Minutes of joint SCADM/SCAGI meeting

7-9th September 2009

Trippenhuis, Amsterdam

The meeting took the format of a joint meeting on the morning of 7th September, all day on the 8th September until mid afternoon on 9th September. SCADM and SCAGI had individual business meetings on the afternoons of 7th September and 9th September.

Invited Guests:
Colin Summerhayes - SCAR
Mike Sparrow - SCAR
Volker Rachold - IASC
Mark Parsons – IPY Data Committee
Martin Loss – NWO
Ad Huiskes - SCAR

Invited Speakers:
Antonio Quesada (Biologist – SCAR)
Tony Phillips (Physical Scientist – SCAR)
Ian Jackson (OneGeology)
Paul Morin (University of Minnesota)

Day 1 – 7th September

Agenda items 1 – 3 (welcome and opening remarks, overview of meeting activities and goals, and housekeeping)

The meeting commenced with a welcome to Amsterdam and the Trippenhuis by Martin Loss from the Royal Netherlands Academy of Arts and Sciences.
Kim Finney :

- thanked Taco de Bruin for organising the meeting, and hosting the SCADM and SCAGI meetings in Amsterdam.
- welcomed Colin Summerhayes and Mike Sparrow from SCAR, Volker Rachold from IASC, Ad Huiskies from SCAR Excom, and Mark Parsons from the IPY Data Committee.
- Noted that this was a historic meeting as it was the first official joint meeting of SCADM and SCAGI.
- Introduced the structure of meeting, and the three guest speakers, Antonio Quesada, Tony Phillips and Ian Jackson and gave a brief overview of aims of meeting

Henk Brolsma thanked the hosts, and welcomed new members of SCAGI.
Taco de Bruin welcomed all attendees to Amsterdam and the Trippenhuis, and introduced logistical arrangements for the meeting.

Agenda item 4 (Presentation by SCAR Executive Director (Colin Summerhayes))

Colin Summerhayes gave a brief introduction to the work of SCAR, and the outcomes of the data discussions at the recent SCAR Executive Committee meeting. Coordination of data and information are an important role for SCAR, and EXCOM see data as fundamental to the way we do science. He emphasised the importance of presenting the DIMS at the next ATCM to explain how it will provide benefits for all Parties [ACTION 1].

He went on to explain that SCAR and COMNAP will be meeting soon to develop more mutually beneficial working arrangements, and will also conduct discussions on links with SCADM and SCAGI. SCADM and SCAGI will also play an important role in the new developing Strategic Plan for SCAR. A meeting to progress the development of the new SCAR strategic plan will be held in early 2010 in Cambridge.

Colin talked about the progress which had been made in promoting the status of SCADM and SCAGI which are both now standing committees within SCAR. He pointed out that this shows a recognition of the permanent and ongoing requirement for data and information work in SCAR. He said that SCAGI's work was well recognised and appreciетd by SCAR EXCOM.

Colin highlighted that many global bodies now have programmes which include Antarctic Science, and SCAR must recognise this and work with these organisations to form better partnerships. This is also being reflected in the SCAR DIMS, which highlights the growing relationships with, for example, CODATA and GBIF. He also highlighted the importance of close relationships with the Arctic community.

He encouraged SCADM and SCAGI to interact more with the science community through attending the various science symposiums which the SCAR science community runs. They should be used as an opportunity to bring the data message to the science communities.

He also highlighted the SCAR fellowship programme, and recommended that the data community could use this for development opportunities, and progressing implementation of the DIMS [ACTION 2]

Colin then pointed out that data is becoming increasingly important at EXCOM level. He reported that EXCOM were extremely pleased to receive and endorse the new DIMS, and congratulated Kim on having led its production. It places SCAR very effectively in global efforts in data management for science. He highlighted the importance of getting the draft SCAR data policy endorsed [ACTION 3]. Colin highlighted that as we are all volunteers, manpower is needed to take forward implementation of the policy, and he promoted the need for secondments to work on strategy implementation, as is recommended in the DIMS. Kim and Colin will be sending out a letter to national contacts to advance this [ACTION 4]. He highlighted the suggestion that had been agreed at EXCOM, that a demonstration project should be used to show how strategy

implementation can help SCAR science. He encouraged all SCADM and SCAGI members to gain further national approval for the strategy [ACTION 5]. The strategy will also be promoted through the Notes from the President.

