anna Emmelin, SRC/SU, Sweden, Science administrator

Calle Folke, SRC/SU, professor (tbc.)

Walter Freeman, Berkeley University, USA, Professor, \*

Elfriede Fuhrmann, Lebensministerium, Vienna, Austria, EURAGRI board member

Diego Galafaci, SRC/SU, PhD student

Ing-Marie Gren, national economy/SLU, Professor

Jacob v. Heland, SRC/SU, PhD (tbc.)

Bettina Heimann, EURAGRI, Secretary General

Anders Hjort, Linköping University, Sweden, Professor (tbc.)

Hans Liljenström, SLU, Professor , \* (organiser ICCN)

Alf Linderman, The Sigtuna Foundation (Sigtuna Stiftelsen), Sigtuna, Sweden, Director

Janken Myrdahl, SLU, Professor (tbc.)

Per Olsson, Theme Leader/Adaptive Governance, Networks and Learning, PhD

Henrietta Palmer, Royal Academy of Arts, Stockholm, Sweden, Professor (tbc.)

Paul Rapp, University of Armed Services, Maryland, USA, PhD, \*

Sisir Roy,India Institute of Statistics, Kolkata, India, PhD, \*

Lisen Schultz, SRC/SU, senior researcher

Uno Svedin, SRC and DSV/SU, Prof., senior research fellow, EURAGRI Board member

Pehr Sällström, author, Järna, Sweden, Professor

Emanuelle Tognoli, Center for Complex Systems and Brain Dynamics, \*

Frances Westley, School for Entrepeneurship, environment and Development (SEED) at the University of Waterloo, Canada, Professor

Hugo Zeberg, ´The Karolinska Institute, Stockholm, PhD student, \*

Peter Årheim, The Karolinska Institute, Stockholm, Professor, \*

Henrik Österblom, SRC/SU, researcher , PhD

DSV= Department of Computer and Systems Sciences at Stockholm University (SU)

EURAGRI= the independent European organization for Agricultural research.

ICCN= International Conference on Cognitive Neurodynamics (ICCN) to be held in Sigtuna at the Sigtuna Foundation 23-27 June 2013

SLU= Swedish Agriculture University, Sweden

SRC= Stockholm Resilience Center at Stockholm University (SU)

\*= Participant in the International Conference on Cognitive Neurodynamics (ICCN) to be held in Sigtuna at the Sigtuna Foundation 23-27 June 2013.