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## **ANNEXES**

1. Agenda
2. Personality List
3. Distribution/Sales of the GEBCO Digital Atlas (June 2001 – May 2002)
4. List of Acronyms

**Contrary to earlier years, in 2002 the Minutes of the GEBCO Officers have been prepared separately from the Minutes of the GEBCO Sub-Committee on Digital Bathymetry (SCDB).**

## **1. OPENING OF THE MEETING**

- 1 The Thirteenth Meeting of the Officers of the joint IOC-IHO General Bathymetric Chart of the Oceans was held at the Elliot Alumni Center of the University of New Hampshire, Durham, New Hampshire, USA on 20<sup>th</sup> and 21<sup>st</sup> May 2002.
- 2 The Chairman, Sir Anthony Laughton, opened the meeting at 1330 on 20<sup>th</sup> May. Those present were the Chairman, Robert Anderson (20<sup>th</sup> May only), Norman Cherkis, David Divins, Robin Falconer, Jose Frias, Neil Guy, John Hall, Peter Hunter, Meirion Jones, Mike Loughridge, Laurent Louvart, David Monahan, Hans-Werner Schenke, George Sharman, Shin Tani, Pauline Weatherall and the Permanent Secretary.

## **2. CONDUCT OF THE MEETING**

### **2.1 Adoption of the Agenda**

- 3 The Agenda for the SCDB was adopted (Annex 1). It was agreed that, unlike meetings in recent years, the Minutes of the Officers and of the Sub-Committee on Digital Bathymetry (SCDB) would be prepared separately.

### **2.2 Documentation**

- 4 The Permanent Secretary, introduced the documentation for the meeting. This included the latest Personality List (Annex 2) and a report on distribution and sales of the GDA (Annex 3).

## **3. MEMBERSHIP OF THE GEBCO COMMITTEES**

- 5 There were no changes to the GEBCO Officers but it was agreed to add Dr Smith to the membership of the SCDB. Dr Loughridge enquired how a new sub-committee was set up or an existing one disbanded to which there was no satisfactory response. Dr Falconer observed that the activities of the SCDB went beyond just digital bathymetry; there might be a need for a different sub-committee, for example, on assimilating data. It was agreed that the matter should be deferred because it depended on the content of the new Strategy Plan to be discussed the next day.
- 6 The discussion then turned to SCUFN. Dr Falconer felt he could no longer act as a valid member of SCUFN because of the frequent overlap with SCDB meetings. Dr Loughridge considered there was a lack of interest in serving on SCUFN. New blood was required but the problem was how to entrain new members. Mr Cherkis volunteered that he had a parallel interest as a member of ACUF. He had also helped Mr Huet during the past year with checking the Gazetteer. Rear Adml. Guy shared members' concerns about SCUFN membership but cautioned that Mr Huet could not become more involved than he was already. The Chairman concluded that it was up to Dr Fisher, the Chairman of SCUFN, to engender replacements to the committee. Dr Fisher was doing an excellent job and had expressed his wish to remain as Chairman until the 2003 Centenary Conference.
- 7 No change to the membership of the Strategy Planning Committee was proposed. Membership of the Centenary Organising Committee was not an issue since the work of that committee was coming to an end.

- 8 Dr Sharman reported on the status of the Education Working Group. The WG was not active and had not yet met. He had spoken to Dr Kim Kastens who remained interested in the project but it had been pointed out that when, 6 years ago, she had started a similar project she had been given \$28-30k seed money. Dr Sharman said he would help Dr Kastens to apply for an NSF grant to build a prototype educational GDA over a 12-month period but this was not necessarily the only way forward. The Chairman reminded Dr Sharman that GEBCO had offered the WG \$5000 start-up funds in 2001; was this still required? Dr Sharman was not certain and thought that the Group might be equally effective without holding any formal meeting. In response to questions about inviting Dr Kastens to the present meeting and to the Centenary Conference Dr Sharman replied that she needed financial support more than being enthused by the GEBCO community. Dr Hall responded that he might be able to offer such support; he needed a brief document describing the WG's objectives [Action Dr Sharman]. The Chairman finally remarked that Dr Goodwillie was very enthused about the educational aspects of GEBCO. Dr Sharman replied that he would be very happy for him to join the WG [Action Dr Sharman].

#### 4. SCOR WORKING GROUP 107

- 9 Mr Hunter, a member of the SCOR Working Group 107, reported on the status of the Working Group's final report. Final corrections and figures had been requested in February 2002 and by May 2002 the report had reached the IOC for final checking. It was expected to be with the printers within two weeks (by the end of the first week of June) and publication would occur in August 2002.

