Low Carbon Societies Network

Project partners at the Kick-off Meeting

This project and network start at a quite special moment: *2009 is the year of the Copenhagen Climate Conference and the year of an overthrow of the established financial landscape. The economic crisis and future economic growth or shrinkage have major impacts on trends in greenhouse-gas emissions. We have reached a critical crossroad and it is absolutely necessary that we take the right way.*

We hope that our project will provide input to the national and European climate negotiations. We will show that ambitious greenhouse-gas emission targets are not only necessary but also acceptable from economic and social points of view.

We also intend to show that it is neither necessary nor acceptable to base a Low Carbon Society on risky technologies like nuclear power.

A scenario of no regret cannot be realized without conflict, however. Many obstacles must be overcome on the way to a low-carbon society. It requires nothing less than rethinking our lifestyles, restructuring the energy supply sector and welcoming the necessary redefinition of the European industrial sector heralded by the end of the fossil-fuel age.

Thus, we invite you to join our European Low Carbon Society Network. *Help us to ensure prompt dissemination of new research achievements as well as of practical examples of low-carbon technologies and scenarios, such that only the most recent scientific findings and the best available technological concepts are communicated to political decision-makers.*

Our quarterly newsletter *will inform you about important project advancements. Each issue will also feature information on a particular special topic.*

You can subscribe to the newsletter on www.lowcarbon-societies.eu .

The Project Team

First Newsletter of the Low-Carbon Societies Network.

The newsletter is published by a Project financed by the 7th Framework Program (FP7) for research of the European Commission.
The project's name is ENCI-LowCarb *"European Network engaging CIvil society in Low Carbon scenarios"*.
The project period is 2009-11.

The aim of our Project is to facilitate information flows between Civil Society Organizations (CSOs) and research institutes in Europe on low carbon energy scenarios and technologies.

We want to establish a **lively exchange** concerning existing scenarios and examples of best practices already in place today that will be indispensable in meeting the requirements of a low carbon society.

If you want to join our Network, you can register on our web page at **www.lowcarbon-societies.eu** .

Our Project Team, representing Climate Action Network France (RAC-F), INFORSE-Europe, Germanwatch, CIRED - Centre for International Research on Environment and Development, and PIK - Potsdam Institute for Climate Impact Research, will also build two ambitious energy scenarios for 2050 for Germany and France.

Along with the economic impacts of these scenarios on the national economies, the labor market and consumer goods' prices will be assessed by using macro-economic models (REMIND-R for Germany and IMACLIM-R for France). We also want to analyze positive impacts and to anticipate political blockages in testing the social acceptability of these scenarios.

Political measures accompanying the switch to a low-carbon society, depending on their formulation, can lead to social distortion or to increased social freedom. Potential areas of conflict will be assessed through several stakeholder dialogues in order to identify redistribution measures to counter negative social and economical impacts. These dialogues will include all major interest groups, e.g., economic stakeholders, trade unions, and consumer associations.

Project Start: Bridging the Gap - Scenarios & Societies

by Meike Fink,
Project Coordinator,
RAC-France

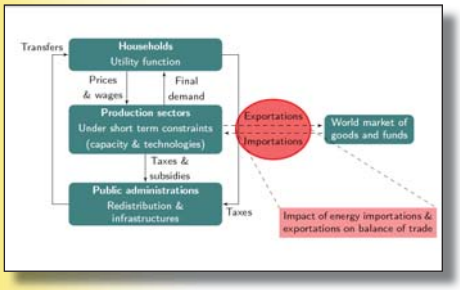
Creation of Energy Scenarios for Germany and France

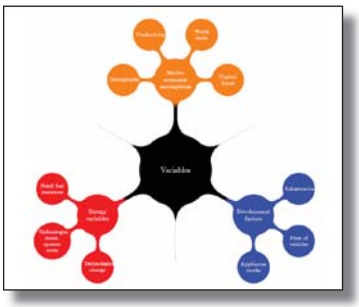
The heart of the Project is the creation of energy scenarios for 2050 for France and Germany. The scenarios will specify sufficiently ambitious CO_2 emission-reduction targets to conform with the latest scientific guidelines for keeping global warming under 2°C.

The aim is to count not on a technological breakthrough but on the development of renewable energies and on energy efficiency. It will be essential to achieve sufficiency and to determine necessary energy-service levels, i.e., the level of energy-consuming activities in a country (heated floorspace, transport volume, production volume etc.). Lifestyle choices and industrial as well as residential consumption patterns critically influence energy services and thereby energy demand.

