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# InterRidge

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**Steering Committee Meeting Report, 2003**

**ORI, Tokyo, Japan  
27 - 28 June 2003**

**Chair  
Kensaku Tamaki**

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**Enrico Bonatti**, 1998 (Italy)  
**Paul Dando** 1999 (UK)  
**Javier Escartin** 2002 (France)  
**Toshitaka Gamo** 2001 (Japan)  
**Masataka Kinoshita** 2002 (Japan)  
**Jian Lin**, *ad hoc* 1999 (USA)  
**Catherine Mével**, 1997 (France)  
**Abhay V Mudholkar** 2002 (India)  
**Rolf Pedersen** 2001 (Norway)  
**Ricardo Santos** 2002 (Portugal)  
**Deborah Smith** - 2003 (USA)  
**Damon A.H. Teagle** 2002 (UK)  
**Spahr C. Webb** *at hoc* 2001 (USA)

## **Meeting Agenda**

Introduction and Welcome	(Tamaki)
General Organization of meeting	(Adamczewska)
Agreement on meeting agenda	
Accept the Minutes of 2002 meeting	
Coordinator's Report	(Adamczewska)
IR Budget	(Tamaki)
National Updates	
Canada	(Juniper)
France	(Dyment)
Germany	(Devey)
India	(Raju)
Japan	(Tamaki)
Korea	(Lee)
USA	(Fisher)
China	(Tamaki)
Summary Discussion	
Next IR office discussion	
Project Updates	
Guest speaker – Monitoring of the Ocean floor	(Lawrence Clark)
Next Decade Project Plan approval	(Tamaki)
Bio WG – Management Proposal	(Juniper)
Evaluation/discussion of the working group structure for the future	
Future InterRidge Meetings	(Tamaki)
Date and location of next Steering Committee Meeting	(Tamaki)
SCOR	(Adamczewska)
InterRidge Steering Committee members	(Adamczewska)
Summary of Actions for 2003	
Review 2003 Calendar	
Last minute issues	
FINISH meeting	

## **Introduction**

The Chair of InterRidge, Kensaku Tamaki welcomed all the members to the Ocean Research Institute, Tokyo, Japan and thanked them for attending.

While it was unfortunate that the meeting location had to be changed, the Chair was pleased to have the opportunity to host his last steering committee meeting, as the Chair of InterRidge, in his institute. The Chair was pleased that the IR office achieved so many goals under his leadership and said that he thoroughly enjoyed running the office for the past 4 years. The Chair declared that it is time he stepped away from InterRidge and pointed out that there are many outstanding young scientists in Japan that will be encouraged to get involved in InterRidge in the future so that they can represent Japan in the international arena.

## **Matters arising**

*This steering committee meeting was momentous in that it marked the end of the first decade of InterRidge. From January 2004, a new Chair will take over the office and face the enormous task of implementing the “Next Decade” science plan. During this meeting a number of vital decisions were made, including the endorsement of the “Next Decade” science plan for InterRidge and selection of a new Chair and host nation for the InterRidge office, based on the bids submitted earlier this year.*

### **Selection of the new Chair**

The bid to host the next IR office submitted by Prof. Colin Devey From the University of Bremen, Germany was approved by the Steering Committee. The IR office will move to the University of Bremen in January 2004.

### **The InterRidge Next Decade plan**

The final version of the Next Decade Plan for InterRidge (IRND) was endorsed by the Steering committee. The IRND shall be made publicly available from the IR website and distributed in hard copy to all Steering committee members and National Correspondents.



## **National updates**

### **CanRidge (K. Juniper)**

During the summer of 2002, several submersible cruises were undertaken by CanRidge researcher, in collaboration with American colleagues. Briefly, a joint cruise with the NOAA Vents program visited Axial Volcano on the Juan de Fuca Ridge and the vent fields of Southern Explorer Ridge, both in the northeast Pacific. This cruise deployed the ROPOS submersible from the *R/V Thomas G. Thompson*. A second, CanRidge only cruise to the Endeavour Segment vent fields deployed ROPOS from the Canadian vessel John P. Tully. As usual, all cruises were multidisciplinary and submersible operations ranged from deployment of experimental modules for colonisation by larvae and microbes, to the sampling of basalts and sulphides. Further details of these cruises are given in reports to the InterRidge News.

Another major collaborative field effort is planned for summer 2003. A three leg cruise with ROPOS on the *R/V Thomas G. Thompson* will visit the Endeavour Segment vents and Axial Volcano. Legs 1 and 2 are in collaboration with the University of Washington, while Leg 3 is a collaboration with the NOAA Vents program.

We are beginning the final year of a 4-year, non-renewable collaborative grant that funded the consolidation and expansion of ridge research in Canada. During the past three years 8 more Canadian university laboratories have become involved in hydrothermal vent research, bringing the total to 13. Other funding avenues to continue group activities are presently being explored. We will also soon begin the final year of funding of the ODP Canada program, which has been paying Canada's Associate membership in InterRidge. Again, other funding will have to be obtained to maintain this level of membership.

### **China (J. Lin & J. Chen)**

China plans to upgrade its membership status to an Associate Member from next year. The China-ODP Program, under the leadership of Pinxian Wang, has agreed to pay for the \$5,000 annual fees for China to upgrade to an Associate Member in InterRidge.

InterRidge-China STCOM Planning Meeting will take place in September, 2003. The meeting will be attended by approximately 15 researchers from 7 institutions to discuss:

- 1) Goals and funding strategy of the IR-China Program;
- 2) Relationship to the InterRidge Next Decade Initiative;
- 3) Selection of first Chair and STCOM;
- 4) Personnel of the IR-China Office.

Inauguration of the IR-China Program is tentatively planned for 27<sup>th</sup> October, 2003. The plan is for the program to be officially inaugurated at the opening day of the re-scheduled InterRidge Workshop in Beijing.

Suggested new dates for the InterRidge workshop on "Opportunities and contributions of Asian countries to the InterRidge Next Decade Initiative" are 27-29 Oct., 2003 (Mon-Wed). These new dates were chosen because of the following considerations:

- The World Health Organization (WHO) has officially lifted warning of travelling to Beijing on June 24. The next four months will give us time to monitor if the situation is stable.
- An October meeting will give sufficient time for the IR-China Program to be set up.
- Having a meeting in 2003 will help to keep the meeting's momentum and Chinese funding.
- Beijing is well known for its "Golden October" when tree leaves turning colours. Mid-October is an ideal season for those interested in travel in China prior to the workshop.

The InterRidge-China Program, through the support of National Science Foundation of China (NSFC) and China-OPD, will co-sponsoring the Beijing workshop. IR-China Office will pay for hotels of invited speakers from outside of China, partial travel support for graduate students/post-docs/young researchers in China, and an official banquet for all workshop participants. All members of the new IR-China STCOM will be encouraged to attend the workshop.

The meeting agenda will remain unchanged except for limited changes in speakers due to schedule conflicts.

## **France - (J. Dymant)**

### **Research programs in France**

*Programme National Dorsales* of CNRS and IFREMER has officially ended at the end of Year 2001. Since that time no specific Ridge program exists in France, and Ridge scientists continue their research in different frameworks.

1) IFREMER is presently focussing its Geoscience activities on passive continental margins and does not list mid-ocean ridges among its top priorities. However, the existing research groups, mostly oriented towards hydrothermal vent studies (both in terms of Geosciences and Biology) should be able to continue their research activity and extend it to cold seep investigations.

2) CNRS INSUE (*i.e.* the CNRS division for Earth and environmental sciences) has been reviewing its programs during year 2002. A list of new programs was established in the Spring of 2003 and these are now being implemented, although in a quite limited way due to recent financial restrictions.

Among these programs, some of the ridge activities fall into a program entitled "Dynamic and evolution of the internal Earth", inside the themes:

- "Mantle Plumes" - the ridge-hotspot interaction is specifically mentioned,
- "Localisation of the lithospheric deformation" - which may include some of the tectonic studies on ridges, and
- "Tracers of mantle convection" - which includes the geochemistry at ridges.

The result is that the French Ridge community will be split up into different groups, and the visibility of the community as built by the *Dorsales* program may diminish.

The importance of the MOMAR project has been recognised, and the MOMAR area is one of the two "Sites" specified by CNRS INSUE. The notion of "Site" has still to be defined, especially in terms of budget!

3) CNRS SDV (*i.e.* the CNRS division for Life Sciences) has established a joint program with CNRS INSUE, the GEOMEX program (Geo-micro-biology in extreme environments) which includes micro-biology at mid-ocean ridges but also in the polluted areas and other extreme environments. This program has a relatively large budget.

For the transition period, CNRS INSUE has provided limited support for the current InterRidge activities (*i.e.* the French contribution to InterRidge and the participation of French scientists to meetings such as, in 2003, the STCOM meeting in Tokyo and the Ridge-Hotspots interaction workshop in Brest). For the future, some mechanism has to be defined to continue the French participation to InterRidge and improve the visibility of the French Ridge community abroad, but also to allow French Ridge scientists, now split among different programs, to interact and maintain a community feeling – one of the great achievements of the former *Dorsales* program!

### **On the European side...**

Many proposals to the European Union have attempted to place MOMAR on Brussels agenda. Proposals to establish a "Network of Excellence" and ensure that MOMAR is an "Integrated Project" under the EU regulations were not considered for immediate implementation, although they remain in the system. So in the near future these proposals may be improved and examined again. Currently, two MOMAR proposals are under review by the EU: one is a proposal for a "Specific Target" and another one to create a "Marie Curie Research Training Network". If successful these projects will help to prepare the community for the MOMAR project.

### **Research ships and deep sea vehicles in France**

Research vessel *R/V Nadir* is no longer used for scientific cruises and will shortly be discontinued. A new research vessel called *R/V Pourquoi Pas?* will be operational in 2005 (contract was signed with shipyard in December 2002). The new ship will be approximately 100 m long and able to take 40 scientists. The ship will mostly be devoted to "site" cruises with deep sea submersible *Nautilie* and ROV *Victor*. This will be a much needed upgrade but there will be a period of two year when the French scientists will have reduced means for getting ship time.

*Nautilie* has been refurbished in 2002. *Cyana* is soon to be discontinued. ROV *Victor* is now fully operational. "Coastal" AUVs (down to 3000 m) are going to be acquired soon, and will also be available for Ridge research.

### **Cruises**

- Cruise "Graviluck" (gravity & deep sea geodesy on MOMAR; V. Ballu, IPG Paris) has been cancelled due to *Nautilie* operations on the wreck of oil tanker *Prestige* off Galicia.
- Cruise "Luckyflux" (heat flux measurements on MOMAR; A. Bonneville, IPG Paris) has been successfully carried out in June 2003 on *R/V Poseidon*.
- Cruise "Sirena 2" (recovery of OBH on both sides of the MAR North of Azores; J. Goslin, IUEM Brest, in collaboration with C. Fox) is scheduled for September of *R/V Discovery*.

Several ridge cruise proposals have been submitted on 15<sup>th</sup> January, for Year 2004. Some obtained a good scientific ranking and are likely to be scheduled.

- PacAntarctic 2 (collecting rock samples between Juan Fernandez microplate and Heezen-Tharp FZ system; L. Dosso + H. Ondreas, IFREMER Brest)
- Parisub (Geosciences, Nautilic transects across the EPR at 16°N; P. Gente, IUEM Brest)
- Biospeedo (Biology + Geosciences, Nautilic dives on EPR 7-15°S; F. Lallier, Roscoff)

#### **Meetings**

The InterRidge Workshop and Symposium on "Ridge - Hotspot Interaction" will take place in Brest on September 8-10, 2003.

## **Germany (C. Devey)**

Funding for Ridge research comes from the German national science foundation (DFG) - Priority program 11 44 - „From mantle to ocean: Energy, material and life cycles on spreading axes”. The 31<sup>st</sup> of March 2003 was the deadline for proposal submission and proposal assessment took place on the 31<sup>st</sup> of July. The Priority program 11 44 has officially been funded from October of 2003 for a period of 6 years with funding of approx. 1 million EUR per year.