#### 5. ACTION ITEMS FROM GUIDING COMMITTEE XVIII

- 10 Action items from the 2001 Guiding Committee meeting in Japan were reviewed. Items that remained uncompleted or not started included the following. Mr Monahan had been unable to check whether Canada has a better radar satellite shoreline than WVS+. Dr Falconer had yet to discover why the Australian Antarctic Division data are not in the IHO database or in NGDC. Dr Hall expected to grid the Red Sea, Dead Sea, Mediterranean Sea and Sea of Galilee by the end of September 2002.
- 11 Mr Hunter had experienced problems in importing InterRidge bathymetry but some Atlantic Ocean data had been acquired. Dr Loughridge mentioned that some InterRidge data had been acquired by NGDC. He saw that the problem was to keep up the flow of new data. Was there overlap with Mr Hunter's efforts? Dr Loughridge suggested that the IHO DCDB should keep a check on the eventual destination of all mid-ocean ridge swath surveys [Action Dr Sharman]. The Chairman then asked Mr Hunter whether he had attempted to obtain continental margin data for the GDA 2001 from at least the 13 countries that replied positively to the recent circular letter from the IHO. The answer was no. Dr Jones interposed that only a very small percentage of the total area of continental shelf lay off the 13 countries (which included the Netherlands, Germany, New Zealand, Brazil and Greece). The Chairman concluded that Dr Jones and Mr Hunter should decide which of the 13 countries to approach [Action Dr Jones, Mr Hunter].
- 12 Dr Sharman reported that he had not yet acquired Dr Keating's charts from around Hawaii [Action Dr Sharman]. He would also prepare a breakdown of the provenance by country of data acquired by the DCDB [Action Dr Sharman]. Regarding the acquisition of data from the Sea of Okhotsk he was aware that his letter to Drs. Svarichevsky and/or Udintsev had been received but there had been no response yet. Finally Dr Sharman reported that Part 4 (Multibeam Data) of the Guidelines was in revision. There was ongoing discussion over the grid size relative to

the navigation system used and the multibeam footprint. The latest version had been passed to Mr Huet very recently.

- 13 Dr Jones queried whether it was useful to re-visit the GEBCO Guidelines. Updating of this document had been started 15 years ago. Rear Adml. Guy responded that the IHB planned to re-write Part 2 Section A (Analogue data). Part 2 Section B (Digital data) also needed re-writing. The last version was published in 1991 and the last revisions had been made in 1993. The Chairman added that an update of Annex 2 had been discussed at the May 2001 CGOM meeting in St Petersburg and possibly had been left as an action item. The Secretary was instructed to write to Dr Giermann, the Chairman of CGOM, to establish the status of Annex 2 [Action Permanent Secretary]. Rear Adml. Guy offered to circulate the latest version of the GEBCO Guidelines [Action Rear Adml. Guy].

## 6. REPORT OF THE SUB-COMMITTEE ON DIGITAL BATHYMETRY

- 14 Dr Jones, Chairman of the SCDB, presented his report. The full Minutes of the SCDB are attached separately to these Minutes.
- 15 Sales of the GDA during 2001-2002 are reported in Annex 3.
- 16 The production date of the GDA was discussed at length. It was recognised that all depended on the delivery of the gridded Indian Ocean bathymetry by Dr Goodwillie. The time required to organise the some 100,000 files, write the supporting text and turn out the CD-ROMs was less critical. The GDA had already been converted to run under Windows. Dr Jones was aiming for production by 14<sup>th</sup> November 2002. The Chairman was mandated to discuss with Dr Goodwillie ways that GEBCO could help him ensure that he delivered on time [Action Sir Anthony Laughton].
- 17 The technology required for Print-on-Demand of the 6<sup>th</sup> Edition (2003), which was Agenda item 5.5, would be looked at in the next 12 months.
- 18 Dr Jones said he would supply 'tasters' of bathymetric charts to put on the GEBCO web site after the production of the GDA [Action Dr Jones]. Dr Loughridge encouraged him to do it sooner.

## 7. GEBCO FINANCES

- 19 The Chairman presented a summary of GEBCO's financial situation. Income had been obtained from a variety of sources including the sale of the GDAs. Expected outgoings in the coming 12 months included the Centenary Conference and publication of the 'History of GEBCO' book and associated editorial costs. The Chairman proposed that honoraria should be offered to the two Sub-Committee Chairmen, both of whom were now retired, and to Mr Scott and Mr Harper for their assistance in editing the book and/or negotiating with the publisher. In the ensuing discussion it was agreed as a matter of principle that GEBCO should meet the travel and subsistence expenses of the Sub-Committee Chairmen, if necessary. Although there was support for providing some further funds to recognise the Chairmen's contributions there was reluctance to set a firm figure because of the uncertainty of GEBCO's future income. Mr Monahan was concerned that by April 2003 all GEBCO's funds might be spent. The Chairman responded that the problem was to increase GEBCO's income. He was less concerned if GEBCO returned to an unfunded situation, it had been there before. It was concluded that he should authorise one-time payments to the four people mentioned above [Action Sir Anthony Laughton].

