



**XXXI SCAR Delegates Meeting**  
**Buenos Aires, Argentina, 9-11 August 2010**

Agenda Item: 6.3  
Person Responsible: Kathy Conlan

# **SCAR SRP 'Evolution and Biodiversity in the Antarctic'**

## **Report for Delegates, 2010**



## Executive Summary

**Title:** SCAR SRP 'Evolution and Biodiversity in the Antarctic'

**Authors:** P. Convey, G. di Prisco (EBA Co-Chairs), S.Gordon (EBA Secretary)

**Relevant URLs or references to other reports:** [www.eba.aq](http://www.eba.aq)

**Introduction/ Background:** EBA is one of five current approved Science Research Programmes of SCAR, and the only one representing the interests of the very large and diverse biological sciences research community with interests in Antarctica. The Programme has a planned lifetime of 2005-2013. Work under the auspices of EBA is divided into five 'workpackages', each working in both the marine and terrestrial environments of Antarctica.

**Important Issues or Factors:** Since the Programme's last Report to Delegates in 2008, and also the very positive review of EBA science and outputs carried out by SCAR in 2008/9, the programme has continued to be very active in its primary coordination role, catalyzing interactions amongst the SCAR biological community.

EBA is now entering its final 2-3 year period. Major delivery aims in this period are (1) for each component workpackage to organize a themed conference session/workshop with planned/defined synthesis output, documenting the 'state of the art' and major future challenges in their respective fields; (2) to propose an EBA session at the 2012 SCAR OSC, where single overview presentations of progress under each workpackage, and for the programme overall, will be presented by package and programme leaders, ideally to be accompanied by an appropriate publication output; (3) to play an active and central role in the development of proposals to SCAR for successor SCAR biological and cross-disciplinary research programmes.

**Recommendations/Actions and Justification:** (1) to note and approve of EBA actions and progress to date; (2) to confirm support for EBA's outline plans for the remaining life of the programme [1 provides an indication that Delegates recognise that EBA is delivering to SCAR as planned, 2 provides programme approval and security for its remaining life, and maximizes the opportunity of achieving the higher level syntheses and outputs that are the intended product of the programme, and provide the 'added value']

**Expected Benefits/Outcomes:** Significant publication output (both content and numbers), outreach delivery, advice to stakeholders, enhancement of SCAR profile.

**Partners:** Various outputs involve interactions with CEP, COMNAP, SCAR Expert and Action Groups

**Budget Implications:** Request for confirmation of SCAR science programme funding at current level for planned remainder of the Programme's operation to 2013

***Evolution and Biodiversity in the Antarctic:  
The Response of Life to Change (EBA) - Report for SCAR Delegates, April 2010***

### ***1. Rationale***

Evolution and Biodiversity in the Antarctic: the Response of Life to Change (EBA) was endorsed by SCAR and became operational from January 2006.

The overall aim of the EBA programme is to understand the evolution and diversity of life in the Antarctic, to determine how these have influenced the properties and dynamics of present Antarctic and Southern Ocean ecosystems, and to make predictions on how organisms and communities will respond to current and future environmental change.

This programme involves an explicit integration of work on marine, terrestrial and limnetic ecosystems. The science in this programme thus extends over an entire biome on Earth. By comparing the outcome of parallel evolutionary processes over the range of Antarctic environments, fundamental insights can be obtained into evolution and the ways in which life responds to change, from the molecular to the whole organism level and ultimately to biome level. Most national programmes individually cannot attempt a study on such a bold scale, whereas the collaborative spirit of the Antarctic science community provides a mechanism for achieving outstanding scientific success.

EBA has established five linked Work Packages to cover the intended areas of research:

- Work Package 1: Evolutionary history of Antarctic organisms
- Work Package 2: Evolutionary adaptation to the Antarctic environment
- Work Package 3: Patterns of gene flow and consequences for population dynamics: Isolation as a driving force
- Work Package 4: Patterns and diversity of organisms, ecosystems and habitats in the Antarctic, and controlling processes
- Work Package 5: Impact of past, current and predicted future environmental change on biodiversity and ecosystem function

### ***2. Overview of Progress***

Information regarding the outputs and inputs specifically concerning the EBA programme and its undertakings are provided in the summary format requested by SCAR below. These highlight not only the high level, diversity and connectivity of research that contributes to EBA, and also the challenge that EBA has in keeping a track of these widely distributed groups.