#### **People involved in running of the program**

Universität Bremen, Fachbereiche Geowissenschaften & Physik

C. W. Devey (Petrology, Coordinator), I. Grevemeyer (Geophysics), K. Lackschewitz (Hydrothermal Petrology), H. Villinger (Geothermic), M. Rhein (Oceanography)

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A. Koschinsky (Hydrothermal geochemistry)

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P. Herzig (Hydrothermal mineralisation), T. Kuhn (Hydrothermal mineralisation)

Universität Hamburg, Zoologisches Institut

O. Giere (Zoology, symbioses)

Universität Kiel, Inst. für Geowissenschaften & Geomar

K. Haase (Petrology/geochemistry), J. Phipps Morgan (Geodynamics), T. Reston (Geophysics)

Max-Planck-Institut für marine Mikrobiologie Bremen

J. Küver (Microbiology), C. Borowski (Zoology, symbioses)

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J. Snow (Mantle rocks)

Universität Marburg

L. Beck (Zoology, taxonomy)

Ridge research in Germany has a priority for research in the Atlantic. The focus will lie in two main areas: one in the Logatchev area and the second around Ascension Is. Research aims to learn more about how the Atlantic, as a slow-spreading ridge, works and its relevance globally. Themes which will be covered include:

- Large-scale study of selected MAR areas
  - Structure
  - Volcanology
  - Hydrothermalism
  - Biology
- Globally or Atlantic-relevant quantifications
- Time scales

The program is highly interdisciplinary. The biology - hydrothermal geology connection is strongest via the question of time scale. Biological systems respond far quicker to environmental changes (which at hydrothermal vents are closely linked to geological activity) than any geological chronometer, and so their study allows access to a whole new range of time scales.

The advantage of doing research around Ascension Is is that it is only 4 hours transit time from the MAR. There may be a long-term option to start something like "southern MOMAR", *ie.* get a cable out from Ascension Is to the ridge to monitor it closely. Support for this might also come from Britain as the area would be in their EEZ. The ridge in this area is between 4000 – 1200 m depth, which provide a good study of the activity of hydrothermal vents at different depths. There are very few seafloor observations and no sidescan data. There is very little know about the MAR south of the equator. Traces of hydrothermal activity have been found in the water column but no vents have been found to date.

#### **Vessels**

Germany has got its first ever ROV. Capable of going down to 1500 m. It has been tried in the Arctic. Presently the new Germany ROV "Quest 4000" capable of going down to 4000 meters has just got back from trials with the *R/V Meteor* where it did dive to 4000 m depth. It has two claw arms and is currently being fitted with high-quality video and sampling gear. The new ROV also has a doppler log for navigation relative to the sea floor, so that it can totally re-track its path year after year. The ROV can also navigate a constant height above the sea floor. A website about the ROV is under construction.

#### **Planned cruises**

2004

M60/3 15.01.04 – 13.02.04 15°N: Start biological time series observations, hydrothermal mineralisation studies (PI.: P. Herzig)

M62/4 29.09.04 – 06.11.04 2-4°S: Geophysics (PI.: T. Reston)

M62/5 09.11.04 – 30.12.04 4-11°S: Bathymetry, side-scan, and search for the first hydrothermal systems in Southern Atlantic with new ROV (PI.: C. Devey)

2005

April, 30 days - 15°N: Heat flow, Geophysics, Biology, using cameras to map the seafloor (PI.: H. Villinger)

May, 30 days - 4-11°S: Petrology, Geophysics, (7 days) Biology (Haase)

2006

4-11°S: Hydrothermal fluids/Biology (Türkay/Koschinsky)

15°N: Rock drill und Biology (PIs: P. Herzig, C. Borowski)

### **India – InRidge (KA Kamesh Raju)**

India became an associate member of IR in the year 2000 and created InRidge as a part of the India's ridge research initiative. As a result India has renewed her interest in ridge research by launching a five-year plan to undertake comprehensive interdisciplinary research over the Indian Ocean ridge segments. In the current program (2002-2007) India's researchers expect to receive more ship time and do more ridge activities. The program is expected to receive funding of about 7 million USD for the next 5 years.

Vision of the program is to include full range of disciplines and can be summarized as follows:

***To understand the tectonic processes and their interaction with hydrosphere and biosphere along the Indian Ridge System and the Backarc Basin***

**Objectives of the program are to investigate:**

- influence of spreading rate on morpho-tectonics
- tectonic framework and magmatic processes along mid-ocean ridges and back-arc basin.
- the structure and evolution of the back-arc basin.
- mantle signatures along the ridge system and in the back-arc basin using geochemical tracers.
- hydrothermal mineralisation along the spreading centres.
- deep ocean circulation and near seabed oceanographic parameters (physical, chemical and biological) and their relation to tectonic processes.

The target areas of research in the Indian Ocean are: 1 - Carlsberg Ridge (CR), 2 Central Indian Ridge (CIR) and 3 - Andaman Backarc Spreading Center (ABSC). All of these regions have been very poorly studied so far and have interesting evolutionary histories since they are in close proximity to India they are ideal places to start.

**Carlsberg Ridge and Central Indian Ridge segments** : Some areas have been mapped and few seabed samples have been recovered. Future plans include more extensive mapping, sampling and water column studies.

### **Andaman basin**

In the recent years the Andaman backarc basin has been mapped using high resolution swath bathymetry, magnetics, gravity and single channel seismics. The data help visualize the complex topographic fabric of the backarc basin. The recent investigations provide vital clues to the evolution of the back arc basin.

### **The network program of CSIR and DOD**

Involves the government research labs NIO, NGRI, the Department of Ocean Development (DOD). The program is open to all ridge researchers in India from the research labs and universities.

Plans for the future include intensified studies as well as an increase in the disciplines, such as tectonics, water column studies and biology. A team of biologists waiting for the discovery of hydrothermal vents along the Indian Ridge system and back arc basins

This program also encourages International collaborations through InterRidge. Effective international collaborations are envisaged by being an associate member of the InterRidge. Other international collaborations include US (ONR, SOEST, Hawaii), Japan (ORI, Tokyo), Germany, Portugal, France (Univ. Brest), Russia (SIO), NSERC (Canada), SOC (UK).

The approach is to combine a number of disciplines: tectonics (high-resolution mapping and acoustic imaging surveys, detailed seabed sampling) and water column studies (temperature anomalies, chemical & biological signatures)

### **Field program onboard *R/V Sagar Kanya***

Cruise-I (SK-194) Carlsberg Ridge: 21 June 03 To 25 July 03 (Karwar – Male)

Cruise-II (SK-195) Central Indian Ridge: 28 July 03 To 30 Aug. 03 (Male-Tuticorin)

### **Recent activities in association with InterRidge**

- Participation - RV Hakuho-Maru (2000-01), Gulf of Aden
- RV Atlante (2000) – Indian Ocean, Submersible dive aboard Nautilie
- RV Atlante – Azores – MAR (2002), ROV – Victor

### **Expectations**

- Intensified effective collaborative efforts, Deep-tow, OBS, ROV, Submersible dives
  - Working group - study of Indian Ocean ridge system (CR-CIR in particular).
  - Collaborative studies will greatly help progress and maximise funding.
- Workshop at NIO-Goa on IO Ridges 2005

### **The years ahead (voyage into the possibilities)**

00-05: The current plan (2002-2007)

05-10: Submersible dive operations including manned dives to the active vent sites.

10-15: To establish seafloor observatory at a selected vent site.

15-20: Establishing a network of seafloor observatories and continuous monitoring. Event detection and response, monitoring of fluxes, deployment of additional instrument packages.

## **Korea (S-M. Lee)**

From 1992 to the present, the main focus of Korean research in the Pacific was on mineral exploration on the ocean floor under the contract with Korean government. The main attention was placed on minerals such as Mn nodules – Clipperton and Clarion Fracture Zone in the East Pacific, and Mn crust, which is found in Cretaceous/Jurassic seamounts in the western Pacific and hydrothermal deposits in the backarc spreading centres in the western Pacific including Manus, Solomon, and Fiji Basins. Korean researchers conduct their ocean-based research onboard the *R/V Onnuri*, which is a 1.5k ton ship equipped with multibeam system, multichannel seismic system, and 10-km-long coaxial cable for live deep-tow camera and sidescan sonar imaging.

The Daeyang Program is one of the largest open ocean project in funded by the Korean Ocean Research and Development Institute (KORDI). Unlike previous government-supported mineral exploration, Daeyang Program focuses on the basic scientific issues, such as exploration to understand global tectonics and life in the deep underwater extreme environments. Back-arc basins form the main areas of research interest to Korean scientists involved in Daeyang Program.

Phase I of the Daeyang Program was for three years (2000 – 2002). Main areas of study were the Ayu Trough and the Manus Basin. Measurements taken include underway geophysics, multichannel seismics, rock sampling and biological sampling at active hydrothermal vent sites. In addition to hydrothermal vent research, the Daeyang Program during the first phase included physical oceanographic research to investigate the mixing of different masses of water at the

equator, mid and deep water circulation of the Philippine Sea, migratory path of larvae and fish, distribution of plankton in the Philippine Sea, and atmospheric chemistry.

•2004 - Daeyang Program (I)

After one year of pause in the seagoing activity in 2003, KORDI intends begin the second phase of Daeyang Program in 2004. The second phase will have a bigger budget than the first, but will focus on finding new hydrothermal vent sites and long-term monitoring of such sites both geological and biological perspectives.

The second Korean Research vessel has been approved and is expected to start building in 2005. The new *R/V* will be a 4000 ton vessel capable of doing research in the polar regions. It will have the capacity to launch and recover ROVs

## **InterRidge Japan (K. Tamaki)**

### **Budget**

InterRidge Japan is funded to fiscal year 2005 (*i.e.* April 2005 to March 2006). We will submit a new proposal for InterRidge Japan to JSPS funding system for another four years to stay with a principal member.

### **Research facilities**

The two Ocean Research Institute (ORI) ships (*R/V Hakuho maru* and *R/V Tansei maru*) will move to JAMSTEC from April 2004. This will be of considerable benefit since the number of operational days will increase from 180 days/year to 300 days/year

### **Upcoming Cruises**

The Archean Park Project will focus on Southern Mariana Trough for fiscal years 2003 to 2004 (*i.e.* April 2003 to March 2005). A number of cruises including submersible dives will be conducted in the area for coming years. Other Mariana Trough cruises are a deep-tow sidescan sonar cruise at the northern Mariana Trough in November 2003 and AUV operation cruise at hydrothermal sites of Mariana Trough in May 2004. Additionally there are numerous cruises to the Okinawa Trough every year lead by biologists as well as chemists. Other than the Western Pacific *R/V Hakuho maru* cruise is planned at CIR Rodriguez segment in 2006.

### **Other News**

The submersible "Shinkai 2000" has stopped operation from 2003.

Vehicle of ROV Kaiko 11K was lost at the Nankai Trough on May 2003 while it is under operation of treating an ODP hole instrument.

The AUV r2D4 is now ready to make its first cruise, scheduled in July 2003

H. Fujimoto is a new chair of JAMSTEC Cruise Proposal Evaluation Committee and T. Gamo is a new chair of Ship Operation Planning Committee.

Tamaki will be chair of the IODP Science Planning and Policy Oversight Committee (SPPOC) from Oct 2003.

## **USA – Ridge 2000 (C. Fisher)**

Planetary Renewal and Life in the deep ocean "From Mantle to Microbe"

R2K Program has two big parts to it: Integrated Studies and Time-Critical Studies. The global aspect was encompassed under "Exploratory Studies" which was not included in the program approved by NSF. The Ridge 2000 program will continue to nurture these types of studies (with workshops and meetings), but funding requests for research support should go directly to the NSF core programs.

### **Time Critical Studies**

Ridge 2000 Time Critical Studies will initially be limited to monitoring and rapid response efforts in the northeast Pacific on the Juan de Fuca Ridge because this is the only area in which real-time monitoring is currently coincident with rapid response capabilities.

This may change and when it does this restriction will be revisited by the Steering Committee. The Time Critical studies is a concept and so at this point in time it can only be realised in the north Pacific but in time this can be extended to other areas where such studies are possible.

### **Integrated Studies**

Major Goals are 1) to develop focused, quantitative, whole-system models through coordinated, integrated and interdisciplinary experiments at a small number of sites and 2) to understand the interactions and linkages among all the components of this complex system.

Three sites have been selected and research is underway at all of them. All sites are selected on a "bull's eye" concept, the idea being is that small scale studies are all done on one vent field but depending on the question that you're asking,

such as studies on segmentation or petrology you might need a much larger area to work on to be able to address the question.

#### *Integrated Studies Sites*

1) Medium Rate Spreading Center: Endeavour Segment, Juan de Fuca Ridge, with the bulls eye is the main vent field  
2) Fast Spreading Center: 8-11°N EPR with the bulls eye at 9°50'N  
3) Back Arc: Eastern Lau spreading center in the Lau basin, not sure yet what the bulls eye is going to be. There have been a number of candidate sites that have been visited and described. A number of cruises are planned in 2004 with one purpose being to determine the bulls eye. Cruises will include mapping, multibeam, dredging and petrology, narrowing the scale. Then there will be chemistry cruises and ROV, and ABE AUV and some focused biology, chemistry and sulfide cruises.

