

The Finnish Research Programme on Climate Change SILMU

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Abstract

SILMU, which runs from 1990 to 1995, aims at studying climate change and its impacts. It also seeks to provide information to Finnish policy makers on adaptation and mitigation. The topics range from air chemistry to sociology, and the total number of projects is 74. Interim evaluation of the programme was carried out in 1992. During the second half of SILMU, 10 % of the total budget (total: 14 Million ECU) has been devoted to programme integration.

1. INTRODUCTION

The need for reliable information on the complex aspects of climate change and its related effects became increasingly evident in mid 1980's both among scientists and policy makers. Global climate change can have a substantial impact on the world's ecosystems and on human welfare and the development of rational and effective strategies for dealing with this problem called for a strong multidisciplinary research effort.

Shortly after the first IPCC panel in 1988, the Finnish Ministry of Environment set up a committee to analyze current knowledge on climatic changes and to define research needs related to the issue. The committee concluded by proposing that a large-scale multidisciplinary national research programme on climate change should be initiated. The following goals were set in 1989 for the Finnish Research Programme on Climate Change (SILMU):

- To increase our knowledge of climate change, its causes, mechanisms and consequences
- To strengthen the research on climate change in Finland
- To increase the participation of Finnish researchers in international research programmes
- To prepare and disseminate information for policy makers on adaptation and mitigation.

The six year programme started in 1990, and its funding was allocated in the state budget to the Academy of Finland. The Finnish Acidification Project had just ended, and positive experiences from this multidisciplinary programme partly paved the way to SILMU.

2. PROGRAMME ADMINISTRATION AND FUNDING

The SILMU programme is led by a directing committee (DC) in which all the relevant ministries are represented. The programme is coordinated and the programme office is located at the Academy of Finland. The decisions concerning scientific planning and funding of projects are carried out by a scientific committee (SC), which is a joint committee of the Academy of Finland and The Delegation of Finnish Academies of Science and Letters. This committee also acts as The Finnish National IGBP Committee.

SILMU has four subprogrammes: Atmosphere, Waters, Terrestrial Ecosystems and Human Aspects / Integration. Each subprogramme has its subprogramme leader and coordinator. The programme secretariat consists of project manager and 1-2 secretaries.

Total financing for 1990-1995 is approximately 85 Million Finnish marks (14 Million ECU / 17 Million US \$) and the funding is channeled through the Academy of Finland. During 1990, 40 research projects were started. Funding was granted for periods of 1-3 years. The ministries in DC were actively involved in formulating the goals of the programme and also in the selection process of the research projects. Additional projects were started during 1991-1994 and several of the initial projects were given funding for the period 1993-95 after scientific reviews. Total number of research projects funded through SILMU in 1990-95 is 74.

3. INTERIM EVALUATION OF SILMU IN 1992

The purpose of the interim evaluation was to provide a critical assessment of the ongoing research and to offer suggestions for a possible redirection in the research agenda for the second half of the SILMU programme (Hordijk et al., 1992). The Central Board of the Academy of Finland listed the topics for evaluation.

The First Progress Report of SILMU had just been published (Kanninen and Anttila, 1992) as well as an integrating book "Muuttuva Ilmakehä" (The Changing Atmosphere) which was geared to the public and to the decision makers (Kanninen, 1992). Many of the research projects had only preliminary results because the programme was so young at that point. Mainly therefore, individual projects were not evaluated but the Evaluation Committee focused on the evaluation of the programme as a whole and on the evaluation of each subprogramme.

Interim evaluation provided SILMU with several concrete suggestions some of which have been put into practice. Fostering of integration and cooperation were the two main messages in the evaluation report and they have been given more emphasis. The recommendations of the interim evaluation guided funding decisions for the last three years of SILMU. In addition, three new projects on economic impacts and policy questions as well as five integrating projects were started. The programme organization has been simplified. Workshops within subprogrammes as well as a national SILMU meeting in 1994 have helped in enhancing scientific cooperation between different research groups.

4. PROGRAMME INTEGRATION

The work in SILMU's 74 projects takes place in seven universities and eleven research institutions throughout Finland and the topics range from air chemistry to sociology. The fact that the subprogrammes operated fairly separately from each other during the first years of the programme, maybe delayed the development of contacts between research groups in separate research areas/subprogrammes. Spontaneous cooperation and integration has, nevertheless, been taking place among scientists especially in research areas with cooperative traditions.

For the second half of SILMU i.e. 1993-95, the subprogramme Human Aspects was renamed Integration & Human Aspects and 10 % of total funding of the SILMU programme was allocated to the integration of research results. As described earlier, the recommendations presented in the interim evaluation have been partly guiding programme integration.

In 1994, five integrative research projects were started.

- scenarios development
- integrated assessment of the effects of climatic change on waters
- an analysis of climate change impacts on forests and forestry
- the GIS-system development
- the influence of the forest industries and the use of forest products on carbon balance

Four international SILMU conferences or workshops will be organized in Finland during 1995. The topics are as following: Climate Change, Biodiversity and Boreal Forest Ecosystems (Aug. 1995), Past Present and Future Climate (Aug. 1995), Northern Peatlands and Climatic Change (Oct. 1995), Effects of Climate Change on waters on Boreal Zone (Dec. 1995). These meetings will serve programme integration, and the main results will be published as a series of books on climate change in boreal ecosystems. The planning process of the conferences has helped Finnish scientists identify some gaps in the current knowledge which has led to some new research efforts.

5. DISSEMINATION OF INFORMATION AS PART OF INTEGRATION

Reporting in SILMU is taking place in many forms. Scientific publications in international journals, SILMU-progress reports (Kanninen and Anttila, 1992; Kanninen and Heikinheimo, 1994), final report and workshop proceedings (Carter et al., 1993; Kanninen, 1993; Heino, 1994) as well books aimed at the general public like "The Changing Atmosphere" all have their target groups.

SILMU has used Internet as a means for delivering information since April 1994. The feedback in the net has been positive from the scientists. Another electronic approach has been the production of an educational multimedia on global change. It has been well received among scientists and teaching professionals, and the generation of ideas for a multimedia for SILMU's final reporting is in progress.

Bridging the gap between policy makers and scientists has been a continuous effort in SILMU. Funding ministries were heavily involved in the first place in formulating the goals of the programme. Their active role has decreased after the majority of funding decisions was made. In 1991, when the negotiations of the Framework Convention on Climate Change were in process, a seminar for scientists and policy makers was set up to exchange information and to facilitate the formulation of Finnish policies on climate change (Anttila, 1991). Another meeting of similar type will be held in early 1995 in order to feed new research results to the policy making process.

Towards the end of SILMU, the scientists will acquire more integrated knowledge for the presentation of policy-related assessments. It is expected that the interpretation of the information to the language of policy makers will be one of the most challenging integration tasks.

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