

VDI Technology Center
Future Technologies Division

Climate and the Economy

Current Interrelations and Sustainable Future Strategies

BACKGROUND

Climatic conditions permanently influence the way, human activities, life styles and the qualities of life are defined and designed and, therefore, make climate a significant component of human life. In the same way, interfaces and interrelations between climate and economic activities and their products can be identified, not only because the economy is an integral part of society but also because globalised production modes such as just-in-time and flat-line production are increasingly linked to climatic conditions. In addition, the global economy calls for tailor-made products which satisfy the climatic requirements of sundry target markets. The increase of interfaces between climate and the economy seem to be a signal for a growing sensitization of the industrial society towards climatic conditions.

Although the importance of climatic issues in relation with society and economy has been recognized for quite a long time, a thorough analysis of these interrelations has not been realised so far, neither by past nor by current research programmes. In addition to the growing number of such interrelations, new challenges for the economy are emerging, some of which are related to uncertainties regarding the future development of the climate. To face these challenges in an appropriate and timely way, it might be necessary that the business community will have to offer innovative products and services in the near future.

The thorough analysis of current interrelations between climate and economy with regard to economic, ecological and socio-cultural aspects, therefore, represents a milestone in the development of sustainable future strategies.

OBJECTIVES

On behalf of the German Ministry of Education, Science, Research and Technology (BMBF), interrelations and interfaces between climatic conditions and economic activities and decision making processes are being investigated in order to support the development of sustainable future strategies for the economy and society. Scientific discoveries, key-learnings and results of climate research undertaken with the help of the BMBF, should be made available to economic decision makers in such a way, that these results can be used for the development of innovative and sustainable products and services.

METHODOLOGY

The concept of the research project is based on three so-called actionlines (AL):

- In the first AL, AL Economy, the thematic is being examined from the point of view of the economy, intending to ascertain the need for climatic data and activities.
- In the second AL, AL Science, actual scientific discoveries and key-learnings in this context are summarized, discussed and related to the results of AL Economy, in order to identify potential synergies between the interests and needs of the business community and those of the science and research community.
- In the third AL, the AL Innovation, the results of the AL's mentioned before are being summarized and evaluated in order to support innovative policy initiatives in the field of climate research.

The AL Economy will be examined first in order to generate relevant information and ensure the practice-oriented focus of the project. In the first place, three industrial sectors have been chosen, where climatic aspects play, it is supposed, already a role today.

These industrial sectors are:

1. **The building industry:** The building industry does not only play an important role in the economy but is also characterised by a high dependency of their production processes (building process) and their products (buildings) on external factors such as climatic conditions. In addition, new trends in this sector, for instance facility

- management, energy contracting and new „smart“ construction modes and materials tend to increase the given sensitization.
2. **The food industry:** The food industry, for instance due to its close link with agriculture, shows a sensitization of their production and products to climatic conditions. Seasonal availabilities and the challenge of handling perishable food distributed to different climate zones are obvious links between climate and this particular industrial sector.
 3. **The environmental technology sector:** This sector is not only one of the fastest growing sectors in the EU economies but will play an important role in the future by providing innovative products and technologies aiming at realizing a sustainable future.

The AL economy is composed of three phases:

1. Preparatory phase

During informal talks, the relevance of objectives and methodology is to be discussed and evaluated with selected experts of the different sectors

2. Qualitative phase

Using an interview-guideline, general and specific questions will be discussed in explorative interviews with experts of the corresponding sectors.

3. Quantitative phase

A questionnaire, which will be pre-tested with regard to its clarity and handling, will be sent to a representative target group of the different sectors.

For AL Science, a similar procedure will be applied. AL Innovation foresees, besides summarizing and evaluating the results of the other two AL's, the discussion of an action plan in roundtables and workshops.

CLIMATE AND THE ECONOMY

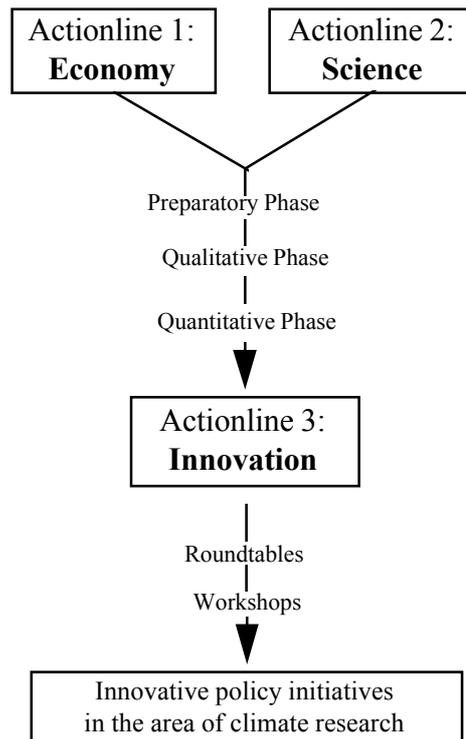


Figure 1: Methodology of the research project.

STATUS OF THE PROJECT

The project has been started at the beginning of 1998. The preparatory phases of AL Economy and Science are about to be achieved.

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