- 20 The Chairman then returned to the question of how to support Dr Goodwillie, perhaps by anticipating income from the sale of the GDAs. At this point Dr Loughridge and Dr Falconer raised objections at the unusual sequential step-by-step approval of expenditure instead of seeking overall approval for a complete budget. The Committee's discussion stopped pending further information about Dr Goodwillie's needs. It continued the next day when it was agreed that the Chairman should write to Dr Goodwillie offering him financial assistance from GEBCO [Action Sir Anthony Laughton].
- 21 Rear Adml. Guy stated that as far as the IHO was concerned GEBCO is an IHO/IOC body. The IHO supports GEBCO as far as it is able and the cost is not accounted for. He would prefer to see GEBCO properly funded with proper accounting. The Chairman responded that IOC are extremely unlikely to give GEBCO an account. IOC expenditure on GEBCO is accounted for by Dr Travin, GEBCO has no control over the expenditure and has no access to these accounts. The same situation applied within the IHO. For these reasons he wanted to see a separate GEBCO-controlled fund.
- 22 Dr Hall indicated that any approach to a funding source to support a GEBCO Fellowship would require a brief outline of the proposed work with costs rather than just a blank request. Salary costs would depend on the domicile of the fellow. The Chairman offered to revise his earlier document into the required form [Action Sir Anthony Laughton]. Dr Hall also suggested contacting Microsoft with a view to raising funds by including GEBCO bathymetry in Encarta 2002. The Chairman replied that this was a valuable suggestion provided that any resulting constraints on GEBCO were minimised.
- 23 Dr Loughridge reminded members that Mr Tani had mentioned Japanese organisations which, if approached in the right way, would support the Centenary activities. Mr Tani said care would have to be taken in justifying the expenditure in terms of the effect it would have and any likely outcomes. The Chairman agreed that this approach should be tried and said he would communicate with Mr Tani by email to draft a suitable letter(s) [Action Sir Anthony Laughton, Mr Tani].
- 24 Mr Cherkis suggested that GEBCO should write to the Bill and Melinda Gates (educational) Foundation to request support for the Educational GDA. The Chairman asked Dr Sharman, as Chairman of the Education WG, to take on this task [Action Dr Sharman].
- 25 Rear Adml. Guy voiced his concern that GEBCO's approach to seeking funds was too *ad hoc*. What was really needed was a Financial Funding Committee. Dr Loughridge agreed. Mr Monahan responded that although the draft Strategic and Work Plans suggested setting up such a committee it would be better to start planning it immediately and hoped that members would volunteer before leaving Durham. The Chairman said he took Rear Adml. Guy's suggestion very seriously. He noted that professional fund raising is very expensive and requires a lot of effort. Personal contacts can be very important. Rear Adml. Guy replied that the Chairman needed support in his search for funds and, regardless of the success of the Strategic and Work Plans, the Chairman should chair a Financial Funding Committee. Dr Schenke agreed. Dr Falconer thought that the key was a small but active Working Group which needed to start work soon. Dr Hall pointed out that although governments are broke there is plenty of private money which GEBCO needed to locate and tap. The Chairman concluded that he was prepared to chair a Finance Working Group. Mr Tani, Mr Cherkis and Mr Monahan (provisionally) offered their services and Dr Hall offered to be a corresponding member. Rear Adml. Guy said he was happy to serve after his return to South Africa later in the year. He was concerned that ideas should come from the whole community with the WG acting as a focus. The Chairman closed the discussion by saying that the WG would consist of himself (as Chairman), Mr Cherkis, Rear Adml. Guy, Dr Hall and Mr Tani and operate mainly by correspondence. All members should feel free to feed their ideas to the WG. The Terms of Reference were agreed as,

1. search for individual patrons interested in the work of GEBCO
2. search for organisations and commercial entities who could profit from grants to GEBCO
3. prepare correspondence/approaches to these entities asking for funds
4. sustain the process
5. entrain others in the process
6. report to the Guiding Committee at least annually.

