

MINUTES

ECORD Council - ESSAC Meeting #4



October 26th-27th, 2016

MARUM, Bremen, Germany

TABLE OF CONTENTS

INTRODUCTION	3
1 Self introduction and logistical information (M. Friberg/U. Röhl).....	3
2 Welcome addresses (M. Schulz/G. Wefer)	3
3 Approval of the agenda (G. Camoin).....	3
4 Objectives of the meeting (M. Friberg/J. Behrmann/G. Camoin).....	3
5 Council and ESSAC actions since the Council-ESSAC #3 meeting (N. Hallmann/G. Camoin/M. Friberg/J. Behrmann)	3
ECORD BUDGET, MEMBERSHIP AND MANAGEMENT	4
6 ECORD News (G. Camoin)	4
7 ECORD: FY16 and FY17 budgets (G. Camoin).....	8
8 EMA: FY17 budget (G. Camoin).....	9
9 ESSAC News (J. Behrmann)	10
10 News from ECORD member countries (Council & ESSAC Delegates)	11
11 DEDI-2: Distributed European Drilling Infrastructure (G. Camoin)	15
12 The question of an EC status for ECORD (N. Hallmann).....	16
13 European initiatives and potential links with ECORD (A. Stevenson)	18
ECORD RENEWAL PLANS	19
14 ECORD post FY18 renewal: organization and procedures (G. Camoin/All).....	19
15 Nominations of ECORD External Review Committee members (M. Friberg/Council members).....	20
16 ESO and EMA renewals (M. Friberg)	22
IODP NEWS AND RENEWAL PLANS	22
17 IODP Forum (J. Austin)	22
18 NSF (T. Janecek).....	23
19 MEXT (E. Sato).....	25
20 ANZIC (L. Armand)	25
29 IODP Forum: coordinating imaging capability with scientific drilling (J. Austin)....	26
41 IODP Forum: overarching O&E activities and views from ECORD (J. Austin)	26
OPERATIONS	27
21 ESO: Report and FY17 budget (D. McInroy)	27
24 ECORD Facility Board: Report (G. Lericolais)	29
22 ESO-EPC: Report (S. Davies/S. Morgan).....	33
23 Bremen Core Repository: Report and FY17 budget (U. Röhl).....	34
25 Exp. 357 Review Committee (G. Lericolais).....	36
26 JOIDES Resolution Facility Board and Operations: Report and views from ECORD (T. Janecek/G. Camoin/J. Behrmann).....	36
27 Chikyū: Report and views from ECORD (N. Eguchi/G. Camoin).....	39
28 ESSAC: ECORD Expedition staffing and quotas (J. Behrmann).....	40
SCIENCE	42
30 SEP: Report – Highlights on MSP proposals (W. Piller).....	42
31 MagellanPlus: Report and FY17 budget (L. Lourens).....	43
32 IODP Forum: Progress towards IODP Science Plan challenges and views from ECORD (J. Austin/J. Behrmann).....	45
33 PMOs: views from ECORD (J. Behrmann)	45
COLLABORATION	45
34 ICDP: Recent and future activities (U. Harms)	45

35 Amphibious Drilling Proposals: Implementation and implications for MSP ADPs (D. McInroy/U. Harms).....	46
36 Collaboration with industry: ECORD views (A. Moscariello/M. Friberg).....	46
39 ECORD OETF: Outreach activities related to recent MSP expeditions and forward look (A. Stevenson/U. Prange).....	46
40 ECORD OETF: Report and FY17 budget (P. Maruéjol)	47
OUTREACH AND EDUCATION.....	48
37 ESSAC: Educational activities (H. Kinkel).....	48
38 ESSAC: FY17 budget (J. Behrmann).....	50
ANY OTHER BUSINESS.....	51
CONCLUSIONS.....	51
42 Review of Consensus and Actions (N. Hallmann/All)	51
43 Next ECORD Council-ESSAC meetings (M. Webb/J. Behrmann).....	51
ACKNOWLEDGEMENTS.....	51
ROSTER.....	53
LIST OF ACRONYMS	56

October 26th, 2016

INTRODUCTION

1 Self introduction and logistical information (M. Friberg/U. Röhl)

(9:04)

M. Friberg opened the meeting and U. Röhl presented the logistical information. M. Friberg let all the participants begin self-introductions.

2 Welcome addresses (M. Schulz/G. Wefer)

(9:12)

M. Schulz gave an overview of research and technologies at the MARUM. The MeBo70 system was recently upgraded and the MeBo200 had its first successful campaign off New Zealand. The schedule of the two systems is filled until early 2020.

G. Wefer presented the development of the Bremen Core Repository (BCR) and the role of the German Research Foundation (DFG) for research at the MARUM.

3 Approval of the agenda (G. Camoin)

(9:21)

G. Camoin presented the agenda and the ECORD Council approved the agenda. There are two changes to the agenda: 1) agenda item 36: collaboration with industry is cancelled and 2) N. Hallmann presents agenda item 40: ECORD OETF report and FY17 budget for P. Maruéjol.

ECORD Council Consensus 16-10-01:

The ECORD Council approves the agenda of the ECORD Council-ESSAC Meeting #4.

4 Objectives of the meeting (M. Friberg/J. Behrmann/G. Camoin)

(9:25)

G. Camoin presented the main objectives of the meeting: 1) the approval of ECORD's budgets, 2) MSP expeditions and proposals, 3) ECORD's renewal and 4) ECORD's post FY18 strategy (closed session).

5 Council and ESSAC actions since the Council-ESSAC #3 meeting (N. Hallmann/G. Camoin/M. Friberg/J. Behrmann)

(9:27)

N. Hallmann summarized actions and consensus statements since the ECORD Council-ESSAC meeting #3 that was held in October 2015 in Naples, Italy (see agenda book pages 12-16). There is a change of the status for two action items:

Action EFB: to write after the ECORD Facility Board Meeting #4 a concise recommendation for one single option of the drilling plan for the MSP expedition

'Central Arctic Paleoceanography (ACEX2)' (Proposal #708) taking all possible (financial and scientific) risks into account **DONE**

Action ECORD Council: to discuss the ILP budget at the ECORD Council-ESSAC Meeting #4 in October in Bremen **NOT DONE**

DISCUSSION on ECORD's collaboration with industry:

ECORD should look for a possible collaboration with industry for each expedition and somebody has to be responsible for driving this process when it is needed (M. Friberg). The UK had a NERC-led Industry Liaison Panel (ILP), which was extended to the ECORD ILP (R. Gatliff). An ILP has to be set up on a proposal basis with ESO and the proponents exploring suitable possibilities for collaboration with industry (R. Gatliff). A proposal based standing panel is recommended (K. Verbruggen). Requirements of industry have to be in line with ECORD's requirements as a science programme (M. Friberg). Academic collaboration with industry is highly variable and depends on the oil price (J. Austin). The ECORD Council may have oversight of the collaboration with industry (M. Friberg). Seismic imaging is another contact with industry (J. Austin).

ECORD Council Consensus 16-10-02:

The ECORD Council recommends that ESO and the proponents explore any suitable collaboration with industry on a case-by-case basis.

DISCUSSION on Key Performance Indicators:

Key Performance Indicators must be based on science, like publications and achieved science objectives (M. Friberg). However, it is also useful to record other indicators in the matrix like industry involvement and in-kind contributions (K. Verbruggen/M. Friberg).

Action Item 1: EFB

to contact the Co-Chief scientists of each MSP expedition to get a document summarizing the performances regarding each scientific objective of the relevant expedition

ECORD BUDGET, MEMBERSHIP AND MANAGEMENT

6 ECORD News (G. Camoin)

(9:43)

G. Camoin presented the ECORD news and the 2016 Ocean Drilling Citation Report.

There are following changes in the ECORD structure:

- 1) M. Friberg (SWE) is ECORD Council Chair until December 2016. M. Webb (UK) is the incoming Vice-Chair until December 2016 and will become ECORD Council Chair starting on January 1st, 2017.

- 2) J. Behrmann (GER) is ESSAC Chair since January 1st, 2016. G. Früh-Green (CH) is the outgoing Vice-Chair until December 31st, 2016.
- 3) The ECORD Council members E. Humler (FRA, starting on July 1st 2016 and replacing M. Diament), M. Webb (UK), G. Lüniger (GER) and M. Friberg (SWE) are members of the ECORD Executive Bureau. A. Kjaër (DK) will rotate off at the end of October 2016.
- 4) G. Lericolais (FRA) is the new Chair of the ECORD Facility Board since January 1st, 2016 and K. Gohl (GER) is the outgoing Vice-Chair until December 31st, 2016. S. Gallagher (AUS) and F. Inagaki (JPN) are the new EFB Science Board members. D. Weis (CAN), K. Gohl (GER) and G. Dickens (USA) will rotate off on December 31st, 2016. At the moment a call is open to replace one US and two ECORD representatives.
- 5) In October 2016 C. Cotteril (UK) replaced A. Stevenson (UK) as member of the ECORD Outreach and Education Task Force.
- 6) The ECORD Council decided during its last meeting on June 1st 2016 in Berlin not to have a constant ECORD ILP, but to form an ad hoc committee and to decide on a case-by-case basis on ECORD's collaboration with industry.

ECORD Council Consensus 16-10-03:

The ECORD Council nominates Marco Sacchi as new ECORD Executive member in replacement of Anders Kjaër.

G. Camoin continued to present the rotation scheme for the ECORD Council and suggested G. Lüniger as the incoming Vice-Chair during the second half of 2017. M. Webb will become ECORD Council Chair starting on January 1st, 2017 and M. Friberg will be outgoing Vice-Chair during the first half of 2017.

