



AGENDA BOOK

ESSAC Meeting # 4 18-20 May 2015 Uppsala, Sweden

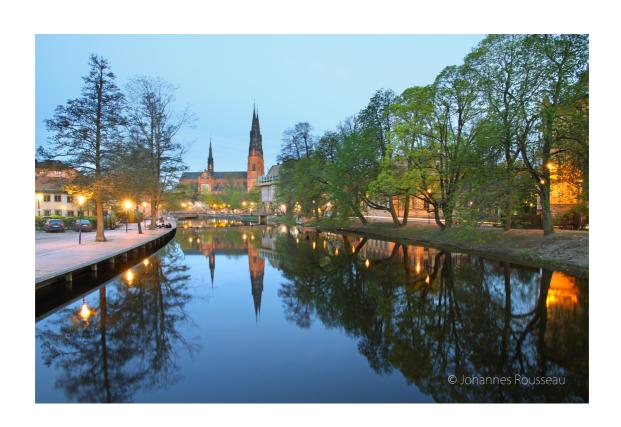


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ESSAC Meeting # 4

May 18-20, 2015 Department of Earth Sciences (Geocentrum) Uppsala University, Sweden

Final AGENDA

Monday 18 May 2015, 13:00 – 17:30

Communal dinner of the ESSAC Delegates and Guests, 19:00

Tuesday 19 May 2015, 9:00 – 17:30

Special Lecture, 11:00 – 12:00

Monday 18 May 2015, 13:00 - 17:30 Geocentrum - Room Norrland II

Communal lunch at "Mickes Kitchen" at the Evolutionary Biology Centre (EBC) for those who wish - Meet at the entrance to Geocentrum at 11.30

Coffee Break: ca. 15:00 - 15:30

- 1. **Introduction** (20 minutes)
- 1.1 Call to order, introductions (G. Früh-Green)
- 1.2 Welcome and meeting logistics (I. Snowball/ J. Hendericks)
- 1.3 Discussion and approval of the (1) agenda and (2) minutes of ESSAC Zurich meeting 2014 (G. Früh-Green)
- 1.4 Review of action items since the ESSAC Zurich meeting (by email/ G. Früh-Green)
- 2. **IODP Platform Operator Updates** (30 minutes)
- 2.1 IODP Update (G. Früh-Green)
- 2.2 EMA, ECORD Council, ECORD Vision Task Force (G. Früh-Green)
- 3. **ESO and ESSAC News** (60 minutes)
- 3.1 ESO (A. Stevenson)
- 3.2 ESSAC Office news (G. Früh-Green / J. Gutiérrez-Pastor)
- 3.3 ESSAC representatives and National Office reports / issues (ESSAC Delegates)

- **4. Expeditions, Nominations and Staffing (1)** (60-90 minutes)
- 4.1 Staffing (G. Früh-Green)
 - 4.1.1 Updates on expedition staffing and applications
 - 4.1.2 Quotas, CPPs, in-kind contributions
 - 4.1.3 Upcoming expedition deadlines and calls
- 4.2 ECORD Facility Board Report (G. Früh-Green)
- 4.3 SEP update (W. Piller)
- 4.4 Update on advisory panel members (G. Früh-Green)
 - 4.4.1 New calls and alternates
- 5. Education and outreach updates and outstanding issues (1) (60 minutes)
- 5.1 ECORD Summer Schools/courses update & applications 2016 (J. Gutiérrez-Pastor)
- 5.2 ECORD Grants and Scholarships update and applications 2015 (J. Gutiérrez-Pastor)
- 5.3 Teachers at Sea (J. Gutiérrez-Pastor)
 - 5.3.1 Status of applications
- 5.4 Upcoming E & O calls 2015 and Outreach activities (J. Gutiérrez-Pastor)
- 5.5 ECORD Database (T. Bingham)
- 5.6 ESO Outreach & Public Relations (A. Stevenson)
- **6. Breakout Sessions I** (as time permits)
- 6.1 Introductions (G. Früh-Green)
- 6.2 Breakout sessions: ESSAC Nominations and Staffing (lead: G. Früh-Green)/ Education and Outreach Subcommittees (lead: X. Monteys)

Monday, 18 May, 19:00 - Joint dinner of the ESSAC Delegates and Guests: Domtrappkallaren, S.t Eriks Gränd 15

Tuesday 19 May 2015, 9:00 - 17:30

Coffee Breaks: 10:30 - 11:00; 15:00 - 15:30

Guest Lecture: 11.00-12.15 Hamberg lecture theatre, Geocentrum (next to meeting room)

Antony Morris (Plymouth University, UK): What can magnetism tell us about oceanic tectonics? New insights from scientific drilling

Lunch 12:30 - 13:30, 'Mickes Kitchen' at the Evolutionary Biology Centre (EBC)

- **6. Breakout Sessions** *continued* (30-60 Minutes)
- 7. Education and outreach (2) Breakout reports & discussion (90 Minutes)
- 7.1 E&O Subcommittee report, discussion and future actions (X. Monteys)
- 7.2 ECORD Summer Schools 2016 update & selection (J. Gutiérrez-Pastor)
- 7.3 ECORD Grants and Scholarships 2015 (J. Gutiérrez-Pastor)
 - 7.3.1 Discussion of awards

- 7.4 Update on status of DLP scheduling, budget (J. Gutiérrez-Pastor)
- 7.5 Changes to the ECORD/ESSAC websites (J. Gutiérrez-Pastor)
- 8. Nominations and Staffing (2) Breakout reports & discussion (45 Minutes)
- 8.1 Nomination & Staffing Subcommittee report, discussion & future actions (G. Früh-Green)
- **9. Discussion of ESSAC chair and science coordinator responsibilities** (G. Früh-Green)
- 9.1 Proposed changes to ESSAC Terms of Reference
- **10.** Workshop and Conference Reports (90 Minutes)
- 10.1 Magellan Plus Programme updates (R. Stein)
- 10.2 Third International Conference on the Arctic Research Planning (ICARP III), Toyama, Japan, April 23-30, 2015 (R. Stein)
- 10.3 Past and future workshops and conferences (J. Gutiérrez-Pastor)
 10.3.1 Planned outreach activities future conferences (A. Stevenson)
- 10.4 Joint IODP/ICDP session at the EGU 2015 in Vienna (G. Früh-Green) 9.3.1 Plans for EGU 2016?
- 11. Next meetings
- 11.1 ESSAC-ECORD Joint Meeting #3, 26-27 October 2015, Napoli, Italy (Host: Marco Sacchi, Fieldtrip: Monday, 26 Oct)
- 12. Any other business (G. Früh-Green)

Review of consensus, motions and actions will be carried out by email

Wednesday 20 May 2015

Field trip, Siljan District, Dalarna

Excursion leader: Professor Graham Budd

The excursion will start at 08.00 promptly. Pick-up will be at the Radisson Blu Hotel, Stationsgatan 4, SE-75 340 Uppsala.

List of Participants

ESSAC Office

Gretchen Früh-Green (Chair) ESSAC Delegate Switzerland
Julia Gutiérrez Pastor ESSAC Science Coordinator

ESSAC Representatives

ESSAC Delegate Italy Andrea Argnani Anne Le Friant **ESSAC** Alternate France Kikki F. Kleiven **ESSAC** Delegate Norway Aarno Kotilainen **ESSAC** Delegate Finland **Xavier Monteys ESSAC** Delegate Ireland Werner Piller ESSAC Delegate Austria Ian Snowball ESSAC Delegate Sweden Rüdiger Stein **ESSAC** Delegate Germany Szymon Uscinowicz **ESSAC** Delegate Poland Antje Voelker **ESSAC** Delegate Portugal **Bridget Wade** ESSAC Delegate UK Nicolas Waldmann ESSAC Delegate Israel

Liaisons, Alternates and Guests

Jan Behrmann ESSAC Vice-Chair

Jorijntje Henderiks ESSAC Alternate Sweden

Alan Stevenson ESO

Teresa Bingham ESSAC Data Base Coordinator

Antony Morris DLP Guest lecturer

Apologies

Gilbert Camoin EMA
Nadine Hallmann CEREGE
Patricia Maruéjol EMA

Marit-Solveig SeidenkrantzESSAC Delegate DenmarkDominique WeisESSAC Delegate CanadaGeorges CeulenerESSAC Delegate FranceLucas LourensESSAC Delegate NetherlandsDavid Van RooijESSAC Delegate Belgium

Jochen Erbacher IODP/ICDP Germany, MagellanPlus, past-chair

(Status 10 May 2015)

LIST OF ACRONYMS

ACEX Arctic Coring Expedition (Expedition 302)

AF Academy of Finland
BCR Bremen Core Repository
BGS British Geological Survey (UK)
BOG IODP-MI Board of Governors

CDEX Center for Deep Earth EXploration (Japan)

Consorzio Nazionale Interuniversitario per le Scienze del

Mare (Italy)

CDP Complex Drilling Project

CNR Consiglio Nazionale delle Ricerche (Italy)

CNRS Centre National de la Recherche Scientifique (France)

DASTI Danish Agency for Science, Technology and Innovation

DFG Deutsche ForschungsGemeinschaft (German Research

Foundation)

DSDP Deep Sea Drilling Project
ECORD FB ECORD Facility Board
EC European Commission

ECORD European Consortium for Ocean Research Drilling

EDP Engineering Development Panel
EPC European Petrophysics Consortium

EMA ECORD Managing Agency

ERA-Net European Research Area Network
ESF European Science Foundation

EPSP Environmental Protection & Safety Panel

ESO ECORD Science Operator

ESSAC ECORD Science Support and Advisory Committee

FB Facility Boards

FWO-Vlaanderen Fund for Scientific Research-Flanders (Belgium)

FWF Austrian Science Fund

GRICES Gabineta de Relacoes Internacionais da Ciencias e do Ensino

Superior (Portugal)

GSI The Geological Survey of Ireland

ICDP International Continental Scientific Drilling Project

ILP Industry Liaison Panel (ECORD)

INGV Istituto Nazionale di Geofisica e Vulcanologia (Italy)
INSU Institut National des Sciences de l'Univers (France)

IOS Implementing Organisations

IODP
 International Ocean Discovery Program
 IODP-MI
 IODP Management International, Inc.
 ISP
 Initial Science Plan for the IODP

JAMSTEC JApan Marine Science & TEchnology Center

J-DESC Japanese Earth Drilling Science Consortium

JEODI Joint European Ocean Drilling Initiative

JOI Joint Oceanographic Institutions

IR IOIDES Resolution

JRFB JOIES Resolution Facility Board
LDEO Lamont Doherty Earth Observatory

MEXT Ministry of Education, Culture, Sports, Science & Technology

(Japan)

MoU Memorandum of Understanding

MOST People's Republic of China Ministry Of Science and

Technology

MSP Mission-specific platform

NanTroSEIZENankai Trough SEIsmogenic Zone ExperimentNERCNatural Environment Research Council (UK)

NSF National Science Foundation (USA)

NWO Netherlands Organisation for Scientific Research

OD21 Ocean Drilling in the 21st Century (Japan)

ODP Ocean Drilling Program

OEAW Austrian Academy of Sciences

OGS Istituto Nazionale di Oceanograpfiae di Geofisica

Sperimentale (Italy)

OTF Operations Task Force
PEP Proposal Evaluation Panel

RANNIS The Icelandic Centre for Research

SAS Science Advisory Structure

SASEC Science Advisory Structure Executive Committee

SciMPScientific Measurements PanelSCPSite Characterization PanelSEPScience Evaluation Panel

SIPCOM Science Implementation and Policy Committee

SNSF Swiss National Science Foundation
SODV Scientific Ocean Drilling Vessel

TAMU Texas A & M University
ToR Terms of Reference

USSAC United States Science Advisory Committee
USSSP United States Science Support Program

SVR Swedish Research Council

See also http://www.iodp.org/acronyms

ESSAC subcommittee procedures

ESSAC has been structured in three subcommittees (Nominations and Staffing, Education and Outreach, and ad-hoc working group) to increase the efficiency of ESSAC and the involvement of the ESSAC Delegates in ESSAC activities and responsibilities. Subcommittee general tasks and composition are summarized below.

The subcommittees meet electronically to prepare the meetings on general issues and to work on specific issues at the request of the ESSAC Chair. Each subcommittee is coordinated by an ESSAC Delegate, nominated by the ESSAC Chair. The coordinator is in charge of writing a report for the Agenda book and for presenting the activities of the subcommittee at the meetings. A general discussion follows that presentation.

Nominations and Staffing subcommittee

Members: Lucas Lourens (Coordinator, NL), Gretchen Früh-Green (ESSAC Chair, CH), Dominique Weis (CDN, interim vice-chair), Georges Ceuleneer (F), Bridget Wade (UK), Ruediger Stein (D), Aarno Kotilainen (FIN), Antje Voelker (P).

General tasks:

- Provide nominations of ECORD representatives (delegates and alternates) on science advisory panels, facility boards and other planning groups.
- Co-ordinate applications, review all the applications and suggest nominations of shipboard participants.
- Review quotas of shipboard scientists between participating countries.
- Provide co-chief nominations for IODP Expeditions.

Immediate actions:

- Evaluate the current ECORD composition of the Advisory Panels, identify future replacements (expertise), and suggest permanent alternates.
- Evaluate the quota balance of ECORD participation to IODP Expeditions.
- Review upcoming IODP Expeditions and provide names of potential co-chief candidates.