In the dream of the program there are 6 type areas for studies in 13 years:

- Fast spreading centre (MOR)—9° N-EPR
- Intermediate spreading centre—Endeavour
- Back-arc spreading centre—Lau
- Slow spreading centre—perhaps somewhere on MAR
- Sedimented spreading centre
- Hotspot-influenced spreading centre

However, the budget doesn't allow that without a lot of international collaborations. There were three different proposals for the MAR but it was not possible to reach a consensus about an ISS on the MAR. Perhaps collaboration with IR could make this a reality in a shorter time frame than if we must wait until the US has the resources to do it alone.

#### **Ridge 2000 today**

- Two NSF funding target dates have passed:

12 of 30 proposals from 8/15/02 funded

5 of 23 proposals from 2/15/03 funded

Summary of the proposals funded

- 5 for Lau Basin
  - 2 for Endeavour
  - 5 for EPR
  - 4 others for Data Management and modelling
  - Data management system and office funded!
    - Working with MARGINS Program...
    - Data management policy has been approved to try and enforce open sharing of data by USA scientists to try and encourage scientists from other countries to do likewise
    - Primary metadata sheets will be available on all oceanographic vessels that can be filled in during the cruise to let everybody know what data/samples were collected. These will go online within 30 days of the end of the cruise.
- The plan is to have all the data should go online within 2 years of the cruise

- Lau Basin field work will begin in 2004. Work at Endeavour and on the EPR is ongoing

#### **Workshops and meetings**

- Biodiversity and biogeography of vents and seeps: Southampton, UK 6/16-18/03
- Iceland Summer School in Magmatic-Tectonic Interaction late August, 2003
- Ridge 2000 Community Workshop: Boulder Co. November 7-8, 2003
- MAR Integrated Study Site Workshop: Providence RI, February 29 - March 2, 2004
- IR/R2K Theoretical Institute on Back-arc Basins: Jeju Island Korea, May 24-28, 2005
- Limited support for other IR meetings.

### **Ridge 2000 E&O**

Centralised help and coordination identifying and implementing programs to share Ridge2000 science with the general public, the K-12 education community and the scientific community.

#### ***Ridge 2000 E&O Goals:***

General PublicTo promote Ridge2000 science to the general public, helping make the public more aware, excited and supportive of this science.

K-12To increase the awareness and understanding of Ridge2000 science within the context of science education in the K-12 community and to help infuse science learning with the excitement of discovery of the deep-sea.

Scientific CommunityTo promote Ridge2000 science within the scientific community, helping to recruit new and future research scientists and collaborators and increase awareness at colleges, universities & research institutions.

#### ***Ridge 2000 E&O balances ...***

On the one hand helping individual researchers with their independent E&O efforts.

- Features Individual's Creativity
- Access to Greater Resources

and on the other hand providing opportunities for researchers to get involved in community-wide projects. • Addresses Important Large-scale efforts

- Easier entry for those with less time for E&O
- Helps promote Ridge2000

#### ***R2K Approach***

##### General Public

- News Releases
- Web sites!
- Lectureship Series
- IMAX films / Video
- Magazine articles

##### K-12

- Standards-based curriculum
- "Live" cruise coverage Web sites
- Teacher Workshops (AGU, NSTA)
- Local Teacher/Scientist partnerships
- Teacher-At-Sea Program (REVEL)
- "What's in the News" PBS
- Distance Learning Course

##### Scientific Community

- R2K Web site
- Conferences (AGU)
- Journal & Newsletter Articles
- Lectureship Series
- Feature Articles (Geotimes)

#### **Examples of Cost**

- Lectureship Series (~\$30K year)
- Film projects (\$0 to contributing ship time)
- Curriculum development (ranges depending on your approach, can be significant ~\$100K)
- Teacher at Sea (\$15K per teacher)

#### ***Recommendations...***

- Determine your goals & priorities for E&O
- Identify opportunities for programs, costs & funding sources!
- Find collaborators / partners (COSEEs, related science programs). Many are trying to do the same things.
- Start small and grow.
- *And, if you are serious, hire a full time person*



## Invited talk (*H. L. Clark*)

### **Cabled Observatories for Ocean Research: A Component of the Ocean Observatories Initiative**

**H. L. Clark and Alexandra Isern**

Division of Ocean Sciences, National Science Foundation

Historically, ocean science research has been driven by *spatial* exploration with data collected in an *expeditionary* mode, *i.e.* where data are collected on cruises of limited duration over a limited spatial area. However, it is becoming increasingly apparent that many of the dynamic processes in the ocean will not be understood unless data are collected at spatial and temporal scales appropriate to the processes being investigated.

To do this, we need new strategies that will provide a permanent presence in the ocean including areas where we now are not able to readily explore, such as the Southern Ocean. Just as 30 years ago NSF's leadership in establishing the academic fleet revolutionized access to the ocean, a permanent presence in the ocean will provide the capability and stimulus to solve key problems in ocean science research.

It is time to start looking at things at scales that we should, not just at scales that we could.

Ocean observatories will not replace ships:

1. There is a continuing need for shipboard measurements that will not disappear with the Ocean Observatories Initiative (OOI)
2. New hypotheses from OOI time-series will need to be tested at other, non observatory, locations
3. Vessel capabilities will be needed to service observatory systems

#### ***Current standard tools to observe the ocean:***

- Shipboard sampling
- Satellite remote sensing
- Drifting objects
- Specialized, limited duration moorings

Many of the current tools used are similar to those used for the past 50 years. Sensors are currently being developed for use in long term deployments but we need the platforms for them.

Ocean observatories will provide the framework to better understand complex dynamical ocean processes at the spatial and temporal scales at which they occur.

There is an increased move towards ocean bottom observatories with the creation of research programs like "Coastal Ocean Processes and Observatories (CoOP), Dynamics of Earth and Ocean Systems (DEOS), Ocean Observatories Initiative (OOI), and Scientific, Cabled Observatories for Time Series (SCOTS).

Six major themes that provide the most important and promising opportunities for discovery and new understanding over the next decade and beyond:

- Dynamics of the Earth Structure and Ocean Lithosphere,
- Fluids and Life in the Ocean Crust,
- Coastal Ocean Processes,
- Turbulent Mixing and Biophysical Interactions,
- Ecosystems Dynamics, and
- Ocean, Climate, and Biogeochemical Cycling

**Cabled Observatories for Ocean Research: A Component of the Ocean Observatories Initiative** First generation optical cables in the Pacific are thousands of km long. Some of them will be decommissioned and can be utilised by the scientific community for ocean observatories.

Opportunity for Telecommunication Cable Re-Use

- ALOHA Observatory at site of the ongoing Hawaii Ocean Time Series (MRI)
- IRIS Ocean Cable

- Committee of engineers to investigate the technical and economic questions related to the re-use of telecommunication cables (2 meetings)

#### Integrated and Sustained Ocean Observing System (IOOS)

- What is Ocean.US?
  - Safe Marine Operations
  - National Security
  - Managing resources
  - Forecasting climate
  - Preserving healthy ecosystems
  - Mitigating natural hazards
  - Ensuring public health

It is anticipated that the annual cost of a fully-realized, integrated and sustained coastal and open ocean observing system in constant dollars is \$500M; the new investment required to initiate a sustainable path to full implementation of the IOOS is \$138M. These costs do not specifically address requirements for the satellite-based remote sensing. More details on the IOOS plan can be found on the Ocean.US web site.

- ORION - “Operations and Maintenance”
  - Science Funding
  - Instrumentation
  - Mobile Platforms
  - Educational Activities
- OOI - “Construction and Implementation Phase”
  - Infrastructure
  - Technical Development
  - Project Management
  - Data management
  - Core instrumentation

**NSF-Major Research Infrastructure and Facilities Construction Account (MRE-FC)** The MRE (Major Research Equipment; now the MREFC-Major Research Equipment and Facilities Construction) account is a National Science Foundation (NSF)-wide capital asset account that provides funding for the establishment of major science and engineering infrastructure having costs ranging from several tens to hundreds of millions of dollars. In the MREFC context, "infrastructure" is used interchangeably with "tools". NSF established this account in FY 1995 to promote effective planning and management for the support of sizable investments made over a limited period of time.

The MREFC account supports state-of-the-art tools that are centralized in nature, integrated systems of leading-edge instruments, and distributed nodes of information that serve as shared-use networked infrastructure in advancing one or more fields of scientific study. Examples include accelerators, telescopes, research vessels, aircraft, earthquake simulators, networked high-tech research platforms, advanced computing resources, digital libraries, and large databases. The Division of Ocean Sciences (OCE) hopes that Ocean Observatories Initiative (OOI) will be added to this list in the near future.

The MREFC process begins with internal requests from NSF Divisions for large equipment items or facilities that are proposed to the NSF Director and the National Science Board (NSB) with the hope that they are approved and eventually put into a NSF budget request. Currently, the OOI has been approved by the NSB and hopefully will be included in NSF's FY04 budget request that will go to the Office of Management and Budget in February 2003. In expectation that the OOI is in the FY04 budget request, OCE is continuing the implementation planning for the OOI.

- Examples of Existing Observatories**
- Bermuda testing mooring** - Provides a deep-water platform for developing, testing, calibrating, and intercomparing instruments that collect long-term data sets. **LEO-15** (in costal waters off New Jersey since 1996) - consists of two unmanned seafloor observatories linked to the Rutgers Marine Field Station by an electro-optic cable which permits scientists to remotely monitor experiments and to alter their direction. **Hawaii-2 Observatory (H2O)** - was installed on a retired AT&T submarine telephone cable in 5000m of water between Oahu and the California coast. The facility consists of a sea floor junction box providing power and two-way communications to scientific sensors. **Martha's Vineyard Coastal Observatory (MVCO)** - was designed to study coastal atmospheric and oceanic processes. **MARS** - (new generation Cable observatory test bed) in Monterey Canyon will provide:
    - a platform for scientists and engineers to experiment with components of a cabled observing system on a smaller scale than is envisioned for future regional systems,
    - an environment for testing new types of seafloor sensors

- the infrastructure to test and develop novel educational tools to ensure that future ocean observing systems take full advantage of their ability to educate the public, and
- MARS will provide further proof of the feasibility of the cabled observatory concept. This award builds on the portfolio of activities funded in OTIC that advance the frontiers of ocean observing technology.
- real-time access to data using the internet for observation and study of the marine environment.

**Ocean Observatories Initiative (OOI)***Basic Infrastructure:* a network providing two-way, high bandwidth communications and electrical power

Three primary components:

- Regional-scale seafloor fibre optic cable system
- Relocatable moored buoy systems
- Coastal observatories

These ideas and projects are helping pave the way for the future Ocean Observatories Initiative Data Handling and Dissemination System

With funding from the MREFC account, OCE plans to construct an integrated observatory network that will provide the oceanographic research and education communities with a new mode of access to the ocean. The OOI has three elements:

- 1) a network of regional cabled observatories on the seafloor spanning multiple geological and oceanographic features and processes,
- 2) several relocatable deep-sea buoys that could be deployed in harsh environments such as the Southern Ocean, and
- 3) new construction or enhancements to existing facilities leading to an expanded network of coastal observatories.

- In November 2000 the NSB approved the inclusion of funds to initiate construction of an integrated observatory network in the Foundation's budget request.
- These facilities will provide the oceanographic research and education communities with a new mode of access to the ocean.
- The scientific problems driving the need for the OOI are broad in scope and encompass nearly every area of ocean science.

#### ***Current allocation of funds in the OOI***

- Cabled Systems – over 50%
- Coastal Observatories ~25%
- Moored Buoys - < 20%
- Program Management - ~ 2-3%

These funding levels are not fixed, nevertheless there are certain boundary conditions on the structure of the OOI that can not change.

#### ***OOI Project Office to Coordinate Ocean Observing Activities***

Program Solicitation - NSF (03-576) National Science Foundation  
Directorate for Geosciences  
Division of Ocean Sciences

#### ***Duties of the Project Office***

- Establish advisory structure
  - Interaction with Ocean.US
- Develop a Science Plan
- Project Execution Plan
  - Review current budget estimates
  - Assist in coordination of CDR for cabled and buoy systems
- “Consensus Building Activities”
- Website for OCE Observing activities

**Management during both the construction and operational phases: Proposed Structure**Two phases of management are envisioned. The first will oversee the acquisition, installation and implementation of observing infrastructure. Once established, the second management phase will oversee the operation and continuing development of the system.

