

**JCADM Review**

**31 March – 1 April 2005**

**NIOZ, Texel, Netherlands**

**Review Team**

Lesley Rickards (Chair), BODC, IODE  
Alessandro Capra, Geosciences SSG  
Maurizio Candidi, Physical Sciences SSG  
Ad Huiskes, Life Sciences SSG  
Berry Lyons, Director Byrd Polar Research Center, Ohio State (LTERs)  
Colin Summerhayes, SCAR

**Corresponding Members**

Anders Karlqvist, COMNAP  
Heinz Miller, COMNAP  
Ted Scambos, National Snow and Ice Data Center, Boulder

Revised 14 June 2005

**Contents of Report**

1. Summary ..... 3

2. JCADM Review Terms of Reference ..... 3

3. Summary of Review Team Discussions ..... 4

4. JCADM Achievements ..... 10

5. Recommendations ..... 14

    5.1 To JCADM ..... 14

        Antarctic Master Directory ..... 14

        Communication ..... 15

        Organisational ..... 15

    5.2 To SCAR and COMNAP ..... 15

Annex 1: JCADM Review Draft Agenda ..... 16

Annex 2: JCADM Terms of Reference ..... 17

## 1. Summary

Between 31 March – 1 April, 2005, a six-person team (representing three SCAR SSGs and LTER) conducted a review of the SCAR/COMNAP Joint Committee on Antarctic Data Management (JCADM) for SCAR and COMNAP. Unfortunately, no COMNAP representatives were able to be present for the review meeting, but their comments on the draft report were sought through correspondence. In addition NSIDC were unable to attend, but noted that they take the work of the metadata archiving for Antarctica very seriously, and believe that it is an important international record of the scientific exploration of the continent. They further commented that they strongly believe that the activity needs to be strengthened and broadened, and links to actual data archives need to be expanded.

The Review Team was joined by Taco de Bruin (NIOZ), Chief Officer JCADM, and NADC manager for Netherlands for parts of the review meeting. He also provided a presentation giving an overview of JCADM and its activities, reviewing the JCADM ToRs and commenting on the Review ToRs.

This report documents the review and presents the findings and recommendations of the JCADM Review Team. The Terms of Reference of the Review are given below, and the agenda for the review meeting together with the JCADM Terms of Reference are to be found in Annexes 1 and 2 respectively.

The Review Team concluded the review with a generally positive evaluation of JCADM. The Review Team feels that JCADM performs a necessary function and should be continued. The Review Team judged that JCADM meets its Terms of Reference. The achievements of JCADM to date are noted in Section 4. The Review Team made a number of recommendations that should help to improve the performance of JCADM and its value to the scientific community and COMNAP (section 5).

## 2. JCADM Review Terms of Reference

1. Review the content of the Antarctic Data Directory System (ADDS) to determine how extensive it is geographically and scientifically, and how it relates to the needs of the scientific community, for example the 5 SCAR Scientific Research Programmes
2. Review the system for ease of navigation to find data and information
3. Review the extent to which JCADM has met its own terms of reference
4. Examine whether JCADM has properly identified its user community and established procedures to obtain feedback from the community and measure users' satisfaction
5. Examine the extent to which JCADM is communicating adequately with the sponsoring organizations SCAR and COMNAP
6. Review interactions between JCADM and the SCAR Expert Group on Geographical Information (EGGI)
7. Consider what partnerships JCADM might profitably develop to improve data and information management in the Antarctic region, which includes the Southern Ocean as far north as the Sub-Antarctic Front (which includes possible partnerships with discipline based organisations like IODE and with policy based organisations like CCAMLR or the CEP).
8. Report to the SCAR and COMNAP Secretariats, summarising the reviews, including evaluation and recommendations, and including (if appropriate) suggesting new terms of reference and new report and control structures for JCADM to reflect new expectations

### 3. Summary of Review Team Discussions

Following introductions, and a welcome from NIOZ Director, J. Meulenkamp, the Review Team (RT) adopted the draft agenda (Annex 1). The RT then met for its first executive session. The RT reviewed the work to be done, the scope of the review and the broader implications. Colin Summerhayes, Executive Director SCAR, provided some introductory remarks and questions. In particular, he noted that there is currently no SCAR strategy for data and information management, and one needs to be developed in the near future. He asked for the opinion of the Review Team as to whether the \$10k jointly paid by SCAR and COMNAP for the AMD development is appropriate and asked the Review Team's opinion as to whether JCADM should be developing links with other organisations, for example, CCAMLR, which deals with fisheries (including plankton) birds and seals. The Review Team agreed that links with CCAMLR should be encouraged.

The Review Team discussed their impressions of the work of JCADM. Whilst agreeing that the Antarctic Master Directory (AMD) was very useful as a window into the metadata on Antarctic data sets, there were a number of comments on its user-friendliness, usability and coverage. For example, for a new user it was felt that it is not always easy to understand the AMD; solar and terrestrial data are not well represented; it can be difficult to find data, as there are too many steps for the search facility; it is sometimes hard to get what is wanted from the system; and there is a language difference between scientists and database people. It was thought that it might be useful for JCADM to produce a clear and simple document describing the AMD, which should be available to all NADCs and the scientific community. Although geospatial referencing is important for much of the data collected in the Antarctic, it is not so relevant for astronomical data, although reference to time is useful in that case.