Rotation scheme	Chair	Country	Vice Chair
Oct 12 - March 13	Mike Webb	UK	Anne De Vernal
April 13 - Dec 13	Mike Webb	UK	Guido Lüniger
Jan 14 - Jun 14	Guido Lüniger	Germany	Mike Webb
Jul 14 - Dec 14	Guido Lüniger	Germany	Michel Diament
Jan 15 - Jun 15	Michel Diament	France	Guido Lüniger
Jul 15 - Dec 15	Michel Diament	France	Magnus Friberg
Jan 16 - Jun 16	Magnus Friberg	Sweden	Michel Diament
Jul 16 - Dec 16	Magnus Friberg	Sweden	Mike Webb
Dec 16 - Jun 17	Mike Webb	UK	Magnus Friberg
Jul 17 - Dec 17	Mike Webb	UK	TBN

G. Camoin summarized the ECORD memberships (Table 1). At the moment ECORD has 16 member countries. Germany, France and the UK represent 80% of the ECORD budget. The annual contributions from the other countries range from \$30,000 to \$1.1 M USD (Table 1). Belgium and Poland withdrew from ECORD in 2016. Furthermore, the future commitment of Israel and Canada beyond 2016 is not sure.

Table 1: ECORD member countries and their commitments

Germany	>FY18
France *	>FY18
UK *	>FY18
Norway	>FY18
Switzerland	>FY16
Sweden	>FY18
Netherlands	>FY18
Italy	>FY18
Spain	TBD
Denmark *	>FY18
Ireland *	>FY18
Austria	>FY18
Portugal	>FY18
Finland	>FY18
Canada	>FY16
Israel	>FY16

Spain is back in ECORD since January 1st, 2016 with an annual contribution of \$169,000 USD and has still to decide on the period of its commitment.

Turkey tries to form a consortium and to join ECORD.

Russia: Over the last few months ECORD had good contacts to Russia. Recently, a « Deep-Sea Drilling Committee » was created in Russia and the government plans to support a deep drilling infrastructure. Together with Jörn Thiede several abstracts concerning IODP science were presented at different workshops and conferences in Russia in 2016. An ECORD delegation could be invited in Russia or a group of Russian scientists could visit the next suitable ECORD meeting for negotiations.

G. Camoin presented the content of the ECORD Annual Report 2016. The call for contributions will be distributed in early December. The deadline for submission of contributions will be on January 15th, 2016. The review of all sections will be done until January 31st and the further editing until the end of February. Printed copies will be sent on March 15th.

DISCUSSION on ECORD Annual Report:

The Annual Report 2016 will be published just prior to ECORD's evaluation. The number of ECORD scientists participating in IODP expeditions should be highlighted in the annual report (K. Verbruggen). A separate section on key performance indicators, like number of young scientists, berths and publications, should be included to track trends between annual reports of the current 5-year programme (M. Webb). The Annual Report 2016 will also be important for the US renewal (J. Austin). Short science summaries for each IODP expedition, which are related to the IODP Science Plan, are needed (J. Austin/J. Behrmann).

Action Item 2: EMA

to include a section in the Annual Report 2016 to show changes in the number of sailing scientists, young scientists, publications, etc. over the last 5 years

G. Camoin continued to summarize ECORD's partnership with the US and Japan. ECORD contributes \$7 M USD to the annual funding of the *JOIDES Resolution* and \$1 M USD to the annual funding of the *Chikyu*. ECORD suspended its membership of the *Chikyu* programme for 2015 and 2016.

2016 Ocean Drilling Citation Report: ECORD contributed about 7400 publications related to all ocean drilling programs (1969-2016). The number of completed theses and dissertations based on Program Science is much lower compared to the United States (100 vs. 302 dissertations between 1969 and 2016). However, theses and dissertations are underreported to the AGI [American Geosciences Institute – GeoRef database]. Publication records for expeditions 301-352 (2003-2016) show the relative high number of publications for MSP expeditions (especially for expeditions 302 and 310). Like for the number of theses and dissertations, the number of publications is underreported.

DISCUSSION on publication statistics:

Collaboration with AGI is needed in order to understand the way they capture information in their database (T. Janecek). Contact person is Angie Miller from TAMU (T. Janecek). In the overview section of the Ocean Drilling Citation Report the production of the database by the AGI is described, for example, the type of used keywords (T. Janecek). Keywords like IODP, expedition number, used vessel and scientific keywords should usually be included in the publications (D. McInroy). Co-Chief scientists should be contacted in order to get the number of publications (G. Camoin). Publications related to DSDP, ODP and IODP material should be recorded (H. Kleiven). The number of publications would be important for ECORD's evaluation. Another way to get this information would be to contact the core repositories and to get the number of people who requested DSDP-ODP-IODP material (L. Armand). It is the role of the national delegates to check the number of PhDs (K. Littler).

Action Item 3: EMA

to send the 2016 Ocean Drilling Citation Report to the ECORD Council-ESSAC #4 meeting attendees

Action Item 4: OETF

to cross-check the number of publications over the last five years, which are based on material from DSDP-ODP-IODP programmes in each ECORD member country

Action Item 5: ESSAC delegates

to provide the number of publications and PhDs over the last 5 years for their respective country to the ESSAC Office until January 2017

G. Camoin listed the previous and next ECORD and IODP meetings. The next ECORD Council Spring meeting will be held soon after the ECORD Evaluation Committee meeting and the major agenda items will be 1) ECORD renewal post FY18, 2) ECORD ILP activities and collaboration with industry, 3) MSP expeditions and proposals, and 4) ECORD and the EC.

7 ECORD: FY16 and FY17 budgets (G. Camoin)

(10:28)

G. Camoin summarized the ECORD budget situation for FY16 (Tables 2, 3) and FY17 (Tables 4, 5).

FY15 ended with a positive balance of \$12.4 M USD, which was carried over to FY16. Together with the FY16 member contributions of \$17.64 M USD (Table 2), the FY16 income yields \$30.05 M USD. The expenses are of \$19.35 M USD. The ESO FY16 expenses include the implementation of Expedition 364 'Chicxulub Impact Crater'. FY16 should finish with a positive balance of \$10.69 M USD (Table 3). Potential additional contributions (cash, IKCs) are not considered in this calculation.

Table 2: FY16 member contributions

Germany	5,600,000
France *	4,400,000
UK *	3,750,000
Norway	1,100,000
Switzerland	600,000
Sweden	528,000
Netherlands	500,000
Italy	400,000
Spain *	168,000
Denmark *	150,000
Ireland *	111,000
Austria	100,000
Portugal	90,000
Finland	80,000
Canada	30,000
Israel	30,000
TOTAL	17,640,000

* Contributions in other currencies
Exchange rates : 1€=1.12\$

Table 3: ECORD FY16 budget

	FY16 Income	FY16 Expenses
FY 15 balance	12,406,000	
FY 16 contributions	17,640,000	
ECORD-NSF MoU		7,000,000
ECORD-JAMSTEC MoU		0 **
ESO		11,300,000 ***
EMA		258,940
MagellanPlus		78,400
ECORD Outreach		61,000
ECORD websites		33,600
ESSAC		287,130
BCR		332,174
TOTAL	30,046,000	19,350,394
FY 16 balance	10,695,606	

* Exchange rate : 1€=1.12\$

** Membership suspended in FY15 and 16

*** TBC

The Amounts in USD are subjected to exchange rate fluctuations

The FY17 contributions will be of \$17.74 M USD (Table 4). Italy will increase its annual contribution from 400,000 to 500,000 USD. Together with the positive FY16 balance the FY17 income will yield \$28.43 M USD (Table 5). The expenses will be of \$X M USD*. Additional contributions are not considered in this calculation.

* See confidential annex.

Table 4: FY17 member contributions

Germany	5,600,000
France *	4,400,000
UK *	3,750,000
Norway	1,100,000
Switzerland	600,000
Sweden	528,000
Netherlands	500,000
Italy	500,000 +
Spain *	168,000
Denmark *	150,000
Ireland *	111,000
Austria	100,000
Portugal	90,000
Finland	80,000
Canada	30,000
Israel	30,000
TOTAL	17,740,000
<i>* Contributions in other currencies Exchange rates : 1€=1.12\$</i>	

Table 5: ECORD FY17 budget*

	FY17 Income (US\$)	FY17 Expenses (US\$)
FY 16 balance	10,695,606	
FY 17 contributions	17,740,000	
ECORD-NSF MoU		7,000,000
ECORD-JAMSTEC MoU		1,000,000
ESO		X
EMA		274,400
MagellanPlus		78,400
ECORD Outreach		63,300
ESSAC		279,648
BCR		313,642
TOTAL	28,435,606	X
<i>Exchange rates : 1€=1.12\$</i>		
<i>The Amounts in USD are subjected to exchange rate fluctuations</i>		

G. Camoin continued to present the predictions for the FY17-FY20 budgets (Table 6*). This projection includes the implementation of the Corinth Active Rift Expedition in 2017, the Arctic Expedition in 2018, a potential low-cost expedition in 2019 and the Antarctic Expedition in 2020. The table is based on cash and potential additional contributions like IKCs are not considered.

Action Item 6: EMA

to provide files of maps displaying financial contributions of member countries to ECORD vs. sailing scientists for 2014-2016 to the Council members and ESSAC delegates

(10:39)

coffee break

(11:01)

8 EMA: FY17 budget (G. Camoin)

(11:01)

G. Camoin presented the composition of the EMA office and the people working for ECORD at the INSU in Paris. Furthermore, he summarized the role of EMA. Finally, he

* See confidential annex

presented the breakdown for the EMA FY17 budget of \$352,800 USD (Table 7).