The management structure for the acquisition and implementation phase is based on a structure that has been successfully used by the Ocean Drilling Program for many years. The day-to-day management, coordination, and oversight of the Regional and Moored Buoy components of the OOI will be the responsibility of an Executive Director of the OOI Program Office established through a Co-operative Agreement with NSF. This Director will be accountable

to an Executive Committee under which will be established Scientific and Technical Advisory Committees. The Executive and Advisory Committees will draw their membership from individuals with expertise in ocean observing science and engineering. The Advisory Committees will have the power to establish subcommittees when more specific advice is needed. Subcontracts for the Cable and Moored Buoy components will be established to provide the specified ocean observation capabilities. The awardees of these subcontracts will work closely with the community-based Technical and Scientific Advisory Committees, the Director, and NSF Program staff. International partners that may eventually wish to contribute to the OOI would establish agreements with NSF. The existing National Oceanographic Partnership Program (NOPP) structure will facilitate participation from other Federal Agencies.

Management of the coastal observatory component of the OOI may differ from the regional and cabled systems discussed above as, in addition to new systems, projects may involve enhancements to existing systems that would already have management structures in place.

Close coordination will be maintained among all grantees, NSF, and the NOPP Ocean Information Technology Infrastructure Steering Committee to ensure that there will be common data handling protocols and standards in addition to effective communication amongst the systems. NSF will also work to ensure effective international coordination, and to keep all activities consistent with and synergistic to the goals of the National Integrated Ocean Observing System (IOOS) effort.

Following the envisioned five-year implementation phase, a separate competition will be held for operations and maintenance of the regional and buoyed observatories. It is envisioned that the management structure for this phase could resemble the highly effective structure of the UNOLS fleet.

Scientific use of infrastructure related to the OOI will be on a peer-reviewed basis where the highest quality proposals will be awarded the funds needed to place appropriate instrumentation on the ocean observatory network infrastructure.

#### Upcoming Community Workshops and Reports

- Report on technical implementation issues related to ocean buoys (May)
- NRC Report on overall implementation issues related to the OOI (June)
- Science Planning Workshop for the Regional Cabled Observatory (October)
- ORION: Ocean Research Interactive Observational Networks (January 04)

## InterRidge Projects

The three InterRidge themes: Global Studies, Meso - Scale Studies and Active Processes were subdivided into ten InterRidge projects during the first decade of InterRidge. Below are listed the current, or most recent, Chairs and working group members of these IR Working Groups, as well as the time frame that each of the WGs they were active. Most of these Working Groups already have or will finish their activities by the end of 2003 at the latest. New WG's have been proposed in the Next Decade Plan and these will start their activities in 2004. Updates and progress of the activities of the various WGs during the past decade can be found in the "InterRidge publications" archives on the IR website:<http://www.intridge.org/act2.html>

### Working Group Overview

#### Global Studies

**Arctic Ridges Working Group:**(1995-2003) Colin W. Devey (Germany), Chair

<i>Georgiy A. Cherkashev (Russia)</i>	<i>Karl Gronvold (Iceland)</i>	<i>Roland Rhim (Germany)</i>
<i>Bernard J. Coakley (USA)</i>	<i>H. Ruth Jackson (Canada)</i>	<i>Hans Albert Roeser (Germany)</i>
<i>Kathleen Crane (USA)</i>	<i>Wilfried Jokat (Germany)</i>	<i>Hideki Shimamura (Japan)</i>
<i>Olivier Dauteuil (France)</i>	<i>Yngve Kristoffersen (Norway)</i>	<i>Yoshifumi Nogi (Japan)</i>
<i>Vladimir Glebowski (Russia)</i>	<i>Peter J. Michael (USA)</i>	<i>Cindy Lee Van Dover (USA)</i>
	<i>Neil C. Mitchell (UK)</i>	

**Global Digital Database Working Group:**(1995 – 2002) Philippe Blondel (UK), Chair

<i>J.S. Cervantes (Spain)</i>	<i>Marco Ligi (Italy)</i>	<i>K.A.K Raju (India)</i>
<i>Christine Deplus (France)</i>	<i>Kyoko Okino (Japan)</i>	<i>Wilhelm Weinrebe (Germany)</i>
<i>Martin Jakobsson (Sweden)</i>	<i>Ron McNab (Canada)</i>	
<i>William Ryan (USA)</i>	<i>T. Matsumoto (Japan)</i>	

**Global Distribution of Hydrothermal Activity Working Group:**(1998-2002) Chris German (UK), Chair

<i>Ed Baker (USA)</i>	<i>Sang-Mook Lee (Korea)</i>	<i>Steve Scott (Canada)</i>
<i>John Chen (USA)</i>	<i>Gary Massoth (New Zealand)</i>	<i>Kevin Speer (USA)</i>
<i>Don Cowan (UK)</i>	<i>Joel Radford-Knoery (France)</i>	<i>Carol Stein (USA)</i>
<i>Toshi Gamo (Japan)</i>	<i>Anna-Louise Reysenbach (USA)</i>	<i>Verena Tunncliffe (Canada)</i>
<i>Eulalia Gracia (Spain)</i>	<i>Dan Scheirer (USA)</i>	<i>Cindy Van Dover (USA)</i>
<i>Peter Halbach (Germany)</i>		

**SWIR (Southwest Indian Ridge) Working Group:** (1994-2002) Catherine Mével (France), Chair

<i>Miquel Canals (Spain)</i>	<i>Charlie Langmuir (USA)</i>	<i>Jonathan Snow (Germany)</i>
<i>Chris German (UK)</i>	<i>Anton le Roex (South Africa)</i>	<i>T. Kanazawa (Japan)</i>
<i>Nancy Grindlay (USA)</i>	<i>Chris MacLeod (UK)</i>	<i>Cindy Lee Van Dover (USA)</i>

#### Meso-Scale Studies:

**Back-Arc Basins Database Working Group:** (1995 - )Sang-Mook Lee (Korea), Chair

<i>Philippe Bouchet (France)</i>	<i>Peter M. Herzig (Germany)</i>	<i>Steve D. Scott (Canada)</i>
<i>Jean-Luc Charlou (France)</i>	<i>Jun-ishihiro Ishibashi (Japan)</i>	<i>Robert J. Stern (USA)</i>
<i>Kantaro Fujioka (Japan)</i>	<i>Yukari Kido (Japan)</i>	<i>Brian Taylor (USA)</i>
<i>Katsunori Fujikura (Japan)</i>	<i>Roy A. Livermore (UK)</i>	
<i>Eulália Grácia (Spain)</i>		

**Active Processes:**

**Biological Studies at the Ridge Crest Working Group:** (1994 - ) Françoise Gaill (France) and S. Kim Juniper (UK), Co-Chairs

*Manuel Biscoito (Portugal)*  
*Andrey Gebruk (Russia)*  
*Olav Gierre (Germany)*

*Timothy Shank (USA)*  
*Paul Tyler (UK)*  
*Franck Zal (France)*

*Ken Takai (Japan)*  
*Anna Metaxas (Canada)*  
*Jung-Ho Hyun (Korea)*

**Undersea Technology Working Group:** (1996 – 2002) Spahr C. Webb (USA), Chair

*John R. Delaney (USA)*  
*J. Kasahara (Japan)*  
*Hiroyasu Momma (Japan)*

*M. Kinoshita (Japan)*  
*Adam Schultz (UK)*  
*Debra S. Stakes (USA)*

*Pascal Traits (France)*  
*H. Villinger (Germany)*

**Hotspot-Ridge Interactions Working Group:** (2002 - ) Jian Lin (USA), Jerome Dymont (France) Co-chairs

*Eulalia Gracia (Spain)*  
*David Graham (USA)*  
*Nobukazu Seama (Japan)*  
*Garrett Ito (USA)*

*Bramley Murton (UK)*  
*Kaj Hoernle (Germany)*  
*Rajendra Drolia (India)*  
*F. Sigmundsson (Iceland)*

*Joaquim Luis (Portugal)*  
*Javier Escartín (France)*

**Monitoring and Observatories:** (2002 - ) Javier Escartin (France), Ricardo Santos (Azores), Co-Chair

*Chris Fox (USA)*  
*K. Mitsuzawa (Japan)*

*Pierre Sarradin (France)*  
*Adam Schultz (UK)*

*Paul Snelgrove (USA)*  
*Paul Tyler (UK)*

A summary of national representation for the different Working Groups is presented in the Table below. Currently there are 108 individuals from 18 nations that make up the working group members.

Table 1. National Representation on the InterRidge working groups

	Arctic	SWIR	GDD	GDHA	Hotspot	BAB	Biology	Cables	Mon/Obs	Total
France	1	1	1	1	2	2	2	1	2	13
Japan	2	1	2	1	1	4	1	3	1	16
UK	1	2	1	2	1	1	1	1	2	12
USA	4	3	1	7	3	2	1	3	2	26
Canada	1		1	2		1	2			7
Germany	3	1	1	1	1	1	1	1		10
India			1		1					2
Italy			1							1
Korea	1			1		2	1			5
Norway										
Portugal					1		1		1	
Iceland	1				1					2
New Zealand				1						1
Norway	1									1
Russia	2									2
South Africa		1								1
Spain		1	1	1	1	1				5
Sweden			1							1
<b>Total:</b>	<b>17</b>	<b>10</b>	<b>11</b>	<b>17</b>	<b>12</b>	<b>14</b>	<b>10</b>	<b>9</b>	<b>8</b>	<b>108</b>
<b>Nations:</b>	<b>10</b>	<b>7</b>	<b>10</b>	<b>9</b>	<b>9</b>	<b>8</b>	<b>8</b>	<b>5</b>	<b>5</b>	<b>71</b>

## **Biological Studies Working Group**

Kim Juniper prepared a draft code was developed in collaboration with Lyle Glowka, an environmental lawyer who has been actively involved in this dossier since the 2000 InterRidge workshop on the Conservation and Management of Hydrothermal Vents in Victoria, Canada.

The STCOM was asked to read over the draft code in advance and discuss it during this meeting to improve and adapt the Code. Based on the feedback at the Tokyo meeting, and subsequent community and national program input, the InterRidge Biological Studies Committee planed to put together a final draft document for adoption at the 2004 STCOM meeting.

The overall goal is to provide a structure for self policing at heavy use vent sites. We also hope that the Code will serve as a model for managing scientific research at vents in marine protected areas under national jurisdiction. For the moment there are no rules. It is in our interest to develop a model that will both permit sustainable use of vent sites for research, and hopefully influence how MPA vents are managed for research (*i.e.* avoid excessive and misguided rule making by bureaucrats).

The STCOM unanimously agrees that IR needs to produce a code of conduct that can be made available to government bodies to provide a frame work for regulation within the EEZ of countries that do not have their own regulations at this point in time as well as in international seas. It was agreed that the draft code will need substantial revisions before it is accepted and adopted by IR as an official document. A preamble to the code of conduct needs to identify various issues as to why we need this document and what role this document should play in the general community.

**BAB Working Group** RIDGE 2000-InterRidge Joint Theoretical Institute: Interactions among Physical, Chemical, Biological and Geological Processes in Backarc Spreading Systems

### **Organising Committee**

- (1) Sang-Mook Lee (KORDI, Korea) – Local Organiser
- (2) Kensaku Tamaki (Univ of Tokyo, ORI, Japan)
- (3) David Christie (Oregon State Univ, USA)
- (4) Patricia Fryer (Univ of Hawaii, USA)
- (5) Peter Herzig (Univ of Freiberg, Germany)
- (6) Daniel Desbruyeres (IFREMER, France)
- (7) Anna-Louise Reysenbach (Portland State Univ, USA)

### **Location**

Jeju Island, Korea

### **Dates**

May 24-28, 2004

Short Course (2 days): May 24 (Mon) - May 25 (Tue)

Field Trip (1 day): May 26 (Wed)

Workshop (2 days): May 27 (Thu) - May 28 (Fri).

### **Field Trip**

There are two possibilities for a field trip that will need to be finalised shortly

Young-Kwan Sohn (Gyeongsang National Univ)

Suk-Hoon Yoon (Cheju National Univ)

**Short Course Topics**1. Tectonics and dynamics of backarc basins from a global perspective

2. Recent geodetic constraints on the kinematics of backarc basins
3. Geophysical imaging of backarc spreading system (I) - seismics
4. Geophysical imaging of backarc spreading system (II) - gravity, magnetics etc
5. Hydrothermal systems of backarc basins from a geochemical perspective - plume & water chemistry6. Magmatism of backarc spreading system - petrology, rock chemistry
7. Hydrothermal mineralization within backarc basins - sulfides etc
8. Biogeography/biodiversity of backarc basin fauna9. Physiological ecology of backarc basin fauna
10. Microbiogeography of backarc basin

### **CASE STUDIES**

11. Mariana Trough
12. Okinawa Trough
13. Scotia Sea
14. Manus Basin

The short course topics require some refining before being finalised. The issues to be decided are: - Correctly interdisciplinary?

- Possible lecturers - suggestions?

- Requirement for submission of Lecture notes by invited speakers, prior to the meeting

- BAB WG - New members?

