

**GUIDELINES FOR SSGs  
ON ESTABLISHMENT AND OPERATION OF  
SCAR SCIENCE RESEARCH PROGRAMMES  
(5.1.2006)  
(revised 21.5.2010)**

**Scientific Research Programmes** (SRPs) are major international scientific initiatives coordinated by SCAR, either alone or jointly with other international research bodies. It is expected that SRPs will address scientific questions that will require sustained efforts over 6-8 years. SRPs address major, priority scientific issues of global or fundamental importance, at the cutting edge of the science, that will require substantial field-work and/or observations in the Antarctic to be successful.

### **1. The Scientific Programme Planning Group**

The SRPs will be developed and proposed by **Programme Planning Groups** (PPGs) fostered by one or more of SCAR's **Standing Scientific Groups**. Before an PPG is established, the fostering body or bodies will submit a title and brief (1-2 page) outline of the proposed **Scientific Research Programme** (SRP), plus a suggested chief officer and initial core membership for the SPPG, for consideration by **the SCAR Executive or the SCAR Delegates Committee on Scientific Affairs** (DCSA). Outline bids are required 6 weeks before the meeting of the relevant review body. The Executive or DCSA will review these bids, decide on priorities, and agree which ones to approve for further development. They will inform the SCAR Delegates of their decisions. For those bids approved, a **Programme Planning Group (PPG)** will be established and the level of any SCAR funding needed to support the work of the SPPG will be set.

The PPG will first produce a **Science and Implementation Plan** for the proposed SRP. The plan should follow the structure and provide the information outlined below in section 2. The plan will be subject to a review and selection process managed by the Delegates Committee on Scientific Affairs and set out in section 3.

### **2. Content and structure of the Science and Implementation Plan for a proposed SCAR Scientific Research Programme.**

The Science and Implementation Plan is prepared by the Science Programme Planning Group for the activity. The plan should ideally be no longer than 15 pages in total (including diagrams, and at no smaller than 10 pt font).

#### ***Title Page (1 page)***

- A1 Title of SRP
- A2 Name of SSG(s) Submitting the proposal
- A3 Expected duration of program (years)
- A4 Estimated SCAR funding required over the total program lifetime (in present-day USD)

## A5 Program Summary

### ***Proposal details (maximum of 12 pages of text)***

*Percentage numbers are indicative of the weight that you should give to each section of this proposal*

- B1 What are the objectives of the program? [5%]
- B2 Scientific background to the program [30%]
- B3 Program rationale/justification (So What? Why now? ) [15%]
- B4 Methodology and preliminary implementation plan [15%]
- B5 Program management and governance [10%]
- B6 Deliverable outcomes from the program including public awareness [5%]
- B7 Biennial milestones against which progress can be evaluated [10%]
- B8 Success factors (what can we use to judge success?) [5%]
- B9 References cited [5%]

### ***Supporting information (2 pages)***

- C1 Names of proposed chief officer and 3 other lead investigators (include 1 para bio, but not publications)
- C2 Why is SCAR support needed for this program (what is the value added)?
- C3 Anticipated degree of national and international involvement
- C4 Indicative budget for the first 4-years (2 SCAR cycles)

## **3. Selection of Scientific Research Programmes**

The draft Science and Implementation Plan should be submitted to the Executive Committee meeting (in a non-delegate body year) at least 6 weeks prior to the meeting. The Executive Committee and Chief Officers of Standing Scientific will review and recommend improvements and changes to the draft as appropriate. The review process will obtain additional expert comments and advice as deemed necessary.

Taking review comments into consideration, the PPG will then refine the Science and Implementation Plan for submission to the SCAR Secretariat at least 8 weeks prior to the biennial SCAR meeting. The Secretariat will then forward the Plan to the Delegates for the attention of the Members of the Delegates Committee on Scientific Affairs (DCSA).

The Secretariat will also obtain external international reviews of the Plan from two or more reviewers recommended by the Scientific Programme Planning Group and agreed by the Executive Committee. These reviews will be made available to the DCSA prior to or at the Delegates meeting. Reviewers will be requested to provide comment specifically on the novelty, science quality, relevance and timeliness of the proposed work. The reviewers may not necessarily be part of the Antarctic science community. It is recognised that care must be taken in choosing reviewers who are not directly involved in the programme in question, yet who are not totally uninformed about the demands of science in the Antarctic region.

Members of the DCSA may provide the Secretariat with written comments on the Plan at least 2 weeks prior to the SCAR biennial meeting.