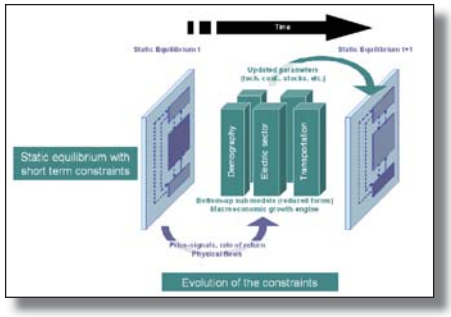
The impacts on sectoral activity, on employment and on prices of goods of different technological choices, along with political measures capable of responding to the ambitious reduction target, will be assessed using macro-economic models (REMIND-R for Germany and IMACLIM-R for France), calculating prices for each tonne of CO_2 avoided in the frameworks of the different scenarios.

The scenarios will reflect each nation's characteristics. Therefore, variables such as the particular technology choices, centralization of electricity production, etc. and assumptions underlying the scenarios will not necessarily be the same. Nevertheless, the objective of CO_2 emissions per capita will be ambitious in both cases.





Illustrations of variables, and of relationships in the IMACLIM-R model, developed by CIRED.



Social Acceptance

A particular strength of the project is that we will not limit our work to scenario-building; we will also test their acceptability, e.g., by inviting stakeholders (trade unions, consumer associations, industry representatives) to roundtable discussions. We want to identify the core problems and to discover what kind of policy measures are necessary to forestall or to overcome potential blockages. For example, a redistribution mechanism might protect poor households against the impacts of rising energy prices.

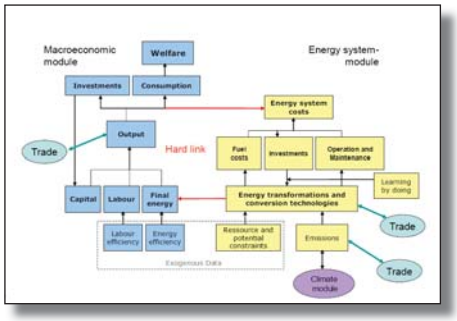
These stakeholder meetings will proceed according to a methodology permitting us to derive general assumptions concerning the representation of the different stakeholders and their actual influence.

The objective of the discussions is to adapt the policy measures of the scenarios in order to reach greater social and economic coherence. Subsequently the impacts of these measures must be reassessed using the macro-economic models.

Even if it is not possible to find a compromise satisfying every divergent opinion, the aim is to define a set of policy measures capable of fostering the transition to a low carbon society in socially and economically acceptable way.

A scenario is never neutral, nor is it based on scientific evidence alone. A scenario tries to give a face to the future, and the assumptions "hidden" behind energy scenarios reflect the convictions of the modelers.

In this sense, one important question concerning the French side of the project is how we will deal with the nuclear phase-out assumption that we will integrate into the scenario, since this move is not supported by actual politics. We have to be prepared for controversial debates on this issue. But as compromise is not the overall and unique aim, analyses of such points of conflict provide interesting and valuable information as well.



Illustrations of relationships in the REMIND-R model developed by PIK, Germany.

Creation of a Network on Low Carbon Societies

Beyond the creation of scenarios, one objective of the project is the development of a European Network on Low Carbon Societies, comprising researchers and CSO members working on energy scenarios.

From the beginning of the Project, we aim to establish communication between these two groups, which often work in a disconnected way on the same issues.

The Project includes plans to enhance interdisciplinary and trans-boundary exchanges between research institutes and CSOs about best practices concerning technical issues or policy measures.

We will do that with the website, mailing list, and discussions.

Once a year, a research seminar will take place to bring the two communities together.

CSOs and research institutes are complementary organisms in some respects.

Scientific research is needed to inform politics; but, as the dissemination of scientific knowledge takes some time and as politicians generally take into account only the information that they judge advantageous for their purposes, the role of the CSO is to push scientific evidence on the agenda and to deliver arguments as a countervailing power.

Project Team & Motivations

Climate Action Network - France/ Réseau Action Climat (RAC-F)

The network RAC-F is a non-profit organization (NGO) gathering 12 French NGOs active in the areas of climate change, renewable energies and transport.

Our main activity is to analyze climate negotiations as well as to inform stakeholders and the wider public about the decisions taken or failed.

We also play a role in influencing national decisions on policy measures necessary to pave our way to a low carbon society.