Colin recommended that SCAR products need to be managed in a more coherent way, and should be brought in line with implementation of the strategy. To reflect this, SCADM have been asked by EXCOM to carry out a review of SCAR products [ACTION 6]. Finally, he highlighted the IPY legacy points, of which data is one, and the need to SCADM to remain close to the work on the IPY legacy.

Helen Campbell highlighted that the DIMS had raised expectations on SCADM, and we therefore need to manage these expectations, and successful implementation will require involvement of all NADCs.

Henk Brolsma then agreed with this point and highlighted the importance of collaboration on implementing the strategy, and not just attending meetings.

On behalf of the SCAR President, Henk Brolsma then presented two SCAR certificates of appreciation acknowledging the long-term and excellent services provided by Chiara Ramorino and Roberto Cervellati, both from Italy.

Henk also presented how names in the SCAR CGA can now be viewed using Google Earth. It visually highlights the problem of the same features being given different coordinates by different countries. SCAGI is in the process of writing to the national committees to ask for them to accept changes to locations to rectify some of these problems [ACTION 7].

The meeting then divided into the separate SCADM and SCAGI meetings.

Agenda item 5 - AMD, Portals, Statistics, Future Plans (Stephanie Grebas – GCMD)

Stephanie presented statistics on use of the AMD, ways to search for metadata on the AMD, and ways to contribute metadata. The presentation showed the content growth in the AMD – there has been a 20% increase since 2008 (possibly largely through NZ contributions). 46% of records provide access to data through the Get Data link. Astrophysics keywords can be accessed from the top-level navigation – it was explained that these two sets of keywords need to be separate to differentiate between earth science and space science domains. She also introduced how to use the data services section of the site. The content provision per country was demonstrated, along with the growth in content per country this year. Finally she showed that many of the polar portals are in the top 20 portals of GCMD. She then demonstrated the IPY portal. Colin Summerhayes asked SCADM to produce a SCAR news item on AMD statistics for the next news bulletin – the intent being to give our work a higher profile. The graph for the news bulletin should also include an extra column for the number of DIFs per country which point to web-accessible data [ACTION 8].

Stephanie then presented new developments in the GCMD. For satellites there are DESDyni and Icesat. For GCMD in general there is a tool for checking broken

links. There is also the ability to define private portals. The Climate diagnostics portal provides access to climate diagnostics visualisations. NADCs can provide visualisations to this - rules for inclusion of visualisations are on the GCMD website.

GCMD are continuing to update the Keywords. SCADM asked for more consultation on updating of keywords, and for more information about the keyword web service that is being developed [ACTION 9]

The web interface is also being updated with an improved look. The potential for using feedback from the AMD user survey to inform this development work was discussed, and Stephanie agreed to send out an email of the timetable and content of changes to show how the AMD user survey could fit in with the GCMD plans [ACTION 10].

There was a discussion about what the Get Data link means. Links to further information should use the related URL field, rather than the GET DATA link. The Get Data link should point directly to data, and not to another search page.

Agenda item 6 - Devising an AMD User Survey (Kim Finney & Stephanie Grebas)

Kim explained that the AMD has been in operation now for a number of years and there has been variable feedback from both data managers and scientists alike on aspects of its functionality and use. She said that it was probably time to assess how users and data providers feel about using the AMD. This task has been on the SCADM "to do" list since last year, but has not yet been tackled. She explained that one way of capturing information from both data providers and users was via a survey. Kim gave an outline of how a survey should be designed to make sure it is as effective as possible. In a subsequent break-out session meeting participants questioned the need for a survey and instead said that they felt a range of data gathering methods might be more suitable to get the type of information required, a survey being just one method. As many of the users of the AMD are based within SRPs, it was decided that SRP liaison officers were perhaps best placed to get the type of feedback we required on the AMD. This session was concluded by placing an action on SRP Liaison Officers to discuss how best to get feedback from providers and users and to work with the SCADM Exec and the GCMD to develop a report of the AMD issues that users feel need addressing [ACTION 11]. Note that this action is dependent on outcomes of action [13] outlined later in these minutes.