## 8. THE STRATEGIC AND WORK PLANS

- 26 The Committee considered at length the draft Strategic and Work Plans presented by Mr Monahan and Dr Falconer. Its principal objective was to identify the names of people to ensure that the jobs itemised in the Work Plan were carried out. Various aspects of the Work Plan tasks are discussed below.
- 27 Task 2 of the Plan proposed the setting up of a WG on the Integration of Geoscientific Data to GEBCO. The proposal was agreed by those present with the following membership Dr Smith (Chairman), Dr Schenke, Dr Divins, Dr Hall, Mr Tani and Mr Pharaoh (IHB) [Action Dr Smith]. The Terms of Reference of the Working Group are,
1. to improve the accuracy, utility, and marketability of GEBCO products by a) bringing new and ancillary data into GEBCO's portrayals of bathymetry, and by b) being more cognisant of the bathymetric needs of a broad community of geoscientists
  2. to advise GEBCO on the use of new technologies and ancillary data for bathymetric investigation, interpretation and portrayal.
  3. to support those relevant activities of the Guiding Committee and the SCDB, as enumerated in their Terms of Reference, including the integration of new technologies and ancillary data for bathymetric investigation and interpretation and the integration of scientific user needs into the interpretation and portrayal of global bathymetry
  4. initially the WG will a) study the possible quantitative use of satellite altimetry in future GEBCO products and return advice to the Guiding Committee and b) cultivate experts in the ocean modelling community and learn what feature and texture data are important in the modelling sciences
  5. report to the Guiding Committee at least annually.
- 28 Task 3 concerned data assimilation and acquisition. Rear Adml. Guy assured the committee that Mr Huet would ensure continuity of the flow of data from IHO. But he noted that data does not flow from IOC so easily. Dr Loughridge agreed that some data does not reach NGDC and proposed a WG to discover what part of the process was failing. Dr Divins concurred, he thought that the process needed better definition. Dr Falconer noted that GEBCO's review system no longer worked in spite of NGDC having Board members from all the IBCs. How could it be improved? Mr Tani was concerned that without an efficient means of collecting data GEBCO would fail. The Chairman concluded the discussion by proposing a WG on Data Assimilation and Acquisition with the following membership, Dr Sharman (Chairman), Dr Hall, Dr Frias, Dr Divins, Mr Tani, Mr Hunter, Mr Cherkis and Mr Huet [Action Dr Sharman]. No terms of Reference for the WG were set out.
- 29 Task 6 covered outreach. Dr Sharman offered to produce an icosahedral globe, printed with GEBCO bathymetry, to be distributed at the Centenary Conference [Action Dr Sharman]. Dr Schenke asked about the layout of the new paper edition of the GEBCO charts. Dr Jones replied that it would be in the same style as the 5th Edition plus some other types of presentation. Mr Monahan noted that GEBCO needs to generate a display to be used at conferences. Dr Jones offered to provide some graphics and text on a CD-ROM [Action Dr Jones]. Dr Jones agreed that such files could also be used on the GEBCO web site. Regarding

the writing of general interest articles about GEBCO for scientific and other journals Sir Anthony Laughton voiced the opinion that a collection of figures, such as were produced for the conference display, was needed.

- 30 Task 7 covered the development of rules for naming different types of features. Dr Schenke suggested that the scale-independent placing of feature names on charts should be included in this task. Rear Adml. Guy responded that the IHB had already tackled this problem in their e-charts and offered to find out how it was done [Action Rear Adml. Guy]. Others provided alternative suggestions of likely sources of solutions to the problem. Mr Tani offered assistance from Japan [Action Mr Tani].
- 31 The text of the draft Strategic Plan Version 3.1 was discussed next. Sir Anthony Laughton considered that the list of short-term actions supplied by Dr Smith should be considered by the SCDB. Rear Adml. Guy wanted the text to be re-formatted to highlight what GEBCO is trying to achieve and offered to carry out this task [Action Rear Adml. Guy]. He also offered to write an Executive Summary which would be useful for internal use within the IHO [Action Rear Adml. Guy]. Further discussion ensued about including the Terms of Reference of the Guiding Committee, its membership, a summary of how GEBCO currently operates [Action Dr Falconer] and how to present the negative aspects of the SWOT analysis in a more positive light.
- 32 Mr Tani enquired what mechanism would be used to monitor the progress of the Work Plan between meetings. Dr Falconer suggested that at a minimum a 6-monthly report should be submitted for distribution by the Permanent Secretary. The Chairman concurred [Action Mr Monahan, Dr Falconer] and in addition requested an annual report to the Guiding Committee. The Permanent Secretary should also be informed after task had been completed [Action All].
- 33 The Chairman summarised the timescale over which the Strategic and Work Plans were to be completed. The Plans had to be refined after the Durham meeting by correspondence and would be finally approved in April 2003. Mr Monahan commented that a further meeting would be necessary only if problems and differences could not be resolved by correspondence. He also foresaw the following sequence of events: production of Version 4.0, re-formatting by Rear Adml. Guy, circulation to all Guiding Committee members requesting feedback to himself by a firm deadline [Action All]. The Chairman proposed that the Committee should be told that the Plan would be approved if no substantive objections had been received by the deadline. Thereafter the Plan should be mounted on the GEBCO web site [Action Permanent Secretary].

## 9. DATE OF THE NEXT MEETING

- 34 Dr Loughridge proposed that, contrary to custom, in future the Guiding Committee should meet every year in order to take decisions and to avoid delays in decision making. The Chairman agreed and thought that the concept of GEBCO Officers meetings in alternate years was likely to fall into disuse. It was not necessary to build this procedural change into the Strategy document.
- 35 The next meeting was planned to take place at the IHB, Monaco after the Centenary Conference in April 2003. It was agreed that the Sub-Committee on Digital Bathymetry and the Sub-Committee on Undersea Feature Names would meet on the afternoon of the 16<sup>th</sup> April and all day 17<sup>th</sup> April. The Guiding Committee would meet on 18<sup>th</sup> April and 19<sup>th</sup> April.
- 36 The Chairman asked for proposals for the meeting venue in 2004. After some discussion it was agreed that a venue would be sought in either North America or Central America (either Boulder, Colorado, USA or Mexico). Dr Schenke made a provisional offer to host the meeting in 2005 in Kiel, Germany.