With our participation in the Project, we want to contribute to the creation of an ambitious but feasible energy scenario for 2050, giving factual input to climate policy. We want to show that it is possible to respect the 2°C limit when we redefine our consumption patterns. We hope that the creation of a European network on low carbon scenarios will create a fruitful exchange on scenarios and best practices beyond national borders, helping researchers and CSOs to deliver convincing arguments for climate-friendly policy choices.

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GERMANWATCH

Following the motto "Observing, Analysing, Acting", Germanwatch has been actively promoting North-South equity and the preservation of livelihoods since 1991. In doing so, we focus on the politics and economics of the North with their worldwide consequences. The situation of marginalised people in the South is the starting point of our work.

Together with our members and supporters as well as with other actors in civil society, we intend to represent a strong lobby for sustainable development. We endeavour to approach our aims by advocating fair trade relations, responsible financial markets, compliance with human rights, and the prevention of dangerous climate change.

In the context of climate policies, the social acceptability of climate protection measures has not been given enough attention. However, to avoid dangerous climate change, it is important to analyze the social acceptability of policy measures. For this, policy measures have to be developed through constructive cooperation with research institutes, civil society, and economic stakeholders.

Emissions have to be reduced in the North first and vulnerable states have to be protected, to come closer to North-South equity.

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PIK

Researchers of PIK are driven by the motivation of finding options to mitigate dangerous climate change regionally, nationally, and globally. Mitigation that is technologically feasible and economically affordable can be achieved in different ways, with different impacts on the distribution of income and on social acceptability.

We develop computational models that integrate the current knowledge about the Earth system's determining components and simulate climate-policy scenarios that represent win-win solutions to stakeholders. Nevertheless, the modeling approach is based on a number of assumptions. In order to increase the policy relevance of our research, it is a fruitful challenge to discuss scenario results and model assumptions with NGOs and other stakeholders.

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CIRED

CIRED was founded in 1973 to harmonize environmental economic research, natural resource management and economic development. In the last thirty years, CIRED has worked on energy, waste management, transportation, water, and food, in developed as well as in developing countries. From the late '80s on, CIRED research has focused more and more on global environmental issues (stratospheric ozone, acid rain, climate change) and on the application of the precautionary principle.

Since the emergence of the global warming issue, CIRED has focused on the assessment of the costs of greenhouse-gas emission reduction and on economic tools for public policy (greenhouse-gas taxes, tradable emission allowances, energy-efficiency certificates, etc.).

The Project is an opportunity to build for the first time in France a national low carbon scenario with the IMACLIM-R model developed by CIRED based on a coherence between economic constraints, technological dynamics, and social impacts. This is of primary importance to inform political decisions.

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INFORSE-EUROPE

International Network for Sustainable Energy

INFORSE-Europe is a network of 75 non-governmental organisations from 35 European countries working for energy efficiency and sustainable use of renewable energy. The network supports members to put forward sustainable energy visions with proposals to phase out fossil-based and nuclear energy. It also follows relevant policy developments from EU, and UN.

In the Project, INFORSE Europe's role is networking, establishing a contact database, distributing results, and publishing a newsletter. We would like to build contacts, improve elements of sustainable energy scenarios, and increase awareness on ways to realise the scenarios.

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What Risk Do We Judge Acceptable?