Table 7: EMA FY17 budget

	in €	in \$	Comparison FY17-FY16 (€)
Compensation for the Director	50 000	56 000	+ 4 000
EMA Salaries			
Outreach Coordinator	47 000	52 640	0
Assistant Director	54 000	60 480	+ 7 000
Total EMA salaries	101 000	113 120	+ 7 000
Travels EMA CEREGE	50 000	56 000	0
Travels EEC (8) & ORC (2)	9 000	10 080	+ 9 000
ECORD Meetings	5 000	5 600	0
Consumables	2 500	2 800	- 2 500
SEP June meeting	7 500	8 400	0
MagellanPlus	70 000	78 400	0
"Scientific Drilling" journal	0	0	- 3 700
TOTAL	295 000	330 400	
Overheads CEREGE	20 000	22 400	0
GRAND TOTAL	315 000	352 800	+ 13 800(+ 4.6 %)

Exchange rate : 1€ = 1.12 \$ (22/09/15)

ECORD Council Consensus 16-10-04:

The ECORD Council approves the EMA FY17 budget of \$352,800 USD to be administered by EMA Aix-en-Provence, France.

9 ESSAC News (J. Behrmann)

(11:09)

The ESSAC Office moved from ETH, Zurich to GEOMAR, Kiel on March 31, 2016. A joint session was organized by ECORD/IODP and ICDP at the EGU 2016 with more than 50 oral and poster contributions. In 2016 ESSAC organized calls for the ECORD Training Course, three ECORD Summer Schools, ECORD Research Grants, ECORD Distinguished Lecturer Program and twelve expeditions (10 *JR*, 1 *MSP* and 1 *Chikyu*). Staffing was managed for twelve expeditions (see agenda book page 25).

Summer Schools – Scholarships: The ECORD Training Course 2016 « Virtual Drillship Experience » (MARUM, Bremen, March 2016) was supported with 6,500 €. The Urbino Summer School in Paleoclimatology (July 2016) was funded with 10,000 € and six scholarships with 1,400 € each were given. The ECORD Bremen Summer School (September 2016) on « Submarine Geohazards: Mapping, Monitoring, and Modelling » was supported with 10,000 € and six scholarships with 700 € each were given. The ECORD Petrophysics Summer School (Leicester, June/July 2016) was funded with 10,000 € and three scholarships with 1,200 € each were given.

Research Grants: Eighteen high-quality proposals from young scientists to work on DSDP-ODP-IODP cores or data were received with a large spread of disciplines and ECORD member countries. Seven research grants were awarded to young researchers from five different countries.

DISCUSSION on ECORD Research Grants:

It would be interesting to have a report on the output of the research grants (M. Friberg). The research grants recipients provide reports to ESSAC and ESSAC plans to assess how many publications come out of funded studies (J. Behrmann). Research grants are given to PhDs and junior Postdocs who have the drive to publish (J. Behrmann).

10 News from ECORD member countries (Council & ESSAC Delegates)

(11:18)

ECORD Council and ESSAC delegates presented the news from their respective country.

B. Plunger (**Austria**): There was one Austrian participant for Expedition 364 'Chicxulub Impact Crater'. Furthermore, Austria has two lead proponents for proposals #835 (Michael Strasser) and #875 (Werner Piller). One Austrian scientist will sail on Expedition 366 'Mariana Convergent Margin & South Chamorro Seamount' and two early-career scientists applied for sailing at Expedition 369 'Australia Cretaceous Climate and Tectonics'. Funding is secured until the end of FY18. ECORD's external evaluation is at the right time and needed for the decision on future funding. In Austria the funds come from the government and go to the Austrian Academy of Sciences, which signs the contract with ECORD. The Ministry is responsible for the Academy and will decide on future funding.

W. Piller (**Austria**): The first national IODP-ICDP symposium was held in Vienna in May 2016 and was a big success.

D. Weis (**Canada**): There are many Canadian applicants and the Canadian Office has been contacted by many young scientists. Canadians have participated in various expeditions. D. Weis is Co-PI on a new IODP proposal. Various proposals were submitted to renew the Canadian membership to ECORD. At the moment Canada is working on new funding schemes.

Denmark: Danish scientists are applying and in 2017 there will be a Danish Co-chief scientist (J. Behrmann).

T. Huhtio (**Finland**): Finland is committed until the end of FY18.

O. Hyttinen (**Finland**): One Finnish young scientist participated at the 2016 Urbino Summer School. There is ongoing research related to the Baltic Sea Expedition. Finland has high interest in the upcoming ACEX-2 Expedition. Active research is ongoing related to past expeditions in Arctic and Antarctic areas.

G. Camoin on behalf of E. Humler (**France**): The French contribution is secured until FY18. ECORD was not impacted by any budget cuts. The French Ministry wants to go into the direction of a European Research Infrastructure.

G. Ceuleneer (**France**): The French community has a strong interest in IODP, which is even increasing in those years. The targets of the expeditions fit perfectly the scientific interests. The IMAGES community is also boarding on IODP expeditions. This development is due to a good communication of IODP expeditions in the French community but also due to some financial aspects. The CNRS is funding two Postdoc salaries per year and this funding will be renewed in 2017. Furthermore, a new concept, direct post-cruise funding, was introduced to facilitate research. There is also a strong interest of teachers in ECORD/IODP. Recently, there were three teachers at sea on IODP expeditions. French teachers are organising meetings on core description, etc. At the end of November 2016 IODP France Days will be held in Paris.

K. Verbruggen (**Ireland**): The Geological Survey of Ireland has a major commitment to seabed mapping (INFOMAR programme) and increased the budget for 2017 to 4 M €. A new Geoscience research center was set up with 70% government and 20% industry funding with 26 M € over six years.

X. Monteys (**Ireland**): There is good feedback from the major Irish universities and there will be Irish applicants for upcoming IODP expeditions. An increase in Ireland's contribution to ECORD could be considered if Ireland's participation in IODP increases over the next three years (sailing scientists and other activities).

Israel: J. Austin will encourage Z. B. Avraham to interact and to continue Israel's membership to ECORD. Israeli scientists have been very active over the last year and they are currently participating at three different IODP proposals (D. Weis). Israel has recently continued its ICDP membership (U. Harms).

A. Argnani (**Italy**): The commission of IODP Italy was set and it was decided to increase Italy's contribution to ECORD. IODP Italy created a new website illustrating the activities of the Italian community. There is a strong response from the Italian community

regarding IODP participation. Many applications were submitted by Italian scientists following the recent calls. Three Italian scientists were invited to participate at two upcoming IODP expeditions. There will be one Italian Co-chief scientist sailing on Expedition 374 'Ross Sea West Antarctic Ice Sheet History'.

M. Sacchi (**Italy**): Recently, Italy increased its contribution to ECORD from 400,000 USD to 500,000 USD. The Italian contribution is secured until the end of FY18.

B. Westerop (**Netherlands**): The Dutch funding is secured until the end of FY18. Due to structural changes the future contribution to ECORD is unclear.

L. Lourens (**Netherlands**): Many Dutch scientists were sailing over the last year. The young generation of scientists is very much interested in IODP and there are many applications for upcoming expeditions. It is positive that the expeditions cover the different Science Plan themes. Last week a joint IODP-ICDP meeting was held and it showed the broad interest in scientific drilling. A roadmap for largescale infrastructure just started and there is a proposal for the replacement of a Dutch vessel as marine facility. The proponents were asked to include the budget for the contribution to ECORD/IODP in their proposal. A decision will be made soon if the proposal is on the roadmap.

H. Roggen (**Norway**): Norway is committed until the end of FY18 and ECORD's external evaluation report will be important for Norway's future contribution to ECORD.

H. Kleiven (**Norway**): Norway is underquota. At the moment there is a large generation change in Geosciences in Norway. There is an increasing interest of Norwegian scientists to sail, especially for the higher latitudes like the Arctic and Antarctic. A commitment through the Research Council and the Norwegian government funds this research in the high latitudes. A new national infrastructure was built up, a new isotope facility, which includes now also research on hydrothermal systems and deep sea vents. The new generation of scientists and the upcoming IODP expeditions in the Arctic and Antarctic will probably increase the number of Norwegian sailing scientists in the near future.

L. Menezes Pinheiro (**Portugal**): Funding is secured until the end of FY18. One Portuguese scientist will sail on Expedition 366 'Mariana Convergent Margin & South Chamorro Seamount'. One Portuguese high school teacher participated in the *Chikyu* Onboard School in 2016. The 2017 SEP June meeting will be held in Lisbon. National talks on Portugal's participation at IODP will be prepared for schools and universities. Some Distinguished Lecturers will be hosted in Portugal and an ECORD/IODP Day is planned.

A. Voelker (**Portugal**): One year ago an IODP Outreach Day was held and there is interest from younger people. People were reached and there is increased interest in

ECORD/IODP. The University of Lisbon applied to host a Distinguished Lecturer. Portuguese scientists are working on 'Mediterranean Outflow' material and work also started on material from 'Arabian Sea Monsoon' and 'Maldives Monsoon and Sea Level' expeditions.

J. R. Sánchez Quintana (**Spain**): A round table discussion about drilling projects was held at the national Congress for Geology in Spain in September 2016. There will be a report on these activities in the next issue of the ECORD Newsletter. One Spanish scientist participated at Expedition 364 'Chicxulub Impact Crater'. Carlota Escutia is invited as Co-chief scientist on Expedition 373 'Antarctic Cenozoic Paleoclimate'. Spanish scientists are applying for expeditions 371, 373 and 374. In 2017 Spain will have the same level of contribution to ECORD.