Kim highlighted that not all issues associated with the AMD were related to the technical functioning of the AMD application and many of the issues that need addressing were in fact more to do with the way in which the SCAR community manages and uses the AMD. By way of example she explained that there is confusion about how certain fields in the AMD are being used. For example the "Project" field is being used by some to define the project that the data was collected for, and used by others to record the projects that the data might be useful for. She also highlighted that the AMD uses a look-up list of project keywords from an un-moderated list of project names. She suggested that

SCADM should play some role in moderating SCAR related project lists – at least to ensure that the SCAR project structure is reflected in the keyword list. This led to a discussion about how we shoud tackle issues of consistent use of fields within DIFs [ACTION 12]

Agenda item 7 - Feedback from AMD users by nation:

Taco presented feedback from the Netherlands. He began by explaining how metadata is managed for ocean sciences. He suggested that guidelines are needed on how to fill out fields in the AMD. He also highlighted that granularity of metadata entries in the AMD is an issue. He requested that there is a need for a PR campaign by NADCs, SCADM and SCAR about use of the AMD. He also pointed out the importance of DIFs being linked to online data. Finally he said that there was a need for overall integration of DIFs to provide an overall overview of Antarctic data.

Helen presented the feeback for NZ on behalf of Shulamit Gordon. The presentation began with an overview of the 18-month post at Antarctica NZ which resulted in a large number of metadata entries being submitted to the AMD, covering all of the science carried out by NZ since the 1950s. It then went on to explain that future plans will involve developing a data policy which all Antarctica NZ funded scienctists will have to adhere to. The feedback on the AMD was then divided between DIF Creators and AMD users. The (single) DIF Creator was generally positive about the AMD, though they noted that improvements could be made to search functions, and this was followed by a list of suggested improvements to the AMD for DIF creators. The feedback from NZ scientific users was also generally good, with users having found out about science and data which they were not previously aware of. But there was also some concern expressed about the time it takes to create metadata, and that the search facilities are not as intuitive as they could be.

Talha Alhady presented feedback from Malaysia. There is a need to encourage more use of the AMD, and there is a need for more guidelines on completing metadata – this could include:

- how often should metadata be submitted
- how should metadata be aggregated
- who should manage the metadata (or lay claim to it) – the country that created the metadata, or the country holding the data (particularly and issue where countries collaborate and scientists work within the framework of one country but belong to another).

There is also a need for enforcement of the data policy.

Masaki Kanao presented feedback from Japan. He began by presenting an update on their NADC progress which included a demonstration of their science database and metadata base, and how they link to the AMD. They have a data policy which ensures compliance with SCADM requirements. They now also have a national Arctic metadata portal in the GCMD. They still have more metadata to contribute to the AMD and from IPY. They have also entered some outreach metadata in the AMD.

Agenda item 8 - Breakout groups: developing typical survey questions that capture feedback from AMD users and providers.

The break-out session outcomes were already summarised above but the detailed responses from the individual groups is listed below.

Group 1:

- The first question to tackle is – who are the users?
- If people are looking for data beyond their discipline, they may need different types of information.
- The metadata records don't really show which data might be useful (i.e. no incorporation of user feedback).
- The utility of the system comes down to robust complete metadata.
- To better understand perceptions we should focus on a particular need of SCAR and then tailor our approach to using and managing the AMD to meet that need – e.g. just work on getting SALE related records in the system and usefully able to be searched. Then we can say – this is what a good portal could be. This will hopefully mean that the word of how good it is would get passed on. Fits in well with guidance from EXCOM on making sure that our work is presented in way which shows that we are answering specific science questions
- Follow standards, guided keywords and direct links to data.

