

Developing Consistent Global Change Scenarios for Finland (FINSKEN) Second Progress Report on Co-ordination, January 2002

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Purpose of this report

This document is the second report of progress in the co-ordination of the FINSKEN project and covers 2001. It describes the main objectives 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

¹ Left the project in August 2001

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Progress to date

Task 1: Project direction

18 December 2000, 3rd FINSKEN co-ordination meeting: This covered the status of the sub-projects and future plans, discussion about a seminar to be held in April or May 2001 and plans for preparing information about the project on the Website, including release of preliminary scenarios.

28 May 2001, FINSKEN Seminar, Paasitorni, Helsinki: The project hosted a 1-day seminar entitled "Global change scenarios for Finland" which was attended by 68 participants representing the research community, the private sector, local government and ministries. The goals of the seminar were: (i) to describe the methods being used by FINSKEN researchers to develop scenarios of global environmental change for Finland (ii) to obtain feedback from representatives of the private sector, public sector, non-governmental organisations and researchers concerning their requirements for global change scenarios, and (iii) to present preliminary scenarios for discussion. Abstracts from the meeting are available on the Web site.

28 August 2001, Project meeting on socio-economic scenarios, Turku: Tim Carter discussed with Jari Kaivo-oja and Jyrki Luukkanen about widening the scope of socio-economic scenarios and holding small sectoral stakeholder discussions on scenarios.

Task 2: Scenario formulation, presentation and documentation

The methods of scenario development in FINSKEN are being developed in conjunction with 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.*, 2001; Mearns *et al.*, 2001; Carter, 2001). Partners in FINSKEN are interpreting and applying this contextual information to develop scenarios at national scale. One means of interpreting potential user needs in Finland has been through a questionnaire survey, the results of which were reported at the FINSKEN Seminar and are presented on the Website (Bärlund and Carter, 2001). Another paper has been submitted to a journal.

Task 3: Communication and feedback

Website: A Website has been developed (Finnish and English) containing details about the project, its participants, events, lists of publications (some downloadable):

<http://www.vyh.fi/tutkimus/ilmakeha/finsken/>
<http://www.vyh.fi/eng/research/projects/finsken/>

Conferences and seminars: In addition to the May Seminar, elements of the FINSKEN project have been presented at:

2.2.2001, Helsinki: *Global change scenarios: assessing the risks and examining the options*
Ilmastostrategiat seminaari (FIGARE - invited)

5.-7.3.2001, Potsdam, Germany: *Climate and related scenarios for ATEAM*
ATEAM Kickoff meeting (EU project)

16.5.2001, Helsinki: *FINSKEN climate scenarios*

Eduskunnan ympäristövaliokunta (Carter, Tuomenvirta - invited to respond to questions)

6.-8.6.2001, Turku: *Integrating global change scenarios for Finland: the FINSKEN project*

Climate change and variability in northern Europe – CLIC conference (FIGARE)

28.-29.6.2001, London, UK: *Climate and sea level scenarios for coastal vulnerability assessment studies*

SURVAS Overview Workshop -The future of Vulnerability Assessment (VA) for Coastal Areas (EU - invited)

23.8.2001, Rica, Norway: *The role of scenarios in national-level climate impact assessments*

Climate Impacts in Norway: International Perspectives on National Assessments (CICERO - invited)

17.-18.9.2001, Aulanko, Hämeenlinna: *Socio-economic scenarios for FINSKEN*

FIGARE annual meeting 2001: Integrated Global Change Research (Carter, Kaivo-oja, Luukkanen, Wilenius)

15.-16.11.2001, Évora, Portugal: *Uncertainties in Climate Change Scenarios and Impact Studies*

International meeting on Climate Change and the Kyoto Protocol (University of Évora - invited)

3.-5.12.2001, Snekkersten, Denmark: *Developing and applying scenarios*

PRUDENCE Kickoff meeting (EU project)

Plans for 2002

Co-ordination work during the final phase of FINSKEN in 2002 involves the following tasks:

- Publication of the project methodology for scenario development
- Submission of papers describing the FINSKEN scenarios to a special issue of a journal (with Partners)
- Provision of final FINSKEN scenarios on the Web (with Partners)
- Development of guidance material for applying scenario information (with Partners)
- Organisation of final FINSKEN meeting

Relevant publications

Bärlund, I. and Carter, T.R. 2001. A survey of the potential user-requirements for global change scenarios in Finland. Summary Report. Unpublished report, Finnish Environment Institute, Helsinki, 13 pp, available at: <http://www.vyh.fi/eng/research/projects/finsken/finrep.pdf>

Carter, T.R. 2001. Uncertainties in assessing the impacts of regional climate change. In: Brunet India, M. and Bonillo, D.L. (Eds.). *Detecting and Modelling Regional Climate Change*, Springer-Verlag, Berlin, pp. 441-469.

Carter, T.R., La Rovere, E.L., Jones, R.N., Leemans, R., Mearns, L.O., Nakicenovic, N., Pittock, A.B., Semenov, S.M. and Skea, J. 2001. Developing and applying scenarios. In: McCarthy, J.J., Canziani, O.F., Leary, N.A., Dokken, D.J. and White, K.S. (Eds.). *Climate Change 2001: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Third Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge and New York, pp. 145-190.

Mearns, L.O., Hulme, M., Carter, T.R., Leemans, R., Lal, M. and Whetton, P. 2001. Climate scenario development. In: Houghton, J.T., Ding, Y., Griggs, D.J., Noguer, M., van der Linden, P.J., Dai, X., Maskell, K. and Johnson, C.A. (Eds.). *Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change*, Cambridge University Press, Cambridge and New York, pp. 739-768.