

Developing Consistent Global Change Scenarios for Finland (FINSKEN) Progress Report on Co-ordination, December 2000

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Purpose of this report

This document is a brief report of progress in the co-ordination of the FINSKEN project. It covers the main objectives and of the project, the co-ordination tasks, achievements to date and plans for the remainder of the project.

Objectives of FINSKEN

The FINSKEN project aims to develop state-of-the-art projections of changes in environmental and related factors in Finland during the 21st century and beyond. The scenarios to be developed include:

- Socio-economic and technological scenarios (including population, economic growth, human welfare and emissions)
- Atmospheric composition scenarios (including carbon dioxide, ozone, sulphur and nitrogen compounds)
- Acid deposition scenarios
- Climate scenarios (including temperature, precipitation, atmospheric circulation)
- Sea-level scenarios

One of the key objectives of FINSKEN is to develop scenarios that are mutually consistent. To achieve this, a number of global emissions scenarios recently published in by the Intergovernmental Panel on Climate Change (IPCC) Special Report on Emissions Scenarios (SRES) are being adopted as core projections in FINSKEN. To the extent possible, all scenarios developed in FINSKEN are being related to the SRES scenarios.

Tasks of FEI-1

The co-ordination group at the Finnish Environment Institute (FEI-1) is responsible for the following specific tasks:

- Task 1: Project direction, to ensure common goals and timetabling between Partners as well as consistency between the scenarios being developed
- Task 2: Scenario formulation, presentation and documentation
- Task 3: Communication and feedback

Progress to date

Task 1: Project direction

The FINSKEN Partners have held two co-ordination meetings at FEI:

¹ Formerly joins the project in January 2001

² Left the project in August 2000

5 October 1999: Preliminary planning meeting to agree on a revised proposal to the Academy of Finland to accommodate a 19% shortfall in funding compared to the original application

20 March 2000: Meeting to discuss the status of the sub-projects and to identify research goals for the first phase of the project up to April 2001. This is the date agreed upon for preparing preliminary scenarios for release to potential users. Status reports were presented by Partners.

In addition, contracts have been drawn up between the Partner institutes for the disbursement of funds.

Task 2: Scenario formulation, presentation and documentation

The methods of scenario development in FINSKEN are being developed in conjunction with the ongoing activities of the IPCC and the European Commission. These take a global or European view of global change scenario development, which is the essential first step in providing a consistent international context for constructing scenarios that are specific to Finland (Carter *et al.*, 2000; Hulme and Carter, 2000). Partners in FINSKEN are interpreting and applying this contextual information to develop scenarios at national scale. Guidance material on the application and interpretation of FINSKEN scenarios will also be required, and this will draw upon evolving documentation being developed for the international community (IPCC-TGCI, 1999).

Task 3: Communication and feedback

Brochure: In order to inform potential users of scenario information about the objectives of the FINSKEN project, a 4-page brochure has been produced in Finnish and English. This will be sent to all names on a mailing list and will be downloadable on the Internet.

Questionnaire: The types of scenarios produced within FINSKEN should be relevant to the needs of potential users or "stakeholders". A 2-page questionnaire has been produced in Finnish, Swedish and English to ascertain likely stakeholder requirements. It is being targeted at Finnish researchers as well as to a range of public and private sector organisations thought to have some interest in the effects of global environmental change. The questionnaire is being sent, along with the FINSKEN brochure, to a list of about 800 names provided by Partners, by Academy of Finland programmes and obtained from an Internet search. Responses to the questionnaire will be processed during 2001.

Conferences and seminars: Elements of the FINSKEN project have been presented at:

2-5.4.2000, Tromsø, Norway

Developing base case and global change scenarios for integrated regional impacts studies
Simulating the Regional Impacts of Global Change. CLIMPACT Symposium (Invited:
European Science Foundation)

10-12.5.2000, Laage Vuursche, Netherlands

Representing uncertainties in climate and related scenarios for impact assessment
Climate Scenarios for Water-Related and Coastal Impact, ECLAT-2 Blue Workshop
(Partner: European Commission, Concerted Action). Carter and Hulme, 2000

25-26.5.2000, Tvärminne Zoological Station

The role of socio-economic scenarios in estimating future global change

Biodiversiteetti- ja globaalimuutostutkimustakoskevan tutkimuksen yhdistäminen - sosio-ekonominen workshop "Tutkimustieto - ohjauskeinot - päätöksenteko" (Invited: FIBRE/FIGARE)

29-31.5.2000, Tarragona, Spain

Uncertainties in assessing the impacts of regional climate change

International Conference on Detection and Modelling of Recent Climate Change and its Effects on a Regional Scale (Invited)

Plans for 2001

Two phases of co-ordination work are planned for 2001. Phase 1, up to April 2001 and Phase 2, covering the remaining 18 months of the project. The following tasks are envisaged.

Phase 1: Interim FINSKEN scenarios

- Dispatch of the FINSKEN questionnaires and analysis of responses
- Development of a FINSKEN Web site
- Collation, presentation and documentation of the interim scenarios developed by partners
- Organisation of a Scenarios Workshop

Phase 2: Preparation of final scenarios

- Publication of project methodology for scenario development including results of the questionnaire survey
- Publication of interim scenarios (with Partners)
- Development of guidance material for applying scenario information (with Partners)
- Investigations of scenario uncertainty and methods of its representation
- Selection of final set of scenarios to be developed

Relevant publications

Carter, T.R. and Hulme, M. 2000. Key findings from the first ECLAT-2 workshop "Representing Uncertainties in Climate Change Scenarios and Impact Studies". In: J. Beersma, M. Agnew, D. Viner and M. Hulme (Eds). *Climate Scenarios for Water-Related and Coastal Impacts*, ECLAT-2 Workshop Report No. 3, Climatic Research Unit, University of East Anglia, Norwich, UK, pp. 10-14.

Carter, T.R., Hulme, M., Crossley, J.F., Malyshev, S., New, M.G., Schlesinger, M.E., and Tuomenvirta, H. 2000. Climate Change in the 21st Century: Interim Characterizations based on the New IPCC Emissions Scenarios. *The Finnish Environment* 433, Finnish Environment Institute, Helsinki (in press).

Hulme, M. and Carter, T.R. 2000. The changing climate of Europe. Chapter 3 in: M. Parry (Ed.). *Assessment of Potential Effects and Adaptations for Climate Change in Europe: The Europe ACACIA Project*. Jackson Environment Institute, University of East Anglia, Norwich, UK, pp. 47-84.

IPCC-TGCI 1999. *Guidelines on the Use of Scenario Data for Climate Impact and Adaptation Assessment*. Version 1. Prepared by Carter, T.R., Hulme, M. and Lal, M. Intergovernmental Panel on Climate Change, Task Group on Scenarios for Climate Impact Assessment, 69 pp.

http://ipcc-ddc.cru.uea.ac.uk/cru_data/support/guidelines.html