**10. CLOSURE OF THE MEETING**

- 37 The Chairman thanked all participants for their contributions. He especially thanked Rear Adml. Guy, whose last meeting this was as a representative of the IHB, for his invaluable contributions to meetings and especially for his assistance with the Centenary arrangements and he wished him all the best in his retirement. The meeting closed at 1300 on 21<sup>st</sup> May.

**ANNEX 1**

**Thirteenth Meeting of the GEBCO Officers**

**13.30 Monday 20<sup>th</sup> May and 09.00 Tuesday 21<sup>st</sup> May, 2002  
University of New Hampshire, Durham, New Hampshire, USA**

***AGENDA***

1. OPENING OF THE MEETING
2. CONDUCT OF THE MEETING
  - 2.1 Adoption of the Agenda
  - 2.2 Documentation; Administrative Arrangements, etc.
3. COMPOSITION OF THE GUIDING COMMITTEE AND ITS SUB-COMMITTEES
  - 3.1 Guiding Committee
  - 3.2 Strategy Planning Committee
  - 3.3 Sub-Committee on Digital Bathymetry (SCDB)
  - 3.4 Sub-Committee on Undersea Feature Names (SCUFN)
  - 3.5 Centenary Organising Committee (COC)
  - 3.6 Scientific Advisors
  - 3.7 Corresponding Members
  - 3.8 GEBCO Reviewers
  - 3.9 General Review of the GEBCO Personality List
4. MATTERS ARISING FROM REPORTS OF PREVIOUS MEETINGS:
  - 4.1 Summary Report of the Eighteenth Meeting of the joint IOC - IHO Guiding Committee for GEBCO covering also the Eighteenth Meeting of the Sub-Committee on Digital Bathymetry (doc IOC - IHO/GEBCO Guiding Committee - XVIII/6)
5. REPORT BY THE CHAIRMAN OF THE SUB-COMMITTEE ON DIGITAL BATHYMETRY (NINETEENTH MEETING, University of New Hampshire, 16-17 May 2002)
  - 5.1 Update on the work of the GEBCO Grid Working Group
  - 5.2 Status of Third Release of the GDA
  - 5.3 Status of GDA conversion to Windows
  - 5.4 GEBCO Guidelines
  - 5.5 Technology for Print-on-Demand of 6<sup>th</sup> Edition (2003)
  - 5.6 GEBCO Web Site
6. THE GEBCO FUND AT SOUTHAMPTON UNIVERSITY, UK
  - 6.1 Financial statement
  - 6.2 Possible expenditure
7. REPORT BY THE CHAIRMAN OF THE STRATEGY PLANNING COMMITTEE (SECOND AND THIRD MEETINGS, University of Southampton 14-15 November, 2001 and University of New Hampshire, 15 and 17 May 2002)
  - 7.1 Current status
  - 7.2 Results from Questionnaire
8. PROMOTION OF GEBCO

9. GEBCO CENTENARY PLANS

- 9.1 Financing
- 9.2 Conference
- 9.3 Technical (chart) exhibition
- 9.4 Commercial exhibition
- 9.5 Publications
- 9.6 Any other matters

10. DATES AND PLACES FOR THE NEXT MEETINGS

- 10.1 Year 2003: Centenary Sessions of GEBCO Guiding Committee and Sub-Committees -  
IHB, MONACO
- 10.2 Year 2004:

11. ANY OTHER BUSINESS

12. CLOSURE OF THE MEETING

## **GEBCO PERSONALITY LIST**

*(Last Revised: 10/16/2002)*

### **JOINT IOC-IHO GUIDING COMMITTEE FOR GEBCO**

Sir Anthony Laughton PhD FRS      Mr Alexis E. Hadjiantoniou  
(Chairman)

Dr Robin K.H. Falconer      Dr Michael S. Loughridge

Lic. José Luis FRIAS Salazar      Mr David Monahan

Dr-Ing. Hans-Werner Schenke

Dr Gleb B. Udintsev      Dr Kunio Yashima

### **SUB-COMMITTEE ON DIGITAL BATHYMETRY (SCDB)**

Dr Meirion T. Jones (Chairman)

Dr Michael Carron

Mr Norman Z. Cherkis

Dr Andrew Goodwillie

Mr Alexis E. Hadjiantoniou

Dr John K. Hall

Mr Peter Hunter

Dr Michael S. Loughridge

Mr Ron Macnab

Dr Andrey Popov

Mr William Rankin

Dr -Ing. Hans-Werner Schenke

Dr George Sharman

Dr Walter H. F. Smith

Mr Shin Tani

## **SUB-COMMITTEE ON UNDERSEA FEATURE NAMES (SCUFN)**

Dr Robert L. Fisher (Chairman)

Dr Galina Agapova

Rear Admiral Neil Guy (retired 31/8/02)

Ing.en Chef Michel Huet (Secretary)

Mr Desmond P D Scott

## **STRATEGIC PLANNING COMMITTEE**

Mr David Monahan (Chairman)

Dr Michael Carron

Dr Robin K.H. Falconer

Dr Günter Giermann

Rear Admiral Neil Guy (retired 31/8/02)

