SCARP

Swedish Clean Air Research Program

Frisk Luft i Sverige

Proposed changes in the program in relation to the decision of Naturvårdsverket and the recommendations from the evaluation of the program

2nd revision of the proposal

Peringe Grennfelt
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This document is a second revision of the proposal. The changes in relation to the revised plan based on the decision and scientific evaluation was submitted 4 October. After that there was a request from the Secretariat to further revise the proposal. This has been done through amendments to the earlier version and a revised budget. The amendments in the text are marked in italic.

This document has been prepared in collaboration with the area coordinators, Göran Pershagen, HC Hansson, John Munthe and Catarina Sternhufvud.

The decision on support to the research program on air pollution (acronym SCARP) was accompanied by a number of prerequisites before final contracts could be signed. In this memorandum we present how we have handled the proposed changes.

1. Communication

In the Proposal we outlined a communication strategy which stated
"Communication of results and interaction with the scientific and policy communities nationally and internationally is a key issue for SCARP. As can be seen from the CVs from the participants in the program, contacts and communication activities are a main interest for all key participants. We intend to structure this work and identify particular activities and processes for our communication.

The key international organisations for handling air pollution issues have mostly a clear structure for how scientific results are taken on board, synthesised and brought into policy advice. We will make use of this system and in particular interact with

- *The EU CAFE program.* DG Environment will continue its supporting activities under the Clean Air For Europe initiative. The CAFE program
- *CLRTAP*. The Convention has a well-developed structure for scientific support through various expert groups. It is also a main source of information for CAFE. The main groups with which this program will interact are Task Force on Health, ICP Mapping, ICP Vegetation, ICP Forests, ICP Waters, Task Force on Measurements and Modelling, Task Force on Integrated Assessment Modelling and Expert Group on Particles.
- *WHO,* through the development of Air Quality Guidelines
- *The Swedish Environmental objectives.* The objectives as well as the work on the fulfilment of the objectives are continuously reviewed.

Ways of interaction

We have identified and will use various ways of communication with policymakers, other stakeholders, the scientific community and the public. The following ways of communication have been identified:

- *Direct participation expert groups under international and national organisations.* Several of SCARP the scientists have long experience in science to policy communication through participation in various organisations, which is obvious from attached CVs.

- *Interactions with NGO organisations.* The Swedish NGO Secretariat on Acid Rain has for more approx. 25 years been active in collecting scientific information on air pollution and communicating the information to policy actors and the public. We intend to keep a continuous contact with the secretariat and make sure that our results will become available.
- *Support to Swedish experts in international and national organisations.* Swedish experts have been closely involved in reference and steering groups in earlier projects and programs on air pollution, which has given a very good opportunity for a two way communication; results have been presented and discussed with stakeholders and problems and requests from the policy side have been communicated back to the scientists.
- *Support through scientific assessments.* Within some areas (in particular human health) scientific assessments form a strong platform from which policy may develop. SCARP participants will be encouraged to participate in assessments when appropriate.
- *Scientific publications.* Publication in peer-reviewed scientific journals is an important activity in the program and more details are given in the description of the different activities. In addition, SCARP scientists will participate and give presentations at international and national conferences and meetings.
- *SCARP web page.* On the web page all actual information regarding the program will be available, including, reports, publication lists, important links etc.
- *Internal communication within the program.* All meetings will have a standing agenda point on the actual issues within international and national organisations and processes followed by an analysis of how this will influence our work and if there is a need for action. There will also be a yearly meeting, to which all participants, the external advisory board and key stakeholders will be invited.
- *Information in relation to stakeholders e.g. the industry and local and regional authorities.* Some aspects of the program are of particular interest for local and regional authorities and the industry. Local authorities have several responsibilities that may cause an interest in results from the SCARP project. They are responsible for the protection of human health and have particular obligations in relation to air quality regulations. They are also involved in permitances for industrial production and also in decisions related to city planning and traffic. Industry may be interested in the research since results may result in changes in control priorities. If health effects can be attributed to particular properties of particles, this may direct development of control techniques. Cost-efficiency results from theme four may also have direct implications for industry. This activity will be done in close collaboration with the secretariat for the national environmental objectives (Miljömålssekretariatet)
- *Information in relation to the public.* Air pollution is of general concern for the public. Local conditions may vary and there is concern with respect to health effects from air pollution in many urban areas. We do not intend to have a particular SCARP activity in this area. Instead our intention is to communicate our results through the secretariat for the National Environmental Objectives.