Group 2:

- How do you enter metadata now? DocBuilder? Other?
- If you use other system(s), how would you compare to DocBuilder?
- Do you find the DocBuilder data entry process intuitive?
- Do you need more guidance when adding data through docbuilder ?
- Would you like additional guidance to be specific to the polar domain (i.e. Contextual examples)? [GCMD – feasible by portal?]
- Does the current standard (set of fields) adequately describe your data? If no, what might you add or change?
- Would you like the system to be more flexible to better serve national requirements? If yes, how?
- Which community(ies) do you work with?
- What are they using as their metadata standard? [Context: GCMD and ISO 19115 etc.]
- Do you tend to complete all fields in a DIF record? If no, which fields do you tend to omit?
- Do you find entering metadata using DocBuilder to be prohibitively time consuming?
- Have you used /know of automated systems? If yes, please list.
- Community – Granularity
- Community – Point of contact
- Community – Guidance on populating each field
- Capacity – resources to provide focused support?

Group 3: could the user provider experience be improved by changing the way the community manages its content?

- It might be good to monitor how users use the system – could maybe use formal web usability testing
- We generally just need to improve our promotion of the AMD
- We could have the ability to feedback straight after a search has been performed about how well the search has worked
- We could learn from other groups e.g. TDWG
- How would we get feedback from people who are not already interested
- Have a questionnaire about the AMD at the open science conference and have a prize
- Is the AMD a useful tool to identify data from multiple sources, and to help with science. What tools do scientists already use (examine them and then bottle the good points)?
- Granularity – how detailed should it be – what role is it playing, and what role do we expect it to play?
- Its good to get constant feedback…..

Agenda item 10 - Perspectives on data issues from a practicing biologist (Antonio Quesada)

Antonio has been involved in pushing the importance of SCAR data management for many years. He presented his experiences from the LIMNOPOLAR projects, to provide an example of what is needed by scientists from data management. LIMNOPOLAR requires as much reference information as possible, in a zone which is changing rapidly from climate change. It is a diverse project team from many countries and they are multidisciplinary. Minimising environmental impact was very important, and therefore they tried to minimise the number of scientists that needed to be there. Individual projects were funded by different institutions.

Spanish legislation makes deposit of metadata and data into a data repository mandatory.

The LIMNOPOLAR project built a portal to be specifically useful for the science. It has a bibliography, picture repository, GIS interface to enable download of all data layers. At first it is only open to the project community, but will be made publicly available soon.

The data management problems which were encountered included:

- Non polar researchers who are not as used to data sharing – they were very sceptical about it. We need ways to convince non-polar scientists to share data in the same way
- Diverse data types – very difficult to feed them all into one system – this problem has not been solved. There is a desire to be able to access it all from one place.
- It is hard to define dates when data will be made available, as it can take many years to identify new species etc from samples, and therefore the information cannot be made available quickly
- Patenting and data ownership are different in different countries

The solution proposed is one of FLEXIBILITY.

Need guidance on where to store all these diverse data types – e.g. huge amounts of genomics data. It has been difficult integrating data, as different disciplines use different terminologies. Ensuring that data management is considered at the stage of initial funding helps with ensuring that data management work is carried out. Genbank is a problem when you have very large datasets.

Agenda items 11 & 12 - Reports from SCADM SRP liaisons

Peter Pulsifer introduced the history of the liaison posts – they were established following a review of JCADM where it was decided that we needed to work more closely with the SCAR science community. There are currently only two active liaisons – for Life Sciences and the Physical Sciences. It was agreed that before new people could volunteer to be liasons, there needed to be a job description, which needs to include a desciption of how individual members are expected to communicate the work of SCADM.