At the Delegates' meeting the Members of the DCSA will consider and comment on the merits of the Plan, using the criteria listed below. The DCSA will advise the SCAR Delegates' Meeting of the merit and relative priority of the Plan, and recommend whether or not the activity should be approved and funded, and if so at what level.

The criteria are listed in order of importance, together with notes on implementation of the criteria where appropriate, and some guideline questions to assist in the interpretation of the criteria. Based on these criteria delegates will classify each SRP into one of three categories as shown in section 4.

### **3.1 Science quality/proposal quality.**

*Notes:* See above regarding external review.

*Guideline questions:* Is this innovative, excellent science?

### **3.2 Science importance/relevance/timeliness.**

*Notes:* See above regarding external review.

*Guideline questions:* Is the work advancing global science? What major advances in science will result from this programme? Will a delay in implementing this programme result in SCAR science falling behind in the area?

### **3.3 "Fit" to SCAR Strategic Plan**

*Guideline questions:* Does the research contribute to SCAR's Goals enunciated in the Strategic Plan? Does it strengthen SCAR's structure? How significant and practical are the proposed inter-disciplinary elements?

### **3.4 Operational and Technical feasibility.**

*Notes:* COMNAP will be asked to comment on those programmes where there is a significant logistical component.

### **3.5 Degree of international involvement/likely commitment.**

*Guideline questions:* Does the programme involve a wide array of SCAR nations? Are nations with less well developed Antarctic Programs able to participate and contribute? How does it contribute to capacity building? What are the links to international programmes outside of SCAR?

### **3.6 Data archival and access**

*Guideline questions:* Does the proposal adequately address the issues of data archiving and data access, in particular does it link to the SCAR Data and

Information Management Strategy Is there a nominated data liason person to interact with SCADM?

### **3.7 Public/policy profile**

*Guideline questions:* Will this programme enhance and/or improve the profile of SCAR?

### **3.8 Value added by SCAR involvement**

*Guideline questions:* Is SCAR's support for the programme critical to the success of the research?

### **3.9 Education and outreach (E&O)**

*Guideline questions:* Does the work plan to contribute to education about Antarctic science? Is communication about the programme significantly raising SCAR's public profile?

## **4. Classification**

Delegates will recommend/reject implementation of Scientific Research Programme Plans, using the following criteria:

- A. Excellent science in terms of quality, importance and timeliness with a good "fit" to SCAR's place in science and to SCAR's directions. Education and outreach plans are in place, and the programme will further raise SCAR's international profile. The programme is highly feasible, with international connections in place and data handling procedures evident. There may be some minor revisions or clarifications needed, but *the programme is ready to proceed.*
- B. Excellent science in terms of quality, importance and timeliness with a good "fit" to SCAR's place in science and to SCAR's directions. Education, outreach, and data handling plans are generally in place, as are international connections. BUT there are some difficulties. Work is necessary, as suggested by the Delegates' comments, to bring the overall standard up to the level expected. Funding is recommended to begin once the SCAR Executive, or the next Delegates' meeting, whichever comes first, has reviewed the revised programme. *The programme may be funded, but is not ready to proceed in its present form.*
- C. The science does not meet the standard required to justify SCAR's support or endorsement. The programme needs significant reworking based on the reviews provided, before resubmission to SCAR. *The programme is not approved in its present form.*

## **5. Implementation**

Approval of a Science and Implementation Plan by the Delegates constitutes approval of a Scientific Research Programme.

Once an SRP is approved, the SPPG will be asked to submit to the Executive Committee:

- (a) A brief Implementation Plan including explicit milestones and expected scientific outcomes, and stating what is going to be achieved by when and if possible by whom.
- (b) A proposal for the Chief officer(s) and members of a Scientific Programme Group (SPG) to implement, manage, and direct the programme.

Members of the SPG will be appointed by the SCAR Executive Committee, in consultation with DCSA and the relevant SSG(s), and with the (e-mail) approval of Delegates. It is expected that members of the SPG will include some members of the Programme Planning Group, but this is not mandatory. Efforts should be made to ensure that the membership of the SPG is well balanced as to science, geography, and gender.

The SPGs will be responsible for all aspects of their research programme including reporting to the Executive Committee on progress, and the delivery of agreed scientific outcomes.