Dr Meirion T. Jones

Sir Anthony Laughton PhD FRS

Dr Michael S. Loughridge

Dr -Ing. Hans-Werner Schenke

Dr Walter H. F. Smith

Mr Shin Tani

Dr Dmitri Travin

Prof. Bob Whitmarsh (Secretary)

## **CENTENARY ORGANISING COMMITTEE**

Sir Anthony Laughton PhD FRS (Chairman)

Dr Michael Loughridge

Mr. Jean-Michel Manzone

Capt Hugo Gorziglia (Rear Adml. Neil Guy until 31/8/02)

Mr David Monahan  
Mr Desmond P. D. Scott  
Dr Dmitri Travin  
Prof. Bob Whitmarsh (Secretary)

### **EDUCATIONAL GDA WORKING GROUP**

Dr George Sharman (Chairman)  
Dr Michael Carron  
Mr Norman Z. Cherkis  
Dr. Andrew Goodwillie  
Mr Alexis E. Hadjiantoniou  
Dr Meirion T. Jones  
Dr Michael S. Loughridge  
Mr Shin Tani  
Prof. Bob Whitmarsh (Secretary)

### **FINANCE WORKING GROUP**

Sir Anthony Laughton (Chairman)  
Mr Norman Cherkis  
Rear Adml. Neil Guy  
Dr John Hall

### **INTEGRATION OF GEOSCIENTIFIC DATA WORKING GROUP**

Dr Walter Smith (Chairman)  
Dr David Divins  
Dr John Hall  
Mr Tony Pharaoh  
Dr Hans-Werner Schenke  
Mr Shin Tani

**DATA ASSIMILATION AND ACQUISITION WORKING GROUP**

Dr George Sharman (Chairman)

Mr Norman Cherkis

Dr David Divins

Dr John Hall

Mr Michel Huet

Mr Peter Hunter

Dr Luis Frias

Mr Shin Tani

**GEBCO PERMANENT SECRETARY**

Prof. Bob Whitmarsh

**GEBCO BATHYMETRIC EDITOR**

Mr Peter Hunter

**GEBCO DIGITAL ATLAS MANAGER**

Ms. Pauline Weatherall

**REPRESENTATIVES OF THE IOC SECRETARIAT AND THE  
I.H. BUREAU**

Dr Dmitri Travin  
Intergovernmental Oceanographic Commission

Captain Hugo Gorziglia  
Director, International Hydrographic Organization

Ing. en Chef Michel Huet  
International Hydrographic Bureau

Mr Tony Pharoah  
International Hydrographic Organization

## **GEBCO REVIEWERS**

### **ARCTIC OCEAN:**

Mr David Monahan  
Dr. Valeriy Fomchenko

### **NORTH ATLANTIC:**

Mr Peter Hunter  
Mr David Monahan

#### *Caribbean Sea & Gulf of Mexico*

Dr Troy L. Holcombe

#### *Mediterranean & Black Seas*

Dr John K.Hall  
Dr Andrey Popov

### **SOUTH ATLANTIC:**

Mr Norman Z.Cherkis  
Lt Cmd. Alexandre Fontainha  
or Lt Cmd. Luiz Antonio Felix