Education and Outreach subcommittee

Members: Xavier Monteys (Coordinator, IRE), Gretchen Früh-Green (ESSAC Chair, CH), Nicolas Waldmann (IS), Julia Gutiérrez-Pastor (ESSAC Science Coordinator, CH), Bryndis Brandsdottir (ICE), Andrea Argnani (I), Helga F. Kleiven (N), Werner Piller (A), Marit-Solveig Seidenkrantz (DK), Ian Snowball (S), David Vaan Rooij (B), Szymon Uscinowicz (POL).

General tasks:

- Develop educational opportunities/programs: Teacher's workshops, Summer Schools etc., especially for non-traditional audiences.
- Review Summer School proposals.
- Review applications and suggest nominations for ECORD scholarships.
- Initiate applications of speakers for the ECORD Distinguished Lecturer Series and suggest nominations.
- Provide new ideas regarding new ways to raise funds for E&O activities.
- Advise on public outreach (societal relevance of the IODP science).

Immediate actions:

- Make recommendations for deadlines for submission of Summer School proposals and for applications for ECORD scholarships.
- Make suggestions of new ideas regarding E&O activities (societal relevance of the IODP science), especially in non-traditional audiences.
- Make suggestions regarding new ways to raise funds for E&O activities.
- Monitor ECORD database (e.g. ECORD publications).

AD-HOC Working Group on relevant themes

ESSAC meeting location address

Department of Earth Sciences (Geocentrum) Uppsala University Villavägen 16 752 36 Uppsala Sweden

The meeting will take place in room **Norrland II**, which is easily found by entering the main entrance of Geocentrum. The entrance is on Villavägen and looks like this:



The Geocentrum is located about 1 km from downtown Uppsala and the reserved hotels.

Useful maps of Uppsala can be downloaded from these two sites. Geocentrum is marked on both maps.

http://www.destinationuppsala.se/Global/PDFer/PDF-Kartor/Whatson_karta_2014.pdf

http://www.destinationuppsala.se/Global/PDFer/PDF-Kartor/Uppsalakarta_2014.pdf

Here is link to a map of the local bus routes. Bus number 40 can be taken from the Central Station (near the booked hotels) to within 200 m of the Geocentrum. You have to get off at the first stop on Götavägen.

http://www.ul.se/Global/Resa/Kartor/Karta%20stadsbussar%202015.pdf

Meeting Room

The entrance to Norrland II is about 10 m to the left after one has walked through the main entrance of Geocentrum. There will be signs marked 'ESSAC' that point the way.

Guest Wi-Fi access will be provided. Participants should consider using Eduroam (https://www.eduroam.org/), which is available across the campus and many central university buildings (and some airports and other public places, etc). Consider checking in advance if your institute participates in this world-wide roaming access service and your username and password.

Pre-meeting lunch on Monday 18th May

Seven (7) people have signed up for the optional pre-meeting lunch at 'Mickes Kitchen', which is in the Evolutionary Biology Centre (EBC), just a few hundred meters from Geocentrum. Please meet Ian Snowball at the entrance to Geocentrum promptly at 11.30. Payment by cash or credit card. There can be a queue. They have vegetarian options.

Communal Dinner on Monday the 18th May: 19.00

Domtrappkallaren, S.t Eriks Gränd 15, 753 10 Uppsala. The facilities are housed around Domtrappan, which was originally built in the 1330's as part of defensive wall around the cathedral. Since the 1930s, the premises have been used for food service.

http://domtrappkallaren.se/in-english/



There will be a set ESSAC menu. Please inform us two weeks in advance of the ESSAC meeting of special dietary requirements (to ESSAC Office, or Ian Snowball). NOTE: we have now set the menu.

Guest Lecture

Tuesday 19th May, 11.00-12.00. Hamberg lecture theatre, Geocentrum (next to the ESSAC meeting room). Professor Antony Morris: *What can magnetism tell us about oceanic tectonics? New insights from scientific drilling.*

Lunch on Tuesday the 19th May

Lunch on Tuesday will also be 'Mickes Kitchen' at the Evolutionary Biology Centre (EBC). We have a two x 12 people tables booked between 12.30-13.30.

Excursion on Wednesday the 20th May

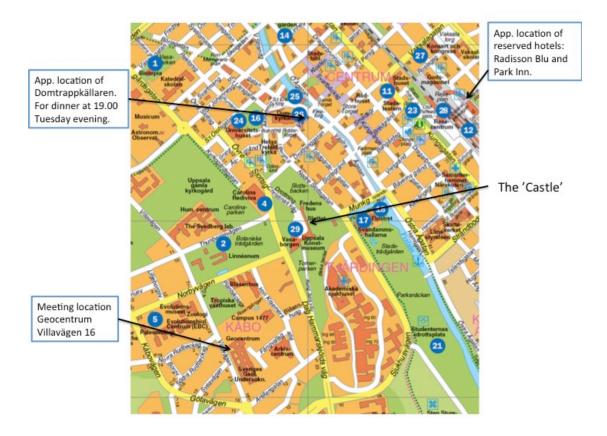
The excursion will start at 08.00 promptly at Radisson Blu Hotel, Stationsgatan 4, SE-75 340 Uppsala.

A field trip to the Siljan District, Dalarna

Excursion leader: Professor Graham Budd

Lake Siljan is a large arcuate lake situated some 200km to the NW of Uppsala in the Swedish district of Dalarna. It is situated along the SW margin of a very large late Devonian impact structure that is, excluding Russian examples, the largest known in Europe. As a result of the complex down-faulting associated with the impact, a suite of lower Palaeozoic rocks (Ordovician-Silurian) have been preserved around the periphery of the crater. Rocks we will be able to see include the richly fossiliferous Upper Ordovician reefal deposits at Osmundsberg and deep sea Silurian shales at Styggforsen, as well as the impact structure itself. On the way up to the Siljan district we will stop at the famous (world heritage site) Falun mine where copper was mined for about 1000 years, and have lunch. We envisage leaving at 08.00 in the morning by minibus (2) and returning latest by 19.00 in the evening.

See: http://en.wikipedia.org/wiki/Siljan_Ring



1. Introduction

Letter from the ESSAC Chair

Dear ESSAC Delegates, ESSAC alternates, and attendees of the ESSAC Meeting in Uppsala, Sweden,

The ESSAC Office has completed its first successful year at the ETH Zurich and we are continuing our efforts with education and outreach activities and staffing of expedition participants and panel members. An update of the most recent ESSAC activities was given in the most recent issue of the ECORD Newsletter #24, published in April 2015. We also hope you appreciate receiving the ESSAC News that Julia has put together at the beginning of each month. Here we would just like to give an update on the status of ESSAC activities.

Expeditions: The Arabian Sea Monsoon Expedition 355 (CPP) is now underway with 5 ECORD scientists on board. For future IODP Expeditions in 2015, the *JOIDES Resolution* Science Operator has completed the invitation process for ECORD scientists to participate in the Indondesian Throughflow Expedition 356 (currently with 9 ECORD scientists planned to participate) and the SW Indian Ridge Moho Expedition 360 (with 8 ECORD scientists and one co-chief scientist). For expeditions in 2016, IODP has also completed the staffing process for the *JR* Expeditions 359 (Maldives Monsoon) and 361 (South African Climates); these expeditions include 2 ECORD co-chief scientists. Applicants for these expeditions benefited from information provided by on-line, interactive seminars, "webinars", which is a new initiative organised by the Consortium for Ocean Leadership.

The application and staffing processes have been completed for the next MSP Expedition 357 Atlantis Massif, which will be operated by ESO and will use seabed rock drilling technology for the first time. ESSAC will have 12 scientists participating, in addition to 3 UK scientists as compensation for an in-kind contribution for this expedition. Co-chiefs Gretchen Früh-Green and Beth Orcutt as well as David McInroy (ESO) participated in the webinar for this expedition, providing information about operations and MSPs in general. We are also pleased to announce that Exp. 357 will be the first MSP expedition with two female co-chiefs and the majority of the science party being female scientists. In addition, the deadline to apply for the JR Expedition 362 Sumatra Seismogenic Zone has passed, and the ESSAC delegates have been asked to provide rankings by 22 May. Selection and staffing for Exp. 362 should be completed in the summer of 2015. IODP Exp. 364 to drill the Chicxulub Impact Crater will be the second MSP expedition in the new IODP program and the offshore phase is planned to take place from April to June 2016. Joanna Morgan (UK) and Sean Gulick (Texas) will be co-chiefs on this expedition. The deadline to apply for Exp. 364 was 8 May 2015 and the ESSAC delegates are asked to provide rankings by 5 June 2015. A compilation of past and current staffing is given in ESSAC-Annex 1, and the country distribution and current quotas can be found in ESSAC-Annex 2.

<u>Expedition planning</u>: The JR Facility Board (JRFB) meets 12-13 May 2015, and we hope to have a preliminary report of the selected expeditions for 2017 available for the Uppsala ESSAC meeting. <u>ESSAC-Annex 3</u> gives a list of the proposals that will be considered at the JRFB meeting. It is important to note that all future <u>JOIDES Resolution</u> expeditions are contingent upon availability of funds. More information about the scientific objectives and dates of all expeditions can be found on the IODP web site at http://www.iodp.org/expeditions/.

The ECORD Facility Board (EFB) met on March 25th and 26th in Aix-en-Provence to decide on the scheduling of MSP expeditions for the next 4 years. The EFB discussed five proposals that had been forwarded by SEP in 2013. Taking into consideration projected ECORD budgets (approximately 7.7 Million US\$/year), the EFB recommended the scheduling of only one high-cost expedition within the next 5

years and has identified the Arctic Ocean (IODP Proposal 708) as a high priority for an MSP expedition. For 2015 to 2017, only less expensive expeditions (e.g., with seabed rock drills or long-piston coring) can be considered. As mentioned above, MSP Exp. 364 Chicxulub Impact Crater is scheduled for 2016. There will be no expedition in 2017, but an expedition to the Antarctic based on IODP proposal 813 is planned for early 2018, in addition to the Arctic Paleoclimate expedition in the summer of 2018. *ESSAC-Annex 4* gives a list of all MSP proposals that are in the IODP system.

Currently there are no new changes in ECORD memberships on the IODP Advisory Panels. The current list of representatives of SEP and EPSP was published in the ECORD Newsletter #24. SEP will meet in Brest, France from 29 June to 1 July 2015.

<u>Education and Outreach</u>: The ECORD/ICDP **MagellanPlus Workshop** Series Programme continues to be a success and is designed to support ECORD member scientists in developing new and innovative science proposals for submission to IODP and ICDP. Currently, there are two upcoming MagellanPlus workshops related to IODP science scheduled in 2015:

- Mantle, Water and Life (June 10-12, 2015), Lyon, France. Conveners: *Muriel Andréani and Co-Proponents*
- Submarine Paleoseismology Workshop (July 16-18, 2015), Zurich Switzerland. Conveners: *Michael Strasser and Co Proponents*

A call for new workshop proposals has been issued, with a deadline of 1 July 2015.

The new phase of the **ECORD Distinguished Lecturer Programme (DLP)** has started successfully and officially runs until 2016. The five ECORD Distinguished Lecturers, Christian France-Lanord, Gabriele Uenzelmann-Neben, Jens Kallmeyer, Antony Morris and Paola Vannucchi have scheduled a total of 40 lectures in ECORD countries.

Young scientists once again have the opportunity to participate in **ECORD Summer Schools** related to marine science research and ocean drilling in 2015:

- The Urbino Summer School in Paleoclimatology (USSP) on Past Global Change Reconstruction and Modelling Techniques, University of Urbino, Italy, 15 July to 1 August, 2015 (http://www.urbinossp.it/);
- The ECORD Bremen Summer School 2015 Ocean crust processes: magma, faults, fluxes and life, MARUM, University of Bremen, Germany, 31 August to 11 September, 2015
 - (http://www.marum.de/en/ECORD_Summer_School_2014.html);
- The International School on Foraminifera (ISF), Urbino, 3-22 June, 2015 (http://www.isf.tmsoc.org).

As in past years, ESSAC provides **ECORD Scholarships** to allow young scientists to attend one of these summer schools (application deadline was 23 March 2015). ESSAC received 33 scholarship applications for the USSP and 23 applications for the Bremen summer school. The recipients will be selected at the Uppsala ESSAC meeting. Furthermore, the ESSAC Office has issued a call to **host new ECORD-sponsored summer schools in 2016**. The deadline for these applications was 5 May 2015 and we received four applications. These applications have also been distributed to the ESSAC delegates and will be discussed at the upcoming ESSAC meeting in Sweden.

A new initiative was added to ECORD's education activities in 2015: the **ECORD Training Course** takes advantage of the setting of the IODP Bremen Core Repository at MARUM and provides a "Virtual Drillship Experience" for scientists from academia and industry. This one-week course (9-13 March, 2015) focused on basic training in IODP core flow procedures and preparing participants to sail on an offshore drillship expedition. IODP-style lab exercises formed the basis of the ECORD Training Course and follow the pattern of the unique "Virtual Ship" approach developed for the Bremen ECORD Summer Schools. MARUM received 56 applications from 17 countries, which attests to the immediate success of this new course.

A call for applications for **ECORD Research Grants** was issued with a deadline of 31 March 2015. ESSAC received 13 valid applications. These applications have been also distributed and will be discussed at the upcoming ESSAC meeting in Sweden.