### 3. Major Tasks and Timeframe

Year	Task outlined in 2005 Implementation Timeline	Comments
2010	First major IPY meeting (Oslo)	Several sessions organized by EBA-linked IPY programmes
	Polar marine and lacustrine organisms: Gene and protein evolution in a changing environment (Naples)	Organised by GdP. Sponsored by EBA
	SCAR Open Science Meeting (Buenos Aires)	PC on SOC for this meeting, various EBA-linked contributions. EBA Committee meeting. EBA contributing towards travel awards
	Publication of Latitudinal Gradient Project Special Edition of <i>Antarctic Science</i>	Publication supported by EBA.
	Continuation of Aliens in Antarctica work	Final analysis supported by EBA
	WP1/2 and AMBIO (Belgium) workshop (Brussels)	Sponsored by EBA
2011	Last field seasons	
	Workpackage wrap up workshops and associated publications	
2012	SCAR Open Science Meeting (Portland)	
2013	SCAR Biology Symposium – wrap-up of results and last year of program	

### 4. Deliverables

The EBA Implementation plan (2005) outlined that the main output from the EBA programme would be a significant step forward in our understanding of the Antarctic biota and its evolution. There would also be important contributions to fundamental understanding in a number of disciplines. Specific outputs do and will include the following (as demonstrated in the following sections):

- Primary literature publications and books
- Conference proceedings and publications from workshops
- Programme reports
- Website
- Input to databases
- Advisory reports to ATCM and others (e.g., CEP, CCAMLR, COMNAP)
- Input to, and feedback from, international programmes
- Synergies with other SCAR programmes (e.g., ACE, AGCS, SALE)
- Trained PhD graduates and post-doctoral research fellows
- Capacity development of students and members from developing Antarctic nations
- Outreach via National Programmes and in coordination with proposed SCAR Outreach Committee
- Approximately 40 projects identified under the EBA Banner (see Appendix 1)

### 5. EBA Committee

Name	Role	Gender	Country	Term From
Prof Peter Convey	<i>Co-Chair</i>	Male	United Kingdom	2005
Prof Guido di Prisco	<i>Co-Chair</i>	Male	Italy	2005
Shulamit Gordon	<i>Secretary &amp; SCADM Representative</i>	Female	New Zealand	July 2007
Dr Dana Bergstrom	Member	Female	Australia	2005
Prof Angelika Brandt	Member	Female	Germany	2005

Dr Marc Lebouvier	<i>Member (conservation matters)</i>	Male	France	2005
Dr Kathy Conlan	<i>CO LSSSG (ex officio)</i>	Female	Canada	2008
Dr Michael Stoddart	<i>Census of Antarctic Marine Life</i>	Male	Australia	2005
Dr Louise Newman	APECS Representative	Female	Switzerland	Oct 2009
Dr Brigitte Ebbe	Work Package 1 leader	Female	Germany	2005
Dr Dominic A. Hodgson	Work Package 1 leader	Male	United Kingdom	2005
Dr Katrin Linse	Work Package 1 leader	Female	United Kingdom	2009
Prof Daniel P. Costa	Work Package 2 leader	Male	United States	2005
Prof Takeshi Naganuma	Work Package 2 leader	Male	Japan	2005
Dr Elie Poulin	Work Package 3 leader	Male	Chile	March 2008
Dr Ian D. Hogg	Work Package 3 leader	Male	New Zealand	2005
Dr Satoshi Imura	Work Package 4 leader	Male	Japan	2005
Dr Lúcia de Siqueira Campos	Work Package 4 leader	Female	Brazil	Sept 2008
Dr Julian Gutt	Work Package 5 leader	Male	Germany	2005
Dr David Renault	Work Package 5 leader	Male	France	March 2008