Overall, the Review Team agreed that the AMD (which is part of NASA's Global Change Master Directory, GCMD) was technically good. The problems with it and with JCADM are really related to a need for JCADM to improve outreach to those both submitting data and searching for data. In particular, two-way communication with scientists is crucial – their input is valuable to ensure data sets are properly defined, and it is important that they understand how the AMD can be used, and, indeed, that they make use of it.

The Review Team noted and agreed with the following statement relating to the AMD from the 2002 STADM Report 2002:

*“We began by reviewing the quarterly reports. The reports detail project tasks and schedules in considerable detail but it was difficult to get a sense from the reports as to the level of AMD functionality and its utility to the science community. To evaluate the latter, we simply logged onto the data system and sought information about various data sets ranging from remote sensing observations to ice cores. We found that the AMD interface was easy and convenient to use and successfully pointed to data sources. Several of the data sources could be reached on line and in some cases the data themselves could be retrieved electronically. In short the system performed very satisfactorily. Although some information in the AMD may be available in other databases, the centralized, one-stop-shopping attribute of the AMD makes the system unique and useful.”*

The RT discussion moved on to consider data as well as metadata. In general, it appears that the national committees do not give data management a high profile. Furthermore, there appears to be little effort to meet the SCAR requirement, and indeed the Antarctic Treaty

requirement, to make data freely available [Article III of the Treaty states that “*in order to promote international cooperation in scientific investigations in Antarctica, Parties agree ... that ... (c) scientific observations and results from Antarctica shall be exchanged and made freely available.*”]. The Antarctic Treaty Consultative Meeting (ATCM) has acknowledged (i) that it is difficult to get investigators to provide data to NADCs; (ii) that some Treaty Parties have not nominated NADCs; and (iii) that data are not being managed by all so that free access is enabled. For that reason, ATCM Resolution 4 (1998) recommended that:

- Parties who have not yet done so should establish National Antarctic Data Centres and link them to the ADDS [*JCADM is helping to do this*];
- Parties and their NADCs encourage their scientists, through a process of education, support and the development of policies and procedures, to provide in a timely manner appropriate information to their NADCs for distribution through the ADDS; and
- Parties give priority consideration as to how the requirement for freedom of access to scientific information, in accordance with Article III (1)(c) of the Treaty, is achieved within their national data management systems.

Evidently, SCAR should urge its Members (i) to fully implementation and support the Antarctic Data Directory System, which is essential to maximize the value of the data being collected in Antarctica, and (ii) to report on progress at biennial SCAR meetings. There needs to be a strategy to ensure that data collected are managed properly for the future, and funding bodies need to implement this. Some funding agencies (e.g. national and EU) do recognise that there is problem, and have put in place measures to encourage scientists to make their data readily available, as a condition of receiving funding. The RT noted that in past EU projects the final funding has been withheld until data have been submitted to the appropriate agency. In the Antarctic context, although lack of manpower is a problem in many NADCs, what is really required is a political strategy to ensure the safeguarding for the future of the data sets collected now and in the past. It is important to note that scientists often want to know what the benefit to them is of providing their data to data centres, as their priority is to do science and their output is measured by the number of papers produced. There has been discussion for some time in other areas (e.g. oceanography) about developing a system for peer reviewed and/or citable data sets – this would ensure that the scientist would gain an identifiable and recognised output from providing data sets to data centres. It was noted that the USA and Australia do enforce their data policies. The Review Team agreed that the organisations that comprise COMNAP are the bodies that could enforce data policy, and they should be actively encouraged to do so.

However, the RT recalled that its main task was to review JCADM, and not the extent to which nations meet the requirements of the Treaty. In this context, there is a big difference between metadata (which JCADM is primarily concerned with) and raw data. Although JCADM provides much useful information on data management best practice on its web site, for the benefit of NADCs, JCADM’s current main priority is to ensure that there are metadata descriptions of all Antarctic data sets in the AMD. At present there are 32 NADCs (19 of which are submitting metadata to the AMD), and new data centres are being set up and brought in to the system.

Following these preliminary discussions, the Review Team was given a presentation on JCADM by the JCADM Chief Officer, Taco de Bruin. His presentation highlighted JCADM

successes in recruiting new NADCs and increasing the metadata set descriptions in the AMD. He reminded the RT that there are large differences in resources between the NADCs, which vary from full-fledged data centres to one person part-time. This difference is partly reflected in the number of data sets described in the AMD (e.g. Australia has many more data sets in the AMD than other countries do). He also noted the role of JCADM in capacity building (in training people how to run NADCs, for instance), and the advice and information provided by JCADM to the AMD host (i.e. GCMD). Relations between JCADM and the GCMD were good – they responded rapidly to requests.

Dr de Bruin noted that there is a great variety in the data set granularity in the AMD data sets (a problem not unique to Antarctic data). He estimated that 10 – 40% of all data sets available are in the AMD. At present there is a lot of activity going on in, for example, Italy, UK, Germany, France and Korea, which will lead to more data sets populating the AMD. Italy is developing its own data and information management system and aims to make its metadata available to the AMD later in 2005.