M. Friberg (**Sweden**): Sweden is committed until the end of FY18 but there are many big international infrastructure commitments and in the future money has to be saved on these big international engagements. All these engagements will be evaluated in the near future.

I. Snowball (**Sweden**): The Swedish scientists are sailing and publishing. The community is pleased with the opportunities that the Swedish Research Council is giving by financing ECORD/IODP.

G. Früh-Green (**Switzerland**): The Swiss National Science Foundation has encouraged the collaboration between IODP and ICDP for many years. A proposal was submitted in April 2016 to renew both programmes. The two proposals to the large infrastructure grant section were funded. The funding agency has decided to fund until 2018. A 5-year funding could be considered after 2018 for the rest of the programme. Swiss Drilling is coordinated by Flavio Anselmetti. A Swiss Drilling booth is coordinated each year at the Swiss Geoscience meeting. Two young Swiss scientists will be sailing on expeditions #366 and #370. There are applications from other Swiss students for upcoming IODP expeditions. Mark Alexander Lever and Gretchen Früh-Green are Distinguished Lecturers.

M. Webb (**UK**): Funding is secured until the end of FY18. In 2017 an ad-hoc group will be set up on the renewal. ECORD's external evaluation report will be valuable. In autumn 2018 a decision will be made on UK's contribution to ECORD for the next phase of the programme from FY19 to FY23.

K. Littler (**UK**): At the moment there are three UK scientists sailing on Expedition 363 'Western Pacific Warm Pool' and two on Expedition 370 'T-Limit of the Deep Biosphere off Muroto'. Five UK scientists were just sailing on Expedition 362 'Sumatra Seismogenic Zone'. Many applications were submitted for upcoming IODP expeditions. Regularly organized UK-IODP meetings help to develop the community. The next UK-IODP Day will

be held on November 15, 2016. Kirsten Johnson is the new UK-IODP Coordinator.

G. Lüniger (**Germany**): Germany is committed until the end of FY18. The renewal process will be started within the next couple of months. It is expected to have 2.3 M € available to secure scientific projects beside IODP (next deadline is January 2017).

J. Erbacher (**Germany**): There are many German applicants and several German Co-chief scientists. The DFG wants to see a close collaboration with ICDP. The new ICDP Coordinator Sebastian Krastel and the new ICDP Co-coordinator Jürgen Koepke have a long IODP history. The GeoShow 'Unterirdisch' is a successful outreach activity and reaches students, pupils and teachers. 2800 kids and teachers saw the show so far and the next show will take place in Braunschweig in March 2017. A grant of 15,000 € was received from Volkswagen Research for the next GeoShow.

11 DEDI-2: Distributed European Drilling Infrastructure (G. Camoin)

(12:08)

The first DEDI proposal was submitted two years ago and rejected by the European Commission. A second proposal, DEDI-2, was submitted and the lead proponent is Achim Kopf from the MARUM. DEDI is in the frame of Horizon 2020 (H2020-INFRAIA). The aimed funding is 5 M € over four years. There are 23 participants including five ECORD key stakeholders like the MARUM and BGS. The eight key partners are the MARUM, BGS, University of Leicester, University of Montpellier, GFZ, CEREGE, University of Lund and the OGS-Trieste. Overall, 15 countries are involved, 12 of those are ECORD members.

Objectives: DEDI will foster cooperation between existing research infrastructures and link scientific communities, industries and other stakeholders. DEDI will support transnational access to cutting edge technologies and proven scientific services. An inventory of existing technologies (drilling, logging, etc.) can be provided. The different drilling communities can be brought close together. DEDI fosters synergies and pools resources in scientific drilling and monitoring for transnational use. Existing technologies can be improved and innovative new tools can be created. An effective knowledge exchange can be established and training classes can be designed. DEDI helps to develop a sustainable sample and data curation management plan. A roadmap within the European landscape of research infrastructures can be established.

ADP #796: The efficient use of DEDI can be demonstrated by setting up a first land-sea research project: the Nice Landslide proposal. This project is a joint IODP-ICDP effort and linked to an EMSO node.

The benefits for ECORD/IODP are to build a network of institutes that will pool equipment and collaborate on technical developments. Innovation that comes out of DEDI will be available for IODP and ICDP, i.e. MSP expeditions can be implemented more

efficiently and/or at lower costs. ADP proposal #796 is a demonstration of both new technologies that have been developed under DEDI and how DEDI can be used to bring different initiatives together.

DEDI-2 was selected among 33 out of 93 pre-proposals. DEDI-2 was ranked 17 and the first 11 proposals will be funded. The deadline to submit a full proposal is end of March 2017.

DISCUSSION on DEDI-2:

What is the relationship between ECORD/IODP and DEDI (K. Verbruggen)? ECORD/IODP and ICDP will be users of this infrastructure (G. Camoin). Newly developed and improved existing tools can be used for MSP expeditions and for continental drilling (G. Camoin). ECORD/IODP is one of the users but there are many other users like the ice coring community (G. Camoin). The success of DEDI is not contingent on IODP but it could help ECORD to get renewed (G. Camoin).

There is the possibility to create a consortium for research infrastructures at the European level (G. Lericolais). ECORD is a relevant research infrastructure at the European level and should be on the ESFRI (European Strategy Forum on Research Infrastructures) list (G. Lericolais). After being on the ESFRI roadmap, ECORD could become an ERIC (G. Lericolais). Using a bigger research infrastructure would allow to receive EC funding (G. Lericolais).

12 The question of an EC status for ECORD (N. Hallmann)

(12:23)

N. Hallmann summarized the way of functioning of an ERIC (European Research Infrastructure Consortium), which is a specific legal form to facilitate the joint establishment and operation of research infrastructures of European interest. Requirements for the research infrastructure, the procedure of creating an ERIC status, potential benefits for ECORD and potential issues of an ERIC status were presented. Potential benefits are 1) being a legal entity, 2) securing long-term financial commitments for ECORD members, 3) having a better international visibility/a European label, 4) having IKCs more visible, 4) being exempt from VAT and excise duty, 5) having a better contractual management, and 6) having a better coordination/governance. Potential issues are 1) the willingness/readiness of ECORD members to be involved in an ERIC, 2) the reevaluation of the mandate of some ECORD entities, 3) insurance issues regarding MSP expeditions, 4) the liability of the ERIC in case of a lack of payment of the annual contribution by an ERIC member, 5) annual costs of about 1 M €, and 6) ECORD has to be listed on the national ESFRI list as a research infrastructure. G. Camoin and N. Hallmann will attend the 5th ERIC Network Meeting that will be held on November 8-9, 2016 in Paris and they will meet Paul Tuinder from the EC on November 7 to discuss a potential ERIC status for ECORD.

DISCUSSION on a potential ERIC status for ECORD:

The usual duration for creating an ERIC is about 1.5 years (J. R. Sánchez Quintana). The ERIC is signed by the State, but the State can select one institution being in the ERIC (J. R. Sánchez Quintana). The DFG is an organisation under private law and therefore the DFG is not able to participate in an ERIC (G. Lüniger). The BMBF, German Federal Ministry of Education and Research, may decide to participate as German contributor to ECORD, however, this is a high-risk way (G. Lüniger). However, the Ministry could delegate the DFG (G. Lericolais).

Recently, EMSO has become an ERIC, however, several countries not participated in the ERIC (K. Verbruggen). Loosing member countries during the creation of an ERIC is a common procedure (M. Friberg). There is the danger that ECORD fractures, especially considering the high risk for the DFG (M. Webb). Becoming an ECORD-ERIC would not increase the duration of commitment of the ECORD member countries (M. Webb). It is important to look for additional funding but not to replace ECORD (G. Wefer). It also has to be taken into account that an ECORD-ERIC could make discussions with Russia impossible (G. Wefer).

It would be interesting to know from Euro-Argo ERIC the benefits they have from the ERIC status (M. Webb). The UK is suspected not to be an ERIC member/associated country seeing the potential benefits vs the potential issues (M. Webb). It is a good possibility to further explore the potential ERIC status (J. R. Sánchez Quintana). Smaller problems are anticipated for Portugal but considering the problems of the major contributors regarding the ERIC status this way would be too risky (L. Menezes Pinheiro). Only a small amount of time should be spent exploring the advantages and disadvantages of an ERIC status, for example, Euro-Argo and EMSO could be contacted (K. Verbruggen). The advantage of an ERIC is being a legal entity and receiving funds from the EC (M. Friberg/G. Camoin/G. Lericolais). The disadvantage is the complication factor (M. Friberg). Another possibility to be a legal entity is to create an association (G. Lericolais). There could be a high gain for ECORD but on the other side there is also a high risk (B. Plunger). The three main contributors, Germany, France and UK, should further discuss the potential ERIC status (M. Friberg). The ECORD Council agrees on exploring a potential ERIC status without spending too much time. G. Camoin and N. Hallmann will meet Paul Tuinder, the creator of the ERICs, on November 7, 2016 in Paris for further discussions on this issue and especially expressing the concerns by Germany and the UK.

It is recommended to get on the ESFRI list in order to receive more funds and to get more stability rather than getting an ERIC status (R. Gatliff). A new ESFRI call will be opened soon (M. Friberg).

ECORD Council Consensus 16-10-05:

The ECORD Council recommends EMA not to actively pursue an ERIC status, however, receive information following the EMA-EC meeting that will be held on November 7th in Paris.

ECORD Council Consensus 16-10-06:

The ECORD Council agrees to explore the possibility of being a project on the 2018 ESFRI infrastructure roadmap.