- BAB WG - Should lead the Workshop

Can you please add the decisions regarding the last two points, *i.e.* membership and role of BAB working group in the workshop. In fact what do you envisage that the WG will do?

### **The Next Decade WG structure**

The structure of the working groups will be changed during the Next Decade of InterRidge. Some of the working groups will continue to function as they already exist. Others will morph into different working groups and a number of totally new working groups will start operating from next year.

Initially, the Next Decade of InterRidge will start off with seven working groups. New working groups can always be proposed to the Steering Committee for consideration and will be implemented if the Steering Committee agrees to accept any new proposals that are submitted. There is no formal procedure that has been established for the formation of new Working Groups. The IR steering committee remains open to any groups of scientists with strong motivation and global and interdisciplinary project proposals that will benefit from being part of this international program.

#### Next Decade Working Group status

1. Ultra-slow – New Chair(s) needs to be selected
2. Ridge-hotspot – Chairs will remain the same; Jerome Dymont (France) and Jian Lin(USA)
3. BAB - Chair will remain the same; Sang-Mook (Korea)
4. Mid-oceanic ridge Ecosystems – The current Biology WG will become this WG
5. Monitoring and Observatories Chairs will remain the same; J. Escartin (France) and Ricardo Santos (Azores, Portugal)
6. Deep Earth Sampling - New Chair(s) needs to be selected
7. Global Exploration - New Chair(s) needs to be selected



## **Actions List**

### IR Office

- Membership issue of Italy: The ST COM member will be provided with an invoice and given two weeks to respond. In case of lack of response the status of Italy's membership will need to be downgraded to a corresponding member.
- A close contact should be kept with Russia: possible meetings to strengthen interactions are the October 1-3 Moscow meeting and the April 25-30, St Petersburg meeting.
- The Chair of Inter-MARGIN (or a nominated delegate) should be invited to attend the next ST COM meeting and give a brief presentation in Korea.
- The position for a new IR coordinator needs to be advertised to the IR community.
- Announce a new Editorial policy of IR News. Accept the following types of articles: 1) cruise reports [shipboard or immediate post-cruise results, preliminary results of recent field work related ridge research], 2) general interest articles, [new equipment, new ship, opinion article, workshop reports, news or updates of ridge related projects].
- Contact all on the mailing list to ask if they wish to continue to receive IR news in hard copy or just wish to be informed about the availability of the electronic versions on the IR website.
- New WG Chairs for the following Next Decade Working Groups need to be selected: Ultra-slow WG, Deep Earth Sampling WG and the Global Exploration WG.
- Proposed Indian Ocean Ridge System Workshop in Jan 2005, Goa should be announced in the next IR News (Fall 2003)
- Colin will attend the SPC (IODP) in Dec 2003 or later to present the Next Decade IR Program
- The support for IR among the European community could be strengthened by creating a "EuroRidge" – It will require a very solid support of the community but IR is the obvious means to start off such a project.

### ST COM meeting

- The next ST COM meeting will be held 21(Fri)-22(Sat) May 2004 in Seoul (or Jeju), Korea.

### Monitoring and Observatories:

- Find out if Chris Fox is still interested in being a member of the WG since he has moved to another position.

### Bio WG

- Kim Juniper to make changes to the draft code of conduct and present it to the ST COM for further discussion.
- A call for the third Hydrothermal Vent Biology Symposium should go out by the end of 2003 or early 2004. Proposed meeting date should be in 2005.
- Bio WG meeting in early 2004 (after the call for symposium host has gone out)
- F. Gaill to provide a Brazilian contact for a possible symposium

### BAB WG

- new membership needs to be selected for this working group.
- C. Fisher to ask the R2K committee to select a rep. member from USA

### Global Bathymetry WG

- See notes from Philippe Blondel on bottom of page 28 of this report.

## **Coordinator's Update**

### **InterRidge Membership**

Since the last Steering Committee meeting there was no change in the membership status of the contributing member nations.

Since Germany has submitted a bid to host the next IR office, Germany will upgrade its membership status from Associate to Principal by the end of this year.

Italy has made only one payment (in 2001) during the time the IR office was hosted in Tokyo, *i.e.* within the last 4 years for its annual Associate Membership contribution. Upon meeting with the national representative during the 2002 Steering committee meeting, it was made clear that this situation was not satisfactory and that funds would be sought to continue Associate membership contribution. Persistent attempts on behalf of the coordinator since that meeting have yielded no results, thus the status of Italy was discussed and a decision reached about action to be taken for the future.

We have a new Australian Correspondent, Dr Dietmar Müller from the University of Sydney Institute of Marine Science (USIMS).

The current status of InterRidge member nations is a total of 28 countries: 4 Principal members (France, Japan, UK and USA), 7 Associate members (Canada, Germany, India, Italy, Korea, Portugal and Norway) and 17 Corresponding members (Australia, Austria, Brazil, China, Denmark, Iceland, Mauritius, Mexico, Morocco, New Zealand, Philippines, Russia, Spain, South Africa, Sweden, Switzerland and SOPAC).

## **InterRidge Meetings and Workshops**

### **Recent and Upcoming meetings**

- SWIR Working Group Workshop  
*17 - 19 April, 2002 SOC, UK*
- InterRidge – The Next Decade Workshop  
*10 – 12 June 2002, Bremen, Germany*
- InterRidge MOMAR Workshop  
*15-17 June 2002 Azores, Portugal*
- InterRidge Theoretical Institute: Thermal Regime of Ocean Ridges and the Dynamics of Hydrothermal Circulation  
*9 - 13 September, 2002, University of Pavia, Italy*
- InterRidge Steering Committee Meeting  
*13 -14 September, 2002, Sestri Levante, Italy*
- InterRidge Steering Committee Meeting  
*27 -28 June, 2003, Tokyo, Japan*
- IR Symposium and Workshop: Ridge-Hotspot Interaction: Recent Progress and Prospects for Enhanced International Collaboration  
*8 - 10 September 2003, Brest, France*
- Joint R2K-InterRidge Theoretical Institute: Interactions among Physical, Chemical, Biological, and Geological Processes in Backarc Spreading Systems on back-arc basins and back-arc spreading systems,  
*24-28 May, 2004, Jeju Is., Korea*
- InterRidge Steering Committee Meeting  
*May, 2004, Korea*

### **Meetings proposed for the future**

- InterRidge Workshop: Opportunities and Contributions of Asian Countries to the InterRidge Next Decade Initiative  
*POSTPONED - New Date proposed 27-29 October 2003, Beijing, China*
- Indian Ocean Ridges  
*January 2005, Goa, India.*
- Biology Working Group meeting in the first half of 2004  
*Location and exact dates to be decided*

### InterRidge WWW Pages

No new major additions to the existing structure of the IR website have been implemented since the last meeting. The maintenance of the InterRidge website continues to take a substantial amount of labour and our website is steadily growing.

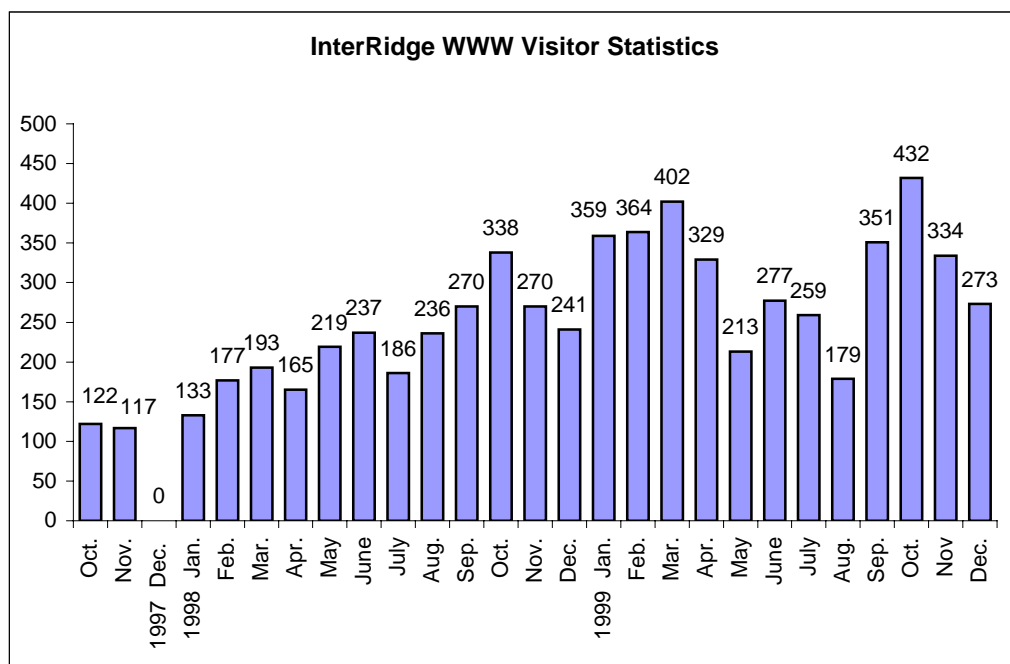
Almost all of the publications of the IR office since 2000, including all issues of IR news, meeting abstract volumes and meeting reports, are available as downloadable PDF files from our website using Acrobat Reader 4.0 or later versions. This saves on printing costs as well as postage while at the same time making the information available instantly to anybody who is interested. As usual, the National, Working Group and IR Office updates published in *InterRidge News* have been posted on the web site, as are all the InterRidge reports.

There hasn't been much progress with the portal page to world MB data, the prototype of the portal page has been created and is accessible at <http://www.intridge.org/sbsite.html>. Philippe Blondel has finished as the Chair of this WG and further progress of this project will greatly benefit from the input of somebody directly involved in this research.

A brief summary of the features found on the InterRidge website can be found in the 'News' section, accessible from the InterRidge homepage.

With new server tracking capabilities more accurate web access statistics can be obtained. Between 1997 and 2000 only home page counts were available (Fig 1a). From 2000 onwards the total number of page requests has been tracked instead (Fig 1b). The tracking of total number of page requests provides a much more accurate account of the usage of the InterRidge website because in many instances direct links are provided to meeting pages or web pages with specific information and thus the home page is bypassed on many occasions when information is requested from the InterRidge website.

The use of the IR website continued to increase until the year 2002 but during the last year the number of web pages requested has stabilised at around 14000 hits per month (Fig. 1b).



**Figure 1a.** InterRidge WWW home page Visitor Statistics, October 1997 - Dec. 1999. These are Home Page hits only.

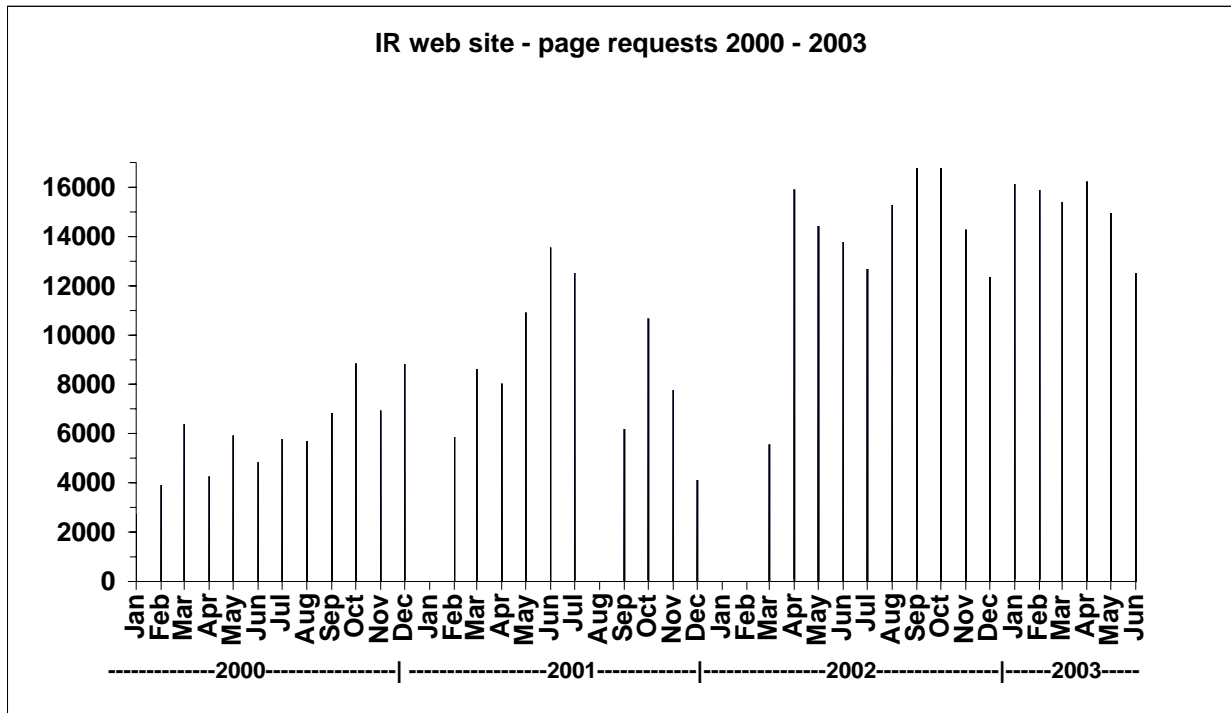


Figure 1b. InterRidge website Visitor Statistics, total number of requested pages – from January 2000.