With regard to links between JCADM and the Expert group on geographical Information (EGGI), Dr. de Bruin commented that the JCADM Deputy Chief Officer (Peter Pulsifer, Canada) is an active member of EGGI, which facilitates the building of good cross-links between the two organisations.

Dr., De Bruin discussed data management background information, the history of JCADM, and its Terms of Reference, and provided some comments on the JCADM Review Terms of Reference. He commented that when he took on the role of JCADM Chief Officer, the job was not well defined. Together, he and Colin Summerhayes have produced a specification for the JCADM Chief Officer, which resolves that question.

The Review Team discussed liaison between JCADM and SCAR's Standing Scientific Groups (SSGs) and Scientific Research Programmes (SRPs), JCADM will attend the 2006 SCAR (SSG) meetings in Hobart, and will give a presentation to each of the SSGs: – this should illustrate the use and benefits of the AMD, and highlight the NADC network, but avoid technical issues, like for example, the structure of the AMD database. The RT agreed that more connections like that, between JCADM and the science groups, were essential if JCADM was to prosper and to demonstrate its true value.

The Review Team discussed liaison between JCADM and the IPY. JCADM had contributed significantly to the draft data and information plan for the IPY. An IPY data sub-committee was being formed and should include the JCADM Chief Officer. Links to the electronic geophysical year also need to be developed.

The Review Team thought that one means of interesting scientists in the AMD would be to find examples of research that could be done or had been done using data identified from the AMD.

The Review Team agreed that SCAR/COMNAP should take responsibility for making the AMD system more effective, for example, using Australia as an example and encouraging more organisations to become part of JCADM.

The AMD web site has been redesigned and there is a metadata assistant to help enter data. The JCADM Chief Officer noted that the GCMD staff is very helpful – they provide a timely

response and they provide a quality control on incoming information. The Review Team agreed that JCADM, and thus SCAR and COMNAP, have a cost effective arrangement with GCMD, which makes use of the existing expertise and infrastructure in place at the GCMD together with quality control of incoming metadata and provision of feedback. The \$10k per year provided to GCMD represents good value for money.

The Review Team tested out the AMD, searching for algae in the Australian biodiversity database. However, as AMD is a discovery level directory, it does not have detailed species information. This searching provided the Review Team with a greater insight into the AMD and also highlighted the need for good communication with SCAR, COMNAP and potential users of the AMD, to ensure that they know what level of information is included in the directory, and that it links to more detailed information, data and databases. The Review Team noted that the free text search is not as good as it could be. It was also felt that links between the AMD and the Australian biodiversity database should be improved.

The Review Team noted that a list of keywords for astronomy has been supplied by Italy, and the Review Team recommended that JCADM work with GCMD to ensure that these astronomy keywords or 'valids' are included. Furthermore the Review Team recommended that the SCAR SSGs work with GCMD to improve the data vocabularies available. JCADM needs to be in contact with the SCAR action groups so that activities like, for example, SuperDARN and CEDAR are included in the AMD. It was noted that sometimes international activities may get lost at the expense of national ones, as it is not always clear whose responsibility it is to create the metadata records.

Discussion relating to the content of AMD concluded that 3000+ entries was certainly a good start, but there remains a lot of data descriptions not yet submitted to the AMD. The Review Team agreed that the AMD is a good system and that all nations should be encouraged to further populate the database. The number of entries is growing, by approximately 300 DIFs/year, and the number of users is growing. The rate of use is greater than the rate of population with metadata sets.

Currently, some have a national presence on the AMD; this was felt to be beneficial by the Review Team, and those countries without such a presence should be encouraged to develop one

It was noted that although the development of the AMD has been good, SCAR/COMNAP do not know what the plan is to develop the system, for example it would be useful to know what is there now against what is promised for the medium and longer term.

The Review Team agreed that there needs to be an assessment of entries in the GCMD to see if there are data sets which have come from sources other than the NADCs, which are relevant to the AMD but not cross-linked to it (e.g. global data sets like the international Argo profiling floats). A similar assessment needs to be carried out looking at the data sets provided by the Global Observing Systems' Information Centre (GOSIC) (currently at the University of Delaware), which are not visible through the AMD view of GCMD. This is a two way process as there may be entries in the AMD view which are relevant to GOSIC, but not cross-linked to be visible from the GOSIC portal.

There was some discussion of the role of World Data Centres, but it was felt that although the WDC system is working quite well for a few types of data, it does not work for all. It was noted that ICSU is proposing to review the WDC system.

In terms of building up partnerships, the International Ocean Data and Information Exchange Programme (IODE) and JCADM intend to work more closely together, and Ariel Troisi, Head of the National Oceanographic Data Centre (NODC) in Argentina (and part of IODE) will attend the next JCADM meeting (in Buenos Aires) later in 2005. Development of partnerships with other projects and programme was deemed useful; examples are EU SeaSed, OBIS, GBIF, SuperDARN, IODE and JCOMM.