Since most of the contacts and communication should be undertaken directly with the above mentioned international organisations, we will work with a distributed responsibility for communication. This means e.g. that each area has to follow the work within relevant bodies and interact when appropriate. Our intention is also that several scientists should be directly involved in the science-to-policy interaction through participation in expert groups under any of the international bodies mentioned above. In addition the executive board of the program will take responsibility for necessary co-ordination and collection and communication of schedules for the different organisations, meeting reports, deadlines for reports etc.

The Communication part of the program will be led by Jenny Arnell IVL Swedish Environmental Research Institute . Jenny Arnell has been responsible for the communication issues of the ASTA program 2002-2006.

During the first year of the program, we will, in addition to the establishment of the web page etc., present and advertise the program in connection with the planned ASTA workshop, the so -called Saltsjöbaden III workshop. This workshop is aimed to outline short and long term science and policy needs within the field of air pollution. This workshop, which will be organised in collaboration with CLRTAP and the European Commission and others, will be an excellent opportunity to present the program."

The evaluation found that this strategy was not sufficient and gave the following comments:
The programme has a clear and relevant strategy for communicating the work programme and results into the international processes. This strategy needs to be accompanied by a broader communication to the interested public, in accordance with Swedish research policy. A web site in both English and Swedish, with programme presentation and popular summaries of research results, needs to be developed.
A communication plan for implementing the strategy is needed with targets that later could be evaluated (quantitatively or qualitatively). The decentralised responsibility for communication should be reflected in the communication plan as well as in the respective research projects. The programme should also see to the needs of training the researchers in communication.

In order to meet the requirements we intend to
1. Develop a web site in Swedish and English, where the program is presented together with main results and their consequences and relevance for society and the public. Reports will be made available through the web page.

2. Additional communication to a broader public.

We have collected the activities in a communication plan:

Communication plan

Activity	Periodicity	Target group	Responsible
Web page in Swedish and English	Available by 1 Jan 2007	Public, Scientific community, Experts, Media	Information officer
Progress reports	Yearly	Naturvårdsverket,	Information officer. Program coordinator
Popular summaries	Yearly	Interested public, media etc	Information officer. Program coordinator area coordinators
Program plans	Yearly	Naturvårdsverket. Internal follow-up	Program coordinator
Internal information on external processes of relevance for SCARP. This activity contains information from policy related processes CLRTAP, EU, Swedish environmental objectives etc..	In connection with meetings. At least every ½ year	SCARP participants	Program and area coordinators.
Contacts with national stakeholders. Participation in seminars will be encouraged.	Yearly.	Local regional and national environmental and health administrations. The industry.	Program and program areas coordinators.
Organisation of SCARP seminar.	At least one wide seminar during phase 1	Local regional and national environmental and health administrations. The industry	Program and program area coordinators
Increase the ability to communicate results to policymakers and the public.	The yearly meeting in the autumn 2007.	Participants in the SCARP program, in particular young scientists	Information officer

After the cut of the budget for communication budget on request from Naturvårdsverket we have decided to cut the following activities:

Popular summaries. There will not be resources for printing popular summaries of the project and project results. Such information will only be available through the web page. We will not be able to organise a SCARP Seminar. Finally, we will probably not be able to engage an external consultant for education in the proposed program for increasing the communication ability for young scientists. Even for other parts of the program, the activities may less intense.

Changes in the scientific activities in the program plan

General

The final decision from the Agency requested an overall cut of the budget for the three first years of 5%, i.e. from 18MSEK to 17.1MSEK. For the areas Particles and Ecosystem effects, the cut will be 5% on all activities while for the health and integrated assessments areas the changes will be further described in the following paragraphs.