## 6. Outputs

### a. Key achievements

- I. *Publications*: Section 6c below demonstrates that at least 280 peer reviewed papers were published by groups contributing to EBA between 2008 and 2009, further to the minimum of ~280 previously reported from 2006/7. These include several journal ‘special issues’, and a major editorial and author contribution to the ACCE report.
- II. *Workshop Sponsorship*: As the role of EBA has developed several workshops have been sponsored to encourage communication among scientists particularly to foster new ideas and cross-discipline discussions. Appendix 2 lists the various workshops that EBA has sponsored or has been involved in.
- III. *EBA Website*: The EBA website ([www.eba.aq](http://www.eba.aq)) was launched in July 2007 to help promote the cause of EBA and bring to the fore the various groups that contribute to EBA. See the table below for web statistics over the past two years.

Year	Unique Visitors	Visits	Hits
2008	~6000	~8000	~140,000
2009	~6000	~10,000	~115,000

- IV. *EBA Newsletter*: The EBA Newsletter gives recent news of the various parts of EBA. Started in March 2008, two newsletters have been compiled and circulated each year. The latest newsletter issue is attached to this review (Appendix 3) and also available on the EBA website.
- V. *Links with the Antarctic Master Directory*: EBA’s SCADM representative (who is also the EBA Secretary) has created an EBA portal in the Antarctic Master Directory where information about Antarctic data is stored. This enables us to easily search for all types of data that contribute to EBA outcomes.

Bruno Danis has requested GCMD to add the identifier ‘ANTABIF’ to the AMD for use with the proposed amalgamation of the marine and terrestrial databases (see d. Project Databases) into one portal at [www.biodiversity.aq](http://www.biodiversity.aq). ANTABIF stands for Antarctic Biodiversity Information Facility. Existing metadata records will be marked with this identifier for retrieval in the new portal.

**b. Contributions to IPY Programmes:**

Besides being a SCAR programme, EBA has also been endorsed by the IPY Committee (Project # 137, coordinated by Guido di Prisco). All of the EBA-IPY projects contribute to the EBA SRP and several other projects that contribute to EBA are themselves IPY endorsed projects (e.g. CAML, SCAR-MarBIN, Aliens, TARANTELLA and ICED). With the completion of the IPY period, we are now in a period of data analysis, presentation and publication, exemplified by the strength of EBA and component IPY programme contributions to the June 2010 IPY meeting in Oslo.

**c. Publications in peer reviewed literature**

As highlighted, EBA as it stands does not publish, however the many projects and programmes that contribute to EBA do. Individual publications from these groups have been compiled and numbers of publications are given in the table below. Note that many publications are co-written by members of more than one project, and that it is likely that not all publications have been captured.

Approximate number of peer reviewed publications that contribute to EBA (as at completion date of this report)

Year	Number of Publications
2006	142
2007	138
2008	89
2009	196

Note that particularly significant EBA-related publications have been picked up effectively by the media arms of author parent organizations.

**d. Project Databases****Biodiversity Database**

The Australian Antarctic Data Centre (AADC) hosts and maintains a Biodiversity Database (<http://data.aad.gov.au/aadc/biodiversity/>) which contains data on Antarctic and sub-Antarctic flora and fauna. This started through EBA's predecessor, RiSCC, and is EBA's main database. This database contains as many collections of data that we are aware of in the public domain (see <http://data.aad.gov.au/aadc/biodiversity/collections.cfm>). The samples and/or observations from each collection are classified into one of three possible habitat domains - terrestrial, limnetic or marine (see table below).

Number of Observations and Collections Currently in the Biodiversity Database (as of 28/4/2010)

Note some collections contain data from more than one Habitat Domain. The number of collections in brackets refers to collections that can be seen by the public. The rest are collections requiring login access. Non-public collections typically require work to georeference or load data or have yet to be released by the investigator.

Habitat Domain	Number of Observations	Number of Collections
Terrestrial	101,114	69 (21)
Marine	433,733	79 (51)
Limnetic	4,223	18 (6)

Web access statistics for this database (as of 28/4/2010) are:

4.4 million page views from 2008 to 2010 of which 15,000 were internal to AAD. The significant increase in page views is partly due to the indexing activities of various search engines such as Google which allow all users to find the database content.