The Review Team discussed astronomical data (collected on Antarctica) and how to discover it through the AMD. Could such data be found through examination of university web sites, and is there an international list of centres? More generally the Review Team noted that most of the AMD entries have come from the NADCs, and data collected by other organisations are not described in the Directory.

The Review Team considered the advantages of a data management system handling just metadata against one handling data as well. There was a general feeling that getting data together was important, as were data policies and their implementation. However, realistically JCADM and the NADCs are already fully committed, and therefore perhaps consideration of this question should be a task for the next review, when other issues have been worked out. In any case, JCADM is already providing advice on standards and best practice – there is plenty of information and guidance on the JCADM web site. The JCADM Chief Officer noted that JCADM is looking at the EU-funded Sea-Search network as a model – Sea-Search links together the National Oceanographic Data Centres in Europe, and has concentrated on common metadata catalogues and indexes. However, within JCADM and the NADCs there are currently insufficient resources to expand from managing metadata into managing the data and the associated generation of products.

There was also the danger of trying to do too much too soon with limited resources. It was agreed that JCADM should work with those national committees who are involved in generating products. However, it would be difficult for JCADM to work with those communities where the data remain with the scientists and are not professionally managed or archived.

Brief consideration was also given to moving towards a bi-polar system (i.e. Arctic as well as Antarctic metadata). Such a combination might provide a better chance of obtaining EU funding. Although the Review Team agreed that there would probably be a number of benefits to a bi-polar system, they were reluctant to commit to it at this stage without wider consultation. Linked to this, the Review Team also considered the possibility of extending the AMD to additionally cover the Arctic, and of encouraging IASC to have a 'JCADM' for the Arctic. IASC is responsible for the International Arctic Environmental Data Directory (ADD), through the ADD Council. The possibility may exist of linking this to JCADM, especially given that SCAR and IASC are discussing possible linkages.

Although these strategic questions were beyond the ToRs of the RT, the RT concluded that an overall plan is required laying out the best way to manage Antarctic data and information. This includes the need to persuade funding agencies to recognise the problem of including metadata in the system and ensuring that data management is included in proposals. The RT

agreed that data and information management needs to be moved higher up in national agendas.

For some research areas, for example, for disciplines relating to astronomical data and upper atmosphere physics, the Antarctic is a good platform for carrying out the measurements. However, such data, like geodetic measurements in Antarctica, are not strictly Antarctic data, but global. Some thought has to be given to how to handle these kinds of data, which have been acquired in Antarctica, but are not strictly Antarctic data. The question of whether GCMD are interested in such data sets arose. However, the GCMD is for all Earth Science, and satellite data are included, so global data sets of relevance also need to be included in GCMD.

Information exchange and flow between from JCADM and the NADCs back to the scientific community could be improved. Meetings with heads of standing scientific groups could improve this liaison. In Italy for example, various groups had been contacted and assistance provided in completing metadata entries. The Review Team agreed that the NADCs need to provide information to scientists and to strengthen linkages with national science committees, SCAR and SSGs. JCADM and the NADCs have to be proactive and use a variety of methods to raise the profile of the AMD to encourage its use and its continued population.

The Review Team felt that although good progress had been made in populating the AMD, submission of data set descriptions could be better and JCADM and SCAR should seek out unused datasets and continue to populate the AMD with new entries.

Considering the present reporting to SCAR/COMNAP, the Review Team agreed that in the future JCADM should report to the SCAR and COMNAP Executive Committees (one year) and to Delegates in the intervening year. A written report should be provided and verbal presentation given. At present JCADM only reports to the executive committees. JCADM should also report to the delegates.

The RT thought it would be beneficial for JCADM to have an advisory board, with scientific (e.g. SCAR-SSG), COMNAP, and data management representatives, instead of STADM, to oversee JCADM's work and evaluate their reports.

As a result of these discussions, the Review Team drew up a number of recommendations to JCADM and also to SCAR and COMNAP. These are listed in Section 5.

#### **4. JCADM Achievements**

- Recruitment of new NADCs (1997 – 15; 2004 – 26; 2005 – 30+?)
- Capacity building workshops (1998, 1999, 2003, 2005)
- Provision of advice on standards and policies
- Communication between NADCs good
- Brochure describing JCADM
- Initial contact made between NADCs and NODCs
- Cost effective use of specialised GCMD portal (Antarctic Master Directory)
- Good relationship with GCMD

- Over 3000 entries in AMD (1326, July 2001; 2116, July 2002; 2544, April 2003; 2966, June 2004; 3094, March 2005) – see Figures 1, 2 and 3.
- Number of countries adding metadata has increased, from 9 in 2002 to 19 in 2005
- Number of users growing 100/month Jan 2003 to 450/month March 2005 (see Figure 4 and 5)
- A number of countries have set up national portals with AMD (2 in 2002 to 15 now)
- JCADM made a major contribution to IPY Data and Information Strategy published in the IPY framework document