The health area

The scientific review requested a change in the budget:

Areas that need to be more prioritised are IAM and communication activities. There seems to be a potential to decrease financing within the health projects. Discussions on re-allocation need to be held with Swedish EPA, and based on further expert advice on environmental medicine. Projects dependent on supplementary funding (planning grants) can be questioned. Such are found among health projects (e.g. WP 4, 7, 12).

In discussions with the Research Secretariat at Naturvårdsverket they claimed that it was not necessary to go for a new round on the cut of the health budget. In accordance with the recommendations of the review panel we propose to exclude WP 4, 7 and 12 amounting to a total of 950 kSEK. In the cut we have realised that there is a need to strengthen the coordination and communication activities in the health area which limits the cut to 815 kSEK. The cut of WP 4 and WP 7 is very unfortunate since it means that support for planning of new large cohort studies on air pollution effects is not included in SCARP. In the first call for proposals of the seventh framework program of the EU such studies are given a high priority since they provide the most conclusive evidence of health effects related to long term exposure to air pollution. Such studies are very expensive and generally rely on funding from several sources. Unfortunately, the absence of such studies in SCARP will decrease the Swedish competitiveness in obtaining funding for such studies on the European level. The exclusion of WP 12 will also have negative consequences since it limits the possibilities to provide evidence on source specific health effects.

In a later discussion with Naturvårdsverket, they claimed that they still want to have the projects 4, 7 and 12 in and that we should seek for a new allocation of money. This allocation has been done through a cut of the remaining 9 projects under health with 5% and a substantial cut of the communication budget. The new budget for WP 4, 7 and 12 will be less than originally but the projects will be in and be of importance especially for preparation and participation in the 7th Framework program.

Aerosol OA sampling and 14C-analysis

Kristina Stenström, Division of Nuclear Physics, Lund University
The Division of Nuclear Physics at Lund University are responsible for aerosol sampling and subsequent 14C-analysis. These data will be used to develop and validate the OA module to be implemented in the 3D chemical aerosol model. The work consists of development of OA sampling equipment, OA sampling at selected sites, development of analytical methods for subsequent 14C analysis, 14C analysis of the collected aerosol samples, data evaluation for OA source apportionment, comparison with the OA module results and evaluation of the module performance. The work will be coordinated with the EU FP6 projects EUSAAR and EUCAARI, and also with other national and Nordic projects whenever possible.

Overall budget for phase 1. Originally 1200 kSEK. After cut with 5% it will amount 1140 kSEK.

Integrated Assessment Modelling - increased budget

An increased budget for Integrated Assessment Modelling will make possible to carry out a larger part of projects 1, 2 and 3 in phase 1 instead of phase 2. It will also make possible an improvement of GAINS Sweden, as an additional sector can be included in the model - the domestic sector.

The GAINS structure is constructed upon different polluting sectors, Agriculture-, Domestic-, Energy-, Processes- and Transport sectors. The domestic sector, constituted of households, governmental services and commercial activities etc, is a major air pollution source in Sweden today. It is a very interesting and important sector since;

- it is generally recognised that there are a number of cost effective emissions abatement options feasible;
- it is a relatively complex sector to simulate, partly because there is no clear relationship between measure and emission effect;
- there are potential negative effects on PM emissions from CO2 abating measures that can be the consequence of an introduction of bio-fuels for heating. A situation very relevant for Swedish conditions.

- it is a highly prioritised sector by IIASA.

Gender issues

The evaluation committee concluded:
"Balance between sexes is not good.
The examination committee strongly demands an action plan for improvement."

Already when preparing the proposal we considered the imbalance between sexes and took steps in order to improve the situation. We made at that time deep inventories within the participating institutions seeking for alternative project leaders and participants able to run certain parts of the program. This plan for improvement should therefore be seen from the perspective of already made efforts.