As part of the **Teachers at Sea** programme, an initiative of the Consortium for Ocean Leadership, ESSAC is able to offer the unique opportunity for teachers and educators of ECORD countries to sail on expeditions onboard the *JOIDES* Resolution. Two ECORD teachers were selected for recent expeditions. Markus Fingerle (Germany) participated on Exp. 353 (Indian Monsoon Rainfall) and Diane Hanano (Canada) sailed on in Exp. 354 (Bengal Fan).

Further ESSAC-related activities include the **EGU 2015 General Assembly Meeting** (12 – 17 April 2015), where we organised a session entitled "Achievements and perspectives in scientific ocean and continental drilling" (co-organized SSP3.3/BG10/CL5/GMPV) as part of the new Programme Subgroup SSP3.3 – Ocean and continental drilling.

We look forward to seeing you in Sweden and wish everyone a successful and pleasant meeting,

Gretchen Früh-Green, ESSAC Chair Julia Gutiérrez-Pastor, ESSAC Science Coordinator

1.1 Call to order, introductions

G. Früh-Green will pass on the introductions.

1.2 Welcome and meeting logistics

I. Snowball and J. Hendericks will provide information about the meeting logistics.

1.3 Discussion and approval of the (1) agenda and (2) minutes from the ESSAC Zurich meeting 2014

G. Früh-Green will summarize the current agenda and minutes and remark potential goals of the meeting and/or changes of the agenda.

http://www.essac.ecord.org/meetings/ESSAC_Minutes_3.pdf

1.4 Review of action items since the ESSAC Zurich meeting

- G. Früh-Green will present items since the last ESSAC meeting. The list below contains the actions items, which arose at the 3rd ESSAC meeting in Zurich. Action items that have been accomplished by the ESSAC Office are labelled as "Done". Action items not yet fulfilled are labelled "in progress" or "pending". The complete list of consensus, motions and actions from the 3rd ESSAC meeting are listed in the *ESSAC Minutes 3*.
- > ESSAC Action Item 1410-01: The ESSAC office shall distribute information to the national alternates to participate in tasks of ranking and nomination for expeditions, advisory panels, scholarships, grants, etc. This will provide the ESSAC delegates a means of distributing their workload and will allow the alternates to be involved in ESSAC activities should they wish to do so. *Done.*
- > ESSAC Action Item 1410-02: ESSAC will not rank applications related to Special Calls. However, the ESSAC Office shall contact the relevant IODP national office and/or delegate in case of uncertainties with applications, prior to sending the applications to the *JOIDES Resolution* Science Operator (JRSO), or in case of uncertainties with invitations from the JRSO. *Done.*
- > ESSAC Action Item 1410-03: The ESSAC office shall remove the wording " ... on exception to non-ECORD countries" in the next call to apply for ECORD Scholarships for Summer Schools. *Done.*
- > ESSAC Action Item 1410-04: The ESSAC E&O subcommittee shall initiate a discussion by email to establish a criteria to rank the ECORD Scholarships for Summer Schools and ECORD Research Grant applications and will present a clear proposal of selection with standardised guidelines before the next ranking period in 2015. *Done.*
- > **ESSAC Action Item 1410-05:** The ESSAC office shall issue the calls for ECORD Grants 2015, ECORD Summer Schools 2015 and a call to Host Summer Schools 2016 in January/February of 2015. *Done.*

2. IODP - Platform Operator Updates

2.1 IODP Update

G. Früh-Green will present an update about the IODP status.

2.2 EMA, ECORD Council, ECORD Vision Task Force

G. Früh-Green will summarize the EMA, ECORD Council, ECORD Vision Task Force news.

3. ESO and ESSAC News

3.1 ESC

A. Stevenson will present the ESO News.

ESO Update to ESSAC, May 2015

IODP Expedition 357: Atlantis Massif

At its March 2014 meeting in Bremen, the ECORD Facility Board recommended the scheduling of an expedition based on IODP Proposal #758: Atlantis Massif, in 2015 (EFB Motion 14-01-01). Some planning and preparation for this expedition had taken place prior to this motion, for example it was necessary to submit an application for the NERC research ship RRS *James Cook* as the drilling platform in March 2013. The ship application was accepted, and ESO have received confirmation of the expedition dates: 24th October – 9th December 2015. The ports of mobilisation and demobilisation have yet to be agreed, as there remains some uncertainty over the location of a ship refit preceding Expedition 357. NERC will supply the RRS *James Cook* as an In-Kind Contribution, and in return the UK has been awarded 3 extra berths. The UK has utilised its three In-Kind Contribution berths, and has relinquished its normal berth allocation for this expedition.

The Co-chief Scientists for this expedition are Gretchen Früh-Green (ETH Zurich, Switzerland) and Beth Orcutt (Bigelow Laboratory for Ocean Sciences, Maine, USA). The Operations Superintendent is David Smith (BGS), the Expedition Project Manager is Sophie Green (BGS), and the Petrophysics Staff Scientist is Elke Hanenkamp (EPC).

This expedition will be the first IODP expedition to utilise seafloor drill technology. Two seafloor drills will be carried: the BGS Seafloor Rockdrill 2 (RD2) and the MARUM Meeresboden-Bohrgerät (MeBo). The RD2 maximum penetration is 50 mbsf, the MeBo maximum penetration is 80 mbsf.

Project Management Team meetings were held in Edinburgh on 15th May 2014 and 23rd Feb 2015 to discuss the expedition's science requirements and how they can be accommodated using seafloor drills as the primary coring tools.

All aspects of planning for this expedition are fully underway: coring, downhole logging, curation, scientific facilities, and core workflows. The ESO Petrophysics container is undergoing a refurbishment which will enhance the MSCL-S capability and increase core storage.

An information webinar for this expedition was held on 6th January 2015 (kindly hosted by the USSSP), and the Call for Scientists closed on 16th January. The Science Party has been selected by ESO and the Co-chief Scientists, and scientists have been returning their acceptances during the last few weeks. The Science Party composition is as follows:

- Co-chiefs (2): Switzerland and USA
- USA (8*)
- ECORD (12**): Germany (3***), France (4), Norway (2), Canada (1), Switzerland (1), Italy (1)

- Japan (4)
- IKC for UK (3)
- ANZIC (1), Korea (1), China (1)
- Total (32)
- *Includes Paleomagnetist position to be filled.
- **ECORD received berths not taken by India and Brazil.
- ***Includes recent approval of Esther Schwarzenbach's change in affiliation from USA to Germany.

Technical Developments

IODP Expedition 357 is serving as a catalyst for new seafloor drill developments, and as such a seafloor drill development meeting with technical staff from the BGS, MARUM (MeBo group) and ANTARES Datensysteme (Germany) took place on 14th May 2014. The meeting focussed on collaborative seafloor drill tool development between BGS and MARUM, with ANTARES as the logging tool developer/provider. Technical developments to enhance the expedition were identified, and those that can be feasibly delivered and tested before the expedition have been initiated. Technical developments for both RD2 and MeBo initiated in 2014 and continuing in 2015 are:

- dual induction resistivity logging tools for seafloor drills;
- · magnetic susceptibility logging tools for seafloor drills;
- · seafloor drill string plug for post-expedition fluid sampling by ROV;
- borehole packer system (expanding packer) for seafloor drills;
- seafloor drill-mounted tracer delivery system;
- · seafloor drill-mounted water sampling system;
- · seafloor drill-mounted sensor package CTD/DO/CH4/pH/Redox

The new seafloor drill developments required for this expedition are being funded under an Engineering Development budget that was approved by ECORD on $18^{\rm th}$ May 2014, as well as by the BGS and MARUM. ESO is currently procuring, and receiving delivery of, off-the-shelf and custom-made components for these developments.

A BGS test cruise, co-funded by ECORD, BGS and a BGS commercial partner, is scheduled for 12th-28th Aug 2015 using the Northern Lighthouse Board vessel NLV *Pharos* offshore West of Scotland. During this cruise, a full coring system test will be conducted in hard rock, as well as a test of the logging tool deployment system using the existing BGS optical-acoustic-gamma tool and a dummy ANTARES tool. The new dual induction resistivity and magnetic susceptibility logging tools, which will be delivered after the test cruise, will be tested at the ANTARES test borehole as part of delivery, as well as by ESO at the Lavalette Experimental and Teaching Centre of located near the campus of the University of Montpellier 2, 8th-9th June. Further ANTARES logging tool deployments from the RD2 will be tested at a test borehole at BGS Edinburgh.

The test cruise was rapidly arranged after a BGS non-IODP project planned for Summer 2015 was delayed until 2016. ESO was granted a maximum \$200,000 extension to its 2015 budget to part-fund the August test.

IODP Expedition 364: Chicxulub Impact Crater

At its June 2014 meeting, the SEP agreed that high priority science can still be achieved by IODP Proposal #548 Addendum 4: Chicxulub Impact Crater, which proposes coring 1 hole to 1200 mbsf, instead of 2 holes to 1500 mbsf. The SEP recommended that ECORD should strongly consider the feasibility of drilling to 1500 mbsf to maximize scientific return. During its July 2014 virtual meeting, the ECORD Facility Board recommended the scheduling of the expedition in 2016, based on the revised proposal (EFB Consensus 14-12-01).

ESO is currently within a contracting exercise for the drilling services and platform, and is seeking a drilling option to reach 1500 mbsf within budget. Four drilling companies replied to the Notice of Interest published on the Tenders Direct Daily (TED), the public procurement database of the European Union. The bids were evaluated by ESO with support from NERC's contract agency, and at the time of writing negotiations are underway with the preferred bidder.

ESO is in regular contact with the Co-chief Scientists Joanna Morgan and Sean Gulick, representatives from the National Autonomous University of Mexico (UNAM), Centro de Investigacion Cientifica de Yucatan (CICY) and Sistema de Investigación, Innovación y Desarrollo Tecnológico del Estado de Yucatán (SIIDETEY) to formulate the project's permitting and collaborative approach. Ultimately a MoU between ECORD, UNAM and SIIDETEY will be agreed. ESO personnel have made visits to Mexico to facilitate the permitting, and have met with the British Embassy in Mexico City (15th April) and will meet representatives of the Subsecretaría de Gestión para la Protección Ambiental (Undersecretary of Management for Environmental Protection) of the Secretaría de Medio Ambiente y Recursos Naturales (Secretariat of Environment and Natural Resources), the agency that will oversee and coordinate ESO's permit application.

A Science Workshop was organised by the Co-chiefs and Mexican colleagues in Merida, Mexico, on 30th and 31st March 2015, which was attended by ESO staff. The primary aims of the workshop were to conduct synergistic planning for the expedition, encourage Mexican participation in IODP, facilitate the permitting, and initiate public outreach and education within the Yucatán. The meeting was attended by the Yucatan Secretary for Education, Dr. Raúl Humberto Godoy Montañez, whose support for the expedition will assist with the permitting. A number of positive news stories were published by local media after a press conference was held in association with the workshop.

The Call for Scientists for this expedition closes on 8th May, with PMO nominations expected by 12th June. ESO and the Co-chiefs will select the Science Party on 19th June. An information webinar was held for potential applicants on 21st April, hosted for the first time by ESO. At its peak the webinar had 40 attendees, with a total of 66 unique people having registered. The Call for Scientists is open to Mexican scientists who may participate under Mexico's In-Kind Contribution currently under negotiation.

Proposal #813: Antarctic Cenozoic Paleoenvironment

Work continues on the scoping of future expeditions, in particular IODP Proposal #813: Antarctic Cenozoic Paleoenvironment, recommended to be scheduled in 2017 (E-FB Consensus 14-13-01).

Enquiries are continuing to secure an ice breaker for Jan-Feb 2017. However, so far the only potential possibility is to contract the N/B Palmer (Division of Polar Programs, NSF) sometime in Feb-Apr 2018, a year later than recommended by the E-FB. ESO submitted a ship time application for the N/B Palmer via the University-National Oceanographic Laboratory System (UNOLS) system to register ECORD's interest in December 2014, with the view that a negotiation will be required to establish the terms of provision should the N/B Palmer be available.

On 13^{th} January 2015, ESO and the Antarctic Support Contract (ASC) for NSF held a conference call to discuss the support requirements for a seafloor drill MSP expedition to Antarctica. The outlook is very positive, and early indications suggest the N/B *Palmer* could be available for ECORD in early 2018. The biggest issue concerning this expedition is that the *N/B Palmer* will not be provided as an In-Kind Contribution, which raises this expedition's costs above those originally estimated. ESO will meet the NSF Polar Division in May 2015 (attached to JR Facility Board meeting) to discuss options for reducing the ship cost to ECORD.

3.2 ESSAC Office news

G. Früh-Green will present a quick overview about the ESSAC news and activities that will be presented during the meeting.