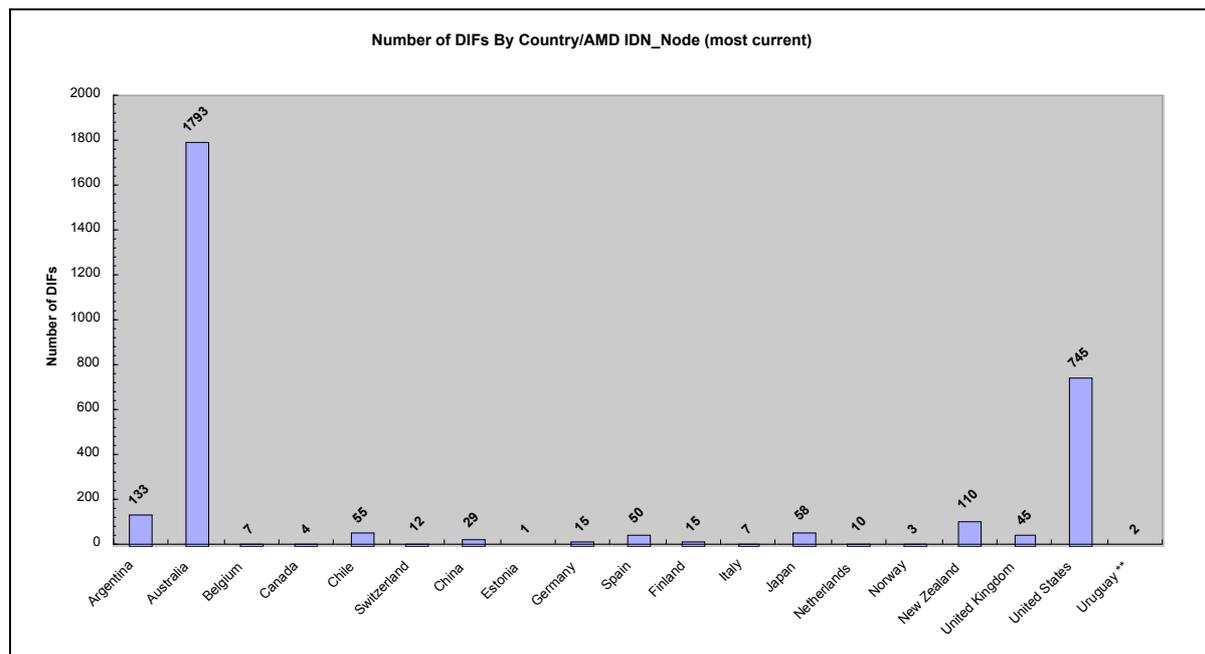


Figure 1: Number of DIFs in the AMD by country

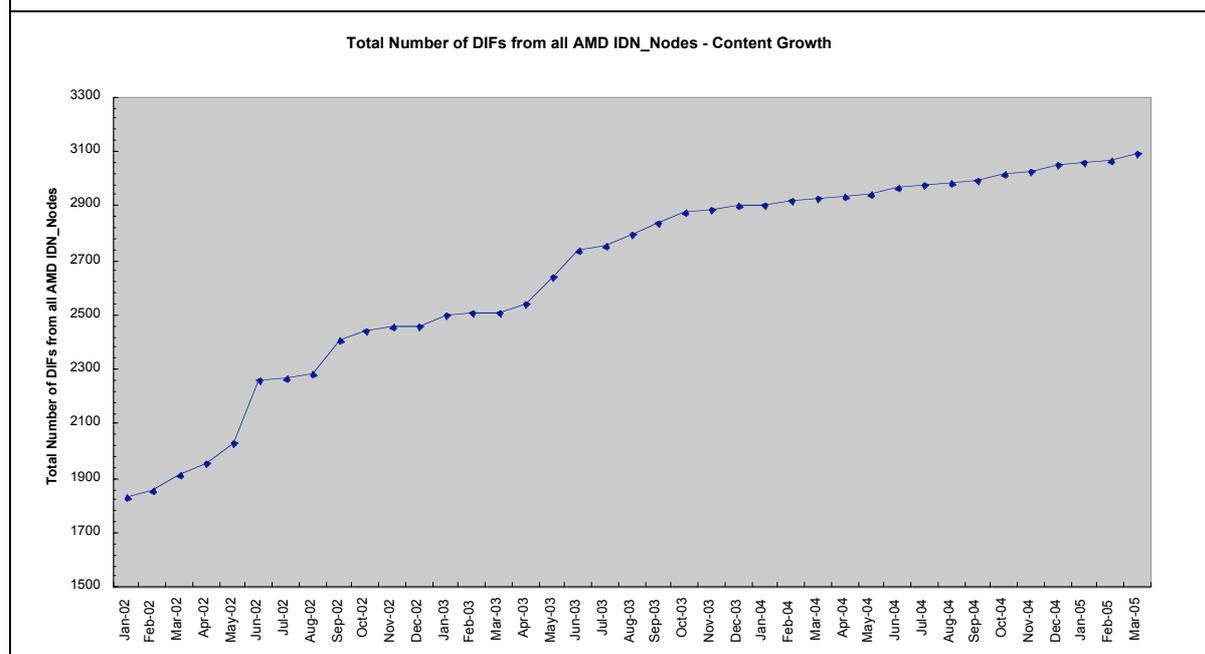


Figure 2: Total number of DIFs included