There are also other databases that are coordinated by several of the individual projects/programmes that contribute to EBA. See: SCAR-MarBIN, MERGE, SO-CPR.

The Royal Belgium Institute of Natural Sciences has funded a two year project called ANTABIF, as a follow on from SCAR-MarBIN project, on building a regional biodiversity portal for the Antarctic and sub-Antarctic. This will amalgamate SCAR-MarBIN ([www.scarmarbin.be](http://www.scarmarbin.be)) and the AAD managed database of terrestrial and limnetic observations. (<http://data.aad.gov.au/aadc/biodiversity/>). The current static page is at [www.biodiversity.aq](http://www.biodiversity.aq). This project will utilise as much as possible data standards, components and tools developed at GBIF. It is also proposed to build an authoritative terrestrial and limnetic taxa catalogue to complement the existing Register of Antarctic Marine Species (RAMS). A suitable acronym for this product is suggested to be Register of Antarctic Freshwater and Terrestrial Species (RAFTS).

The contents of the terrestrial database as at February 2009 have been central to a jointly funded EBA and SC-ATS analysis of terrestrial biodiversity patterns across Antarctica, also including links with the Environmental Domains Analysis V2 from New Zealand. This analysis is central to plans for future advice to CEP and ATS parties relating to conservation planning and management in Antarctica, and forms the subject of a working paper submitted to this year's Treaty Meeting, as well as journal manuscripts in preparation.

### **The Antarctic Master Directory**

EBA has set up a portal within the Antarctic Master Directory (AMD) which gives access to metadata submitted since EBA was established and metadata submitted before EBA was established, but that contribute to EBA's aims. This portal can be accessed [here](#). Groups who associate their work with EBA are encouraged to enter their metadata into the AMD and link it to the EBA programme under 'Projects'. Note that metadata can be linked to more than one project.

This means that if EBA wants to see what data has been collected that relate to EBA, this can be done through a simple search function on the AMD. EBA was the first of the SCAR SRPs to set up such a portal.

## ***VI. Inputs***

### **a. Meetings and workshops**

Several meetings and workshops have been, and are planned to be, sponsored by EBA, and many have been linked to EBA. These can be found in Appendix 2.

### **b. Links to other SCAR SRPs or SCAR Action or Expert Groups**

The Southern Ocean Continuous Plankton Recorder Survey (SO-CPR Survey) has identified itself as a project that contributes to EBA and this is currently an LS-SSG Action Group.

Links have been made with ACE and AGCS through the SCAR inter-programme leaders group, the editorial committee and authorship of the ACCE report, and the Action Group on the Prediction of Change.



## Appendix 1: Projects/Programmes that contribute to the EBA Programme (as of 2008)

Project Name	Lead Contact	Lead Contact Country	Discipline	IPY Project	Website	Other Countries involved
Aliens in Antarctica [Aliens]	Dana Bergstrom	Australia	Terrestrial	#170	<a href="http://www.aliensinantarctica.aq">www.aliensinantarctica.aq</a>	9 Countries with scientists involved: Australia, Belgium, France, Japan, New Zealand, Poland, South Africa, The Netherlands, United Kingdom
Anemonies Database	Daphne G. Fautin	U.S.A.	Marine	No		
ANtartic benthic DEEP-sea biodiversity: colonisation history and recent community patterns – SYSTEM Coupling [ANDEEP-SYSTCO]	Angelika Brandt & Brigitte Ebbe	Germany	Marine	#66	<a href="http://www.cedamar.org/">http://www.cedamar.org/</a>	8 countries out of: USA, United Kingdom, Belgium, Italy, France, Norway, Spain, Switzerland, Russia, Argentina, Australia
Automatic Monitoring of Penguin Populations [AMPPoP]	Yvon LE MAHO	France	Combined	#251	Under Construction	France, Japan, USA, UK, Australia, Italy, New Zealand
Biodiversity-Change in the formerly ice shelf-covered Larsen A/B area	Julian Gutt	Germany	Marine	Under CAML	-	14 countries including: Germany, Canada, Czech Republic, Spain, Russian Federation, Belgium, Italy, Ukraine, USA, UK, France, Chile
Biodiversity, Function, Limits and Adaptation from Molecules to Ecosystems [BIOFLAME]	Peter Convey	U.K.	Marine/Terr estrial	No	<a href="http://www.antarctica.ac.uk">www.antarctica.ac.uk</a>	UK, Germany , Australia
Biodiversity of three representative groups of the Antarctic Zoobenthos - Coping with Change [BIANZO II]	Chantal de Ridder	Belgium	Marine	No		
Census of Antarctic Marine Life [CAML]	Michael Stoddart	Australia	Marine	#53	<a href="http://www.caml.aq">www.caml.aq</a>	20 countries
Climate change, human activities and biodiversity in subantarctic terrestrial ecosystems [Ecobio]	Marc Lebouvier	France	Terrestrial	Under ALIENS and TARANTEL LA	Under Construction	France, Australia, Belgium, New Zealand, Poland
Collaborative Research: Relevance of planktonic larval dispersal to endemism and biogeography of Antarctic benthic invertebrates	Ken Halanych	U.S.A.	Marine	No		