Action Item 7: EMA

to meet Paul Tuinder (EC, ERIC expert) on November 7, 2016 in Paris to discuss a potential ERIC status for ECORD and then to report to the ECORD Council

Action Item 8: EMA

to circulate revised H2020 documents (SC2 and SC5) to the ECORD Council members

(13:06)

lunch break

(13:47)

Expedition #364 « Chicxulub Impact Crater » (S. Gulick / J. Morgan) 45'

13 European initiatives and potential links with ECORD (A. Stevenson)

(14:44)

ECORD links with European programmes, such as ICDP, EPOS, EMSO, DS3F and IMPRESS (formerly IMAGES). The EC aims at bringing European initiatives together and sharing information and procedures.

The European Marine Observation and Data Network (EMODnet) was established by the EC in 2009. This network of more than 100 organisations assembles marine data, metadata and data products from diverse sources within Europe. The principle is to collect data once and to use them many times. The access to data and data products is free and unrestricted. EMODnet Geology provides access to geological information from 30 countries via an open-source platform and received a 6 M € funding to date. The challenge is to access third party data held by industry, research community (like IODP), etc. EMODnet Geology will probably receive further 9 M € funding until 2020. The EC

expects to support EMODnet until at least 2030. For the future EMODnet plans to form links to a wider international community and programmes, such as IODP/ECORD and EPOS.

The 2013 Galway Statement on Atlantic Ocean Co-operation was signed at the governmental level of Canada, Europe and the USA and says that 'Activities may include better efforts to co-ordinate data sharing, interoperability and co-ordination of observing infrastructures and seabed and benthic habitat mapping'. The Atlantic Seabed Mapping International Working Group was formed and will draft a strategic work plan for campaign mapping the North Atlantic seabed. In addition, the North Atlantic Data Portal run by NOAA was created.

EPOS is a long-term plan (2014-2019) for the integration of national and transnational Research Infrastructures for solid Earth science in Europe to provide seamless access to data, services and facilities.

EMSO is a large-scale European Research Infrastructure, a European network of fixed point, deep sea and water column observatories.

The European Global Ocean Observing System (EuroGOOS) is an association of national governmental agencies and research organisations, committed to European-scale operational oceanography within the context of the intergovernmental Global Ocean Observing System.

COMMENT on European initiatives:

The location of DSDP-IODP boreholes should be included in EMODnet (K. Verbruggen).

ECORD RENEWAL PLANS

14 ECORD post FY18 renewal: organization and procedures (G. Camoin/All) (15:05)

G. Camoin presented following timeline for ECORD's external review. The process will be started in January 2017 with the appointment of an ECORD Evaluation Committee (EEC). EMA will provide all appropriate documents to the EEC members, which will be prepared by the relevant ECORD entities. A 2-3 days general meeting is planned for May/June 2017 at the MARUM in Bremen. The EEC members could send a final report to EMA in June 2017.

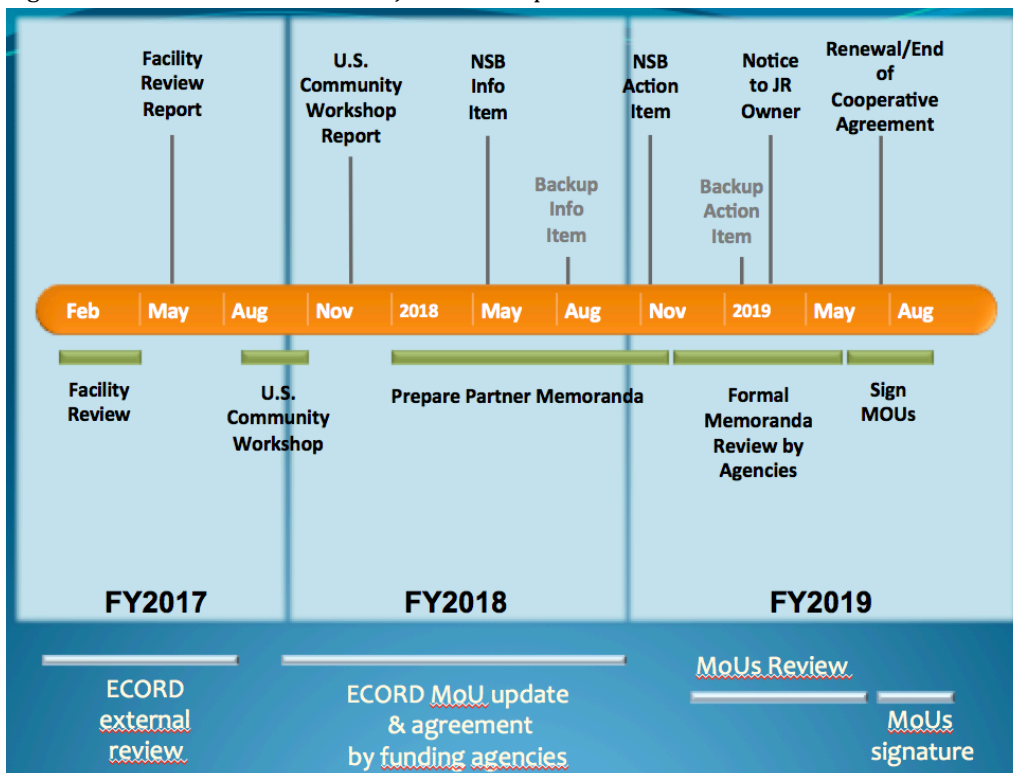
Mandate of the EEC: The EEC mandate will primarily concern the production of a high level review focused on 1) the achievements of ECORD within IODP, 2) the impact of MSPs in particular, and 3) the effectiveness/efficiency of the ECORD entities.

Composition of the EEC: The EEC should include scientists, specialists of subseafloor investigations, managers/representatives of other international science programmes, i.e. 6-10 members. Nomination and selection of the EEC members was done by the ECORD Council and ESSAC in June-September 2016. The final selection will be approved by the ECORD Council in October 2016 based on their expertise and the recommendations by ESSAC and the EFB.

External review report: A focused concise report is planned and should be largely drafted by the end of the general meeting.

Timeline for ECORD and JR Facilities post FY18 renewals (Figure 1): Following ECORD’s evaluation, the ECORD MoU will be updated during the second half of FY17. The funding agencies will agree during the first half of FY18. At the end of FY18 until the beginning of FY19 the IODP MoUs will be reviewed and they will be signed in summer 2019.

Figure 1: Timeline for ECORD and JR Facilities post FY18 renewals



15 Nominations of ECORD External Review Committee members (M. Friberg/Council members)

(15:13)

M. Friberg presented 19 nominations of EEC members from the Council members and ESSAC delegates. Four of those declined the invitation and three did not reply to the invitation. The ECORD Executive proposed eight nominations.

DISCUSSION on nominations of EEC members:

Gerald Haug (Germany) should not be nominated because he worked a lot with IODP material during his career (A. Völker/W. Piller). He also closely collaborates with somebody who is actively involved in IODP (G. Früh-Green). The ECORD Council agrees to remove G. Haug from the list of nominations because he is too much involved in IODP.

Eystein Jansen (Norway) should be nominated because he is the lead author of the IPCC report on paleoclimate (H. Kleiven). The ECORD Council agrees to add him to the list of nominations.

There is a lack of one discipline: hard rock lithosphere (D. Weis). Johan Robertsson and Maria Ask are from this discipline (M. Friberg).

D. Weis mentioned that there are only European nominations. People from outside Europe should still be nominated (D. Weis/H. Roggen).

G. Früh-Green suggested Helmut Weissert and G. Lüniger suggested Ralf Littke as EEC Chair.

ECORD Council Consensus 16-10-07:

The ECORD Council appoints Eystein Jansen, Katherine Richardson, Helmut Weissert, Maria Ask, Patrick Pinet, Adrian Immenhauser, Ralf Littke and Johan Robertsson as members of the ECORD Evaluation Committee.

ECORD Council Consensus 16-10-08:

The ECORD Council nominates Helmut Weissert as EEC Chair. The second option is Ralf Littke.

Action Item 9: ECORD Council + ESSAC

to nominate non-European EEC members with the objective of covering all themes of the Science Plan

Action Item 10: EMA

to create a Doodle poll to set the dates of the ECORD Evaluation Committee Meeting, which will be held in Bremen

Action Item 11: EMA

to send documents relevant to the ECORD evaluation to the EEC members by the end of January 2017

Action Item 12: EMA

to inform the EEC nominees of their nomination and the procedures regarding the ECORD evaluation, which will include the evaluation of EMA and ESO

Action Item 13: EMA

to contact the two potential EEC Chairs and ask them if they agree to chair this committee

16 ESO and EMA renewals (M. Friberg)

(15:32)

The ECORD Council decided at its last meeting that was held on June 1st, 2016 in Berlin to extend the terms of EMA and ESO until the end of 2018 and mid/late 2019, respectively (ECORD Council Consensus 16-06-05). EMA and ESO will be evaluated as part of the ECORD independent review in 2017.

COMMENT on EEC mandate:

Item 3 'Review of the effectiveness/efficiency of ECORD entities' of the EEC mandate should explicitly make reference to ESO and EMA (M. Webb).

Action Item 14: EMA

to send a draft of the EEC mandate and terms of reference for comment to the ECORD Council members

(15:36)

coffee break

(15:56)

IODP NEWS AND RENEWAL PLANS**17 IODP Forum (J. Austin)**

(15:56)

J. Austin presented the general purpose of the IODP Forum. It's a venue for exchanging ideas and views on the scientific progress of the program. The IODP Forum meets once a year and the participation is open to everybody.

The IODP Forum Chair maintains a document on the progress of IODP towards fulfillment of the 2013-2023 Science Plan (www.iodp.org/iodp-forum).

