



THINK TANK REPORT NO. 3
Think Tank meeting Worpswede, June 2011



Participants:

Manfred Weisensee
Hans-Peter Ratzke
René Daszenies
Julian Helmich
Donaat Cosaert
Jan Sundquist
Göran Fremrot
Ben van Os

Ria de Boer
Lars van den Hoogen
Joop Kramer
Femke Adriaens
Chris Ashe
Wiebke Abeling
John Becker
Ulrich Müller

Tim Brauckmüller
Sanne Ostergaard Nielsen
Silke Nolting
Anders Franzén
Dominiek Vandewiele



Introduction:

Mr. John Becker gave a short presentation about the history of REON with a strong emphasis on the topics of solar and wind power. The general efficiency of modern technology greatly enhanced in the last years, making not only the produced energy cheaper, but also the technology. Mr. Becker stated that the key factor for a sustainable economy is the use of local resources. By this, capital is kept in the region and reinvestments are more likely. By this, local economy will even be further enhanced.

Prof. Dr. Manfred Weisensee, part of the R&D knowledge group, thereafter presented some activities of the Jade University within the North Sea- SEP project to the Think Tank members. He stated that a project of this size is “the end of scientific research” bringing research into action and by this explore new topics to do research on. His presentation included the presentation of the developed GIS tool to visualizes energy potentials for different regions in the North Sea region and an insulation handbook for the raise of energy efficiency. A hyper-thermal study on heat losses including innovative solutions for sewers and the results of the photo-grammatic plotting to enhance the efficiency of solar/PV installations in the respective partner regions were presented as well.



The micro perspective: regional examples of sustainable economics presented by the partners of North Sea Sustainable Energy Planning



Femke Adriaens presented a short history of economic planning in the municipality of Tynaarlo (NL) and by this, raised several questions to the Think Tank. In the past there were few or no plans on local or regional level for the steering of such issues. Also the transition time for such plans, if they were developed, was longer. History teaches us, that the view on sustainability is changing throughout time. But how can it be secured that plans for an economic sustainability are still sustainable in the future?

As an example Femke Adriaens presented a traditional economic plan from 2002 relying on existing infrastructure with no thought on sustainability. In 2011 a different development took place e.g. electric bikes, biogas farmers, renewable energies and smart metering. But is this just a niche development which will only survive a short period of time?

Energy neutral houses for example are cheaper after 30 years and by this unlock investments, but with the use of renewable energies certain issues in the local context are point of heated discussions. Especially the land-use for biomass, the involved traffic and the number of wind-farms in the landscape are challenges for local planners and politicians all over Europe.

Are we sustainable now or are we not there yet?

What criteria do we need to rate it?

Is the existing research in that field enough to get a deeper knowledge of the effects of the current actions and developments?

Summary of the moderated discussion:

Moderator: Stefan Gößling-Reisemann (Bremen Production)

Initial statements of the Think Tank:

John Becker's idea of a sustainable region is to save energy and energy resources. Spending should stay in the region. Resources should come from the region itself to avoid transport and the drain of funds.

Donaat Gosert stated that energy, climate and technology are intertwined. Criteria for sustainability in this context are more important than an overall accepted definition. In general there should be a description of Do and Don'ts and mandatory criteria and those that are wished for in addition. Mr. Gosert pointed out, that regions in Europe have to weight them differently to a certain amount.

Jan Sundquist had the opinion that regional energy production is not always the key. Practical and effective methods vary not only on a national but also on a regional level. The energy consumption in his view is too high and strengthens the wrong models like the import of woodchip pellets from Canada to Europe etc.

Göran Fremrot links the use of energy to the branch of real estate. Market development and the individual customer will select the criteria.

Joop Kramer puts his emphasis on organizational processes. A sustainable society in the future is common sense. For the steering indicators are needed, qualitative ones as well as quantitative ones. Money (especially EU funds) and agriculture are closely interlinked with a sustainable future.

Selected questions:

PP: What is sustainability? What are the conflicts?

TT: It is mainly the conflict between short term profits vs. long term sustainability. The development to a sustainable economy has to be approached step by step due to regulations of the market and regulations coming from different policy levels. Good examples for that were the regulations created for wind- and solar-power in some EU member states. Sustainable in general can be seen as a non-harmful concerning society and environment.