Comparative Biologic and Monitoring Research of Gentoo (Pygoscelis papua) in Terms of its Conservation as a Living Resource	Roumiana Metcheva	Bulgaria	Marine/Terr estrial	No		
Comparative Studies of Gentoo Populations [GOSGEN]	Volodymyr Bezrukov	Ukraine	Marine/Terr estrial	No		
Cool Plants 9Group of projects)	Sharon Robinson	Australia	Terrestrial	No	<a href="http://www.uow.edu.au/science/biol/staff/sharonr/sr_coolplants.html">http://www.uow.edu.au/science/biol/staff/sharonr/sr_coolplants.html</a>	Australian, German, Austrian, Czech Rep, Italian, USA
Did Antarctic octopuses colonise the deep sea?	Louise Allcock	U.K.	Marine	No		
Discovery 2010: Integrating Southern ocean Ecosystems into the Earth System [Discovery 2010]	Eugene Murphy	U.K.	Marine	No		
Ecology and Evolution of Antarctic Invertebrates	Sven Thatje	U.K.	Marine	No	-	UK, Germany, US, Argentina, New Zealand
Evolution and Biodiversity in the Antarctic [EBA-IPY]	Guido di Prisco	Italy	Marine/Terr estrial/Aquat ic	#173	<a href="http://www.eba.aq">www.eba.aq</a>	All SCAR Nations.
Health of Arctic and Antarctic bird populations [BIRDHEALTH]	Maarten Loonen	The Netherlands	Terrestrial	#172		
Holocene climate variability and ecosystem changes in the coastal East and Maritime Antarctica [HOLANT]	Wim Vyverman	Belgium	Terrestrial	Under MERGE	<a href="http://www.HOLANT.UGent.be">www.HOLANT.UGent.be</a>	Belgium, UK
Impact of CLimate induced glacial melting on marine and terrestrial COastal communities on a gradient along the Western Antarctic PENinsula [ClicOPEN]	Doris Abele	Germany	Marine/Terr estrial	#34		
Integrated circumpolar studies of Antarctic marine ecosystems to the conservation of living resources [AMES]	Svein Iversen	Norway	Marine	#131	<a href="http://www.imr.no">www.imr.no</a>	Germany, USA, China, Brazil, Norway
Integrating Climate and Ecosystem Dynamics in the Southern Ocean [ICED]	Rachel Cavanagh	U.K.	Marine	#92	<a href="http://www.iced.ac.uk">http://www.iced.ac.uk</a>	20 countries
International Collaborative Expedition	Cinzia	Italy	Marine	#93	<a href="http://www.icefish.neu.edu">www.icefish.neu.edu</a>	Italy, France, New Zealand, USA, Germany, Australia,