This job description was produced out of session and then provided by Peter back to the meeting during a later session. Despite making the job description explicit there was still reticence from people to volunteer for the available roles. Ideally the volunteers should be those with (a) time to do the function and (b) those who are already closely aligned in some way with the particular group that they would be the liaison for (e.g Shulamit Gordon is the Life Sciences rep and is also the SCAR EBA Secretary). It was also felt, after some discussion, that we were targeting the Liaison roles at a level higher than is ideal and that we should in fact target the research project level. Whilst this is intuitively better, given that the idea is to create an effective liaison between SCADM and science practitioners, it also has the effect of increasing the number of Liaison Officers required. Currently the Liaison Officers are targeted at the Standing Group level. The SCADM Exec agreed to discuss the matter off-line and make some recommendations on how effective liaison can be achieved, given the lack of people able to take on this role from within SCADM. [Action 13].

Day 2 - 8th September

SCADM and SCAGI were again in joint session.

Agenda item 1 – Training workshop – what issues need consideration in setting up an NADC? (Helen Campbell), and what are the key elements of a science data management plan? (Kim Finney)

The presentation on establishing an NADC included the history of NADCs; Identification of players/stakeholders; and a model for how to establish an NADC.

The presentation on data management plans included emphasising that they are needed to ensure that the current practice of data management often being an afterthought is replaced by it becoming an integral part of project planning – this is to ensure that data management is well specified and properly resourced. The lack of planning results in data not being interoperable, or even being lost. Data Management Planning is now part of the SCAR Rules of Procedure, the SCAR

Strategy, and the draft SCAR data policy. A Data Management Plan describes data flows from capture through to publication and archival. The presentation also included a list of components which should be included in a plan and a sample plan was provided.

Breakout Groups

Several break-out groups were then convened focussing on two questions. The main points raised by meeting participants in these sessions included:

Group 1: Hardest things to overcome in setting up a data centre

- No formal program / focal point in country
- No enforcement of policy
- Sustained funding
- language issues + semantics
- relevant adherence to international agreements
- nations focus on national priorities
- note: push some recommendations to higher level bodies such as ICSU
- competition with science for $
- different culture by discipline re. data management
- scientists may not be interested in benefit to others re. sharing
- heterogeneity
- data centre vs. data network
- management vs. repositories
- scientist need support, ed. , materials
- need to demonstrate value to scientists
- standards – dif? ISO? Keeping up with updates, versioning etc.
- Translation issues – non-specialist attempting to translate
- Incentives – pressuring to conform may undermine our efforts – 'leave the program'
- Position as a benefit to science as a whole – service element
- Data formats – attempt to adopt existing
- Harmonization of formats

Group 2: What difficulties do you expect in requiring scientist to prepare data management plans?

- What are the value propositions for scientists ? Some responses were:
  - The plan could improve the quality of the data e.g. reducing ambiguous data values
  - – Safety of data and storage/preservation + security threats (malware, attacks) - professional level security
  - Some studies you cannot do without data management - e.g. longitudinal, climate change, change detection
  - Centres can make the data discoverable
  - Highlight projects such as MARBIN where many publications are resulting from work done on managed data
  - Increasing value of data by establishing relationships between data sets.
- Funding agency requirements? Round table - what do national agencies do?
  1. Canada: IPY program - management plan, metadata / NSERC - no
  2. UK - some requirements i.e. South Georgia GIS

3. US - NSF - Office of Polar Programs - rigourously enforced / Mark P. - consistent policy

but variable implementations.

4. Italy - National Program requires - no enforcement tools - if data is not obvious, not a tracking mechanism

5. Malaysia - Data policy - concern about scaring the researhers away so not enforced

Agenda item 2 – Training workshops – 'A Roadmap of Open Source components for GI Web Services and Clients' (Paul Cooper), and 'SCAGI Community Products' (Henk Brolsma).

The presentation on open source components for GI Web Services and Clients covered Standards, Databases, Web Servers, GIS Server Software, Client Software, and encouraged the audience to see that OGC standards don't have to be difficult to implement in data centres.

The presentation on SCAGI community products began with Henk presenting the SCAR Map Catalogue and the SCAR Composite Gazetteer, followed by Paul Cooper presenting the SCAR Antarctic Digital Database. The key point that was made was that the ADD is enabled with Web Services and can be combined with other Web Services – an example was given of overlaying the ADD on USGS LIMA imagery.