## InterRidge Publications

### Summary of 2002-2003 Publications

- InterRidge News, vol. 11, no.1 pp 64, April 2002
- InterRidge Workshop: SWIR (South West Indian Ridge Workshop), pp. 79, April 2002
- InterRidge Theoretical Institute Abstracts Volume, pp84, September 2002
- Extended abstracts volume from the 2nd International Symposium on Deep - sea Hydrothermal Vent Biology are published in the CBM - Cahiers de Biologie Marine, vol 43 n°3-4, 2002
- InterRidge News, vol. 11, no. 2, pp. 68, November 2002
- InterRidge Steering Committee Report, September 2002
- InterRidge News, vol. 12, no. 1, pp. 52, May 2003

### Publications planned for 2003

- New InterRidge Science plan for the next decade, July 2003
- InterRidge Steering Committee Report, June 2003
- Abstract volume - IR Symposium and Workshop: Ridge-Hotspot Interaction: Recent Progress and Prospects for Enhanced International Collaboration.
- Meeting report - IR Symposium and Workshop: Ridge-Hotspot Interaction: Recent Progress and Prospects for Enhanced International Collaboration.
- InterRidge News, vol. 12, no. 2, pp. 52, November 2003

## InterRidge Budget

Below are the IR contributions for the year 2002. To date, not all of our member nations have finalised their annual membership payments. Income from member nations in the Year 2002 was \$125 000 US, (see table below), which lower than in 2001.

	Yen	Dollars *
<b>PRINCIPAL MEMBERS</b>		
Japan	4,800,000	40,000
France	2,400,000	20,000
UK	2,400,000	20,000
USA	2,400,000	20,000
<b>ASSOCIATE MEMBERS</b>		
Canada	600,000	5,000
Germany	600,000	5,000
Italy	0	0
Norway	600,000	5,000
Portugal	0	0
India	600,000	5,000
Korea	600,000	5,000
<b>Total</b>	<b>15,000,000</b>	<b>125,000</b>

**Figure 2a.** IR Office income – 2002 contributions from the Principal and Associate member Nations.

\* assumed 1 US\$ =120 Yen (25 May, 2002)

**IR Office Expenditure:**

The office expenditure was very similar to the previous year. The most pronounced difference from the year 2001 budget expenditure occurred in expenditure for Meeting organisation. In the 2002 Fiscal Year, costs of preparing 4 meetings were approximately 13 500 USD compared with only 3 000 USD in 2001.

General office running costs totalled almost 31 000 USD. It is worth noting that total telecommunications and most of the ‘other’ postage costs (*i.e.* postage costs outside of the IR news) were covered by other funds, and not by the IR office.

The combined travel expenses, for the Chair and Coordinator were again quite small (>2 000 USD). As in the previous year the travel costs for the coordinator and the Chair were covered from other funds.

In conclusion, the overall spending during 2002 was 8% (approx 11 000 USD) higher than the previous year. The IR budget was supplemented by other sources of funding which provided some buffer for various expenses. The IR expenditure in 2002 was about 6 000 USD higher than the income for that year.

	EXPENDITURE (Yen)	EXPENDITURE (Dollars)*
<b>Salaries</b>		
Coordinator	4,870,000	40,583
Assistants	2,300,000	19,167 Usual Post-doc
Post-Doc	2,689,220	22,410 salaries: \$1,980 x 12 =
Insurance for employee	43,500	363 \$23,760
Subtotal	<b>9,902,720</b>	<b>82,523</b>
<b>Travel</b>		
Chair (Bremen)		
Travel	34,970	291
Coordinator (Sapporo, Russia)		
Travel	224,621	1,872
Subtotal	<b>259,591</b>	<b>2,163</b>
<b>Meeting</b>		
Bremen	374,520	3,121
Southampton	399,750	3,331
Portugal	376,050	3,134
Italy	477,200	3,977
Subtotal	<b>1,627,520</b>	<b>13,563</b>
<b>IR Activities</b>		
IR Students awards (\$700 x 2)	168,000	1,400 SWIR WS, IRTI
Workshop Abstracts	44,850	374
St. Committee Report	10,491	87
Subtotal	<b>223,341</b>	<b>1,861</b>
<b>Office Costs</b>		
Telecommunications	7,720	64
Printing IR News (2 issues)	873,075	7,276
Postage IR News (2 issues)	1,133,105	9,443
Postage non IR News	57,720	481
Supplies	200,758	1,673
Equipment(HD)	31,112	259
Bank transfer charges	60,947	508
Overhead	1,350,000	11,250
Subtotal	<b>3,714,437</b>	<b>30,954</b>
<b>Total</b>	<b>15,727,609</b>	<b>131,063</b>

**Figure 2b.** InterRidge Office Expenditure Fiscal Year 2002 (April 2002 – March 2003).

\* assumed 1 US\$ =120 Yen (25 May, 2002)

## **Plans for PRIVATE DIVES to Hydrothermal vent sites.**

The IR office has been contacted for information about the location of hydrothermal vent sites. Private dives are being planned in the future by an unknown Private Group. The purpose and locations of these private dives have not been disclosed to the IR office. A willingness to cooperate with InterRidge and respect for the scientific research that is being conducted was expressed. However several problems arose in communication arising for the following reasons:

- the Private Group request a legal non-disclosure agreement before any information about their dive plans would be released
- The person, and only the person who signs this non-disclosure agreement will be provided with the information about the dives. If this person wants to pass on this information to a third party then they have to contact the Private Group and they will decide if the third party really does need to know and have them sign a non-disclosure agreement before releasing the information to them.

Obviously this creates a situation that is not workable in practice because of the number of different groups that are involved in hydrothermal vent research. No one person can be expected to know about all the research that is being currently conducted and take on the responsibility of deciding which scientists to potentially contact to inform them about the Private Group dives. The Private Group definitely understood the possibility of disrupting long term experiments through simple ignorance of their existence.

Another way to help the situation would be to post on the IR website current locations with long term experiments going on. A large notice was posted in the Spring 2003 (vol. 12.1) issue of IR news to alert the scientific community about the plans for private dives and a call to submit to the IR office information about the location and nature of long term experiments so that this information can be posted on the IR website to make available to the general public the sites that should be avoided or visited with caution. This call for information, however, was not successful and did not receive any responses.

It will certainly be worthwhile to continue to encourage scientists to post the location of their experiments on the IR website so this information is freely available. Such action can help to avoid unnecessary conflict between the different user groups, which arises through ignorance of the presence of "other" user groups rather than any malicious disruption of costly experiments.

## **InterRidge contacts with other programs**

IR has links with the following programs:

- ILP (International Lithosphere Program)
- SOPAC (South Pacific Geosciences Applied Commission)
- SCOR (Scientific Committee on Oceanic Research)
- ODP (Ocean Drilling Program)
- IODP (International Ocean Drilling Program)
- ISA (International Seabed Authority)

In the past year there has not been much activity between the IR office and the ILP, SOPAC or ISA.

## **IODP (International Ocean Drilling Program)**

Tamaki reported that IODP will officially start from October 1<sup>st</sup>, 2003 and that the construction of Japanese riser drilling vessel, "Chikyu", is going well with the plan of completion in FY2005. Tamaki was once invited by ODP Science Planning Committee to present the updates of InterRidge activity in March 2003 in US but he could not attend. However in turn he is expected to be invited to next SPC meeting in September 2003 at Sapporo, Japan. He will present the Next Decade InterRidge Program in the ODP SPC meeting.



## **SCOR (Scientific Committee on Oceanic Research)**

IR is an affiliate program of SCOR and as the IR coordinator I provide annual reports to them about IR activities. I was able to attend the SCOR executive committee meeting for the first time in October 2002, Sapporo, Japan. After my presentation the SCOR executive committee decided that IR definitely needs to maintain the status of an affiliate program and provided feed back about how to strengthen IR-SCOR interactions in the future.

Most importantly, the SCOR executive committee, as well as the various national representatives recognised that IR is doing very important work, and has had more success than other international programs and SCOR will be interested in providing support for IR within their framework of regulations and objectives.

1) There was strong interest in the Global Bathymetry database and that IR should continue to strive to somehow provide a gateway for the worlds banks of information. Additionally IR should try and somehow encourage people to submit/make known and make available their Bathymetry data.

2) The second issue that SCOR felt strongly about is improving our links with the IODP program. The feeling was that we need to make sure to have good information flow and a representative member from IR on the IODP panel. Additional discussions with the IR reporter, Laurent Labeyrie [Laurent.Labeyrie@lsc.cnrs-gif.fr], who is the IR repertoire to the SCOR executive committee, led to the proposal that IR should submit "Project" type proposals to IODP (as opposed to individual type drilling proposals). InterMARGINS has submitted such a proposal which has been met with some resistance since apparently there is no history of submitting "project type" proposals. It might be possible to receive support from SCOR for a "liaison" working group who's function would be to ensure that there is good communication between the proposed drilling project of IR and for example the proposal of InterMARGINS as well as IODP. Or perhaps even support for a WG to come up with an international drilling project proposal.... Obviously I was not able to discuss the scientific possibilities in detail about the ... we got into territory that was way over and above my comprehensive abilities and knowledge! So for more specific information it would be best to contact Laurent directly. Information about SCOR working groups can be found at: <http://www.jhu.edu/~scor/wkgroups.htm>

3) It might also be possible to obtain some support from SCOR to assist with travel funding (~5 000 USD) for developing or former Easter Block nations to some of our big meetings. InterRidge has always wanted to include more scientists from the less developed nations and SCOR does provide some funding for such noble causes. The organiser of such a meeting would need to write a proposal to SCOR and provide exact details of the person(s) that they would like to invite. We have already discussed the R2K-IR joint theoretical institute to be one of our prime candidate meetings for which to seek such support.

4) We should strengthen our links with ISA since they have a mandate and are under obligation to carry out research, and we might be able to get some support from them for that. The info is apparently on their website, but I haven't been able to access it ...

5) We need to encourage our national correspondents to promote IR and make it visible in their respective nations. Creation of formal "national programs" is essential in making funding bodies look favourably on providing funding for becoming a part of an international group.

### **Comments provided by Philippe Blondel regarding the Global Bathymetry database**

I agree that it is important that InterRidge provides information, for example as a gateway, about which data is where and belongs to whom. Encouraging people to submit their data is very good, but should recognise that funding bodies around the world have different views about how their data should be distributed. Some, like the US, are very open and ready to share data. Others would be happier to sell their data, not share it. And finally, others would love to share it, but don't have the infrastructure AND the people to do it.

What we had tried when BRIDGE still existed was to emulate the US model of sharing the data openly amongst scientists, but there were calls from some people to sell the data. The other problem we had at the time, with the BRIDGE database, was the very limited funding available. It was more or less a one-man job, with only a few months of salary attached, and not much can be accomplished even with a dedicated individual in that case). The end of BRIDGE meant that the database is now subsumed into a bigger NERC database, whose mechanisms of access are unclear. Other institutions (e.g. BODC, the British Oceanographic Data Centre) were able to channel more money into their databasing activities, and have more people work on it (with better results, it seems).

So, the first question to address is the recognition of data providing policies in the different countries, and try to lean toward free provision to bona fide scientists. The second question to address is the delivery of adequate funding (not a few months here and there, but real funding), by the national programmes. The third question is that database implementation is not scientifically rewarding; a formal mechanism of recognition of the individuals doing this hard and essential work should be in place (for example referencing them, as people do with Sandwell and Smith's satellite altimetry compilation), and should be supplemented with a recognition career-wise ("GIS developers are also scientists"), as a proper scientific accomplishment (I am speaking from experience).

It is quite unfortunate that the database doesn't seem to be accessible by any obvious means any more. The links that once pointed to it seem to have become obsolete.