in the AMD – January 2002 to March 2005

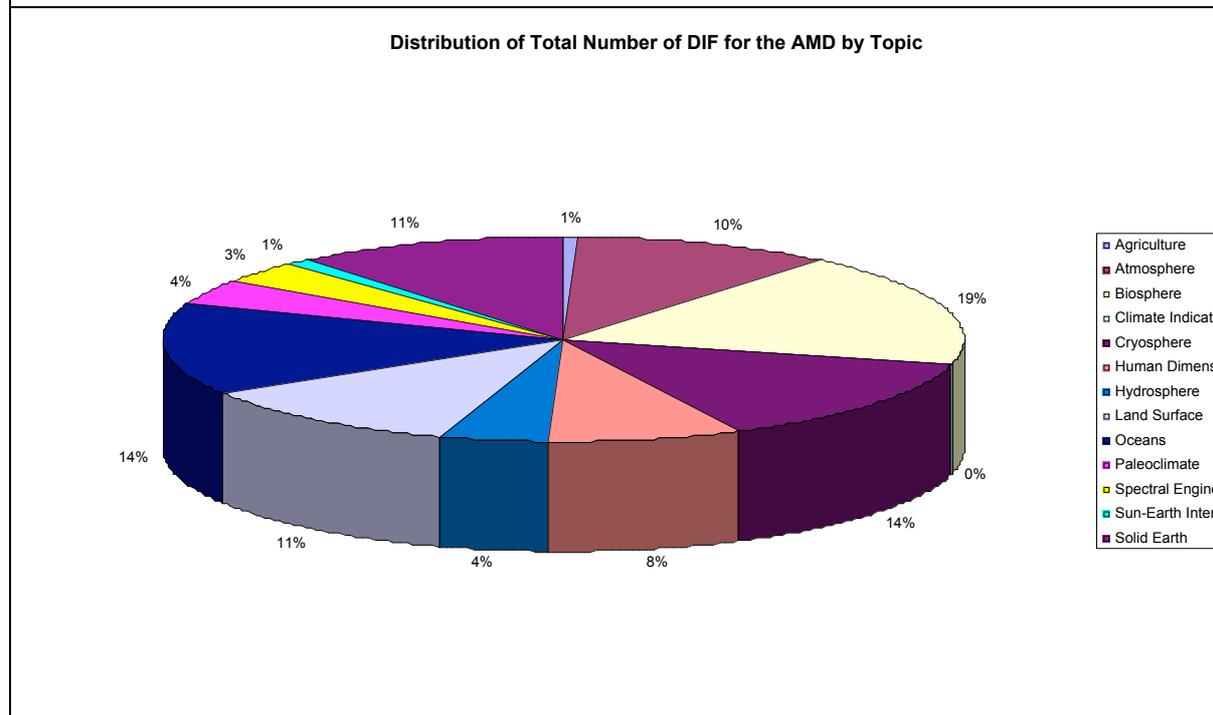


Figure 3: Distribution of total number of DIFs included in the AMD by Topic (March 2005)