3.3 ESSAC representatives and National Office reports / issues

Each ESSAC delegate will give a short summary about the latest national activities regarding IODP and ECORD issues. The current ESSAC delegates and alternates are given in the table down below:

ESSAC Delegates and Alternates		
Austria	Werner E. Piller	Michael Wagreich
	werner.piller@uni-graz.at	michael.wagreich@univie.ac.at
Belgium	David Van Rooij	Kenneth Mertens
	David.VanRooij@Ugent.be	kenneth.mertens@ugent.be
Canada	Dominique Weis	Markus Kienast
	dweis@eos.ubc.ca	markus.kienast@dal.ca
Denmark	Marit-Solveig Seidenkrantz	Paul Cornils Knutz
	mss@geo.au.dk	pkn@geus.dk
Finland	Aarno Kotilainen	Outti Hyttinen
	aarno.kotilainen@gtk.fi	Outi.hyttinen@helsinki.fi
France	Georges Ceulener	Anne Le Friant
	georges.ceuleneer@get.obs-mip.fr	lefriant@ipgp.fr
Germany	Ruediger Stein	Jochen Erbacher
	Ruediger.Stein@awi.de	j.erbacher@bgr.de
Ireland	Xavier Monteys	David Hardy
	Xavier.Monteys@gsi.ie	david.hardy@gsi.ie
Italy	Andrea Argnani	TBD
	andrea.argnani@ismar.cnr.it	
Israel	Nicolas Waldman	Sigal Abramovich
	nwaldmann@univ.haifa.ac.il	sigalabr@bgumail.bgu.ac.il
The Netherlands	Lucas Lourens	Stefan Schouten
	llourens@geo.uu.nl	stefan.schouten@nioz.nl
Norway	Helga F. Kleiven	Katrine Husum
	kikki@uib.no	katrine.husum@npolar.no
Poland	Szymon Uscinowicz	Piotr Przezdziecki
	szymon.uscinowicz@pgi.gov.pl	piotr.przezdziecki@pgi.gov.pl
Portugal	Antje Voelker	Luiz F. Menezes Pinheiro
	antje.voelker@ipma.pt	Imp@geo.ua.pt

Sweden	Ian Snowball	Jorijntje Henderiks
	Ian.Snowball@geol.lu.se	jorijntje.henderiks@geo.uu.se
Switzerland (Chair)	Gretchen Früh-Green	Silvia Spezzaferri
	frueh-green@erdw.ethz.ch	silvia.spezzaferri@unifr.ch
U.K.	Bridget Wade	Anthony Morris
	B.Wade@leeds.ac.uk	A.Morris@plymouth.ac.uk

4. Expeditions, Nominations and Staffing (1)

4.1 Staffing

G. Früh-Green will report on Staffing (See ESSAC-Annexes 1 and 2).

- 4.1.1 Updates on expedition staffing and applications
- 4.1.2 Quotas, CPPs, in-kind contributions
- 4.1.3 Upcoming expedition deadlines and calls

4.2 ECORD Facility Board Report

G. Früh-Green will report on the ECORD Facility Board (See ESSAC-Annex 4)

4.3 SEP update

W. Piller will give an update on SEP.

4.4 Update on advisory panel members

G. Früh-Green will give an update on advisory panel members, rotations and calls.

4.4.1 New calls and alternates

5. Education and outreach – updates and outstanding issues (1)

5.1 ECORD Summer Schools/courses - update & applications 2016

J. Gutierrez-Pastor will report about the ECORD Summer Schools 2016 applications.

5.2 ECORD Grants and Scholarships update and applications 2015

J. Gutierrez-Pastor will present the ECORD Scholarships and Grants 2015 applications.

5.3 Teachers at Sea

J. Gutierrez-Pastor will update about the Teachers at Sea program.

5.3.1 Status of applications

5.4 Upcoming E & O calls 2015 and Outreach activities

J. Gutierrez-Pastor will present the upcoming E&O Calls.

5.5 ECORD Publication Database

T. Bingham will present a summary of the findings and progress in the creation of an ECORD publication database (See ESSAC-*Annex 9*)

5.6 ESO Outreach & Public Relations

A. Stevenson will report about ESO Outreach an public relations.

6. Breakout Sessions

6.1 Introductions

Introductions will be provided by G. Früh-Green to guide discussions.

6.2 Breakout sessions: ESSAC Nominations and Staffing / Education and Outreach Subcommittees

The ESSAC Nomination and Staffing Education and Outreach Subcommittees will meet as time permits.

Guest Lecture: Antony Morris (See ESSAC-Annex 5)

What can magnetism tell us about oceanic tectonics? New insights from scientific drilling

7. Education and outreach (2) - Breakout reports & discussion

7.1 E&O Subcommittee report, discussion and future actions

X. Monteys will report on the E&O subcommittee discussions and give an overview of future actions.

7.2 ECORD Summer Schools 2016 update & selection

J. Gutierrez-Pastor and X. Monteys will present the proposal of selected ECORD Summer Schools 2016.

7.3 ECORD Grants and Scholarships 2015

7.3.1 Discussion of awards

J. Gutierrez-Pastor and X. Monteys will present the proposal of selected ECORD Grants and Scholarships 2015 applicants.

7.4 Update on status of DLP - scheduling, budget

J. Gutierrez-Pastor will update about the DLP program.

7.5 Changes to the ECORD/ESSAC websites

J. Gutierrez-Pastor will report about the last changes in the ESSAC website.

8. Nominations and Staffing (2) – Breakout reports & discussion

8.1 Nomination & Staffing Subcommittee report, discussion & future actions

G. Früh-Green will report on the Nomination and Staffing subcommittee discussions and give an overview of future actions.

9. Discussion of ESSAC chair and science coordinator responsibilities

9.1 Proposed changes to ESSAC Terms of Reference

G. Früh-Green will lead a discussion about the changes to the ESSAC Terms of Reference document (*See ESSAC-Annex 8*).

10. Workshop and Conference Reports

10.1 Magellan Plus Programme updates

R. Stein will report on the Magellan Plus Program.

10.2 Third International Conference on the Arctic Research Planning (ICARP III), Toyama, Japan, April 23-30, 2015

R. Stein will report on the Third International Conference on the Arctic Research Planning (*See ESSAC-Annex 6*).

10.3 Past and future workshops and conferences

10.3.1 Planned outreach activities future conferences

J. Gutierrez-Pastor and A. Stevenson will report about past and future workshops, conferences and outreach activities.

10.4 Joint IODP/ICDP session at the EGU 2015 in Vienna

9.3.1 Plans for EGU 2016?

G. Früh-Green will report about the past Joint IODP/ICDP session at the EGU 2015 in Vienna and discuss the plans for EGU 2016.

11. Next meetings

11.1 ESSAC-ECORD Joint Meeting #3, 26-27 October 2015, Napoli, Italy (Host: Marco Sacchi, Fieldtrip: Monday, 26 Oct)

G. Früh-Green will inform about the upcoming ESSAC-ECORD Joint Meeting in Napoli.

12. Any other business

G. Früh-Green will ask and summarize if there is any other business.

CURRENT STAFFING OF ECORD SCIENTISTS ON JR EXPEDITIONS 2014/2015

Expedition 349: South China Sea (CPP) (26 Jan – 30 March, 2014)

Co-chief Scientists: Chun-Feng Li & Jian Lin

Senior Scientists

BRIAIS, Anne (France) Physical Properties

Post-doctoral Researchers and Early Career Scientists

HERNÁNDEZ ALMEIDA, Iván (Switzerland) Paleontologist (radiolarians) Special Call

Masters and PhD Students

BAO, Rui (Switzerland, PhD) Organic Geochemist

Expedition 350: Izu Bonin Mariana: Rear Arc (30 March-30 May, 2014)

Co-chief Scientists: Yoshihiko Tamura (Japan) & Cathy Busby (USA)

Senior Scientists

VAUTRAVERS, Maryline (UK) Micropaleontology - Planktic Foraminifers Special Call

Post-doctoral Researchers and Early Career Scientists

BERGER, Julien (France) Igneous Rocks/Volcaniclastics
JUTZELER, Martin (UK) Sediments/Volcaniclastics

JOHN, Eleanor (UK) Micropaleontology - Planktic Foraminifers Special Call

MAHONEY, Sue (UK) Physical Properties

HAMELIN, Cedric (Norway) Igneous Rocks/Volcaniclastics
BARKER, Abigail (Sweden) Igneous Rocks/Volcaniclastics

BORDIGA, Manuela (Sweden) Micropaleontology – Nannofossils Special Call

Masters and PhD Students

JONAS, Ann-Sophie (Germany, MSc) Organic Geochemistry SCHINDLBECK, Julie (Germany, PhD) Sediments/Volcaniclastics

Teachers at Sea

ALLEN, Lesley (UK)

Expedition 351: Izu Bonin Mariana: Arc Origins (30 May-30 July, 2014)

Co-chief Scientists: Richard Arculus (Australia) & Osamu Ishizuka (Japan)

Senior Scientists

MORRIS, Tony (UK) Paleomagnetist SAVOV, Ivan (UK) Sedimentologist

Post-doctoral Researchers and Early Career Scientists

BRANDL, Philipp (Germany) Igneous Petrologist

KENDER, Sev (UK) Foraminifer Micropaleontologist

VAN DER LAND, Cees (UK) Inorganic Geochemist MAFFIONE, Marco (Netherlands) Paleomagnetist

SENA, Clara (Portugal) Inorganic Geochemist, Special Call

Masters and PhD Students

MCCARTHY, Anders (Switzerland, PhD) Igneous Petrologist

Teachers at Sea

FINGERLE, Markus (Germany) WITHDRAWN

Expedition 352: Izu Bonin Mariana: Fore Arc (30 July-30 September, 2014)

Co-chief Scientists: Julian Pearce (UK) & Mark Reagan (USA)

Senior Scientists

CARVALLO, Claire (France) Paleomagnetist
GODARD, Marguerite (France) Inorganic Geochemist

ALMEEV, Renat (Germany) Physical Properties Specialist

KUTTEROLF, Steffen (Germany)

PRYTULAK, Julie (UK)

ROBERTSON, Alastair (UK)

Sedimentologist

Sedimentologist

Sedimentologist

Sedimentologist

Sedimentologist

Sedimentologist

KURZ, Walter (Austria) Structural Geologist, Special Call

Post-doctoral Researchers and Early Career Scientists

KIRCHENBAUR, Maria (Germany, Post-doc) Inorganic Geochemist

Expedition 353: Indian Monsoon Rainfall (29 Nov 2014-29 January 2015)

Co-chief Scientists: Steven Clemens & Wolfgang Kuhnt (Germany)

Senior Scientists

MARTINEZ, Philippe (France) Sedimentologist

ANAND, Pallavi (UK) Physical Properties Specialist ROMERO, Oscar (Germany) Diatom Micropaleontologist

Post-doctoral Researchers and Early Career Scientists

BOLTON, Clara (France)

Nannofossil Micropaleontologist

HATHORNE, Ed (Germany) Inorganic Geochemist LITTLER, Kate (UK) Sedimentologist

BARTOL, Milos (Sweden)

Nannofossil Micropaleontologist

RODRIGUEZ, Mathieu (France) Physical Properties WITHDRAWN

Masters and PhD Students

TAYLOR, Samuel (France, PhD) Paleomagnetist

GARIBOLDI, Karen (Italy, PhD) Diatom Micropaleontologist Special Call

Teachers at Sea

FINGERLE, Markus (Germany)

(UK) Expedition 354: Bengal Fan (29 January-31 March 2015)

Co-chief Scientists: Christian France-Lanord (France) & Volkhard Spiess (Germany)

Senior Scientists

GALY, Albert (France) Inorganic Geochemist HUYGHE, Pascale (France) Sedimentologist

MEYNADIER, Laura (France) Paleomagnetist, Special Call

WEBER, Michael (Germany) Physical Properties Specialist

NAJMAN, Yani (UK) Sedimentologist

CASTELLTORT, Sebastian (Switzerland) Sedimentologist WITHDRAWN

Post-doctoral Researchers and Early Career Scientists

ADHIKARI, Rishi Ram (Germany, Post-doc) Organic Geochemist

LANTZSCH, Hendrik (Germany, Res. assist.) Sedimentologist (replacing Castelltort)

ANTHONISSEN, Erik (Norway, Statoil) Foraminifer Micropaleontologist (declined)

Masters and PhD Students

FOX, Lyndsey (UK, PhD) Foraminifer Micropaleontologist

Teachers at Sea

HANANO, Diane (Canada)

Expedition 355: Arabian Sea Monsoon (CPP) (31March-31May 2015)

Co-chief Scientists: Dhananjai Pandey & Peter Clift

Staffing Complete – 355 invitations sent and all have accepted:

Senior Scientists

BENDLE, James (UK)

ANDO, Sergio (Italy)

Organic Geochemistry
Sedimentologist

Post-doctoral Researchers and Early Career Scientists

STEINKE, Stephan (Germany, Post-doc) Planktonic Foraminifers Micropaleontologist

HAHN, Annette (Germany, Post-doc) Physical Properties Specialist

Masters and PhD Students

YU, Zhaojie (France, PhD) Inorganic Geochemistry

Expedition 356: Indonesian Throughflow (31July-30 September 2015)

Co-chief Scientists: Stephen Gallagher & Craig Fulthorpe

Staffing Complete – 356 invitations sent and all have accepted:

Senior Scientists

HENDERIKS, Jorijntje (Sweden)	Nannofossil Micropaleontologist	accepted
RENEMA, Willem (Netherlands)	Stratigraphic Correlator	accepted
REUNING, Lars (Germany)	Sedimentologist	accepted
LANGER, Martin (Germany)	Benthic Foram Micropaleontologist	(declined)