PP: How can it be managed to do no harm if for example biomass production is based on imported corn, land-use for non-food production and CO2 emissions from transport?

TT: In general the lessons learned are, that there is no single solution for this issue. Municipalities in Europe have to try out ways. Best or Worst practice guides from other projects have to be considered. Regulations have to be developed to regulate the market to promote harmless versions of a product (e.g. lowered taxation). Indicators such as "green" or "social" are quite problematic even on a regional level. John Becker promoted the idea that there should be state restrictions on transport to force regions into rethinking. Mr. Cosaert recommended that policy should undertake single actions carefully, because the different policy dimensions are linked, being more aware of the impact of decisions taken.

PP: But how to weight actions? Is wind better than biogas?

TT: Generalization is not possible. In certain areas people are accustomed to certain circumstances (e.g. transport in Sweden). It has to be a democratic decision to ensure a general acceptance.

Joop Kramer stated that regional self-sufficiency and stability of the social- and ecosystem has to be valued by the people and they have to choose on a basis of free will.

Project partners and Think Tank members agreed that there is a “No go area” concerning sustainability, even considering, that profit is one of the EU funding criteria.

Sustainability in general should enhance the reduction of energy use, energy efficiency and the use of renewable energies. The technology which is used for that should be a mix considering local recourses and habits. A sustainable way in economics shall give options, maintain options and not limit the future and other people. The decisions have to be socially accepted and contribute to a stable system. Also the aspect of restoring social and environmental damages has to be incorporated. Göran Fremrot once again pointed out that the risk of planning a sustainable way is a high risk due to the immense complexity of the system. One should be aware of the rebound effects of such decisions and weigh selected criteria carefully. There should be a catalog of fixed global and flexible regional criteria as a smart basis of planning.

TT: Another challenge for planning might be the boundaries of a sustainable development. Regional planners have to be aware of the possibility that it might grow so big, that it is not sustainable any longer. Mr. Gößling-Reisemann pointed out the two opposed approaches: Resilience vs. Optimization.

PP: How to value cultural heritage in the context of sustainability?

TT: “No regret measures” should be applied in general and society and decision makers have to avoid irreversibility in their respective planning. The development has to be a positive contribution to gross national happiness. This may be achieved by transparency of the decision making process and participation of the majority of involved people. To hasten such a process would inevitably lead to a non-acceptance of activities and would further enhance the already existing NIMBY-movement (“Not in my backyard”). Ownership, like in “Cradle to Cradle”- approaches, might be the key to a strengthened participation in the process of the energy turnaround. Interest, involvement and acceptance might come down to individual profit, so the general involvement of regional and social economics is necessary. As in the final statement of Joop Kramer stated:

“We are already owner of the problem, so we should also be owner of the solution, too.”

The Macro perspective of sustainable economics and energy initiatives: thoughts for the discussion

Impulse lecture on Sustainable Economics by Prof. Dr. Niko Paech (Carl von Ossietzky University Oldenburg)

In his [presentation](#) Prof. Dr. Paech gave a short overview of the history of the idea of sustainability, from middle ages forestry to ZD II. Two general disputes were identified:

- Dispute 1: Theory of the “Triple Bottom Line” or “Three Pillars” as coequal aims (the overlapping of social, ecological and economic aims) vs. the Long-term precautionary principal (the temporal and spatial generalizability)
- Dispute 2: Technological change vs. Cultural change

Two philosophies which are interlinked with sustainable economics were presented, the “post-growth economy” (the permanent economic growth can neither be ecological neutralized) and the “decoupling strategy” which is described further below.

The decouple strategy assumes that economic growth can be decoupled from material and energy flows by technological and system innovations. Backbones are the ecological efficiency and consistency, the use of growth as a social peacemaker and the incorporation of the technological change (product and service innovation).

Ecological *Efficiency* (increasing the resource productivity) in this context means:

- Minimization of the “ecological rucksack” and primary energy input
- Optimizing the relation of in- and output
- Application to any hardware (products, technology) and services

Ecological *Consistency* (e.g. zero emission systems, up-cycling, eco-affectivity etc.) in this context means:

- Vision of an economy consisting of closed loops; waste turns into „food“
- Bionics: Applying the economic design and principles of nature
- Principles: (1) Biodegradable substances, (2) Renewable energy, (3) Technical cycles

Further the supply chain approach was presented to the TT and the partnership. The general intensity of CO₂ emission in developed countries decreased, but starts rebound effects in other countries. Due to the shift of the “dirty part” of the production into developing countries their respective share of the worldwide CO₂ emissions was raised to 55%. With the small role of renewable energies in 2007 with only 0,2% there has to be a turning point.