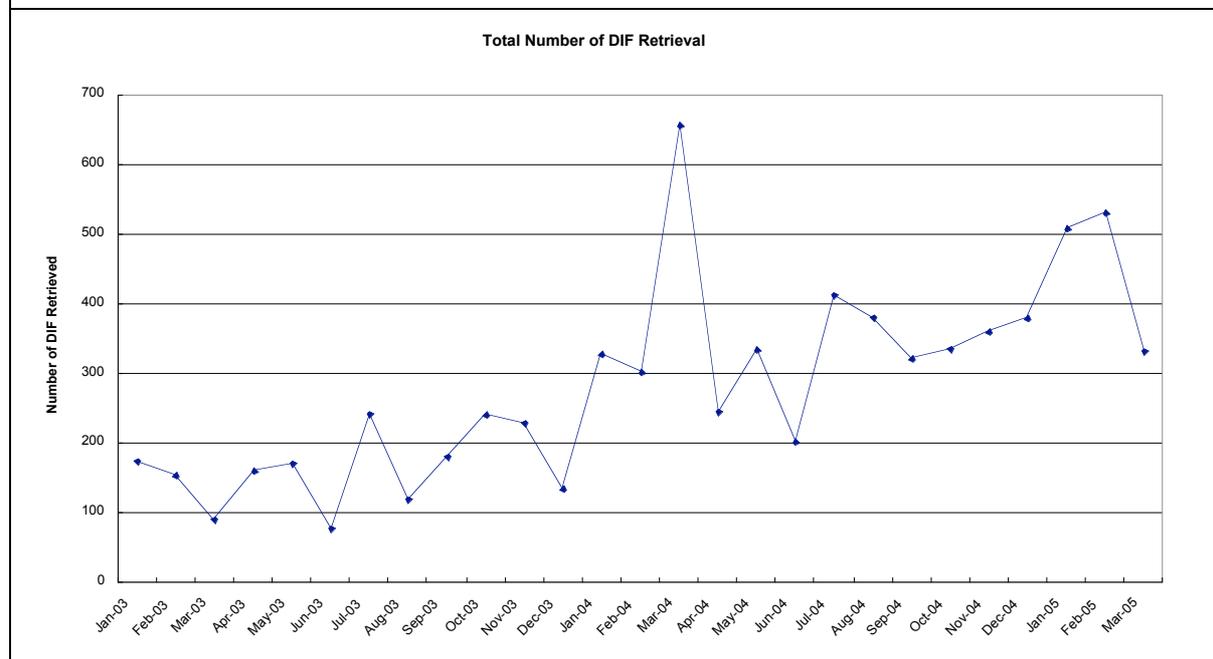


Figure 4: Number of DIFs retrieved per month between January 2003 and March 2005

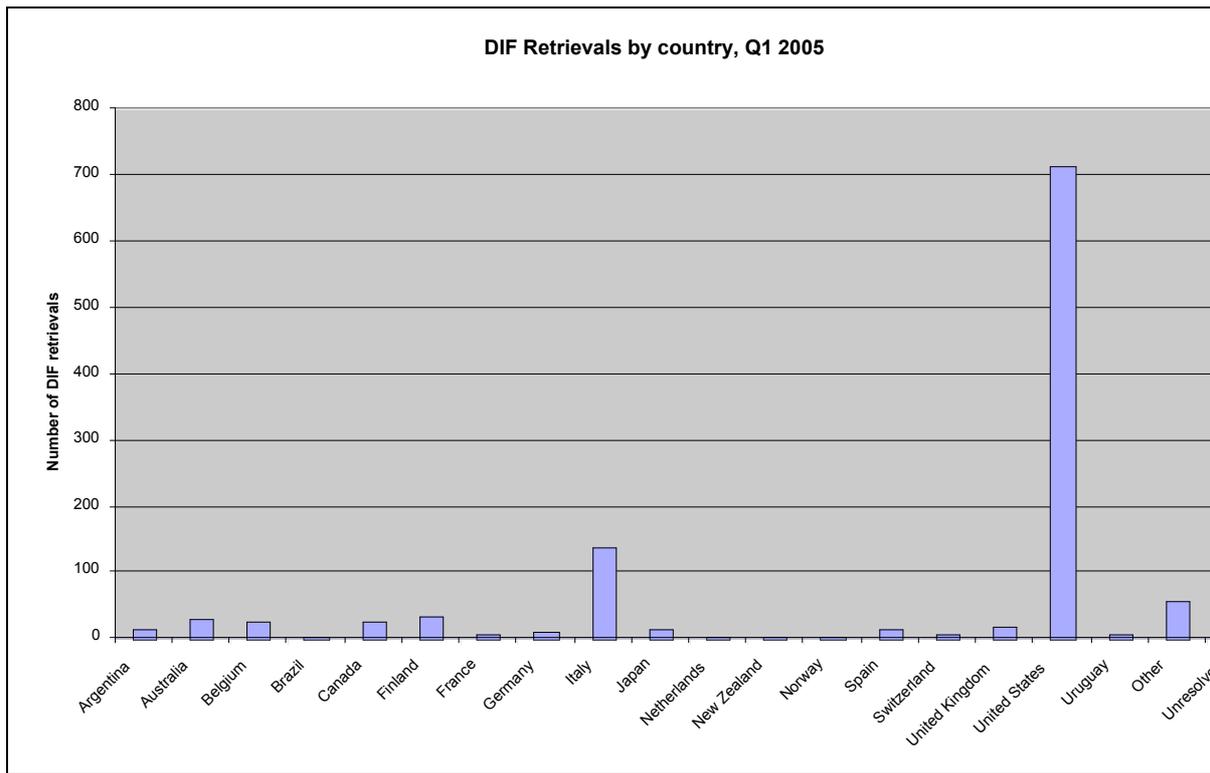


Figure 5: Number of DIFs retrieved by country between January 2005 and March 2005

## 5. Recommendations

### 5.1 To JCADM:

#### Antarctic Master Directory (AMD)

1. JCADM should continue to encourage managers of NADCs and the scientific community to submit entries to AMD to improve coverage (it is believed that about one third/no more than 40% of data sets are described in AMD?)
2. All nations should continue to submit metadata sets to AMD, for example
  - JCADM to continue to find out more about what is going on at the national level outside the NADCs (for example *via* SCAR National Committees), and
  - JCADM and NADCs to encourage metadata submissions to AMD from university groups
3. In order to meet the requirements of Treaty Article IIIc it is highly desirable that the metadata in AMD do contain links to the original data (and JCADM should encourage links to the data sets themselves through AMD)
4. JCADM should establish and/or improve linkages with other (compatible) metadata directories (e.g. EDMED, MEDI)
5. JCADM should work with GCMD to investigate the addition of astronomy categories and key words.
6. JCADM should work with GCMD to add additional key words where appropriate (e.g. sea surface temperature)
7. Put all 26 NADC portals with their logos on the portals page of AMD
8. JCADM, in cooperation with GCMD, should expand AMD to be a window into all possible data sets – e.g. global maps of piston cores including those from the Southern Ocean, JCOMMOPS (e.g. Argo, VOS, SOOP, Drifting Buoys, GLOSS), GBIF, OBIS, SuperDarN, WDCs etc. this would achieve a step function increase in population and utility.
9. JCADM, in conjunction with the Review Team Chair and Executive Secretary SCAR, should consider reviewing GOSIC entries in GCMD and flag those relating to Antarctic data sets, so that these are available through the AMD. Similarly, JCADM should provide GOSIC with information on those AMD entries which should be accessible through GOSIC.
10. Use satellite experts to evaluate what entries are in the GCMD that relate to the Antarctic region, and what should be added (and flagged in the AMD part of the GCMD).
11. JCADM should review what *in situ* data set descriptions are missing from AMD but already included in GCMD (e.g. global data sets with an Antarctic component) and ask GCMD to flag these in AMD
12. JCADM to ensure that international Antarctic region data collection activities are included in AMD
13. JCADM should review and check existing AMD entries periodically