Post-doctoral Researchers and Early Career Scientists

GROENEVELD, Jeroen (Germany, Post-doc)	Planktonic Foram Micropaleontologist	accepted
PETRICK, Benjamin (UK, Post-doc)	Sedimentologist	accepted
HIMMLER, Tobias (Germany, Post-doc)	Sedimentologist	accepted
DE VLEESCHOUWER, David (Germ, Post-doc) Phys. Props/Downhole Meas.	accepted
BARANWALI, Soma (Norway, Post-doc)	Planktonic Foram Micropaleontologist	accepted

AUER, Gerald (Austria, PhD) Sedimentologist accepted

ANGUE MINTO'O, Charlie (France, Post-doc) Benthic Foram Micropaleontologist declined

MSP Expedition 357: Atlantis Massif Serpentinization and Life October - December 2015

Co-chief Scientists: Gretchen Früh-Green (Switzerland) and Beth Orcutt

Staffing in Progress

Senior Scientists:

QUEMENEUR, Marianne (France)	Microbiology	accepted
MENEZ, Bénédicte (France)	Microbiology	accepted
WEIS, Dominique (Canada)	Geochemistry	accepted
CANNAT, Mathilde (France)	Igneous Petrology	accepted
BOSCHI, Chiara (Italy)	Metamorphic Petrology	accepted
BEHRMANN, Jan-Hinrich (Germany)	Structural Geology	accepted
ESCARTIN, Javier (France)	Structural Geology/Physical Properties	invited

Post-Docs & Early Career Scientists:

ROUMEJON, Stephane (Switzerland)	Metamorphic Petrology	accepted
SCHWARZENBACH, Esther (Germany)	Metamorphic Petrology	accepted

PhD Students:

ZHAO, Rui (Norway)	Microbiology	accepted
HESSE, Kirsten (Germany)	Igneous Petrology	accepted
DUNKEL, Kristina (Norway)	Physical Properties	accepted

In-Kind contributions berths:

McCAIG, Andrew (UK) (Senior)	Structural Geology	accepted
HARRIS, Michelle (UK) (Early-Career)	Metamorphic Petrology	accepted
BAYAKCI, Gaye (UK) (Early-Career)	Physical Properties	accepted

Expedition 359: Maldives Monsoon & Indian Peninsula Paleoclimate (APL) 30 September - 30 November 2015

Co-chief Scientists: Christian Betzler (Germany) & Gregor Eberli

Senior Scientists

Post-doctoral Researchers and Early Career Scientists

HAFFEN, Sebastian (France)

BIALIK, Or (Israel)

ALONSO-GARCIA, Montserrat (Portugal)

Petrophysics - Physical Properties accepted
Sedimentologist accepted
Planktonic Foraminifier Micropaleontologist accepted

Masters and PhD Students

REOLID PEREZ, Jesus (Germany) Sedimentologist accepted

Expedition 360: SW Indian Ridge Lower Crust and Moho 30 November 2015 - 30 January 2016

Co-chief Scientists: Henry Dick & Christopher MacLeod (UK)

Senior Scientists

KOEPKE, Jürgen (Germany)	Metamorphic Petrologist	accepted
TRIBUZIO, Riccardo (Italy)	Metamorphic Petrologist	accepted
ILDEFONSE, Benoit (France)	Structural Geologist	accepted
MORRIS, Anthony (UK)	Paleomagnetist	accepted

Post-doctoral Researchers and Early Career Scientists

FRANCE, Lyderic (France)	Igneous Petrologist	accepted
PLUMPER, Oliver (The Netherlands)	Structural Geologist	accepted

Masters and PhD Students

CIAZELA, Jakub (Poland)	Geochemist, Inorganic	accepted
FERRANDO, Carlotta (France)	Structural Geologist	accepted

Expedition 361: Southern African Climates (Agulhas Current Density Profile APL) 30 January - 31 March 2016

Co-chief Scientists: lan Hall (UK) and Sidney Hemming

Senior Scientists:

BARKER, Stephen (UK)	Stratigraphic Correlator	accepted
GRUETZNER, Jens (Germany)	Physical Properties	accepted

Post-Docs & Early Career Scientists:

CALEY, Thibaut (France)	Sedimentologist	accepted
CRESPIN, Julien (France)	Sedimentologist	accepted
KOUTSODENDRIS, Andreas (Germany)	Sedimentologist	accepted
JUST, Janna (Germany)	Paleomagnetist	accepted
SIMON, Margit (UK)	Benthic Foraminifer	accepted

PhD Students:

VAN DER LUBBE, Jeroen (Netherlands)	Sedimentologist	Invite
TANGUNAN, Deborah (Germany)	Nannofossil Micropaleontologist	Sp. Call accepted

Expedition 362: Sumatra Seismogenic Zone 31 July - 30 September 2016 Co-chief Scientists: <u>Lisa McNeill</u> (UK) & Brandon Dugan

Total applications: 29

Senior Scientists: 1 Aus, 1, Den, 1 Fr, 1 Ger, 2 lt, 1 Swe, 6 UK. Total: 13

Post-Docs & Early Career Scientists: 2 Fr, 2 Ger, 3 lt, 2 UK. Total: 9

PhD Students: 3 Fr, 3 Ger, 1 It. Total: 7

May 12, 2015

Annex 2

ESSAC Meeting Uppsala May 2015, ANNEX 2

ECORD participation on expeditions and projected quotas as of 10 May 2015

Modified from version given in 2014 Annual Report

						Joides	Resolu	tion Exp	pedition	ns in 201	L4							Joides	Resolu	tion Exp	edition	ns in 20	15											
				S China CPP		50 Rear Arc		51 Arc gins	Exp 352	! Forearc	Mon	3 Indian soon nfall	Co-chiefs FY14		4 Bengal an	Exp Arabi Monso			356 nesian hrough	Exp Atlantis		Mal	359 dives soon		0 Indian Moho	Co-chiefs FY 15	Afr	361 S. rican nates	Co-chiefs FY 16	Projected		xpeditions (Exps. 349	staffed to d - 361)	late 2014 -
Member	Financial Contribution (%)	Total Contribution FY14 &15 (US\$)	Invited	Special Call	Invited	Special Call	Invited	Special Call	Invited	Special Call	Invited	Special Call		Invited	Special Call	Invited	Special Call	Invited	Special Call	Invited	IKC	Invited	Special Call	Invited	Special Call		Invited	Special Call		Total Berths invited	speciai	berths entitled*, excl. Sp. Calls & Cc	Difference	Total Sailed, incl. co- chiefs
France	27.30%	10'412'080	1		1				2		3			2	1	1				4		1		3		1	2			20	1	23.75	-3.75	22
Germany	29.36%	11'200'000			2		1		3		2		1	3		2		4		3		2		1		2	3	1		26	1	25.54	0.46	30
UK	22.54%	8'596'400			2	2	4		2		2		1	2		1		1			3	1	1	1		1	2		2	18	6	19.61	-1.61	28
Sum	79.19%	30'208'480	1		5	2	5		7		7	0	2	7	1	4	0	5	0	7	3	4	1	5	0	4	7	1	2	64	8	68.90	-4.90	80
Austria	0.52%	200'000								1								1												1	1	0.46	0.54	2
Belgium	0.16%	60'000																												0	0	0.14	-0.14	0
Canada	0.79%	300'000																		1										1	0	0.68	0.32	1
Denmark	0.93%	354'000																												0	0	0.81	-0.81	0
Finland	0.42%	160'000																												0	0	0.36	-0.36	0
Iceland*	0.08%	30'000																												0	0	0.07	-0.07	0
Ireland	0.73%	277'000																												0	0	0.63	-0.63	0
Israel	0.16%	60'000																				1								1	0	0.14	0.86	1
Italy	2.10%	800'000										1				1				1			1	1						3	2	1.82	1.18	5
Netherlands		1'000'000					1											1				1		1			1			5	0	2.28	2.72	5
Norway	5.77%	2'200'000			1									1				1		2										4	0	5.02	-1.02	4
Poland	0.16%	60'000																						1						1	0	0.14	0.86	1
Portugal	0.47%	180'000						1														1								1	1	0.41	0.59	2
Sweden	2.77%	1'056'000			1	1					1							1												3	1	2.41	0.59	4
Switzerland	3.15%	1'200'000	1	1			1													1						1				3	1	2.74	0.26	5
Sum	20.81%	7'937'000	1	1	2	1	2	1	0	1	1	1	0	0	0	1	0	4	0	5	0	3	1	3	0	1	1	0	0	23	6	18.10	4.90	30
									7			_	_	<u> </u>		_					_	7		_			_		_					
TOTAL ECORI	D	38'145'480	2	1	7	3	7	1	7	1	8	1	2	7	1	5	0	9	0	12	3	7	2	8	0	5	8	1	2	87	14	87.00	0.00	103

All Proposals at the JRFB

Proposal Number	Category	Short Title	Lead Proponent	Ocean	Stage
505	Full5	Mariana Convergent Margin	Fryer	Pac	JRFB
522	Full5	Superfast Spreading Crust	, Teagle	Pac	JRFB
549	Full6	Northern Arabian Sea Monsoon	Lückge	Ind	JRFB
567	Full4	South Pacific Paleogene	Thomas	Pac	JRFB
595	Full4	Indus Fan and Murray Ridge	Clift	Ind	JRFB
618	Full3	East Asia Margin	Clift	Pac	JRFB
633	Full2	Costa Rica Mud Mounds	Brückmann	Pac	JRFB
693	APL	S. Chamorro Seamount CORK	Wheat	Pac	JRFB
702	Full2	Southern African Climates	Zahn	Ind	Exp 361
724	Full	Gulf of Aden Faunal Evolution	de Menocal	Ind	JRFB
732	Full2	Antarctic Peninsula Sediment Drifts	Channell	Sou	JRFB
751	Full2	West Antarctic Ice Sheet Climate	McKay	Sou	JRFB
760	Full2	SW Australia Margin Cretaceous Climate	Hobbs	Ind	JRFB
769	APL2	Costa Rica Crustal Architecture	Tominaga	Pac	JRFB
777	APL3	Okinawa Trough Quaternary Paleoceanography	Lee	Pac	JRFB
778	Full2	Tanzania Margin Paleoclimate Transect	Wade	Ind	JRFB
781A	Full	Hikurangi: observatory	Saffer	Pac	JRFB
791	APL2	Continental Margin Mathane Cycling	Malinverno	Pac	JRFB
799	Full2	Western Pacific Warm Pool	Rosenthal	Pac	Exp 363
800	MDP	Indian ridge Moho	Dick	Ind	Exp 360
818	Full	Brothers Arc Flux	de Ronde	Pac	JRFB
807	Full	Indonesian Throughflow	Gallagher	Ind	Exp 356
820	Full	Maldives monsoon	Betzler	Ind	Exp 359
830	APL2	Scott Plateau microbial interaction	D'Hondt	Ind	JRFB
837	Full	Sumatra Seismogenic Zone	McNeill	Ind	Exp 362
839	Full	Amundsen Sea Ice Sheet history	Gohl	Sou	JRFB
845	APL	Agulhas LGM Density	Adkins	Ind	Exp 361
849	APL	Indian Peninsula Paleoclimate	Giosan	Ind	JRFB
705	Full2	Santa Barbara Basin Climate Change	Kennett	Pac	SEP-HB
770	Full3	Kanto Asperity Project: Observatories	Sato	Pac	SEP-HB
819	APL2	Arabian Sea OMZ	Singh	Ind	SEP-HB
831	APL	Campbell Drift climate	Turner	Pac	SEP-HB
836	APL	Continental Margin Mathane Cycling	Malinverno	Ind	SEP-HB
841	APL2	Creeping Gas Hydrate Slides	Pecher	Pac	SEP-HB
878	CPP	South China Sea Rifting	Sun	Pac	SEP-HB

Red: Scheduled

Annex 4

Agenda Item 4.5: Other proposal(s) that could potentially be forwarded by SEP in the future

4. Review of the MSP proposals

4.5 – other proposal(s) that could potentially be forwarded by SEP in the future (only discussion; no actions/decisions)

Overview of MSP proposals currently in the IODP/ECORD system:

MSP proposals at SEP and EFB order according to relative maturity Status: 14 Jan 2015