## Meetings Calendar

- 4 - 6 June, 2003      **Oceanology International Americas,**  
New Orleans, Louisiana, USA
- 16 - 18 June, 2003      **Biogeography and Biodiversity of Chemosynthetic Ecosystems: Planning for the future,** Joint IR-R2K-Chess-Ocean Exploration meeting. SOC, UK
- 23-26 June, 2003      **Fluxes and Structures in Fluids,**  
St. Petersburg, Russia
- 24 - 27 June, 2003      **Scientific Submarine Cable workshop,**  
Tokyo, Japan
- 27 - 28 June, 2003      **IR Steering Committee Meeting,**  
Tokyo, Japan
- 30 Jun. - 11 Jul., 2003      **International Union of Geodesy and Geophysics (IUGG),**  
Sapporo, Japan
- 8 - 10 Sept., 2003      **Ridge-Hotspot Interaction: Recent Progress and Prospects for Enhanced International Collaboration,**  
Brest, France
- 22 - 26 Sept., 2003      **7th International Conference on Gas Geochemistry,**  
Freiberg, Germany
- 1 - 3 Oct., 2003      **Interdisciplinary Studies of Slow- and Ultra Slow-Spreading Ridges: From Mantle Melting to Biota Formation at Hydrothermal Vents.** Moscow, Russia
- 6 - 10 Oct., 2003      **33rd Underwater Mining Institute, "New Horizons for Marine Mining: Progress through International Cooperation,**  
Jeju Island, Korea
- 27 - 29 Oct., 2003      **IR Workshop: Opportunities and Contributions of Asian Countries to the InterRidge Next Decade Initiative.** Beijing, China,
- 7 - 8 Nov., 2003      **Ridge 2000 Open community workshop,**  
Boulder CO., USA
- 8 - 12 Dec., 2003      **AGU 2003 Fall Meeting,**  
San Francisco, USA
- 4 - 8 Jan., 2004      **Ocean research Interactive Observatory Networks**  
San Juan, Puerto Rico
- 14 - 16 Jan., 2004      **The fifth International Conference on Asian Marine Geology,**  
Bangkok, Thailand
- 26 - 30 Jan., 2004      **Ocean Sciences Meeting,**  
Portland, OR, USA
- 29 Feb. – 2 Mar, 2004      **MAR Integrated study site workshop,**  
CO, USA
- 16 - 19 March, 2004      **Oceanology International,**  
London, UK
- 25 - 30 April, 2004      **"Minerals Of The Ocean - Integrated Strategies,**  
St.Petersburg, Russia
- 26 - 30 April, 2004      **European Geosciences Union (EGU) XXVIX General Assembly,**  
Nice, France
- 17 - 21 May, 2004      **Joint Meeting: AGU and the Canadian Geophysical Union,**  
Montreal, Canada
- 24 - 28 May, 2004      **RIDGE 2000-InterRidge joint Theoretical Institute (R2K-IRTI): Interactions among Physical, Chemical, Biological, and Geological Processes in Backarc Spreading Systems.** Jeju Island, Korea
- 5 - 9 July, 2004      **Asia, Oceania Geosciences Society meeting**  
Singapore
- 16 - 20 Aug., 2004      **Western Pacific Geophysics Meeting,**  
Honolulu, Hawaii
- 20 - 28 Aug., 2004      **32nd International Geological Congress,**  
Florence, Italy
- 13 - 17 Dec., 2004      **AGU 2004 Fall Meeting,**  
San Francisco, USA

## **InterRidge Steering Committee 2002**

1. Japan - Kensaku Tamaki (Chair, 2000)
2. Canada - S. Kim Juniper (1998)
3. France - Jérôme Dymont (2001)
4. France - Javier Escartin (*ad hoc*, 2002)
5. France - Françoise Gaill (*ad hoc*, 1998)
6. France - Catherine Mével (1997)
7. Germany - Colin Devey (1999)
8. India - Abhay V Mudholkar (2002)
9. Italy - Enrico Bonatti (1998)
10. Japan - Toshitaka Gamo (2001)
11. Japan - Masataka Kinoshita (2002)
12. Korea - Sang-Mook Lee (2001)
13. Norway - Rolf Pedersen (1996)
14. Portugal - Fernando Barriga (2001)
15. Portugal - Ricardo Santos (*ad hoc*, 2002)
16. UK - Paul Dando (1999)
17. UK - Damon Teagle (2002)
18. USA - Charles Fisher (2002)
19. USA – Deborah Smith (2003)
20. USA - Jian Lin (*ad hoc*, 1999)
21. USA - Spahr C. Webb (*ad hoc*, 2001)

## **InterRidge National Correspondents**

### ***Principal Members:***

1. France - Catherine Mével
2. Japan – Kensaku Tamaki
3. UK - Damon Teagle
4. USA - Charles Fisher

### ***Associate Members:***

1. Canada - S. Kim Juniper, Kathryn M. Gillis
2. Germany - Colin Devey
3. India - Sridhar D Iyer, KA Kamesh Raju
4. Italy - Enrico Bonatti
5. Korea - Sang-Mook Lee
6. Norway - Rolf Pedersen
7. Portugal - Fernando Barriga

### ***Corresponding Members:***

1. Australia – Dietmar Müller
2. Austria - Monika Bright
3. Brazil - Suzanna Sichel
4. China - Wang Zhihong
5. Denmark - John R. Hopper
6. Iceland - Karl Grönvold
7. Mauritius - Daniel P. E. Marie
8. Mexico - J. Eduardo Aguayo-Camargo
9. Morocco - Jamal Auajjar
10. New Zealand - Ian Wright
11. Philippines - Graciano P. Yumul, Jr.
12. Russia - Sergei A. Silantyev
13. South Africa - Anton le Roex
14. Spain - Juan José Dañobeita
15. Sweden - Nils G. Holm
16. Switzerland - Gretchen Früh-Green
17. SOPAC - Russell Howorth

## InterRidge People, Past and Present

### Steering Committee Members

<b>Canada</b>		<b>Norway</b>	
S. Kim Juniper	1998 -	Rolf Pedersen	2001 -
		Eirik Sundvor	1996 - 2000
<b>France</b>		<b>Portugal</b>	
Javier Escartin, <i>ad hoc</i>	2002 -	Ricardo Santos, <i>ad hoc</i>	2002 -
Jérôme Dymont	2001 -	Fernando Barriga	2001 -
Françoise Gaill, <i>ad hoc</i>	1998 -	Miguel Miranda	1996 - 2000
Mathilde Cannat	1997 - 2000		
Catherine Mével	1997 -	<b>Spain</b>	
Daniel Desbruyères, <i>ad hoc</i>	1991 - 1997	Miquel Canals	1995 - 1998
Jean Francheteau	1991 - 1998	Juan José Dañobeita	1995 - 1998
H. David Needham	1991 - 1994		
<b>Germany</b>		<b>UK</b>	
Colin Devey	1999 -	Paul Dando	1999 -
Peter M. Herzig	1996 - 2000	Christopher R. German	1997 - 2002
Roland Rihm	1995 - 1998	Philippe Blondel, <i>ad hoc</i>	1997 - 2002
<b>India</b>		Lindsay Parson, <i>ad hoc</i>	1996 - 1998
Ranadhir Mukhopadhyay	2000 - 2001	Roger C. Searle	1994 - 1998
Abhay V Mudholkar	2002 -	Martin Sinha	1991 - 1996
<b>Italy</b>		<b>USA</b>	
Enrico Bonatti	1998 -	Deborah Smith	2003 -
		Charles Fisher	2002 -
<b>Japan</b>		Spahr C. Webb, <i>ad hoc</i>	2001 -
Masataka Kinoshita	2002 -	Jian Lin, <i>ad hoc</i>	1999 -
Toshitaka Gamo	2001 -	Christopher G. Fox, <i>ad hoc</i>	1998 - 2001
Kantarō Fujioka	1999 - 2001	David Kadko	1998 - 2001
Hiromi Fujimoto	1997 - 2000	Alan Chave, <i>ad hoc</i>	1997 - 2001
Tetsuro Urabe	1995 - 1998	Dave Christie	1997 - 2001
Kensaku Tamaki	1992 - 1997	Karen Von Damm	1996 - 1998
Kensaku Tamaki	2000 -	Lauren Mullineaux, <i>ad hoc</i>	1996 - 2000
<b>Korea</b>		Robert S. Detrick	1992 - 1995
Sang - Mook Lee	2001 -	John Delaney	1991 - 1994
		P. Jeff Fox	1991 - 1994
		Charles H. Langmuir	1991 - 1996

### InterRidge Chairs

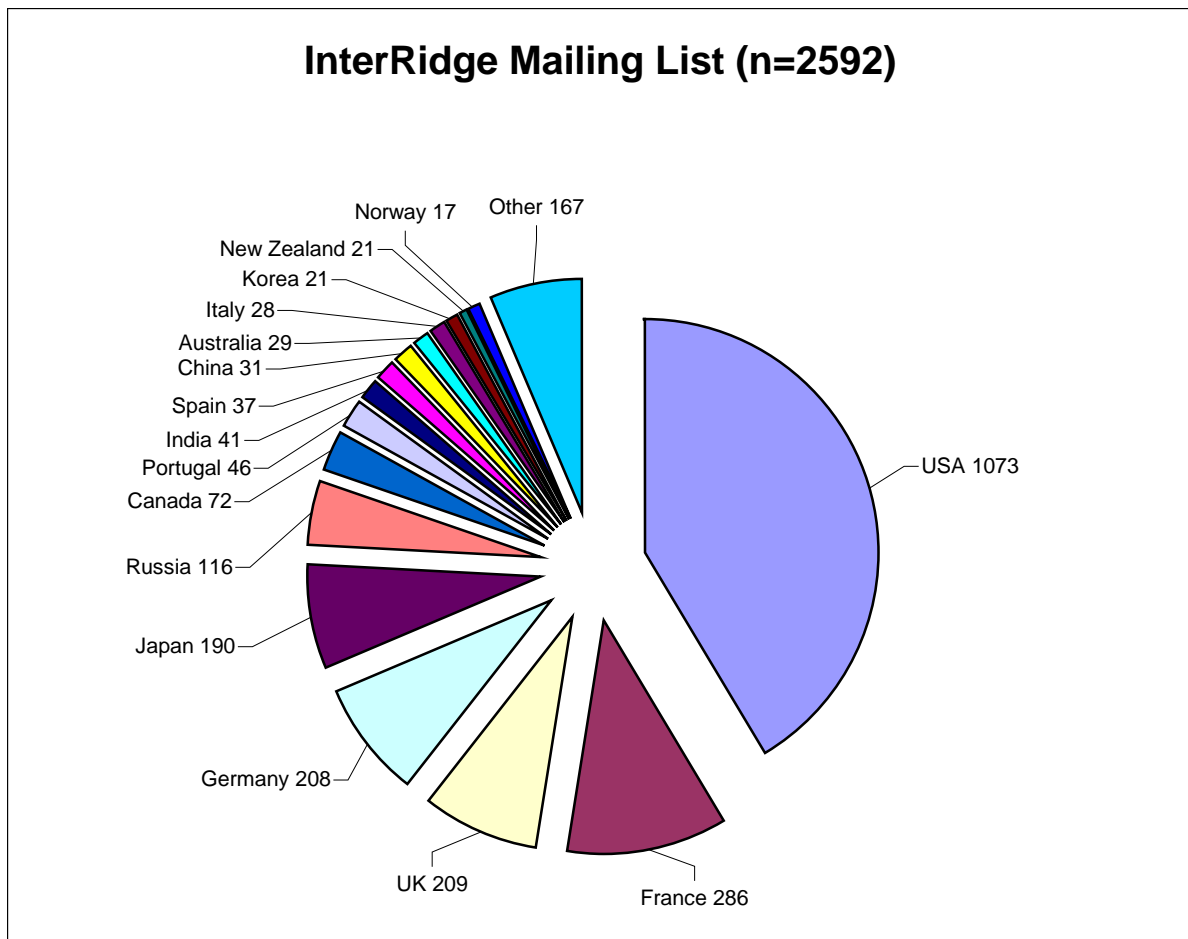
Kensaku Tamaki (Japan)	2000 -
Mathilde Cannat (France)	1997 - 1999
Roger Searle (UK)	1994 - 1996
John Delaney, co - chair (USA)	1991 - 1993
H. David Needham, co - chair (France)	1991 - 1993

### InterRidge Coordinators

Agnieszka M. Adamczewska	Nov. 1999 -
Cara Wilson	March 1997 - Nov. 1999
Ruth Williams (acting)	Oct. 1996 - March 1997
Heather Sloan	Oct. 1993 - Oct. 1996
Trileigh Stroh	1989 - Oct. 1993

## InterRidge Mailing List, June 2003

The InterRidge mailing list has shrunk since this time last year. The main reason for this is a lack of update of mailing addresses. Every issue of IR news we get between 50-100 returns. This is quite a substantial amount. It might be worth discussing potential mechanisms to deal with problem. There are now over 2592 individuals and organisations world wide that receive IR news twice a year. Approximately 67.8% of the mailings go to the Principal member nations. Individuals from Associate member nations make up another 16.8% of the total list. The remainder (~15.4%) are distributed amongst 43 different nations. The most pronounced deviation from the relationship between the number of individuals on the mailing list and national affiliation with InterRidge is shown by Russia, which is the 6<sup>th</sup> largest nation on the mailing list, making up 4.5% of the mailing list but is a corresponding member. A pie chart showing the number of individuals on the IR mailing list from different countries is shown below (Fig. 3). Compiled in June 2003.