## **6. Process for Performance Evaluation of SRPs**

Each SPG will present a written report of scientific activities and progress to the SCAR Secretariat at least 6 weeks before each biennial SCAR meeting. These reports will be distributed to the Executive Committee and to the Delegates Committee on Scientific Affairs (DCSA) for evaluation. The appropriate SSG Chief Officer (or SPG Leader) will make a presentation of the SPG report to the DCSA at the Delegates meeting.

Progress reports should be no longer than 6 pages. They should give an overview of activities and progress for the prior two years and list five scientific highlights. They should address:-

- (a) Progress against prior work plan:
  - What were the planned milestones and deliverables?
  - What were the achievements against these during the 2-year cycle?
  - What deviations were made from the work plan, and why?
  - What SCAR funds were allocated to the activity?
  - How were the SCAR funds spent?
- (b) Proposed work plan for the next 2 years:
  - What are the new planned milestones and deliverables?
  - What SCAR funds are required to support the activity and how will they be used?

The reports should list:-

**(i) Outputs/Deliverables**

- (a) Publications in peer reviewed literature (including articles “in press”)
- (b) Other Publications (e.g. institution reports, articles in the grey literature, maps, atlases, CDs, Newsletters or contributions to newsletters)
- (c) Brochures, posters, press/media articles and similar PR material
- (d) creation of a web site, and number of hits per web site
- (e) creation of database(s), and amount of use of database(s) (e.g. as measured by hits on a web version)
- (f) number and type of education/training and other capacity building activities;
- (g) new technology/model developments;
- (h) key achievements (short paragraphs on each)

**(ii) Inputs**

- (a) number, gender and country of participating scientists
- (b) number and type of meetings/workshops, and numbers, genders and countries represented in their attendees
- (c) links to other SCAR SRPs or Action or Expert Groups
- (d) links to other ICSU bodies or to other scientific groups
- (e) development and staffing of a project office or other administrative support
- (f) sources and amounts of income for project activities
- (g) expenditure on project activities

In 2012, for example, the first results (or indications of progress with implementation) shall be reported to the Delegates in 2012. SRP leaders will use the criteria listed in 6 (i) and 6 (ii) above to produce reports on progress. The SSGs meeting prior to the Delegates meeting will assist SRP leaders in preparing the reports for the Delegates.

Progress will be evaluated during the Delegates’ meeting by the Delegates Committee on Scientific Affairs (DCSA), using the metrics of performance in section 3, above. The DCSA will then report the outcome to the Plenary.

If revisions in direction are required, SRP leaders will be asked to present a plan for such revisions in time for their consideration at the Executive Committee meeting in the following year.

In 2014, independent reviews of the progress of the SRPs shall be carried out and made available to the Delegates. As specified in section 3, above, external reviewers will be approached for each report, and asked to evaluate the reports based on the criteria in section 3. Reviewers will use the reports presented at the 2012 meeting, and an update representing progress in the subsequent 2 years. COMNAP will be asked to comment on logistical implications.

As in 2012, the SSGs meeting prior to the Delegates meeting will assist SRP leaders in preparing the reports for the 2014 Delegates meeting.

The Delegates Committee on Scientific Affairs (DCSA) will evaluate progress by using the external reviews and their own judgements, to rate the projects into the categories in section 4, above, modified as follows:

- A. Excellent science in terms of quality, importance and timeliness with a good “fit” to SCAR’s place in science and to SCAR’s directions. IPY and outreach plans are in place, and the programme is raising SCAR’s international profile. The programme is highly feasible, with international connections in place and data handling procedures evident. There may be some very minor revisions or clarifications needed, but *the programme is well underway and making good progress.*
- B. Excellent science in terms of quality, importance and timeliness with a good “fit” to SCAR’s place in science and to SCAR’s directions. IPY, outreach, and data handling plans are in place, as are international connections. BUT there are some difficulties. Work is necessary to bring the overall standard up to the level expected. Revisions are required and should be reported to the Executive Committee in the following year for approval. *The programme is not making as good progress as expected and direction needs to be revised.*
- C. The science is not up to the standard required to justify SCAR’s continued support or endorsement. The programme needs significant reworking based on the reviews provided, before resubmission to SCAR. *SCAR’s funding for international coordination will be withdrawn unless the reworked and resubmitted programme meets approval at the next Delegates’ meeting.*

The DCSA will then report to Plenary. The DCSA will recognise that the science performed under the umbrellas of the SRPs is organised in projects that are largely funded and reviewed nationally. It is the object of SCAR’s review to assess if the international coordination of those national endeavours is effective and adds value.