Proposal	Short Title	Proponent	Country	Ocean	Drill Platform	Status				
at EFB:										
758-Full2	Atlantis Massif	Früh-Green	Switzerl.	Atlantic	seabed drill	03/14: scheduled for 2015 (Exp 357)				
548-Full3, <u>Add</u>	Chicxulub Crater	Morgan	UK	Atlantic	lift-boat, jack-up rig	07/14: scheduled for 2016 (Exp 364)				
813-Full, Add	E-Antarctic Paleoclimate	Williams	USA	Southern	seabed drill	07/14: scheduled for 2017 (more likely 2018)				
708-Full	Arctic Paleoceanography	Stein	Germany	Arctic	drill ship	03/14: submit addendum to EFB				
581-Full2	Coralgal Banks	Droxler	USA	Atlantic	geotech rig or seabed drill	03/14: EFB holding bin				
716-Full2	Hawaiian Drowned Reefs	Webster	Australia	Pacific	geotech rig or MeBo200	03/14: EFB holding bin				
637-Full2, Add	New England Hydrogeology	Person	USA	Atlantic	drill rig	03/14: EFB holding bin				
at SEP:										
879-Full	Corinth Active Rift Development	McNeill	UK	Mediterr.	drill ship	01/15: external review				
866-Pre	Japan Trench Paleoseismology	Strasser	Switzerl.	Pacific	long-piston coring	01/15: revise				
ADP / 796-Full	NADIR <u>Nice Amphib</u> . Drilling Ligurian Landslide	Kopf	Germany	Mediterr.	geotech rig; MeBo	01/15: submitted to ICDP 05/12: revise				
730-Full	Sabine Bank Sea Level	Taylor	USA	Pacific	MeBo200	06/14: revise				
857-MDP2*	DREAM Mediterr. Salt Giant	Camerlenghi	Italy	Mediterr.	(JR & Chikyu)	01/15: submit daugther prop.				
857A-Pre*	DREAM-GOLD	Rabineau	France		Chikyu	06/14: submit full prop. to CIB				
863-MDP	ISOLAT <u>S-Ocean</u> Paleoclimate	Peterson	USA	Southern	long-piston coring	06/14: submit daughter prop.				
852-Pre	North Sea GlaciStore	Stewart	USA	Atlantic	drill rig	06/14: submit full prop.				
812-Pre	Ross Sea Glacial History	Wilson	USA	Southern	seabed drill	12/12: submit full prop.				
806-Pre	Beaufort Gas Hydrate	Paull	USA	Arctic	geotech rig	05/12: submit full prop. or MDP with 797				
797-Pre	Alaska Beaufort Margin	Ruppel	USA	Arctic	drill rig (or JR)	05/12: submit full prop. or MDP with 806				
680-Full	Bering Strait Climate Change	Fowell	USA	Arctic	lift-boat, jack-up	12/11: revise				
761-Pre	South Atlantic Bight	Wilson	USA	Atlantic	geotech rig; jack-	12/11: submit full prop.				
	Hydrogeology				up					
756-Pre	Arctic Ocean Exit Gateway	Jakobsson	Sweden	Arctic	drill ship (JR?)	12/11: submit full prop.				
750-Pre	Beringia Sea Level History	Polyak	USA	Arctic	drill rig (JR?)	12/11: submit full prop.				

st ECORD co-funding may be considered



Institutionen för geovetenskaper

Gästföreläsning – guest lecture 19th May 11.00-12.00

In association with a meeting of the *European Consortium for Ocean Research Drilling* (ECORD) *Scientific Support and Advisory Committee* (ESSAC) to be held in Uppsala during 18-20th May we proudly announce a guest lecture by -

Professor Antony Morris

(Plymouth University, UK)

Tony will present his lecture that is part of the ECORD distinguished lecturer programme

What can magnetism tell us about oceanic tectonics? New insights from scientific drilling



Abstract is overleaf

Tuesday 19th May 11.00-12.00 Hamberg lecture theatre (Hambergsalen) Geocentrum, Villavägen 16, Uppsala

On behalf of ESSAC and the Department of Earth Sciences at UU: (ian.snowball@geo.uu.se)

What can magnetism tell us about oceanic tectonics? New insights from scientific drilling.

Antony Morris

School of Geography, Earth and Environmental Sciences, Plymouth University, UK amorris@plymouth.ac.uk

Seafloor spreading and subduction in the oceans are the most significant geodynamic processes on Earth, and together drive the plate tectonic cycle. It is widely known that magnetic studies played a key role in understanding how oceanic lithosphere forms at mid-ocean ridges. Indeed, Vine and Matthews ground-breaking realization in the 1960's that linear marine magnetic anomalies result from oceanic crust having acquired magnetizations in different polarities of the geomagnetic field during accretion at mid-ocean ridges must rank as one of the great scientific discoveries of the twentieth century. This lecture will show how magnetic analysis of core samples recovered by scientific ocean drilling by the International Ocean Discovery Program (IODP) and its predecessors continues to provide new insights into globally significant tectonic and magmatic processes in the oceans. A focus will be how our understanding of slow and ultraslow spreading axes has changed radically following the discovery of so-called "oceanic core complexes" along ridge systems. These enormous massifs on the seafloor form by unroofing of lower oceanic crust and upper mantle rocks by crustal-scale faulting. Palaeomagnetic data from rocks drilled at several core complexes have quantified this process and demonstrated that their formation involves large tectonic rotations that bring rocks formed at depth up to the ocean floor. These rotations provide the key to recognizing this important tectonic process in ophiolites (fragments of ancient oceanic crust emplaced tectonically onto the continents), allowing the record of "detachment-mode" seafloor spreading to be extended back beyond the age of the oldest crust in the modern oceans. Finally, the lecture will show how scientific ocean drilling is also providing new information on the nature of the magnetization of the oceanic crust. Analysis of lower crustal gabbros recovered in both the Atlantic and Pacific Oceans reveals that these rocks often record multiple polarities of the Earth's magnetic field within individual samples, contrasting with the simpler magnetizations of upper crustal rocks responsible for most of the marine magnetic anomaly signal.





4th Circular: Program and Early Bird Registration

The Arctic Science Summit Week (ASSW) is the annual gathering of the international organizations engaged in supporting and facilitating Arctic research. The purpose of the summit is to provide opportunities for coordination, collaboration and cooperation in all areas of Arctic science. The summit attracts scientists, students, policy makers and other professionals from all over the world. The ASSW 2015 will be held in Toyama (Japan) on April 23-30 and include business meetings of the participating organizations on April 23-25, excursions and a public lecture (in Japanese) on April 26 and a four day science symposium on April 27-30, combining the Fourth International Symposium on Arctic Research (ISAR-4) and the Third International Conference on the Arctic Research Planning (ICARP III).

The Program of the ASSW 2015 Business Meetings and the ISAR-4 / ICARP III Symposium is now available. Conference organizers invite you to register for the conference, noting that early-bird registration closes on February 28, 2015. To register please visit: http://www.assw2015.org/registration/index.html

Information on accommodation and domestic travel is available on the conference website:

http://assw2015.org/accommodations/index.html

http://assw2015.org/venue/venue_02.html

Note that end of April and beginning of May is a high season for tourism in Toyama and book your hotel as soon as possible.

As of FEB 23

			AS	SW 2015	Busines	s Meetin	gs			
Faci	lity (Capacity)	Hall (825)	201 (72)	202 (72)	203 (72)	204 (72)	Conference (72)	205 (24)	3F Foyer	Civic Plaza
	09:00 -12:30	IASC WG Common Session					NySMAC			
4/23 (Thu)	Lunch							bilateral Japan / Germany		
	14:00 - 17:30		IASC AWG	IASC CWG	IASC MWG	IASC SHWG	IASC TWG	AFoPS		
	18:00 - 19:30					IASC / UArctic / IASSA				
	09:00 -12:30			IASC Council			NySMAC			
4/24	Lunch									
(Fri)	14:00 - 17:30			IASC Council			NySMAC			
	18:30 - 20:30								Reception	
4/25	09:00 -12:30		PAG	ISIRA	ЕРВ		FARO			
(Sat)	Lunch									
	14:00 - 17:30		PAG		ЕРВ	PaSCAS	FARO			
				Excursi	on (4/26 Sunda	y) - Full Day				
	09:00 -12:30		APECS Workshop	MOSAIC	ЕРВ					
	Lunch									
4/26 (Sun)	14:00 - 17:30	Public Lecture (13:00-16:30)	APECS Workshop	MOSAIC	ЕРВ					
	18:30 - 20:30								Icebreaker	

Open Business Meeting, Closed Business Meeting, Open Side Meeting, Closed Side Meeting

		A	SSW20 1	15 ICAR	P III / IS	AR-4 Syn	nposium			
Faci	lity (Capacity)	Hall (825)	201 (72)	202 (72)	203 (72)	204 (72)	Conference (72)	205 (24)	3F Foyer	Civic Plaza
	09:00 -12:30	Opening Session								
4 (0.00	Lunch									
4/27 (Mon)	14:00 - 15:30	В6	A2	A4	B2	C1	C6	C10	Poster 1	Weather Linkages
	16:00 - 17:30	В6	A2	A4	B2	C1	C6	C11		
	17:45 - 19:15			Geospace			EU-J-US WS (18:30-21:00)			
	09:00 -10:15	Plenary Session								
	10:45 - 12:15	B6	C 7	A4	B2	В7	В9	C3		SIOS
4/28	Lunch									
(Tue)	13:45 - 15:15	В6	C7	A 1	B2	В7	В9	C4		
	15:45 - 17:15	B6	C 7	A 1	B10	В7	B9	C8		
	17:30 - 19:00								Poster Core Time 1	
	09:00 -10:15	Plenary Session					:		Poster 2	
4/29	10:45 - 12:15	B5	B1	B3	B10	В7	Joint Session (C4, 5, 10, 11)	B11		
(Wed)	Lunch						:			
	13:45 - 15:15	B5	B1	B3	B10	В7	A6	B11		
	15:45 - 17:15	B5	B1	B3	B10	В7	A6	B11		NRF
	17:30 - 18:45								Poster Core Time 2	
	19:00 - 21:00				Banquet at ANA	A hotel				
	09:00 -10:15	Plenary Session								
4/30 (Thu)	10:45 - 12:15	B5	B4	B8	C2	C 5	A6	A5	Poster 2	
7	Lunch									
	13:45 - 15:15	B5	B4	B8	C2	C5	A6			
	15:45 - 17:15	Closing Session								

Scientific Session, Open Side Meeting, Closed Side Meeting

Session Titles

- A1 Understanding the Arctic climate change and its global influences: Japan's contributions and suggestions for the future
- A2 Paleoclimatic perspective on Arctic changes and polar amplification
- A4 Geospace over and related to the Arctic region
- A5 The Climatic Threat from Arctic Offshore Methane
- A6 Climate and ecosystem vulnerability in the terrestrial northern high-latitudes
- B1 Arctic Climate Change and Potential Mid-latitude Weather Linkages: Large-scale Atmospheric Circulation and Storm Track Dynamics
- B2 Current and Future Observing Strategies for Understanding the Evolving Arctic Climate and Ecological System
- B3 Changing permafrost and its impact on the physical, ecological, economic and cultural Earth system
- B4 Arctic snow cover changes and their consequences
- B5 Remote Sensing of the Arctic System
- B6 A Pan-Arctic Challenge: Predicting the Future of Marine Biota and Ecosystem Connectivity Through Field Studies and Data Integration
- B7 Atmosphere-ocean-ice interactions and aspects related to a future, seasonally ice free Arctic Ocean
- B8 From human security to geopolitical dynamics in the Global Arctic: the global implications of rapid environmental, economic, and societal change

- B9 Arctic Governance, Sustainable Development of Local Communities and Non-Arctic State's Contribution
- B10 Ice mass loss in Greenland and Arctic glaciers under the influence of changing atmosphere and the ocean
- B11 Navigation and Fisheries in the Arctic: Prospects, Problems and International Policies
- C1 Sharing Arctic Data, Observations and Knowledge: Understanding the Global System through International Exchange
- C2 Arctic in Rapid Transition future research directions from the perspective of early career scientists
- C3 Emerging questions in Arctic Geoscience
- C4 Co-design, co-production, co-communication of scientific knowledge? how to frame concerted research for sustainable development in times of change
- C5 Advances in Transdisciplinary Arctic Research: Progress on Building Collaborative Agendas for Research Supporting Solutions for Sustainability
- C6 Understanding Sustainability in the Arctic: From Patchwork to Framework
- C7 The Arctic system; changes and effects with emphasis on freshwater ecosystems.
- C8 Circumpolar Arctic Coastal Communities Observatory Network: knowledge hubs for northern coastal sustainability
- C10 Consulting Arctic Communities on Research Planning
- C11 Early Exploration and Exploitation and their Impact Today on Local Arctic Societies

Plenary Keynotes will be presented by:

- Chris Rapley, University College London
- Qin Dahe, Former Chairman of China Meteorology Agency
- Takashi Yamanouchi, Program Manager of GRENE-Arctic project of Japan, National Institute of Polar Research
- Margareta Johansson, Lund University, Sweden
- Gunn-Britt Retter, Saami Council
- Jacqueline Grebmeier, University of Maryland (IASC Medalist)
- Hannu Halinen, Arctic Ambassador of Finland

Important Dates

February 28, 2015

Early-bird registration closes

March 31, 2015

- Registration closes

Main Organizers: IASC & Partner Organizations















Co-Organizer:

Science Council of Japan

Local Organizing Groups:

NIPR, Hokkaido Univ., JAMSTEC and JCAR

Local Supporting Groups:

MEXT / MOFA / JAXA / Tohoku Univ. / Univ. of Toyama / Center for Computational Sci., Univ. of Tsukuba / Graduate School of Frontier Sci., The University of Tokyo / Toyama Prefecture /

Toyama Prefectural Board of Education / Toyama City / Tateyama Caldera Sabo Museum



TOYAMA CONFERENCE STATEMENT

INTEGRATING ARCTIC RESEARCH: A ROADMAP FOR THE FUTURE

Arctic Science Summit Week 2015 in Toyama, Japan (23–30 April) brought together nearly 700 international scientists, students, policy makers, research managers, Indigenous Peoples and others interested in developing, prioritizing and coordinating plans for future Arctic research. The Conference was organized by the International Arctic Science Committee and the Science Council of Japan, with the support of many other international partners (www.assw2015.org).