J. Austin presented the progress on both 2015 and 2016 consensus items (see agenda book pages 34-37).

18 NSF (T. Janecek)

(16:10)

T. Janecek presented the FY17 budget, the timeline for the renewal, the *JR* staffing and the JR100 Program.

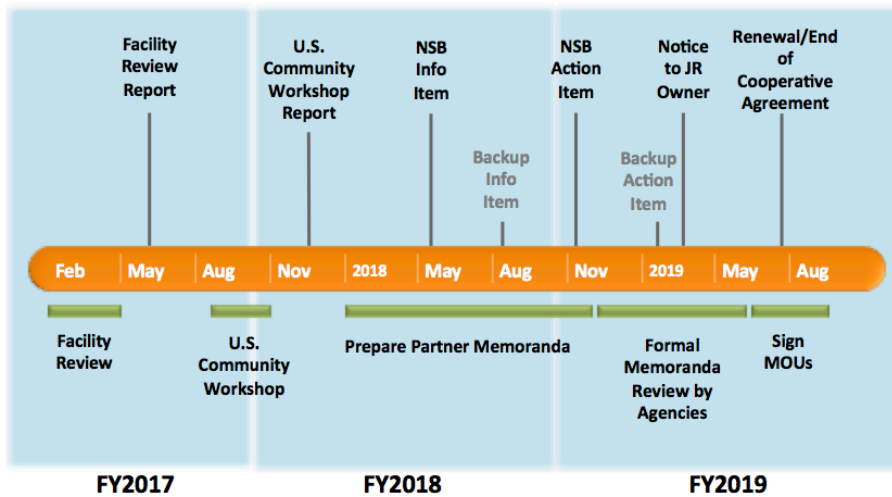
FY17 budget: The financial situation is positive. For FY17 10.5 months of operations over five expeditions are planned at \$62.7 M USD. The expected FY17 international contributions to *JR* operations are \$14.8 M USD base contributions and \$12 M USD CPP contributions. \$6 M USD of the CPP contributions will be available for the support of future *JR* operations. The other \$6 M USD will be allocated inside NSF for funding of science programs, including IODP related science and site survey operations. The NSF goal is to have 10 months *JR* operations per year through FY19. The *JR*-FB has scheduled five expeditions for FY18.

JR Facility Review: Once a year NSF conducts an operational review of the JOIDES Resolution facility from the previous fiscal year. These reviews are used for “mid-course” corrections. In February 2016 the first annual review of FY15 operations was held and NSF accepted all Panel recommendations. The next NSF Panel meeting will be held in March 2017 to review FY16 operations. This review will also provide input on renewal or re-competition of the NSF Cooperative Agreement with the JOIDES Resolution Science Operator post FY2019. The report is confidential but is shared with NSF financial partners and the *JR*-FB.

The NSF goal is to remain at least 10 months per year for *JR* operations for FY19-23. NSF expects an increase in partner contributions to one third of the *JR* operation expenses. CPP costs will most certainly increase. JR100 operations are likely during tie-up periods.

T. Janecek presented the timeline for the renewal of the JOIDES Resolution for IODP operations (Figure 2). The Facility Review (discussed above) will meet in February 2017 and produce a report in May 2017. A U.S. Community Workshop is planned for September 2017 with a written report in November 2017. The goals of the U.S. Community Workshop are to prioritize challenges of the IODP Science Plan from US perspective and to evaluate the effectiveness of the *JR* toward achieving the Science Plan Challenges. In 2018 the Partner Memoranda will be prepared. A formal Memoranda review by the agencies and the signing of the MoUs will be done in 2019.

Figure 2: Timeline for the *JR* Facility Renewal



JR staffing: In response to Sea Change recommendations, NSF instructed the JRSO to increase the number of U.S. Science Party Members from 8 to 10 for upcoming *JR* expeditions. Those staffed under the Onboard Outreach Programme are considered as members of the Expedition Science Party with publishing responsibilities. Post 2019 all Onboard Outreach Program participants will be considered within partner shipboard staffing quotas.

JR100 Program: This program will use non-IODP NSF funds to conduct APC coring up to 100 mbsf for two to four weeks during *JR* tie-up periods. This program takes into consideration the needs by the US community for deeper scientific coring. The 100 m limit is primarily set by environmental assessment issues. The coring period will be determined after the *JR*-FB sets the schedule for each year (i.e., IODP science is the priority). Non-IODP funding will include contributions from NSF Ship Operations Program and Science Programs. Science staffing would be similar to a typical UNOLS cruise.

COMMENT on CPPs:

G. Camoin asked how many CPPs were carried out since the beginning of the program. There will be four CPPs during the first five years of the program, one from India (Exp 355) and three from China (Exp 349, 367, and 368 (T. Janecek).

COMMENT on the *JR100* Program:

*K. Verbruggen asked about the funding of the *JR100* Program. Scientists have to apply for scientific funding from NSF science programs and, if the proposal is successful, the NSF Facilities Section would pay for the *JR* ship time (T. Janecek). Non-US researchers have to participate through a US scientist (T. Janecek).*

COMMENT on Onboard Outreach Program participants:

G. Früh-Green asked about the ECORD education officers on the JR. At the moment the onboard outreach program participants do not count against the quota, however, this will change during the next phase of the program starting in 2019 (T. Janecek).

19 MEXT (E. Sato)

(16:28)

E. Sato summarized changes in the staff, the Japanese Renewal Plan, the JAMSTEC budget allocation since FY11 and the ocean theme at the 2015-2017 G7 meetings.

Japanese Renewal Plan: National research organisations are reviewed every five years designated by the Ministers. The current term of JAMSTEC's 5-year plan is from April 2014 to March 2019. No budget shall be carried over between the current and the next term. E. Sato presented the content of the current JAMSTEC 5-years plan. At the end of FY18 JAMSTEC's 5-year plan will be reviewed in the light of *Chikyu*/IODP operations by an own review committee. Science and technology achievements will be reviewed. A report will be sent to the Minister of MEXT who will make a decision regarding the renewal.

JAMSTEC budget allocation: JAMSTEC is facing a 6% cut to its annual budget.

20 ANZIC (L. Armand)

(16:34)

L. Armand presented an update of ANZIC-IODP activities in 2016 and beyond.

Regional IODP Expeditions: Six IODP expeditions, including one MSP expedition, have been implemented in the Australia-New Zealand region under IODP-1. There will be ten IODP expeditions, with two regional expeditions completed, some scheduled and others agreed until late 2018 (including one MSP expedition). Completed regional IODP expeditions are Expeditions #317, #318, #325 (ECORD), #329, #330 and #356. In 2017 IODP Expeditions #369, #371 and #372 will be implemented in the Australia-New Zealand region. For 2018 IODP Expeditions #373 (ECORD), #374, #375 and #376 are scheduled in the region. IODP Proposal 871 is under consideration.

Value of ECORD Expeditions: Expedition 364 'Chicxulub Impact Crater' was a huge success and one Australian scientist was onboard. Expedition 373 'Antarctic Cenozoic Palaeolimate' has a huge potential for ANZIC scientists and Expedition 377 'Central Arctic Paleoceanography' is of great general interest for the ANZIC community.

Value of Chikyu Expeditions: The current Expedition #370 has great potential for ANZIC in terms of microbiology. IODP Proposal 871 is moving along.

ANZIC IODP participants: In the period from 2008 to 2016, 61 ANZIC scientists have joined or will join science parties. Of these 21 (34%) were early-career scientists and 13 (21%) were women. ANZIC provides post-cruise and legacy funding. 41 scientists groups received legacy funding to work on core material.

Australia has just gone through a research infrastructure roadmap submission where ANZIC put in an IODP submission that increases ANZIC's ability to get better funding. Instead of a short-term, 3-years or potentially 5-years funding, a 10-years funding block could be possible. A regional planning workshop will be held in Sydney in early June 2017 to work on new multinational science proposals.

The meeting was closed at 16:45.

CLOSED SESSION (ECORD Council and ECORD Executive members only)

October 27th, 2016

(8:59)

M. Friberg opened the meeting. The order of agenda items was changed. Agenda items #29, #41, #24, #39 and #40 were preponed. Items #32, #33, #35 and #36 were deleted from the agenda.

29 IODP Forum: coordinating imaging capability with scientific drilling (J. Austin)

(9:00)

A meeting including several members from Europe (1 from UK, 1 from Spain, 1 from Germany) will be held at the Lamont-Doherty Earth Observatory in New York on November 21, 2016. A white paper will be put together on the relationship of imaging to drilling with the aim of an increased international collaboration and efficiency in imaging. A better scheduling of platforms and a more advanced imaging is targeted. This white paper will be sent to NSF and then further circulated.

41 IODP Forum: overarching O&E activities and views from ECORD (J. Austin)

(9:01)

A PMO meeting was held on September 23, 2016 following the IODP Forum Meeting #3. This meeting was very successful and it is planned to be held once a year. The main focus of this meeting was on outreach and education. For example, the relationship between ECORD and the US regarding the Townhall Meetings was discussed. The US will take the lead on the AGU Townhall Meetings and ECORD will take the lead on the EGU

Townhall Meetings. The 2016 AGU Townhall Meeting will be held on Wednesday December 14.

OPERATIONS

21 ESO: Report and FY17 budget (D. McInroy)

(9:05)

Carol Cotterill replaced Alan Stevenson as the ESO Outreach Manager.

D. McInroy summarized the 2016 activities.

IODP Expedition 364 'Chicxulub Impact Crater': The offshore phase took place in April-May 2016. X-ray CT scanning of the Chicxulub cores was done at Weatherfords Labs in Houston in June 2016. A continuous 3D data set covers all cores. The OSP was held in September-October 2016. The educators Barbara Matyssek (Germany) and Kevin Kurtz (USA) attended the OSP at the MARUM in Bremen.