Prof. Peach there are serious shortcomings of the prevailing decoupling strategy. The technology centred concepts may fail because of the so called „rebound effects“, so the growth paradigm has to be reconsidered. The question raised in this context is: Do we need a new interpretation of prosperity?

Concerning the overall discussion on sustainability a shift from moral imperatives to pure resilience might be another way of rethinking. Considering that life style issues become more and more important in the modern society the measure of an individual carbon footprint as the only „true“ or consistent measure for a sustainable performance is to be questioned again.

A paradigm shift from the pure technological change to a change of behavior has to happen. The types for innovations are products, processes, services, systems, organizations and institutions.

The TT stated that neither EU nor UN have the necessary organs to be able to approach into real economy. For this new institutions have to be developed and implemented.

According to Prof. Paech`s opinion this would take too much time. An easier and more preferable approach is to incorporate already existing local solutions. A general code of conduct was proposed by the partnership (e.g. a simple, compact explanation for any person how to live their life in a sustainable way). The TT had the opinion that the millennium goals are a good guideline even though they are not targeted on a single person.

TT: If a change of behavior is inevitable who should be addressed? Individual persons, companies or the government and how could this be transferred to the local project level?

Prof. Paech stated that companies should be the first to address. The option of listing two prices, the CO2 emission and the monetary price, was brought up again. A redistribution may be initiated via a yearly CO2 budget per person. If we would apply this idea, individual persons could buy other peoples CO2 budget if they would have already spend their own budget. This would give at least an orientation.

TT: Paying a monetary fine for environmental damages is an old approach. To raise a price for the impact is critical and complex.

Discussion: "From idea to action" (draft):

Idea/action	Criteria for success
Today, here, CO2, regional economy	Less CO2, better economic growth
Eco industrial parks <ul style="list-style-type: none"> - Analyze demand and supply - Attract partners for network - Improve efficiency 	<ul style="list-style-type: none"> - Total energy demand less than energy demand without cooperation - CO2 balance
Smart networks	
Data acquisition system <ul style="list-style-type: none"> - Project specific - Regional - Before and after the project 	
Local management system <ul style="list-style-type: none"> - Communication strategy - Investments in local groups - Financial incentives - Tax reduction - Set of criteria 	<ul style="list-style-type: none"> - Accessibility - Usability - CO2 Benchmark
Develop CO2 calculator <ul style="list-style-type: none"> - Communication and behavior - Politicians/consumers 	<ul style="list-style-type: none"> - Measurable Knowledge gain

Final statements:

In general the options for a sustainable economy already exist. So everyone, from customer to companies, can play a part in the transition process. CO2 emissions in regard to the evaluation of the process seem to be the most relevant key factor. Planners should be aware that the regional economy is one of the main factors to key. At this point the search for the best way to approach a sustainable future is not the one to look out for, because it would hinder the speed of development which is needed in this field. Key players should explore into better ways and this step by step. The Think Tank agreed that recommendations for concrete action on local level are necessary. Competitions in the field of sustainability between regions would for example enhance the amount of the use of renewable energy or energy efficiency and parallel lead to a social defusing of the topic. The use of economic instruments (e.g. reduced taxes for "sustainable products") might be one way to approach this topic. An international CO2 passport or a listing of the amount of CO2 involved in the production of a certain product next to the monetary price would further enhance the rethinking of people on a transnational basis and would also be a benchmark for sustainability.

The partners of the North Sea –SEP project agreed that the discussion of the criteria needed for a sustainable economic planning should be broadened. A matrix was developed which can be found on the North Sea-SEP website. This [matrix](#) shall be filled via a living discussion. Everyone may contribute to it and we are sure, that by the end of the project we may present a full catalogue of criteria. Further on the partnership discussed the implementation of a North Sea-SEP CO2 calculator for awareness-rising into the learning gateway and/or website, due to the results of the discussion, that CO2 emissions are one of the main criteria to rate sustainability. Also the “Convent of Mayors” with its strict criteria for participation shall be seen as a guideline for a sustainable future of European regions.