**Figure 3.** Breakdown of the InterRidge mailing list by nationality. A total of 54 nations and 2592 individuals receive IR news twice a year.

## Appendices

### Appendix A: Articles and updates published in *InterRidge News*

#### InterRidge News

A breakdown of the research articles that have appeared in *InterRidge News* is given in the figure below (Fig. 4a). Classification is by nation according to the affiliation of the first author. For reference, in the last two issues of IR news the breakdown is shown in Fig 4b.

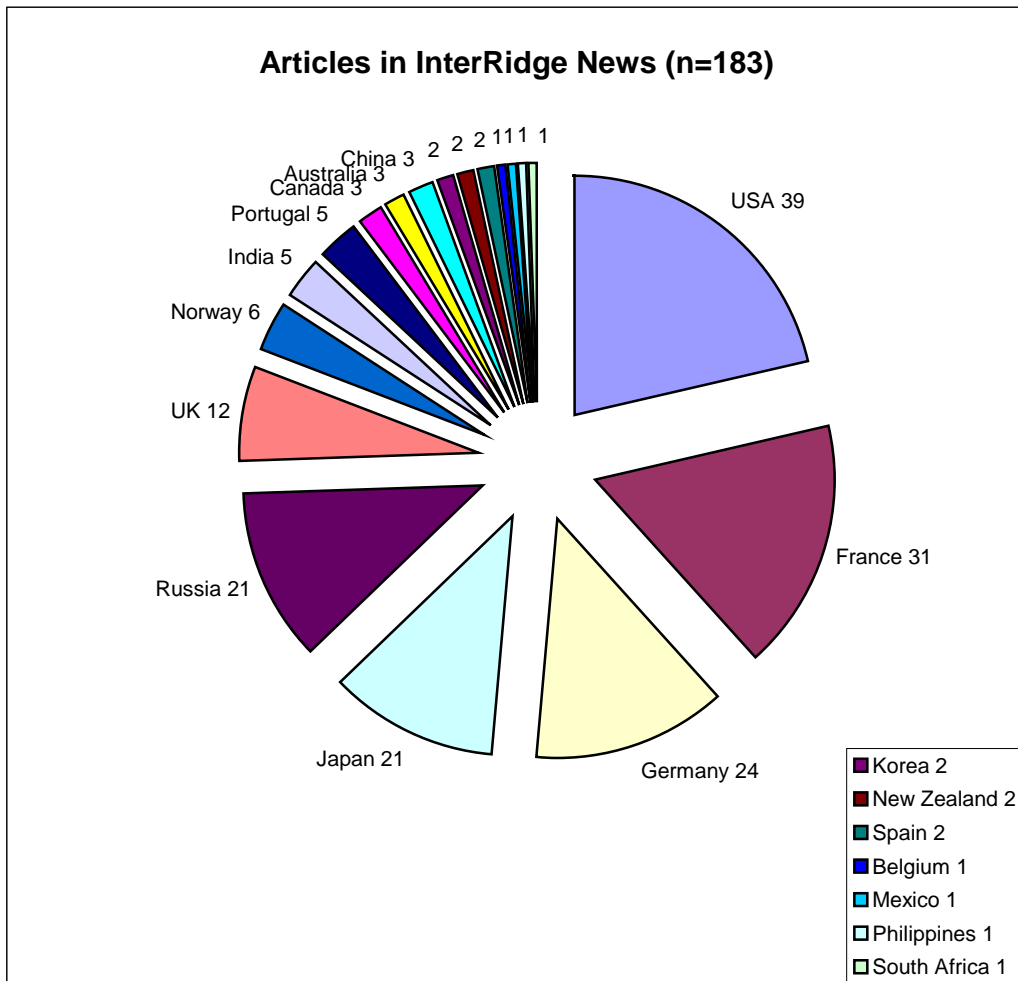


Figure 4a. National contribution of articles that have appeared in InterRidge news

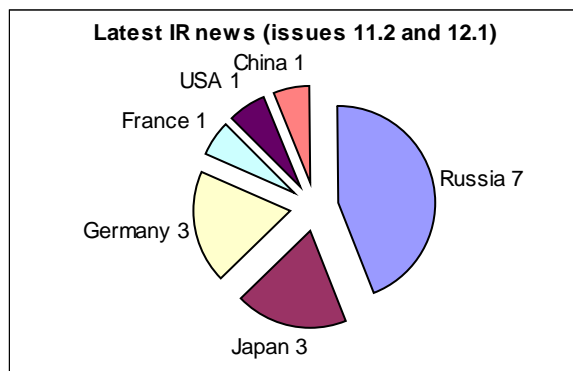
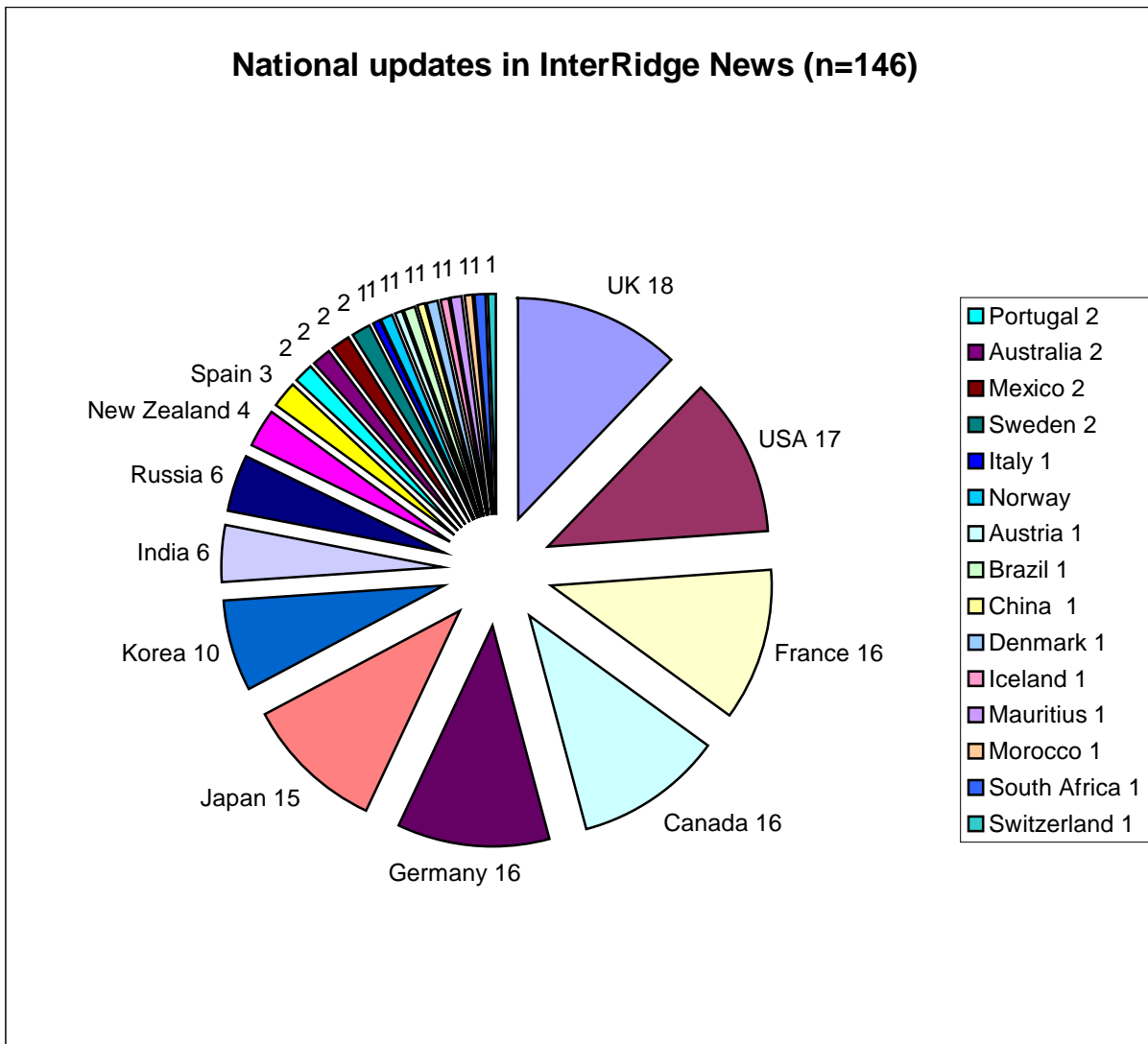


Figure 4b. National contribution of articles that have appeared in InterRidge News issues 11.2 and 12.1.

**National updates published in *InterRidge News***

A breakdown of the national updates that have appeared in *InterRidge News* is given in the figure below (Fig. 5).



**Figure 5.** Classification, by nationality, of all the updates published to - date in *InterRidge News*



## Appendix B: InterRidge Mailing List statistics

**Table 2.** The nationality of the InterRidge mailing list, classified first by membership (principal, associate, corresponding) and then alphabetically. Data compiled in June 2003.

	Country	Mailing List		E-mail Addresses		% with E-mail
		Number	% of Total	Number	% of total	
1	France	286	11.0%	210	10.5%	73%
2	Japan	190	7.3%	122	6.1%	64%
3	UK	209	8.1%	186	9.3%	89%
4	USA	1073	41.4%	888	44.4%	83%
5	Canada	72	2.8%	60	3.0%	83%
6	Germany	208	8.0%	126	6.3%	61%
7	India	41	1.6%	33	1.7%	80%
8	Italy	28	1.1%	25	1.3%	89%
9	Korea	21	0.8%	17	0.9%	81%
10	Norway	17	0.7%	15	0.8%	88%
11	Portugal	46	1.8%	60	3.0%	130%
12	Argentina	3	0.1%	2	0.1%	67%
13	Australia	29	1.1%	24	1.2%	83%
14	Austria	2	0.1%	2	0.1%	100%
15	Belgium	12	0.5%	9	0.5%	75%
16	Brazil	4	0.2%	4	0.2%	100%
17	Chile	1	0.0%	0	0.0%	0%
18	China	31	1.2%	19	1.0%	61%
19	Cuba	1	0.0%	0	0.0%	0%
20	Cyprus	1	0.0%	0	0.0%	0%
21	Czech Republic	1	0.0%	0	0.0%	0%
22	Denmark	10	0.4%	10	0.5%	100%
23	Ecuador	1	0.0%	0	0.0%	0%
24	Fiji	5	0.2%	4	0.2%	80%
25	French Polynesia	1	0.0%	0	0.0%	0%
26	Greece	3	0.1%	1	0.1%	33%
27	Guadeloupe	1	0.0%	1	0.1%	100%
28	Iceland	14	0.5%	11	0.6%	79%
29	Indonesia	2	0.1%	2	0.1%	100%
30	Iran	4	0.2%	1	0.1%	25%
31	Ireland	7	0.3%	6	0.3%	86%
32	Israel	4	0.2%	4	0.2%	100%
33	Maldives	1	0.0%	1	0.1%	100%
34	Muritus	4	0.2%	4	0.2%	100%
35	Mexico	6	0.2%	2	0.1%	33%
36	Monaco	2	0.1%	1	0.1%	50%
37	Morocco	1	0.0%	1	0.1%	100%
38	Netherlands	14	0.5%	9	0.5%	64%
39	New Caledonia	2	0.1%	0	0.0%	0%
40	New Zealand	21	0.8%	13	0.7%	62%
41	Pakistan	1	0.0%	1	0.1%	100%
42	Papua New Guinea	2	0.1%	0	0.0%	0%
43	Philippines	3	0.1%	3	0.2%	100%
44	Poland	3	0.1%	1	0.1%	33%
45	Puerto Rico	1	0.0%	1	0.1%	100%
46	Russia	116	4.5%	59	3.0%	51%
47	Slovenia	1	0.0%	1	0.1%	100%
48	South Africa	6	0.2%	2	0.1%	33%
49	Spain	37	1.4%	26	1.3%	70%
50	Sweden	14	0.5%	10	0.5%	71%
51	Switzerland	16	0.6%	13	0.7%	81%
52	Taiwan	7	0.3%	7	0.4%	100%
53	Turkey	4	0.2%	3	0.2%	75%
54	Venezuela	2	0.1%	0	0.0%	0%
	Total	2592	100	2000	100	77%