to collect and study Fish Indigenous to Sub-Antarctic Habitats [ICEFISH]	Verde					Brazil, U.K. South Africa
Internationally coordinated studies on Antarctic environmental status, biodiversity and ecosystems. (Environmental, Biological, and Ecological Studies in Antarctica) [EBESA]	Roberto Bargagli	Italy	Terrestrial	Under EBA-IPY	-	Italy, Czech, Ukraine Republic
Latitudinal Gradient Project [LGP]	Shulamit Gordon	New Zealand	Marine/Terrestrial/Aquatic	Under MERGE and EBA-IPY	<a href="http://www.lgp.aq">www.lgp.aq</a>	New Zealand, Italy, USA.
McMurdo Dry Valleys Long term Ecological Research Project [MCM-LTER]	Berry Lyons	U.S.A.	Terrestrial/Aquatic	No	<a href="http://www.mcmlter.org">www.mcmlter.org</a>	USA, Canada, New Zealand, Australia, UK, Czech Republic, Japan
Microbiological and Ecological Responses to Global Environmental Changes in Polar Regions [MERGE]	Takeshi Naganuma and Annick Wilmotte	Japan and Belgium	Terrestrial	#55	Not one central one for MERGE. Some sub-projects have websites.	Japan, New Zealand, Brazil, Malaysia, Poland, Spain, Belgium, UK
Natural climate variability - extending the Americas palaeoclimate transect through the Antarctic Peninsula to the pole [CACHE-PEP]	Dominic Hodgson	U.K.	Marine/Terrestrial	Under MERGE	<a href="http://www.antarctica.ac.uk/bas_research/current_programmes/cache/pep/index.php">http://www.antarctica.ac.uk/bas_research/current_programmes/cache/pep/index.php</a>	UK and Belgium are main partner
Polar Aquatic Microbial Ecology [PAME]	Gunnar Bratbak	Norway	Aquatic	#71	<a href="http://www.uib.no/pame/">http://www.uib.no/pame/</a>	Norway and France
Response of Polar, Tropical and Temperate Microalgae to Global Warming and Increased UV Radiation	Phang Siew Moi	Malaysia		No		
Retrospective and Prospective Vegetation Change in the Polar Regions: Back to the Future [BTF]	Terry Callaghan	Sweden	Terrestrial	#214		
SCAR-Marine Biodiversity Information Network [SCAR-MarBIN]	Claude de Broyer	Belgium	Marine	#83	<a href="http://www.scarmarbin.be">http://www.scarmarbin.be</a>	
Scratching The Surface [IMARES-SUIT]	Jan Andries van Franeker	The Netherlands	Marine	No	<a href="http://www.pooljaar.nl/poolijs">http://www.pooljaar.nl/poolijs</a> <a href="http://www.jafweb.nl">www.jafweb.nl</a>	Netherlands, Belgium, Germany and Canada
Sex and Variation in Antarctic Lichens	Paul Dyer	U.K.	Terrestrial	No	-	UK
Southern Ocean Continuous Plankton Recorder Survey [SO-CPR]	Graham Hosie	Australia	Marine	No	<a href="http://data.aad.gov.au/aadc/cpr/index.cfm">http://data.aad.gov.au/aadc/cpr/index.cfm</a>	Australia, Japan, Germany, New Zealand, UK, USA and Russian.

Structural-functional characteristics of microbe cenoses in Antarctica. The investigation of microorganisms role in biogeochemical cycles	Oleksandr Tashyrev	Ukraine	?	Under EBA-IPY	-	Ukraine
Terrestrial ecosystems in Arctic and Antarctic: effects of UV light, liquefying ice, and ascending temperatures [TARANTELLA]	Ad Huiskes	The Netherlands	Terrestrial	#59	www.tarantella.aq	The Netherlands, Czech Republic, United Kingdom, Norway, Belgium, USA, Canada, Japan, France, Spain
Trophic Ecology of the Nearshore Zone [TRENZ]	Jonathan Stark	Australia	Marine	No		
Understanding, valuing and protecting Antarctica's unique terrestrial ecosystems: Predicting biocomplexity in Dry Valley ecosystems	Allan Green	New Zealand	Terrestrial	No		
Vulnerability of native communities to invasive insects and climate change in sub-Antarctic islands [Evince]	David Renault	France	Terrestrial	No		