Several overarching messages emerged during the Conference:

- Changes in the Arctic are challenging our understanding of their consequences and our ability to provide knowledge for decision-makers.
- There needs to be a greater sense of urgency among decision-makers and awareness by the general public regarding the global importance of changes taking place in the Arctic.
- It is critical to anticipate changes in the Arctic rather than respond to them, but to do this requires sustained observations and improved understanding of local, regional and global processes. These research challenges must be addressed in a coordinated and timely manner to ensure sustainable development and resilient Arctic communities and ecosystems.
- The rapidly changing Arctic initiates changes that cascade through the global system impacting weather, commerce and ecosystems in the more temperate regions. Linkages across disciplines, scales, and diverse knowledge systems must be addressed in future research activities.
- Understanding the vulnerability and resilience of Arctic environments and societies requires increased international scientific cooperation, including contributions from non-Arctic states.
- More effective use must be made of local and traditional knowledge by engaging northern and Indigenous communities in setting priorities, the co-design and co-production of research, and the dissemination of this knowledge by ensuring appropriate access to research data and results.
- It is essential to build long-term human capacity to support relevant observations and research among scientists, decision-makers and Arctic residents, including Indigenous Peoples, through education and effective public engagement, and by adopting shared principles to guide research activities.
- New markets for Arctic resources and associated activities, including trade, tourism and transportation, will likely emerge faster than the necessary infrastructures on land and sea. Sustainable infrastructure development and innovation to strengthen the resilience of Arctic communities requires a collaborative approach involving scientists, communities, governments, and industry.

The Toyama Conference was a critical step in an international Arctic research planning process involving hundreds of scientists from 27 countries working to improve our understanding of the consequences of changes taking place in the Arctic region, and their connection to global environmental, economic and social processes. These rapid transformations occurring in the Arctic are affecting the entire Earth system, including its climate and weather extremes, through increased temperatures and the continuing loss of ice, glaciers, snow and permafrost. New economic interests in the Arctic have established the region as a larger player in the global economy, but also with very significant local effects. In spite of rapid environmental and social change, the Arctic remains a region of geopolitical stability which is a precondition for sustaining Arctic research.

The Final Report from the Conference, guided by discussions and contributions from many partner organizations, will be completed later in 2015. This Report will catalyze and inform the implementation of critical, cooperative, international Arctic research programs over the next decade.

Quotes from Opening Session of Arctic Science Summit Week 2015

"I hope that this international summit for advancement of Arctic science will be a great success." Shinzo Abe, Prime Minister of Japan

"How should we face the Arctic in the midst of this great change in the Arctic environment and the social and economic conditions surrounding the Arctic? This is a vital question that not only the Arctic countries but all global citizens, including those from non-Arctic countries like Japan, must address."

Motovuki Fuiii. State Minister of Education. Culture. Sports. Science and Technology (MEXT)

"The very change that the Arctic is currently undergoing is opening up both new opportunities and new challenges for those who live in the Arctic and others who wish to engage in the Arctic in various ways." Susan Barr, President of the International Arctic Science Committee

"For the sustainable development of the Arctic, scientific knowledge is indispensable." Takashi Onishi, President of the Science Council of Japan

"Japan is well-suited to develop a national strategy for the Arctic region based on a global perspective that calls on nations worldwide to make concerted and united efforts for protecting the Arctic area."

Tadahiko Ito, Japanese Parliamentary League of Arctic Frontier Study



The Arctic Science Summit Week (ASSW) is the annual gathering of the international organizations, scientists, students, policy makers and other professions engaged in supporting and facilitating Arctic research. Convened annually by the International Arctic Science Committee, it provides opportunities for coordination, collaboration and cooperation in all areas of Arctic science.



The **Fourth International Symposium on the Arctic Research** (ISAR-4), hosted by the National Institute of Polar Research, on "Rapid change of the Arctic climate system and its global influence", aims to facilitate scientific discussions and to promote further national and international cooperation and collaboration, in particular between Arctic and non-Arctic countries.



The **Third International Conference on the Arctic Research Planning** (ICARP III), organized by the International Arctic Science Committee (www.iasc.info), provides a framework to (i) identify Arctic science priorities for the next decade; (ii) coordinate various Arctic research agendas; (iii) inform policy makers, people who live in or near the Arctic and the global community; and (iv) build constructive relationships between producers and users of knowledge. For more details: icarp.iasc.info

For more information please contact:

ISAR-4 Secretariat: isar4-office@nipr.ac.ip
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International Arctic Science Committee (IASC)
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Tel. +49-331-2882214
Fax. +49-331-2882215



Integrating Arctic Research - A Roadmap For The Future



Photo: Luca Br

ICARP

THEMES

PARTICIPANTS



ICARP III provides a framework to:

- Identify Arctic science priorities for the next decade;
- Coordinate various Arctic research agendas;
- Inform policy makers, people who live in or near the Arctic and the global community and,
- Build constructive relationships between producers and users of knowledge.

Third International Conference on Arctic Research Planning

LATEST NEWS

Follow ICARPIII on Facebook and Twitter 08-01-2015 SG Meeting Report Available 15-01-2015 ARCUS Informational Webinar - ICARP III 11-02-2015 Article in "The Cryosphere Discussions" 02-03-2015 Watch the ICARP III FrostBytes 25-03-2015

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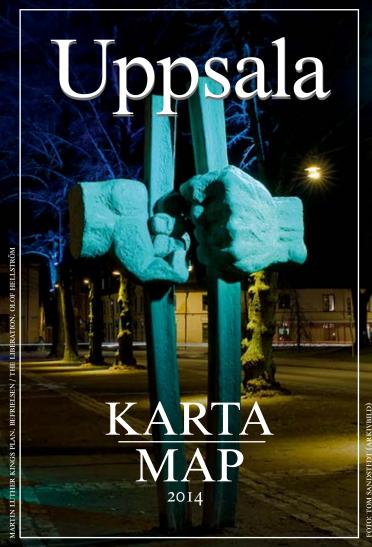
C3: Emerging questions in Arctic Geoscience

Main Convener: Victoria Pease

April 28 (Tuesday), Room 205, 10:45-12:15

Chair: Victoria Pease, Bernard Coakley

C03-O01	A SOCIALLY RELEVANT ARCTIC TECTONIC PUZZLE V. Pease*, A. Andresen, J. Toro	POF
C03-O02	THE EUREKAN DEFORMATION IN THE ARCTIC – AN OUTLINE K. Piepjohn*	PDF
C03-O03	THE GREAT CHALLENGES IN ARCTIC OCEAN PALEOCEANOGRAPHY AND SCIENTIFC DRILLING R. Stein*	PDF
C03-O04	NEW DATA SUPPORT NEW HYPOTHESES ABOUT ARCTIC OCEAN TECTONICS; PLANNING EXPEDITIONS FOR THE NEXT DECADE. B. Coakley*	PDF
C03-O05	SEISMICITY, STRUCTURE AND TECTONICS IN THE ARCTIC REGION M. Kanao*, V. Suvorov, S. Toda, G. Toyokuni, S. Tsuboi	POF
C03-O06	CULTURE AND ARCTIC CLIMATE CHANGE: INTEGRATING LONG-TERM PERSPECTIVES FROM ARCHAEOLOGY AND THE ENVIRONMENTAL SCIENCES P. D. Jordan*, M. T. Friesen, M. L. Timmermans	POF





Sverige har haft fred i 200 år. Därför är det inte så konstigt om vi tar den för given.

Under året kommer vi utgå från olika teman och ta reda på vad fred faktiskt är. I Uppsala firar vi 200 år utan krig, samtidigt är läget ett annat i världen. Vi vill under året fokusera på framtiden och hur den skulle kunna se ut. Målet är att bidra till att skapa en lite bättre värld att leva och bo i. Läs om hur Fredsåret 2014 uppmärksammas i Uppsala på www.varaifred.se.

Uppsala. I fred varje dag. Sedan 1814.

— ·i~i-

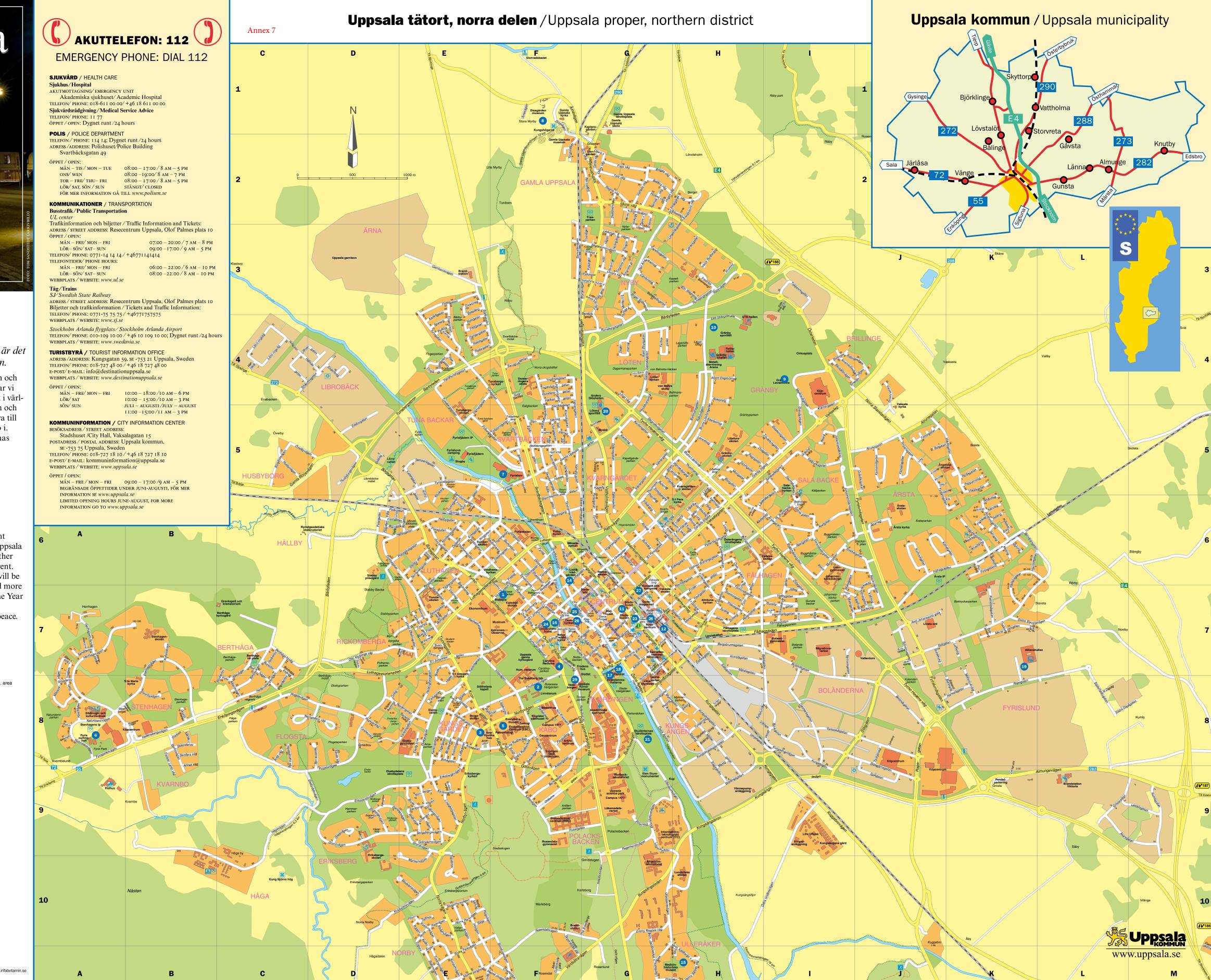
Sweden has had peace for 200 years. No wonder we take it for granted.

During the year we will be exploring different themes to find out what peace really is. In Uppsala we celebrate 200 years without war, but in other parts of the world the situation is very different. The focus will be on the future and what it will be like. The goal is to contribute to a better and more peaceful world to live in. Read about how the Year of Peace will be observed in Uppsala at www.destinationuppsala.se/en/Peace/Be-at-peace.

Uppsala. At peace every day. Since 1814.