These presentations were followed by questions including:

- Would this work in Google Earth? The answer was Yes, and ideally ADD data would be included in the base Google data set. It is very difficult to get a response from Google - Henk Brolsma has had some response, but action is pending. However Paul Cooper cautioned that broadly promoting the ADD Web Services would exceed the capacity of the servers.
- Should we be integrating SCADM/SCAGI efforts with respect to CGA, ADD? Paul Cooper explained that contributions to CGA needs to go through national naming authorities. There was discussion about establishing a SCADM standard that requires the use of CGA data in metadata records. Henk Brolsma cautioned about issues of spatial inaccuracy in location of some place names. Adrian Fox suggested using LIMA base as spatial reference framework - this activity needs to be done but is not currently resourced. Despite this discussion it was still concluded that we should use the CGA wherever possible in SCADM work. SC-AGI are to provide information to SCADM and GCMD on use of the CGA [ACTION 15].
- Should SCADM be providing data or reference to data for use by SC-AGI, i.e. additions to ADD? Paul Cooper is interested in receiving new data from SCADM, but data would need to be reviewed for appropriate scale, quality, and intellectual property permissions [ACTION 16 – noting that SCADM will be conducting a review of all SCAR –badged products at the request of EXCOM].
- Can we create useful services/applications that would combine SCADM / SCAGI resources? Paul Morin suggested that SCADM can contribute by

creating footprints of data collected in the form of a Web Service. Mark Parsons explained that all NSIDC data sets are being pubished using OGC. There was discussion about GCMD providing the data 'footprints' using the information from the bounding boxes. However Peter Pulsifer suggested that even though it would not be difficult for GCMD to create a web service to do this, the wide variation in granularity and the nature of the 'bounding box' where only a few disparate points may be enclosed by a large bounding box, would not support the detailed footprints described by Paul M. Helen Campbell suggested that the SCAGI/SCADM community need to work together to establish a framework or application that will integrate the various services and data feeds into something that is identifiably useful for a scientific research initiative.

Agenda item 3 – National Presentations on approaches to Antarctic Data management

Presentations were given by China, Korea, Finland, USA and Netherlands. All the presentations are now available on the FTP site. Questions and comments were as follows:

Kim Finney stated that the Korean example of considering the need to push data out from databases designed by the data centre to SCAR products such as SCAR MarBIN and the EBA Biodiversity database is very good.

Paul Cooper asked if in Finland the INSPIRE initiative is making a diffrence to attitudes in terms of making data accessible online? Arto Vitikka stated that yes the attitudes are changing due to INSPIRE - particularly with respect to geodata.

Taco asked whether the fact that the US metadata system is based on slightly less fields than the GCMD docbuilder, makes a differences in terms of whether scientists are happier to use it. Bob Arko answered that it does, as anything that saves time makes a difference. It was agreed that Bob Arko would send out the schema for the US implementation of the AMD to SCADM [ACTION 17]. Peter Pulsifer commented that any changes to DIF profile or GCMD interface for SCADM should be done in conjunction with the Arctic Community to ensure we're going in similar directions.

Mark Parsons asked whether the work of the U.S. Antarctic Program Data Coordination Center is focussed on NSF funded programs, rather than all US funded Antarctic work. The answer was yes.

Mark Parsons asked whether the U.S. Antarctic Program Data Coordination Center always assesses whether there are other more appropriate data centres for curating data for the long term, thereby acting as a data centre of last resort for curating data which does not have a suitable data centre for long-term curation. The answer was yes, but they have found that there is a lot of data for which there is not a suitable centre. Bob Arko said that there is a growing recognition of the need for a data repository for this 'orphan' data, and that there are US plans for development of databases for samples, lab results and derived

data, which could help a lot with this. Bob Arko agreed to update SCADM on progress with this [ACTION 18].