## Appendix 2: Workshops/Meetings Supported by EBA or linked to EBA

Title	Venue	Date	Report/Supported Personnel	Attendees/Supported
<b>2005</b>				
IX SCAR Biology Symposium	Curitiba, Brazil	25-29 July 2005	<u><a href="#">Antarctic Science Special Edition Volume 19(2) 2007</a></u> . Eds E. Fanta, W. Arntz, W. Detrich, H. Kawall	
SCAR Cross-Linkages Workshop	Amsterdam, The Netherlands	22-24 Nov 2005	Report	11 participants from The Netherlands, Italy, UK, USA, Russia; and one in Modena, Italy, 5-6 Feb 2009, Report, 15 participants from Italy, Spain, Belgium, UK, USA, Canada, Australia, Finland
<b>2006</b>				
EBA Core Steering Committee Meeting	Hobart, Australia	8 July 2006	<u><a href="#">Minutes</a></u>	6 Attended (3 female); NZ, UK, Italy, France, Korea
EBA Work Package Leader Meeting	Hobart, Australia	10 July 2006	<u><a href="#">Minutes</a></u>	10 attended (2 female); UK, Italy, France, Japan, NZ, Brazil, Germany
LGP International Workshop	Hobart, Australia	10 July 2006	<u><a href="#">Final Report</a></u>	~40 attended (17 female). Argentina, US, UK, NZ, Belgium, Canada, Germany, Australia, Malaysia, Poland, China, Spain, France
CAML Workshop	Hobart, Australia	11 July 2006		
EBA Open Meeting	Hobart, Australia	12 July 2006	<u><a href="#">Minutes</a></u>	38 attended (15 female); Argentina, NZ, UK, Malaysia, Brazil, France, The Netherlands, Japan, Poland, Chile, China, Australia, Germany, India
Aliens Workshop	Hobart, Australia	15 July 2006	<u><a href="#">Minutes</a></u>	11 attended (3 female); South Africa, UK, Poland, France, The Netherlands, Japan, Germany
SYSTCO-IPY Workshop	Bremerhaven, Germany	September 2006		
TARANTELLA – IPY Implementation Workshop	Rilland, The Netherlands	9-11 October 2006		24 attended (5 female); The Netherlands, Czech Republic, United Kingdom, Norway, Belgium, USA, Canada, Japan, France, Spain
Workshop on Terrestrial biodiversity in the Antarctic: Microbial, Macroscopic, Indigenous and Alien	Stellenbosch, South Africa	18-20 October 2006	<u><a href="#">Report</a></u>	21 attended; Australia, France, Japan, The Netherlands, NZ, South Africa, USA, UK
SCAR Cross-Linkages Workshop	Rome, Italy	6-8 November 2006	<u><a href="#">Report</a></u>	15 attended (2 female) Italy, UK, The Netherlands, Finland, USA, Sweden
SCAR-MarBIN Workshop: Evolution of Marine Organisms of the Southern Ocean	Leuven, Belgium	December 2006		