Gatuadresser/Street Index Uppsala tätort, södra delen / Uppsala proper, southern district Odlingsvägen . Albert Engströmsgatar Edith Södergrans gata Edvard Berlingsgatar Almas Allé ... Egilsgatan. Hampus von Posts väg Kvarntorgsgatan Almqvistgatan . Kvarnängsgatar D10, E10 Oscar Arpis väg. www.uppsala.se Alice Tegnérs gata... .. E13 Ekebyvägen Hanselligatan.J12 Oslogatan Alriksgatan . Eklundavägen Kyrkogårdsgatar Ottars väg.... Kålsängsgränd. .B8, C7, C8 Eksätra torg... Hedensbergsvägen. Kälkvägen. .G14, H14 E12, E13 Elfrida Andrées väg Helsingforsgatan .. E7. E8 E13 Elias Friesgatan Källparksgatan Persiljegatan... Källstigen Peterson-Bergers väg.. Henry Säldes väg .. Elin Wägnersgatan Emmy Rappes väg Kärrvägen. Arngrims gränd.. Engelbertsvägen Köpmangatan Artillerigatan ...F8, F9 Entitevägen. Hesselmans väg. ...C8, C9 Plattgatan F15, G15, G16 Plogvägen . K12, K13 .. E3, E4 August Södermans väg. .. E13 Eskadergatan.. Pontus Wiknersgata .H12, H13 ..G5. H5 ...L12, L13 adimes plats Holmgångsvägen. .G3, H2 .G15, H15 Libro ringväg . Hugingatan Lidnersgatan Purjogatan .. Farbror Lantz väg. . E12, E13, G14 Finn Malmgrens plan Hurtigs gata. Rackarbergsgatar Fjällugglevägen. Rangströms väg. . E13 Besöksmål & informationscentra .G15, G16 Lings väg.. Visitor Attractions & Information Centers Bergsbrunna villaväg. Rapsgatan .. 1 Biotopia (F7) Bergtallsvägen ... Floragatan . Regins väg.. Biotopia - Biological Museum Bernadottestigen.. Flottiljgatan. Häggstigen Ljunggatan Regngatan .. Botaniska trädgården (F8) Bernhard Jacobowskys .G10, G11 Botanical Garden Berthåga byväg .. Flustergränd.. Lotta Svärds gata. Linnéanum / Linneanum Berthåga lindväg .. Flygargatan. Lugnvägen Reykjaviksgatan Orangeriet / Orangery Ribbingsgatan Folkungagatar Tropiska växthuset / Tropical Greenhouse ..F12. F13 Höders väg Lurbovägen Riddartorget. Bror Hjorths Hus (E8) ...J5, K5 Fredrika Bremersgatar Lurgatan. Rimbogatan Carolina Rediviva (F7) Frey Svenssons väg ..E6. 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Museum Gustavianum – Uppsala universitetsmuseum (F7) Museum Gustavianum - Uppsala University Museum Bröderna Berwalds väg Kiselvägen Munkgatan Samaritergränd. Bureusgatan ... Gottsunda allé .. Klangs gränd. Munters gata Sandavägen.. Svandammshallarna (G8) Gottsunda skogsväg.. Sandels gata .. Byggmästargatan . Murargatan . MÄLAREN .K6.K7 E11, E12 Svandammshallarna (Concert Venue) Knivsta kommun Bäcklösavägen Gran-Anders väg Murstensvägen $Sand grops gatan\,.$ Pumphuset – kommuntekniskt museum (G7) Bärbygatan .. Grandungevägen Klippvägen. Musikvägen . ..F13, F14 Sandmovägen.. Bärbyleden **D6, D7, E4, G4, H4** Pump House - Museum of Municipal Technology . E5, E6 Musserongränd. E11 Granebergsvägen Klockargatan. Bäverns gränd.. Myrgångsvägen Sporthallen Allianshallen (K7) .D5, E6, F6, F7 Granitvägen Allianshallen Sports Hall Knivstagatan. Mälarvägen.. ... G16, G17 Sellerigatan ... **C**arl von Linnés väg... Sporthallen Anders Diöshallen (G5) Granstigen.. Kohagsvägen . Mältargatan. 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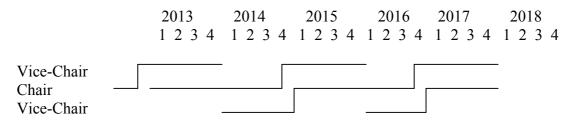
European Consortium for Ocean Research Drilling (ECORD)

MEMORANDUM OF UNDERSTANDING

ECORD Science Support and Advisory Committee (ESSAC) Terms of Reference

A. Representation

- 1. The ECORD Science Support and Advisory Committee (ESSAC) consists of a national delegate and an alternate from each participating country in the European Consortium for Ocean Research Drilling (ECORD) appointed by the respective Member Organization(s). Alternates can attend, when in addition to delegates, as nonvoting members. Additional non-voting representation may be invited on an ad hoc basis. Terms of office of committee members will be reviewed every three years. It is advised that there is rotation where possible and that no more than one-third of the membership is replaced each year. The first rotation review will be in 2016 after an appointment of 3 years. Terms of office will normally begin in October.
- 2. A Chair and Vice-Chair shall be appointed by the Executive Bureau and approved by the ECORD Council following an open call, review of applications and nominations by ESSAC. The incoming Chair will serve one year as Vice-Chair followed by three years as Chair and rotates off as Vice-Chair during the fourth year until a new Chair is nominated (see diagram below). The Chair cannot serve two consecutive terms. The Chair is responsible for reporting to the ECORD Council and liaising with the European Managing Agency (EMA) and European Science Operator (ESO).



3. ESSAC is represented on the ECORD Facility Board either by the ESSAC Chair or the Vice-Chair. In addition, the ESSAC Chair will act as chair of the Vision Task Force organized by EMA.

B. Division of membership benefits

- 1. The IODP assigned quota of Expedition participants granted to ECORD shall reflect the financial contributions of each member country and specific interests of each participating country. ESSAC, in consultation with EMA, shall annually review the distribution effective as of 1 October 2014 and make recommendations in view of the target ratio and of specific drilling interests.
- 2. The delegates and alternates on IODP Science Advisory Panels shall be designated by ESSAC after an open call and recommendations from national offices, and shall be approved by the ECORD Council. IODP panel membership shall reflect the financial

contribution of each participating country over a rolling three-year period. Normally all ECORD representatives on the IODP advisory panels shall serve for a three-year period and may not be re-appointed for a second consecutive term.

C. Obligations of the ESSAC delegates

- 1. To ensure that all IODP and ECORD meetings are attended by the delegates or by their alternates. If neither can participate, the relevant committee shall be informed and, if possible, a substitute nominated.
- 2. To actively participate in the evaluation process of applications and selection of candidates for IODP Expeditions, ECORD Scholarships, ECORD Grants, DLP lectures and members of IODP and ECORD advisory panels.
- 3. To ensure that the scientific interests of ECORD as a whole are represented by whoever attends the IODP advisory panel meetings on behalf of ECORD.
- 4. To ensure that the minutes of meetings are distributed to the national alternates and ECORD representatives.
- 5. To attend ECORD workshops and to report to ESSAC when requested.
- 6. To provide information to interested parties within the national scientific communities of each ESSAC member country and to advise on national regulations and policies.

D. Voting

A quorum is required before decisions can be taken. There is no power of attorney for absent members. A quorum requires the presence of a majority of the members. Where possible ESSAC shall proceed by consensus; if this is impossible, there shall be a majority vote. Each delegate present has one vote and the Chair has a casting vote. If no decision is reached, the issue will be passed to ECORD Council.

E. Secretariat

The ESSAC Office shall be funded from the budget of EMA, after approval by the ECORD Council. The Office shall rotate, on a three-year basis, with the Chair of ESSAC. The budget shall be sufficient to provide salary for a science coordinator with a scientific background, the full cost of maintaining an office and resources to compensate the Chair.

F. Tasks

ESSAC is responsible for the scientific planning and coordination of Europe's contribution to and participation in IODP. The main purpose of ESSAC is to maximize ECORD's scientific and technological contribution to IODP.

ESSAC is responsible for (not in priority order):

• Coordinating expedition applications, nominating shipboard participants and reviewing quotas of shipboard scientists between participating countries.

- Advising ECORD funding organisations and ECORD Council members on IODP issues
- Interacting with the appropriate IODP bodies, in particular the IODP scientific bodies.
- Coordinating ECORD Training, Education and Outreach Programmes, through the
 evaluation of applications and the funding of ECORD Grants, ECORD Schools,
 ECORD Scholarships, Teachers/Educators at Sea and the Distinguished Lecturer
 Programme.
- Evaluating applications and nominating scientists to participate in the ECORD Facility Board.
- Nominating representatives (delegates and alternates) on IODP advisory panels.
- Responding to the ECORD Council on requests for evaluation of its activities and initiation of evaluations of the European scientific input to IODP.
- Assisting and advising EMA on extending the scientific community of the consortium to non-member countries.
- Initiating and monitoring Workshops on specific scientific themes and syntheses of European IODP programs.
- Assisting and advising EMA on the formulation of proposals for funding European related infrastructure.
- Providing stimulation and guidance for the writing of drilling proposals in accordance with the IODP Science Plan and encourage IODP-related activities among participating countries.
- Encouraging (a) innovative science and technology development, and (b) the formulation of long-term integrated IODP studies.
- Assisting and advising EMA and ESO on public outreach.

The ESSAC Chair represents and supports ESSAC in all ECORD and IODP activities. It is the responsibility of the ESSAC Chair to:

- Manage the ESSAC Office.
- Oversee and manage ESSAC's scientific activities, including scientific planning, evaluation and staffing of IODP expeditions, and evaluation and nominations of ECORD panel members.
- Oversee and coordinate educational activities and participation in defining strategies for ECORD science, funding and technology.
- Communicate with and advise IODP program managing and support offices regarding nomination and staffing of expeditions and coordination of education and outreach activities.
- Oversee quotas and maintain country balance and for IODP expeditions and panel members and participants of education and outreach activities.
- Liaise with the ECORD Council, EMA and ESO.
- Report to the ECORD Council.
- Organise and chair the meetings of ESSAC.
- Participate in the Executive Bureau and the Facility Board to provide advice on ECORD science priorities and long-term scientific planning in accordance with the IODP Science Plan.
- Participate in the Vision Task Force to assist and monitor the ECORD scientific strategy.
- Represent ESSAC at other IODP meetings, such as the JR Facility Board and IODP Forum meetings, or arrange for an appropriate alternate.
- Inform the ESSAC delegates of ECORD and IODP activities and decisions.

- Provide contributions (requested by EMA) to ECORD Newsletters and ECORD Annual Reports.
- Organise and chair an IODP-ECORD/ICDP session at EGU General Assembly meetings.

The ESSAC Science Coordinator shall assist the ESSAC Chair in running the ESSAC Office and is responsible for:

- The day-to-day running of the ESSAC Office and communication with ESSAC delegates and the wider IODP science community.
- Coordinating, preparing, distributing and posting "Calls for Applications" to
 participate in IODP expeditions, IODP advisory panels and ECORD education and
 outreach activities (ECORD Research Grants, ECORD Summer Schools, ECORD
 Scholarships and the Distinguished Lecture Program, opportunities for teachers/
 educators at sea) as well as other relevant announcements.
- Receiving, compiling and archiving applications for all science, education and outreach activities. Distribute application lists and compile rankings and participant information from ESSAC national delegates.
- Maintaining and updating the ESSAC website (XHTLM language, including Facebook)
- Distributing information through the ESSAC mailing list and social media platforms, such as Facebook (ESSAC) and Twitter (ECORD).
- Supporting the scientific community and the IODP National Offices.
- Coordinating ECORD Education & Outreach activities, attending ECORD Education & Outreach Task Force meetings, and participating in outreach activities at international meetings (e.g., EGU).
- Planning and assisting in the ESSAC meetings and preparing the Agenda Book and minutes of these meetings.
- Providing contributions (requested by EMA) for the ECORD Annual Report and ECORD Newsletter.

G. Proceedings

- 1. ESSAC shall meet twice a year, or at the request of one-fourth of the members, the ECORD Council, or the ESSAC Chair. The ordinary agenda shall include:
 - Reports from recent SAS meetings;
 - Staffing nominations, progress and evaluation;
 - Planning of ECORD initiatives for forthcoming SAS meetings;
 - Reports from completed expeditions;
 - Any other tasks.
- 2. ESSAC can implement working groups and define their terms of reference.

ECORD Publication Data Management System

The main goal of the ECORD Publication Management System is to provide open access of publication data to enable efficient searches of IODP, ODP and DSDP relevant publication information and the evaluation of ECORD scientific contributions to the ECORD knowledge community. This community encompasses the stakeholders of innovation, higher-education institutions and their members, in particular scientists and students, government officials from funding agencies and industry participants from ECORD member countries.

For this purpose a selection of existing publication search and management systems (Zotero, RefBase, Docear, and End-note), as well as a stand-alone database system are analyzed in terms of cost and efficiency, sustainability, usability, and functionality to search retrieve and archive metadata (in accordance with international standards). In addition, openness and completeness of the search and capture methods are evaluated with the goal of avoiding common problems associated with publication searches (incompleteness, spam material, duplicates, citing behavior, self-cites).

Due to the diversity of our target group the publication data management system is designed for non-professional technical users, those with a low-to moderate level of digital literacy yet with a degree of e-awareness, more than a modicum of digital culture, and the ability to change and learn.

The management system requirements are defined as:

- A functional, comprehensive dynamic ECORD community repository with the goal of self-archiving (if possible) non-copyrighted meta-data form high impact, and peer-reviewed journal, and non-peer-reviewed report and proceedings as well as book contributions.
- The reference management system should be compatible with the existing ESSAC web-site (written in PHP)
- The maintenance of the repository should be relatively simple and cost effective, requiring an administrator only, and the infrequent use of an IT programmer.
- Access to previously existing databases at ECORD/IODP/ESO should be enabled through links.
- RSS feeds should be established for dynamic pages to alert stakeholders to new and/or significant contributions such as entries over the past 7 days.
- Access by stakeholders should be possible from anywhere and with standard browsers such as Mozilla Firefox, Chrome, Safari and/or Internet Explorer with log on and password.
- The structure should allow up-dates for future improvements and expansions to be made. An example would be to include social tags or third party collaborative functions.

Based on the analytical evaluation of the previously mentioned systems the two most promising aggregating systems have been selected to test: RefBase and Zotero. Publication data from two ECORD member countries, Switzerland and Austria, have been compiled in preparation for testing. In addition, the feasibility of designing and implementing a stand-alone database system is being evaluated with experts at the ETH.

May 6, 2015 Dr. Teresa Bingham Mueller