**Communication**

14. JCADM to improve communication with data collecting scientists and users (including SSGs, SRP Steering Committees, SCAR Expert and Action Groups), through provision of clear information about use of and input to AMD, including examples (from scientists) of what research can be done using data from AMD, and guidance for searching
15. JCADM to use opportunities such as conferences and newsletters to make the scientific communities more aware of opportunities offered by/benefits of the AMD, the NADCs and JCADM.
16. JCADM to establish communications and collaboration with EGGI, starting with JCADM-9, and continuing with intersessional meetings to discuss areas of mutual interest, including the EGGI sub-project Antarctic Data Linkages and liaison regarding geospatial information activities

**Organisational**

17. An annual written report should be made available for the Executive Committees (by end May)
18. As part of its annual report JCADM should produce a quantified plan of what will be done over the year, e.g. estimate of likely additions to AMD.
19. JCADM to formally report to the SCAR and COMNAP Executive Committees (one year) and the Delegates (intervening year).
20. Consider developing a network of allied data centres (e.g. WMO, NODCs, GBIF, OBIS, CCAMLR, etc.) through bilateral partnerships.
21. Improve capacity for long term data stewardship, including compiling data sets

**5.2 To SCAR and COMNAP:**

22. SCAR should invite JCADM to make specific presentations to each SSG, focusing on individual SSG scientists needs, during their biennial meetings, starting in 2006.
23. Create an advisory structure comprising the Chief Officers of the SCAR SSGs, experts in data management and COMNAP representatives, to provide guidance to JCADM and to evaluate its reports. This body should meet biennially prior to (and report to) the joint meetings of the SCAR and COMNAP executives. *[This body should replace STADM.]*
24. SCAR and COMNAP should encourage the involvement of JCADM in the further development of IPY Data and Information Management plans.
25. SCAR and COMNAP should encourage managers of National Antarctic programmes to consider developing and applying methods to ensure submissions to AMD at the national level within a specified time frame, possibly following the Australian and USA examples
26. SCAR and COMNAP should make the link to data more obvious on their web pages
27. SCAR and COMNAP should develop a data and information strategy for the future, as recommended in the SCAR strategic plan.
28. SCAR and COMNAP should continue funding of AMD

## **Annex 1: JCADM Review Draft Agenda**

**Royal Netherlands Institute for Sea Research (NIOZ),  
Texel, Netherlands**

### **Day 1: Thursday, 31 March 2005**

- 09:00 Welcome from Prof. Dr. J. Meulenkamp, Scientific Director of NIOZ  
Other welcomes, local arrangements/logistics, introductions
- 09:30 Executive Review Team session: review work to be done, scope of review, broader implications
- 10:30 *Coffee*
- 11:00 Presentation of JCADM (JCADM Chief Officer, Taco de Bruin)
- 11:30 Discussion and question session
- 12:30 *Lunch*
- 13:30 Discussion and question session (continued)
- 15:30 *Coffee*
- 16:00 Executive Review Team session: preliminary discussion of recommendations
- 17:30 Meeting close Day 1

### **Day 2: Friday, 1 April 2005**

- 09:00 Review Day 1 – clarification with JCADM Chief Officer if required
- 09:30 Agree on the key recommendations
- 10:30 *Coffee*
- 11:00 Agree on the key recommendations (continued)
- 11:30 Discuss recommendations with the JCADM Chief Officer
- 12:30 *Lunch*
- 13:30 Review group executive and drafting of report
- 15:30 Wrap up session
- 15:45 Meeting close

## **Annex 2: JCADM Terms of Reference**

JCADM is responsible for the Antarctic Data Directory System (ADDS) which comprises the Antarctic Master Directory (AMD) and the National Antarctic Data Centres (NADCs). This includes:

- The promotion of data management within the Antarctic Scientific Community
- Providing guidance to the AMD host
- The assistance in establishing Antarctic data management policies and priorities
- The recruitment of NADCs; these NADCs then catalogue datasets and provide information on data sets to the scientists and others with an interest in Antarctic Science
- The encouragement of scientists to submit metadata to the Antarctic Data Management System
- The reporting to SCAR and COMNAP (hence Treaty) on Antarctic data management issues