2007				
SCAR-MarBIN Workshop	Bialowieza, Poland	2-8 June 2007		32 attended; Supported personnel: Vanhoorne, Segers, Ramm
International Workshop on Antarctic Biology: Critical Issues and Research Priorities for IPY (2007-2009)	Follonica, Italy	7-9 June 2007	Abstract booklet produced.	48 attended from Italy, NZ, UK, Germany, Korea, Bulgaria, India, USA, Spain, Czech Republic; 30 invited presentations; partially supported (not by SCAR funds).
<u>International Conference on Cryogenic Resources of Polar Regions</u>	Selekhard City, West Siberia, Russia	17-21 June 2007	Joint EBA-MERGE session.	Supported personnel: Roberto Bargagli (Italy), Takeshi Naganuma (Japan), two Malaysian microbiologists.
Latitudinal Gradient project Workshop	Wellington, New Zealand	2 July 2007	<u>Minutes</u>	~50 attended; NZ, UK, Australia, Italy. Supported personnel: Diana Wall (female US), Berry Lyons (US), Peter Convey (UK)
<u>10th International Symposium on Antarctic Earth Sciences (ISAES-2007)</u>	Santa Barbara, CA, USA	26 August - 1 September 2007	Joint EBA-ACE session giving a bioperspective.	Supported personnel: Pete Convey, Jan Strugnell (female, UK), Bettine van Vuuren (female SA)
The Southern Ocean Observing System (SOOS) Workshop	Bremen, Germany	1-3 October 2007	<u>Interim Report</u>	32 Attended. Dan Costa and Edith Fanta EBA WP leaders attended.
2008				
Dynamics in the Southern Ocean (ICED) programme - first model development workshop, Old Dominion	University, Virginia, USA	16 - 18 April 2008	Workshop report	30 international participants attended. Subsidised attendance of 4 key participants: Bettina Fach (Female, Turkey), Matt Pinkerton (Male, New Zealand), Cosimo Solidoro (Male, Italy), Dan Costa (Male, USA, EB WP Leader)
Coordination Action for Research Activities in Life in Extreme Environments (CAREX) Workshop	BAS, UK	18 March 2008		42 European and North American experts. Covered attendance of Guido di Prisco (Male, Italy)
<u>Polar and Alpine Microbiology</u>	Banff, Alberta, Canada	11-15 May 2008		Contribution to the meeting. Subsidised 3 key participants Dr Shivaji (Male, India), Alison Murray (Female, USA), SangHoon Lee (Female, Korea)
Antarctic Gradients – Invited Workshop	BAS, U.K.	19-21 May 2008	<u>Workshop Report</u>  Working on review paper to submit to Ecological Monographs	16 Invited participants from NZ, US, UK, Italy, Australia, The Netherlands and Spain. Some expenses will be covered.
International workshop "The polar and alpine environments: molecular and evolutionary adaptations in prokaryotic and eukaryotic organisms"	Naples, Italy	May 29th--30th, 2008	Special Issue in <i>Marine Genomics</i> .	18 invited presentations from Italy, UK, USA, Germany, Belgium, France, Austria; partially supported (not by SCAR funds).
Antarctic Gradients Open Workshop	St Petersburg, Russia	5 July 2008		
SCAR Marbin Workshop	Valencia, Spain			21 participants from 12 countries

2009					
Latitudinal Gradient Project Workshop	Auckland, New Zealand	1 July 2009			Attended by ~40 mostly New Zealand researchers. Supported attendance of Martin Riddle (Australia, Male)
Xth SCAR International Biology Symposium	Sapporo, Japan	26 - 31 July 2009			Sponsorship of the event
SCAR's Standing Committee on Antarctic Data Management Annual Meeting	Amsterdam, The Netherlands	7-9 September 2009	<a href="#">Meeting Report</a>		Supported attendance of Antonio Quesada (Male, Spain) to present data management needs of the biological community
SYSTCO (System Coupling) Workshop	Bremen, Germany	15-16 September			Linked with EBA
Antarctic South American Interactions in the Marine Environment Workshop and Symposium	Rio de Janeiro, Brazil	3-4 November 2009	<a href="#">Meeting Report</a>		55 researchers from 13 countries attended. Provided sponsorship for the event.
SCAR MarBIN workshop	BAS, UK	26-27 November 2009			20 international participants attended
Second Meeting of the SCAR Action Group on Prediction of Changes in the Physical and Biological Environments of the Antarctic	AWI, Bremerhaven, Germany	30 September – 2 October 2009	Report		6 participants from Germany, UK, Italy.
Upcoming in 2010					
Polar marine and Lacustrine Organisms: Gene and Protein Evolution in a Changing Environment, workshop	Naples, Italy	24-25 May 2010	Special Issue of Marine Genomics,		EBA Sponsorship for the workshop.  22 invited speakers from Italy, UK, USA, Germany, Argentina, Norway, New Zealand, Brazil, Chile, Russia
Future of SCAR biology Workshop	Castiglioncello (Livorno), Italy,	27-28 May 2010,			25-30 participants from UK, Italy, USA, Australia, New Zealand, Spain Brazil, Chile, France, Germany, Canada
SCAR OSC	Buenos Aires, Argentina	August 2010	Various sessions with EBA inputs, including proposed special issues		EBA sponsorship for ECS
WP1/2 and AMBIO Workshop	Brussels, Belgium	November 2010 tbc			Shortly to be confirmed and advertised, EBA sponsorship