The reallocation of some money from health to Integrated Assessments will be given to a female project leader and we have also divided subproject 2:3 into two parts, one led by PhD Krisitina Stenström. Through these actions the female percentage for phase 1 has increased from 24% to 30%. During phase 1, the programme will actively work towards a better representation of women in the research as well as communication of results and participation in national/international workshops and meetings.

Name of the program

We do not understand the problem with the name and have in discussions with those closely involved in the project both at the Environmental Protection Agency and those within the SCARP program not found anyone that was uncomfortable with the names both in Swedish and English as well as the acronym. We insist therefore that we should keep the name as it is. If the Agency doesn't want to accept this we would prefer that the Agency proposes another more relevant name and acronym.

Adjusted budget for phase 1 (2006-10-10, 2nd revision)

				Adjusted budget		
				Year	Year	Year
Area	Project	Name	Project leader	1	2	3
1	1	Exposure to traffic related air pollution, lung function and airway disease in 8-year-old children	Tom Bellander	190	190	95
	2	Short-term health effects in susceptible subgroups,	Tom Bellander	190	190	380
	3	Health effects of short-term and cumulative seasonal exposure to road dust and wood smoke particles	Bertil Forsberg	238	238	238
	4	Long-term exposure to traffic exhaust and incidence of obstructive airway disease in a prospective cohort	Bertil Forsberg	60	66	40
	5	Is exposure to particulate air pollution associated with exhaled nitric oxide and blood markers...?	Anna-Carin Olin	221	221	222
	6	Is long-term exposure to particulates associated with an increased risk for ischemic heart disease	Anna-Carin Olin	95	95	95
	7	Cohort study on total public health burden related to long term-exposure to air pollution	Göran Pershagen	60	66	40
	8	Long term exposure to traffic related air pollution and genetic susceptibility...	Göran Pershagen	190	190	0
	9	DISOZPOLL: Diesel and ozone effects on the cardiovascular system	Thomas Sandström	159	159	254
	10	PMMECH - Mechanisms behind particulate matter air pollution induced toxicological effects	Thomas Sandström	159	159	63
	11	WOODPART-2: A human experimental model using for studies of acute effects of particulate air pollution	Gerd Sällsten	190	190	190
	12	Health effects of long range transported particles: a population study using air mass trajectories	Gerd Sällsten	61	68	47
		Synthesis		85	85	105
		Sum		**1897**	**1916**	**1768**
2	1	Chemical Modelling of Aerosol Formation	David Simpson	380	333	333
	2	Developing dynamic particle description including formation, growth and deposition	Valentin Foltescu	333	333	380
	3	Construct emission databases for dynamic particle models and validate urban models	Christer Johansson	380	380	380
	4	Aerosol OA sampling and 14C-analysis	Kristina Stenström	190	190	190
		Sum		**1283**	**1235**	**1283**
3		Coordination and communication	John Munthe	95	95	95
	1	Nitrogen cycling in forest ecosystems	Cecilia Akselsson	760	670	623
	2	Dynamic nitrogen model development and evaluation	Salim Belyazid	285	518	518
	3	Future impacts of forestry, deposition and climate change	Filip Moldan	0	0	0
				1140	**1283**	**1235**
4		Coordination and communication	Jenny Arnell	95	95	95
	1	Costs of non-technical measures in IAM models - theoretical considerations	Mohammed Belhaj	475	285	0
	2	Inclusion of non-technical measures in the GAINS model	Stefan Åström	48	143	428
	3	Development of a GAINS Sweden	Salim Belyazid	163	163	210
	4	Integrated assessment modelling at a national scale	Jenny Arnell	190	265	340
				970	**950**	**1073**
		Overall budget for scientific areas		**5290**	**5384**	**5358**
5	1	Program management	P Grennfelt	190	143	143
	2	Program communication	J Arnell	143	95	95
	3	Program coordinated activities	Peringe Grennfelt	78	79	104
		Sum		**411**	**317**	**342**
		Overall yearly budget		**5700**	**5700**	**5700**