Recent BGS RD2 performance: IODP Expedition 373 'Antarctic Cenozoic Palaeolimate' is currently scheduled for December 2017 and it is planned to use the BGS RD2. Over the last year the RD2 was used in two projects: 1) IODP Expedition 357 'Atlantis Massif' (October-December 2015) and 2) EU Blue Mining project (July-September 2016). During IODP Expedition 357 the RD2 drilled only to 17 mbsf. Consequently, the RD2 performance was examined. Although drilling sediments during Expedition 373 will not be the same like drilling hard rocks during Expedition 357 there is still an uncertainty about other issues with the RD2. A sustained coring to 50 mbsf was not demonstrated and the final 'go/no-go' decision was done on November 30. ESO recommends to postpone IODP Expedition 373 until 2019/2020 and suggests as an alternative 2017 option IODP Proposal #879 'Corinth Active Rift Development'.

IODP Proposal #879 'Corinth Active Rift Development': The proponents proposed three primary and one alternate site. After approval ESO could start immediately inviting the Co-Chief scientists and the tendering procedure. By mid-/end of February 2017 ESO could have formal bids by contractors, thus having a clear picture of the expedition costs. The offshore phase could take place in October-November 2017. ESO concerns are the condensed timeline, the short-notice for Co-Chief/Science Party commitment, the smaller planning window and the costs, which could be higher than for Expedition 373. There could be the opportunity for Greece to contribute to the expedition and to get involved in ECORD.

IODP Proposal #708 'Central Arctic Paleoceanography': ESO will hold a conference call with the AWI in the week of October 31, 2016 where ice management needs will be discussed. Additional icebreaker support and Russian participation have to be explored. The site strategy has to be agreed with the proponents and the drillship tendering will

start in early 2017.

ESO FY16 budget: ESO requests an ESO FY16 budget extension of \$0.6 M USD to a new total of \$11.35 M USD. This budget extension covers an Expedition 357 James Cook IKC deficit from 2015, an Expedition 347 VAT bill that was received in 2016, an Expedition 364 travel, shipping and satellite data overspend.

DISCUSSION on IODP Proposal #879 'Corinth Active Rift Development':

Costs: As long as the Corinth expedition costs as much as the Antarctic expedition ECORD will not lose anything (K. Verbruggen). Everything depends on the final costs for the Corinth expedition (D. McInroy). If the costs are similar ECORD can implement one expedition per year and would have a highly visible European project in 2017 (D. McInroy). The Corinth proposal was ranked superb at the EFB (J. Austin). The Corinth proposal was very well received by SEP and ranked as a first priority by the EFB in June 2016 (G. Camoin). J. Austin cautioned the ECORD Council not to consider descopeing the Corinth proposal to reduce costs. There could also be a time issue because the lead proponent Lisa McNeill just got off IODP Expedition #362 as Co-Chief scientist (J. Austin).

The operational costs for the Antarctic are of \$X M USD* and the predicted operational costs for the Corinth expedition are at the moment of \$X M USD* (G. Camoin). The implementation of the Corinth expedition in 2017 does not compromise the Arctic expedition in 2018 (G. Camoin). A low cost expedition is needed in 2019 to make sure that the Antarctic expedition can be implemented in 2020 (G. Camoin). A potential low-cost expedition could be long-piston coring or the Nice landslide ADP (G. Camoin). 2017 could be a better opportunity to get a geotechnical vessel at a reasonable price (G. Camoin). ESO confirmed that at the moment it is a good time to get a geotechnical vessel (D. McInroy).

Timing: It was questioned if the Corinth expedition has to be implemented in 2017 or if two expeditions could be done in 2018 (J. Behrmann). Targetting October-November 2017 allows enough planning time and for ESO it would be difficult to do two expeditions per year (D. McInroy). It was questioned if the Antarctic expedition could be moved by only one year (H. Roggen). The R/V Nathaniel B. Palmer that will be used for the Antarctic expedition operates on a 2-year cycle and therefore, this expedition has to be postponed by two years and not only by one year (D. McInroy). Furthermore, based on the budget it is impossible to implement the Corinth, Arctic, and Antarctic expeditions in a row because a low cost expedition would be needed inbetween (G. Camoin).

Permitting: There are concerns about Greek authorities regarding permitting, because, for example, GEOMAR has a long history of not getting permits (J. Behrmann). The first point of contact were the 3-4 Greek proponents and one of them knows the system (D. McInroy). ESO is confident for the permits and the Greek involvement will be helpful (D. McInroy).

* See confidential annex

24 ECORD Facility Board: Report (G. Lericolais)

(9:53)

G. Lericolais gave an update on the ECORD Facility Board (EFB) activities. The EFB members with voting rights are 1) the six Science Board members: EFB Chair Gilles Lericolais (FRA), EFB Vice-Chair Dominique Weis (CAN), Gerald R. Dickens (USA), Stephen Gallagher (AUS), Karsten Gohl (GER) and Fumio Inagaki (JPN); 2) the members of the ECORD Executive Bureau: ECORD Council core members, EMA, ESO, ESSAC and E-ILP; and 3) NSF and MEXT with one representative each.

Changes in EFB membership: Dominique Weis (CAN), Gerald R. Dickens (USA) and Karsten Gohl (GER) will rotate off at the end of 2016.

G. Lericolais gave an overview of the MSP proposals at the EFB:

IODP Expedition 357 'Atlantis Massif': The offshore phase was accomplished in October-December 2015. Ten sites were drilled with the MeBo70 and the RD2 on the *RRS James Cook*. The expedition was reviewed in Bremen on October 24-25, 2016. The review committee was composed of two external reviewers (Bo Barker Jørgensen and Christopher MacLeod) and three EFB Science Board members (G. Lericolais, S. Gallagher, K. Gohl).

IODP Expedition 364 'Chicxulub Crater': The offshore phase was accomplished in April/May 2016. One hole was drilled down to 1335 m using a lift boat. The budget limit was \$8.5 M USD (plus \$1M USD from ICDP). The OSP was held for four weeks starting on September 21, 2016.

708-Full 'Arctic Paleooceanography': The expedition is scheduled for the Arctic summer 2018. The budget limit is \$X M USD*.

813-Full 'Antarctic Paleoclimate': Until recently, the expedition was scheduled for early 2018. The budget limit is \$X M USD*.

581-Full2 'Late Pleistocene Coralgall Banks': in the EFB waiting room; deactivated at the last EFB meeting in June 2016

637-Full2 'New England Shelf Hydrogeology': in the EFB waiting room

716-Full2 'Hawaiian Drowned Reefs': in the EFB waiting room

730-Full2 'Sabine Bank Sea-Level': forwarded from SEP in January 2016

879-Full 'Corinth Active Rift Development': forwarded from SEP in January 2016

The EFB ranks proposal #716 'Hawaiian Drowned Reefs' as the highest-priority of the existing proposals within the "sea-level theme" and proposal #730 'Sabine Bank Sea Level' a secondary priority (EFB Consensus 16-06-03).

The EFB considers proposal #879 'Corinth Active Rift Development' as high-priority of the existing proposals within the „Earth Connections“ theme (EFB Consensus 16-06-04).

* See confidential annex

Long-term strategy for scheduling: MeBo70 and MeBo200 are reserved for 2020 and 2022. The aim should be to get research vessels as an IKC for seabed drill and long-piston coring systems.

Table 8: MSP proposals at the EFB including cost estimates*

Proposal	Comments
708-Full Central Arctic Paleoceanography Stein	Revised proposal is feasible if shallow penetrations are used. Length of expedition is still a concern. One-hole strategy is encouraged. ESO need guidance from EFB.
581-Full2 Coralgal Banks Droxler	May 2014: Droxler confirmed objectives can be met with existing seafloor drill penetration June 2016: No answer from proponents, proposal deactivated
637-Full2 Add 6 New England Hydrogeology Person	Proponents open to using wireline logging in lieu of LWD. Also open to reducing from 5 to 3 sites.
716-Full2 Hawaii Drowned Reefs Webster	Awaiting development of MeBo200. 2020 for IODP?
730-Full Sabine Bank Forwarded to EFB Jan 2016	Awaiting development of MeBo200. Potentially >90 days duration.
879-Full Corinth Active Rift Development Forwarded to EFB June 2016	ESO attended proponent workshop, Feb 2014. Long expedition, may be issues with derrick height under Rio–Antirrio Bridge.

COMMENT on Proposal #730:

W. Piller asked if it would be possible to use a jack-up rig. It could be used but only for one target in the lagoon (G. Lericolais).

COMMENT on Proposal #716:

ESO had concerns about using a drilling rig on a commercial vessel in a sensitive environmental area and therefore, decided to use instead the MeBo (R. Gatliff).

(10:09)
coffee break
(10:38)

ECORD Council Consensus 16-10-09:

The ECORD Council approves an ESO FY 2016 budget extension of \$0.6 M USD to a new total of \$11.35 M USD.