There was a lot of discussion about how NSF enforces its data policy. The summary was that the funding agency asks for a URL to the dataset metadata, which must have a link to access the actual data. The USAP will not give the URL to the PI for submission to NSF until they are satisfied that the data policy requirements have been met.

Agenda Item 5 – Antarctic Data: A Physical Sciences Perspective (Tony Phillips)

The presentation is available on the FTP site.

Helen Campbell thanked Tony for a great presentation.

Stephanie Grebas was interested in the comments from Tony about the need for ordering relevance of results in GCMD searches, and this is something that they are working on.

Mark Parsons pointed out that it can be a struggle to reproduce work of the Earth System Research Laboratory because NSIDC data are not standardized. Makes it much harder to develop an easy interface without the underlying standardized data formats. He recognized that the ESRL has put a lot of effort into designing the 'gold standard' interface.

The importance of getting 'buy in' from the community on providing data in a particular format with particular quality was emphasised.

Agenda item 6 – SCAR Data Strategy overview and next steps

Kim Finney provided an introduction to the DIMS. Up until the production of the strategy, there has been lots of urging from SCAR and ATCM, but very little guidance as to how we should actually be delivering the ADMS. There was no policy, and the approach to data management remained ad-hoc. The strategy now explains how the ADMS should work. The challenge now is to expand the DIMS with an implementation plan, as the DIMS covers the bare-bones of what needs to be done. We should keep the testimonials which are presented at the beginning of the strategy in mind throughout the implementation, to ensure that we remain focussed on the final outcome that we want. As much of the current data management work in SCAR is done outside of SCADM and SCAGI, we must focus on alliances and cooperation.

The strategy calls for development of a data policy, and we now have a draft which needs endorsing at the next meeting of the SCAR delegates. It is vital that we find secondees for leading on implementation of the strategy. We must leverage resources from existing global networks. We must ensure closer cooperation between SCADM and SCAGI.

Agenda item 7 – Strategy implementation

There was a discussion on the pros and cons of merging SCADM and SCAGI. The group could see the benefits of closer working, but that merging would not be sensible. This is because the networks that we work with are different – SCADM works with scientists, SCAGI works with national mapping agencies. The two groups have specialist skills and need to all remain active, but it was agreed that we need to work out how the groups will work better together – should every meeting now be joint SCADM/SCAGI meetings, and how will we harmonise the workings of the groups? [Action 19]

Three priorities for strategy implementation were emphasised, and these were mapping SCAR science to the DIMS [ACTION 24], making the AMD work better [ACTION 25], and looking at national science and data management plans, and looking for synergies [ACTION 26].

Colin Summerhayes urged SCADM and SCAGI to be adventurous in the implementation plan, and not restrict ourselves based on current resources. This is because an adventurous plan is more likely to win funding.

We must ensure that we use the feedback that we already have from the SRP's when planning the basis for implementing the strategy.

Day 3 - 9th September

Agenda Item 1 – One Geology (Ian Jackson)

Ian Jackson presented the One Geology project. This presentation was chosen by the SCADM executive for two reasons. Firstly, to promote the project, and encourage SCADM members to contribute more polar data, and secondly, as an inspirational example of what can be achieved in terms of high-profile international data sharing projects.

The presentation ended with a list of recommendations for SCADM as follows:

Ingredients for success	Things to avoid
Simple unifying objectives	Allowing scientists to extend & complicate
Simple model, methodology, technology	Intrusive, large burden task
Inclusive, regardless of development status	Exclusive, technically sophisticated
Distributed model, local data ownership	Centralised database
Committed, passionate international core team	Un-sustained enthusiasm (esp after meetings)
Approval of leaders of national organisations	Offending any national organisation

Understand the importance of cultural and language diversity	Fail to recognise that these are people projects not technical projects
Persistence and tenacity	Inertia, procrastination, apathy
Support from existing international bodies/initiatives	Underestimating sensitivities in existing players
Timing and pressing multiple buttons (IYPE, SDI/INSPIRE, GEO/GEOSS, GeoSciML)	Not looking outside
Lean funding requirement	Over-ambitious and expensive
Quick wins and prototype	All strategy, no action
Make outreach and media profile a priority	Restricted (elite) communications
A memorable name and logo	A boring and externally meaningless acronym

Kim Finney thanked Ian Jackson for a very useful presentation. All SCADM and SCAGI members were encouraged to submit the best possible Antarctic Geology data to the OneGeology Project. [ACTION 21]

Agenda item 2 – SCAGI vision for an Antarctic Spatial Data Infrastructure

Henk presented plans for the AntSDI, and made suggestions as to how we should progress to implement the vision for the Ant SDI, as a component of the DIMS.