### **INDIAN OCEAN:**

Dr Robert L.Fisher

### **PACIFIC OCEAN:**

#### *North-west*

Dr Gleb B.Udintsev  
Dr Alexander Svarichevskiy

#### *North-east*

Dr George Sharman

#### *Central West*

Dr Kunio Yashima

#### *Central East - Mexican area*

Dr Juan GARCIA Abdeslem  
M C Luis A DELGADO Argote

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Mr Alfred Simpson  
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	Gov	Univ	Comm	Other					Gov	Univ	Comm	Other			
Albania	1	-	-	-	1	(0)	Malaysia	1	-	-	-	1	(0)		
Algeria	2	-	-	-	2	(1)	Malta	-	1	-	-	1	(1)		
Argentina	1	-	-	-	1	(0)	Martinique	-	-	-	1	1	(0)		
Australia	28	13	12	-	53	(47)	Mauritania	1	-	-	-	1	(0)		
Austria	1	-	-	1	2	(2)	Mauritius	1	1	-	-	2	(1)		
Barbados	-	-	1	-	1	(1)	Mexico	1	2	1	-	4	(3)		
Belgium	5	7	1	2	15	(12)	Monaco	-	-	-	10	10	(7)		
Bermuda	-	-	1	-	1	(1)	Morocco	2	-	-	-	2	(1)		
Brazil	5	12	1	-	18	(16)	Mozambique	2	-	-	-	2	(0)		
Bulgaria	1	-	-	-	1	(0)	Netherlands	7	3	9	2	21	(19)		
Canada	28	20	7	5	60	(47)	New Caledonia	-	-	-	1	1	(1)		
Chile	3	2	-	-	5	(4)	New Zealand	6	1	4	1	12	(10)		
China	2	2	1	-	5	(2)	Nigeria	1	-	-	-	1	(0)		
Colombia	2	1	-	-	3	(0)	Norway	17	4	14	3	38	(33)		
Costa Rica	-	1	-	-	1	(1)	Papua N.Guinea	1	1	-	-	2	(1)		
Cote d'Ivoire	2	-	-	-	2	(1)	Peru	1	-	-	-	1	(1)		
Croatia	4	-	-	-	4	(2)	Philippines	-	2	-	2	4	(3)		
Cuba	1	-	-	-	1	(0)	Poland	2	-	-	-	2	(2)		
Denmark	9	3	1	1	14	(12)	Polynesia (Fr.)	-	1	-	-	1	(1)		
Ecuador	2	-	-	-	2	(0)	Puerto Rico	-	1	-	-	1	(1)		
Egypt	2	-	-	-	2	(0)	Portugal	3	4	-	-	7	(5)		
Falkland Is.	2	-	2	-	4	(4)	Reunion	1	-	-	-	1	(1)		
Faeroes	2	-	1	-	3	(3)	Romania	1	-	-	-	1	(0)		
Fiji	-	-	-	1	1	(0)	Russia	16	1	-	1	18	(1)		
Finland	2	-	-	-	2	(1)	Seychelles	1	-	-	-	1	(0)		
France	25	9	12	12	58	(46)	Singapore	1	1	-	-	2	(2)		
Gabon	-	-	1	-	1	(1)	Slovenia	1	-	-	-	1	(1)		
Germany	27	28	9	2	66	(62)	South Africa	6	-	2	-	8	(6)		
Greece	4	1	-	1	6	(4)	Spain	8	12	13	3	36	(34)		
Guinea	1	-	-	-	1	(0)	Sri Lanka	1	-	1	1	3	(3)		
Hong Kong	-	1	-	-	1	(1)	St. Vincent	1	-	-	-	1	(1)		
Hungary	-	1	-	-	1	(1)	Suriname	-	-	1	-	1	(1)		
Iceland	7	2	1	-	10	(9)	Sweden	1	2	-	-	3	(2)		
India	5	1	-	-	6	(3)	Switzerland	-	1	1	-	2	(2)		
Indonesia	-	-	1	-	1	(1)	Taiwan	1	3	-	-	4	(4)		
Iran	1	-	-	-	1	(0)	Tanzania	2	-	-	-	2	(0)		
Ireland	4	4	5	-	13	(11)	Thailand	1	-	-	1	2	(2)		
Israel	1	1	-	-	2	(1)	Tunisia	1	-	-	-	1	(0)		
Italy	16	9	3	13	41	(38)	Turkey	3	2	1	-	6	(4)		
Jamaica	-	-	-	1	1	(1)	Ukraine	4	-	-	-	4	(0)		
Japan	10	18	37	2	67	(64)	UK	111	73	71	21	276	(168)		
Kenya	4	-	-	-	4	(0)	USA	59	95	171	12	337	(297)		
Korea	7	1	1	-	9	(7)	Vietnam	2	-	-	-	2	(1)		
Madagascar	1	-	-	-	1	(0)									
							TOTAL	486	348	386	100	1320	(1027)		

Figures above refer to total number of copies sold or distributed up to 1 May 2002. GOV = Government/Public funded organisation; UNIV = University; COMM = Commercial organisation. Number in parenthesis refers to total number of copies

*sold as opposed to complimentary copies.*

**DISTRIBUTION/SALES OF GEBCO DIGITAL ATLAS –  
SUMMARY STATISTICS (1 MAY 2002)**

a) Total number sold/distributed = 1320 copies  
Total number sold = 1027 copies  
Number of complimentary copies = 293 copies

b) Copies sold/distributed to 87 countries

c) Breakdown of copies sold/distributed by sector:

Government bodies 486 copies  
University groups 348 copies  
Commercial bodies 386 copies  
Other organisations 100 copies

d) Distribution of 276 complimentary copies:

GEBCO community 100 copies  
International exchange 99 copies  
UK national exchange 94 copies

e) Sales/distribution by month:

	Sold	Gratis	Total		Sold	Gratis	Total		Sold	Gratis	Total
<b>1994</b>				<b>1997</b>				Sep	9	-	9
May	17	18	35	Jan	7	2	9	Oct	10	1	11
Jun	33	52	85	Feb	13	-	13	Nov	12	2	14
Jul	20	3	23	Mar	5	3	8	Dec	12	-	12
Aug	8	9	17	Apr	11	2	13	<b>2000</b>			
Sep	21	7	28	May	7	-	7	Jan	7	1	8
Oct	16	1	17	Jun	18	8	26	Feb	11	2	13
Nov	18	2	20	Jul	11	-	11	Mar	10	-	10
Dec	13	6	19	Aug	8	1	9	Apr	8	1	9
<b>1995</b>				Sep	10	2	12	May	8	-	8
Jan	16	1	17	Oct	8	2	10	Jun	6	1	7
Feb	48	5	53	Nov	10	2	12	Jul	9	-	9
Mar	31	8	39	Dec	8	11	19	Aug	10	-	10
Apr	18	5	23	<b>1998</b>				Sep	8	1	9
May	28	8	36	Jan	15	3	18	Oct	11	-	11
Jun	20	3	23	Feb	11	2	13	Nov	12	1	13
Jul	23	6	29	Mar	8	2	10	Dec	7	-	7
Aug	16	2	18	Apr	5	3	8	<b>2001</b>			
Sep	18	4	22	May	7	1	8	Jan	11	-	11
Oct	15	3	18	Jun	8	4	12	Feb	6	1	7
Nov	20	3	23	Jul	7	2	9	Mar	9	2	11
Dec	13	2	15	Aug	1	2	3	Apr	3	6	9
<b>1996</b>				Sep	9	3	12	May	9	-	9
Jan	10	1	11	Oct	6	2	8	Jun	13	-	13
Feb	10	23	33	Nov	1	1	2	Jul	7	1	8
Mar	10	1	11	Dec	3	0	3	Aug	8	2	10
Apr	9	-	9	<b>1999</b>				Sep	6	-	6
May	17	5	22	Jan	12	1	13	Oct	6	-	6
Jun	6	-	6	Feb	7	4	11	Nov	3	-	3
Jul	6	2	8	Mar	8	2	10	Dec	5	1	6
Aug	4	2	6	Apr	10	11	21	<b>2002</b>			
Sep	3	-	3	May	8	2	10	Jan	6	-	6
Oct	15	2	17	Jun	2	2	4	Feb	6	-	6
Nov	11	1	12	Jul	6	3	9	Mar	4	-	4
Dec	5	2	7	Aug	3	-	3	Apr	4	-	4
								Total	1027	293	1320

## ANNEX 4

### LIST OF ACRONYMS

ACUF	Advisory Committee on Undersea Features (of BGN)
AGSO	Australian Geological Survey Organization
AWI	Alfred-Wegener-Institut für Polar- und Meeresforschung (Bremerhaven, Germany)
BAS	British Antarctic Survey
CGOM	IOC Consultative Group on Ocean Mapping
DBDB-5	Gridded Bathymetric Data Set on 5-minute squares, produced by USNOO
DBDB-V	Gridded Bathymetric Data Set on a variable grid, produced by USNOO
DCDB	Data Centre for Digital Bathymetry (IHO - at NGDC, Boulder, Colorado, USA)
DTM	Digital Terrain Map
DVD	digital video disc or digital versatile disc
EEZ	Exclusive Economic Zone
ETOPO2	Earth Topography on a 2-minute grid (NGDC)
EU	European Union
GDA	GEBCO Digital Atlas
GEBCO	General Bathymetric Chart of the Oceans (IOC/IHO)
GEODAS	GEophysical DATA System
GLIMPS	Global Land Ice Measurements from Space
GLOBE	Global Land One-kilometer Base Elevation project
IBC	International Bathymetric Chart
IBCAO	International Bathymetric Chart of the Arctic Ocean (IOC/IASC/IHO)
IBCCA	International Bathymetric Chart of the Caribbean and Gulf of Mexico (IOC)
IBCEA	International Bathymetric Chart of the Central Eastern Atlantic (IOC)
IBCWP	International Bathymetric Chart of the Western Pacific (IOC)
IBCSEP	International Bathymetric Chart of the SE Pacific (IOC)
IHB	International Hydrographic Bureau (Secretariat of IHO)
IHO	International Hydrographic Organization
IMO	International Maritime Organization
IOC	Intergovernmental Oceanographic Commission (of UNESCO)
IODP	Integrated Ocean Drilling Program
KMS	Danish National Survey and Cadastre (Kort & Matrikelstyrelsen)
NAVOCEANO	(US) Naval Oceanographic Office
NGDC	National Geophysical Data Center (Boulder, Colorado, USA)
NIMA	National Imagery and Mapping Agency (USA)
NIWA	National Institute of Water and Atmospheric Research (New Zealand)
NIWAR	National Institute of Water and Atmospheric Research (New Zealand)
NSF	National Science Foundation (of USA)
RIDGE	US national mid-ocean ridge research program
SAD	Satellite Altimetry Derived
SCAR	Scientific Committee on Antarctic Research (ICSU)
SCDB	Sub-Committee on Digital Bathymetry (GEBCO)
SCICEX	Submarine Science Exercise (US Navy under-ice cruises in the Arctic)

SCOR	Scientific Committee on Oceanic Research (ICSU)
SCUFN	Sub-Committee on Undersea Feature Names (GEBCO)
SHOM	Service Hydrographique et Océanographique de la Marine (France)
SOC	Southampton Oceanography Centre (UK)
SOPAC	South Pacific Applied Geoscience Commission
SWOT	strength-weaknesses-opportunities-threats
UNCLOS	United Nations Convention on the Law of the Sea
UN	United Nations
USGS	United States Geological Survey
VHO	Volunteering Hydrographic Office (IHO)
WG	Working Group
WVS	World Vector Shoreline (NIMA)