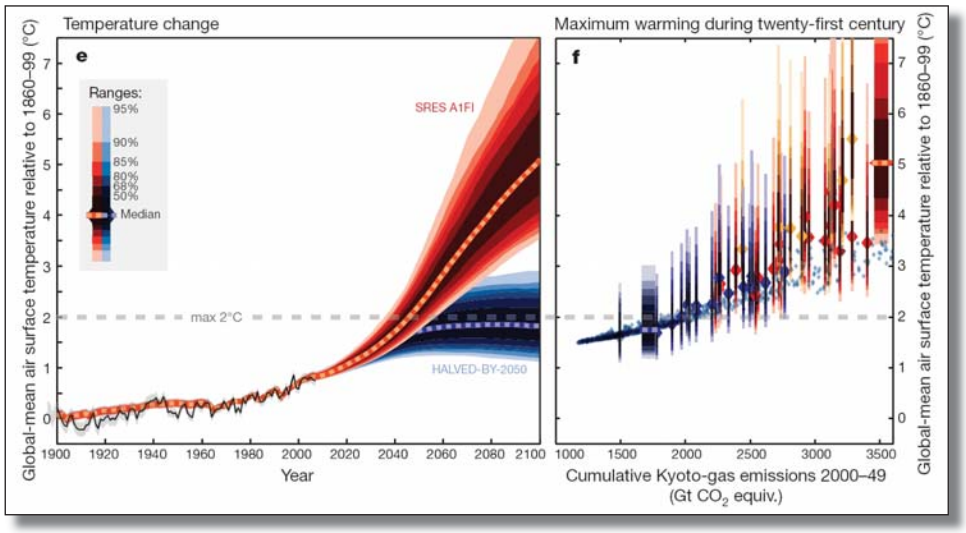
By Jan Burck, Germanwatch

Concrete actions are limping behind declarations.
More than 100 countries agree today on the general principle that a global warming limit of about 2°C has to be respected, but the outcomes of the national, European and international climate negotiations fit neither the 2°C target nor the scientific evidence on what has to be done. The small island states and least developed countries are claiming a 1.5°C limit to avoid devastating consequences for natural resources and human activity. *Given the missing political will, however, both objectives appear unreachable.*

A recently published study[1] quantifies the emission-reduction requirements for staying below 2°C, accounting for uncertainties about the effects of multiple anthropogenic forcings, the climate and the carbon cycle response. Staying below 2°C (with a 25% probability of exceeding it), according to this study, requires adherence to a global carbon budget about 700 Gt CO_2 between 2009 and 2050. This amount represents less than a quarter of the CO_2 still bound, for the moment, in the economically recoverable fossil-fuel reserves. At present emission rates, however, we will exceed our remaining budget in 2030! Thus, the problems that we should address today are to find not only solutions for the post-fossil area, but also ways to switch to low-carbon societies now, widely, before fossil reserves are exploited. If all Kyoto gases[2] are taken into account, the emission budget limiting the risk of exceeding the 2°C warming to 25% between 2000 and 2050 is about 1500 Gt CO_2 equiv. Crucial in respect of the carbon budget is to fix a roadmap and to put the emission peak behind us as soon as possible. The probability of missing the 2°C limit rises to 75% if 2020 emissions are not lower than 50 Gt CO_2 equiv. (25% above 2000). That means that we have to leave our current emission path. The increase of fossil CO_2 emissions between 2000 and 2006 was about 20%; so, until 2020, we are obliged to redefine energy consumption because already today there is no margin left. The longer we wait to reduce the global emissions, the more it will cost in economic and social terms and the more we are forced to count on risky technologies. The study also emphasises that negative emissions would represent an important challenge to humankind, including high inherent risk probabilities in the uses of some technologies (biomass burning, carbon sequestration and storage) and potential social stress due to changes in land-use patterns.

1) N. Meinshausen, et al. (2009). "Greenhouse-gas emission targets for limiting global warming to 2C." Nature 458(7242): 1158-1162.
2) Carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and SF6 .

Maximum temperature during the 21th century versus cumulative Kyoto-gas emissions for 2000–49. Source see note 1.



So what is left to do?

The answer is evident and clear. The western industrialised world, and that means all sectors and all individuals, must reduce the greenhouse-gas emissions. That will be difficult to communicate as well as to impose politically and technologically. It is also evident that continuing to produce more and more in a resource-limited world is in a way suicidal and completely unsustainable.

Therefore, we have to rethink consumption patterns and lifestyle choices. *How much energy and how many consumer goods do we really need?*
Renewable energies and energy efficiency are one part of the answer, but we also have to stop considering energy, as it is produced today, as an unlimited resource.
How much energy do we need to satisfy our basic requirements, and where does energy-wasting for unnecessary luxury activities start?
Breaking down the emissions budget until 2050 into per-capita emissions and taking into account demographic evolution and the varying economic development levels are highly controversial issues in the world. But these factors are key considerations in energy scenarios showing that it is still possible to stay under the 2°C limit of global warming, if and only if individual will and political will are as strong as the need to tackle climate change is urgent.
Do we judge a 25% probability of missing the 2°C target acceptable?
Perhaps it is more acceptable than 40% or 70%, but the core question behind it is whether all stakeholders will be committed to a maximum effort.

EVENT:
November 10, 2009
Low Carbon Scenarios: Presentations & Debate.
Place: Artefact, Glücksburg, Germany (near to the Danish border).
The event is part of the INFORSE-Europe NGO Sustainable Energy Policy Seminar (10-14, November).
www.inforse.org/lowcarbon/events.htm

WEB SITE:
Low Carbon Societies Network
www.lowcarbon-societies.eu

This newsletter is available on the website.