Agenda item 2a – Presentation on new data sources by Paul Morin

Paul Morin presented information on the new high resolution imagery available in Antarctica. The challenge is no longer paucity of data, but is now accessing appropriate data from the huge quantities available. The data community needs to step up to the challenge of providing the tools to enable scientists to access the most appropriate data.

Colin Summerhayes suggested that working together to make this data more accessible for specific scientfic purposes could form the basis for new scientific endeavour in SCAR.

Agenda item 2b – Data access to distributed databases - A case study from oceanography (Taco de Bruin)

Taco presented some of the new techniques which are being developed in the field of oceanography to enable better preservation and reuse of data.

Agenda item 3 – IPY legacy, IPYDIS Overview and the Polar Information Commons (Mark Parsons)

SCADM, IPY and Antarctic Treaty are inspirations behind the work of the PIC. PIC will encourage sharing and preservation of polar data. PIC is based on

changing the view from data ownership, to data being a network resource. To move towards citation becoming the norm of behaviour, and to simply provide terms of use, rather than licencing. Attributing data to the PIC, would define that there are certain expected norms of behaviour when using PIC attributed data.

Agenda items 5 onwards – Implementing the strategy

There was clear recognition of the need for cooperation amongst all SCADM and SCAGI members to implement the strategy. There also needs to be a lot of clarity in what we want people to do to implement the strategy, and how much we are asking them to commit.

It was suggested that we should follow the advice from the One Geology project, which included making sure that we have a product which looks impressive, demonstrates national contributions, and provides quick-wins to ensure that we keep the community bought-in to the need to stay involved in the project. A suggestion was made that if we also want the product to be of interest to the general public (as OneGeology was with its vast media coverage), involving data on charismatic megafauna would be a good idea. It was also suggested that we follow the advice of EXCOM in making sure that we can demonstrate how the work that we are doing is enabling us to answer important SCAR science questions.

It was also pointed out that wherever possible, our implementation should build on existing tools and products which we already have (e.g. ADD, gazetteer as OGC services), and potentially bring in some of the data and tools demonstrated by Paul Morin, if this was relevant to the science question.

It was suggested that as SCAR MarBIN has already been a success in this area, and the EBA terrestrial database is teaming up with the Belgian SCADM representatives to build a terrestrial partner database – AntaBIF (Antarctic Biodiversity Information Facility), that focussing on a biologically based project may be the best initial choice.

We need to ensure that we remain focussed on the goal of working closely with an interested science group to make sure that what we do meets a set of needs that they have. It will also need to be done in a time-frame which is consistent with us being able to demonstrate significant steps by the SCAR OSC in Buenos Aires. The presentation at the OSC must be a science presentation, focussing on how implementing the strategy has enabled SCAR to do things, which otherwise would not have been possible. The presentation can also then extend into showing that having followed the strategy for implementation, it will not now be difficult to integrate more data with the product, in order to answer even more interdisciplinary science questions. Huw Griffiths and Bruno Danis could provide good advice on this based on their experiences from SCAR MarBIN.

In addition to this, Paul Cooper suggested running a training session at the OSC on OGC services which would improve the capacity of Data Centres to use OGC services, and could show how quickly data can be mashed-up by using these services.

The major actions were:

- to form a group from SCADM and SCAGI of willing particpants who can dedicate time to the project [ACTION 22]
- meet with EBA to identify science questions which can only be answered with enhanced access to data held by the data centres [ACTION 23]