DISCUSSION ON 2017-2020 MSP OPERATIONAL PLAN

* See confidential annex

DISCUSSION on postponing IODP Expedition 373 'Antarctic Cenozoic Paleoclimate':

It is not sure that the RD2 is going to work as it is supposed to be (H. Roggen). Not knowing the performance of the RD2 and getting the R/V Nathaniel B. Palmer is a financial risk (H. Roggen). The costs of the R/V Nathaniel B. Palmer have to be paid in August 2017 (D. McInroy). There is the possibility that the RD2 might be ready in about one year to drill to 50 mbsf in Antarctica but ESO cannot guarantee its performance (D. McInroy). The RD2 has to drill to a minimum of 50 mbsf to reach the scientific objectives (G. Lericolais). The risk would be to have a failed expedition for \$X M USD. Offshore projects will be performed and the RD2 performance could be known in June 2017 (D. McInroy/R. Gatliff). It could be decided in June 2017 not to implement the Antarctic expedition in case the RD2 performance is not sufficient (H. Roggen). ESO has no formal contract with the R/V Nathaniel B. Palmer but this decision would destroy any good relationship with NSF (D. McInroy). There is the risk that not implementing certain MSP expeditions like the Antarctic expedition during the first phase of IODP-2 could influence the decision of some countries to continue their ECORD membership in the second phase of the program (H. Roggen). For example, Norway could decrease its funding or withdraw its membership to ECORD if the Arctic expedition is descope (H. Roggen). Having no MSP expedition in 2017 is also a big risk (M. Friberg/M. Webb). ECORD should follow ESO's recommendation not to use the RD2 in 2017 and to have more time to get the technology to implement the Antarctic expedition (M. Webb). Implementing the Antarctic expedition in 2017 is not a good choice and too risky if there are doubts on the RD2 performance (L. Menezes Pinheiro).*

ECORD Council Consensus 16-10-10:

The ECORD Council endorses the ESO recommendation to postpone Expedition 373 «Antarctic Cenozoic Paleoclimate» to 2019/2020.

DISCUSSION on a MSP expedition in 2017 to replace the Antarctic expedition:

Facing ECORD's renewal it would be ideal to implement an expedition in 2017, however, an expensive expedition in 2017 could be risky for the Arctic expedition in 2018 (M. Webb). An expedition in 2017 should not jeopardize the expedition in 2018 (M. Friberg). A buffer is needed to make sure that the Arctic expedition can be implemented in 2018 (H. Roggen). ECORD must have a positive balance at the end of 2018 because the commitments end at this time (G. Camoin). There are various options for the boreholes in the Arctic that can give the needed flexibility (D. McInroy). The costs for the Arctic expedition are between \$8 and \$16 M USD and give a lot of room to move (D. McInroy). The cost estimates include the range of mobilisation costs, day rates, fuel estimates, etc. (D. McInroy). There is a big uncertainty in costs due to the ice, which was not a problem over the last few years (D. Weis). The original estimates are generally in the range of the real costs or slightly below (D. McInroy/G. Camoin). SEP confirmed that with all drilling options the basic science objectives would be met (D. McInroy). The EFB decided to drill two holes and to limit the

* See confidential annex

total pipe length: 1) 4A or 6A below the orange reflector and 2) 5A or 5B until the end of time (G. Lericolais).

ECORD should not be too optimistic in forecasting expedition costs (M. Webb). For example, for the Arctic expedition there was the expectation to get an IKC but now ECORD is paying full costs to the R/V Nathaniel B. Palmer (M. Webb). The icebreaker Polarstern will be an IKC from Germany (M. Friberg/D. McInroy). In case of a good ice year no second icebreaker would be needed (J. Behrmann). In a good ice year no icebreaker would be needed at all (D. McInroy). In case of a no-ice year the Polarstern could do other science (D. McInroy). Another issue is that the Arctic expedition is crossing financial years, which could be problematic if the ECORD membership contributions are not paid quickly (M. Webb).

ECORD Council Consensus 16-10-11:

The ECORD Council agrees to keep a maximum budget of \$X M USD* for the implementation of proposal 708 «Central Arctic Paleoceanography».

DISCUSSION on scheduling proposal 879 'Corinth Active Rift Development' for 2017:

G. Lericolais presented the major goal, the drilling plan and the proposal history for IODP proposal 879. In May 2016 this proposal was forwarded to the EFB with an excellent rating.

The potential to descope the Corinth proposal is very limited (J. Behrmann). The objective of this proposal is to reach the syn-rift sequence to decipher the rifting history and reducing the drill depth is not an option (J. Behrmann). A continuous high-resolution record does not allow to choose the option for less cores. The only option is to drill less holes (J. Behrmann).

The Corinth proposal could be part of a sustained program in the second 5-year period to drill Corinth in an optimum way (J. Behrmann). It has to be considered how important it is to implement a MSP expedition in 2017 (J. Behrmann). Past MSP expeditions were very successful and the program can be evaluated based on this and assuming a successful drilling in the Arctic in 2018 (J. Behrmann). Therefore, having no expedition in 2017 would not mean a break in the program if in 2018 and 2019 the Arctic and Corinth expeditions would be successfully implemented (J. Behrmann). The result would be to have one low-cost expedition less. M. Sacchi asked for other potential 2017 expeditions. Other highly ranked proposals require the MeBo, which is not available in 2017 (M. Friberg).

ECORD could go in the tender process in 2017 and if the expedition would be too expensive, i.e. exceeding \$X M USD, it could moved to 2019 (M. Webb). The ECORD Council agrees with this proposition. The key is not to compromise the Arctic expedition because it is ECORD's priority (D. Weis).*

* See confidential annex

ECORD Council Consensus 16-10-12:

The ECORD Council approves the implementation of proposal 879 »Corinth Active Rift Development« in 2017 with an agreed budget limit of \$X M USD*.

Action Item 15: ESO

to start planning the implementation of proposal 879 »Corinth Active Rift Development«

Action Item 16: EFB

to work with the proposal 879 proponents to adapt their drilling strategy without jeopardizing the scientific objectives

22 ESO-EPC: Report (S. Davies/S. Morgan)

(11:36)

The European Petrophysics Consortium (EPC) comprises three universities in Leicester, Montpellier and Aachen. The EPC provides petrophysics staff scientists and petrophysicists, and expertise in downhole logging and core petrophysics programs. The EPC has dedicated equipment for core logging and discrete measurements. Furthermore, the EPC is involved in data calibration, quality control, evaluation and interpretation of these data. As part of ESO, the EPC is involved in post-expedition activities, the preparation of upcoming expeditions, capability development and training for IODP MSP Expeditions and other key activities, including education and training.

Education, training & outreach: In 2016, EPC was involved in the ECORD Training Course 'Virtual Drillship' and the ECORD Summer School in Bremen. In addition, EPC personnel organized the BSRG Petrophysics Weekend for students from the UK. The first ECORD Summer School in Petrophysics was held in Leicester from June 26 to July 1, 2016. Staff from EPC but also the wider international logging consortium (Japan and US) and industry were involved. 30 participants attended this Summer School and Scholarships were provided by ECORD (3), UK-IODP (1) and USSSP (10).

Preparation for upcoming MSP operations includes Bespoke Techlog training from Schlumberger, software training, EPC logging deployment training, offshore survival training, MSCL training and radiation safety training.

Capability development: The standard MSCL-capability was extended and natural gamma ray sensors were added. An option for a second 'fast-track' MSCL is maintained to measure magnetic susceptibility.

* See confidential annex

IODP Expedition 357 'Atlantis Massif': One Petrophysics staff scientist was offshore and involved in the MSCL operation and logging. Standard and 'fast-track' MSCL were used. During the pre-onshore phase Natural Gamma Ray measurements and through-liner 360° digital line scans were taken. During the OSP moisture & density measurements, discrete P-wave measurements, digital line scans and color reflectance spectrophotometry were done.

IODP Expedition 364 'Chicxulub Impact Crater': Two Petrophysics staff scientists were offshore and one ESO Petrophysics staff scientist attended the Merida meeting in Mexico. EPC personnel developed the logging requirements with the Co-chief scientists and the logging/VSP partners. Permitting for the radioactive source for the Standard MSCL was achieved prior to the expedition. 5.8 km of wireline log data were collected. Three phases of logging and VSP experiments were done. A range of ephemeral properties were measured and as a first EPC took natural gamma radiation offshore using extended capabilities. Seven EPC staff including two Petrophysics staff scientists attended the OSP in Bremen. During the OSP moisture & density measurements, discrete P-wave measurements, digital line scans, color reflectance spectrophotometry and thermal conductivity measurements were done.

23 Bremen Core Repository: Report and FY17 budget (U. Röhl)

(11:49)

U. Röhl gave an update on the Bremen Core Repository (BCR). The BCR currently archives 154 km of cores from the Atlantic Ocean, Arctic Ocean, Mediterranean Sea, Black Sea and Baltic Sea.

In 2016 there were following staff changes: 1) Holger Kuhlmann is the new BCR Superintendent since August 2016, 2) Patrizia Geprägs is the new Assistant ESO Curation and Lab Manager since June 2016, 3) Ulrike Prange is the new ESO Outreach Officer since March 2016 and 4) Vera Bender joined the ESO Data Management team.

There is a new version of the Drilling Information System (DIS): the Repository Database 'CurationDIS' was made more user-friendly and more powerful (see agenda book page 56). Furthermore, the public online data access system for curatorial data (XDIS) was redesigned. The Scientific Earth Drilling Information Service (SEDIS), a portal for data, publications, expeditions, etc., is maintained at the MARUM.

Two Onshore Science Parties were held in 2016 at the MARUM: 1) from January 20-February 5 for IODP Expedition 357 and 2) from September 21-October 15 for IODP Expedition 364. The CoreWall system was upgraded with high-resolution 4k-monitors.

In 2016 the 10th Bremen ECORD Summer School was held. The topic of this Summer School was 'Submarine Geohazards: Mapping, Monitoring, and Modelling'. The Summer School combines lectures and interactive discussions on the main themes of IODP with

practical 'shipboard' methodologies. In March 2016 the second ECORD Training Course was held at the MARUM with 30 participants from 14 different countries. The participants were prepared for future IODP expeditions. The 3rd ECORD Training Course is planned for the first week of March 2017.

Virtual BCR visits were made during the ECORD School of Rock 2015 and during the GeoShow 'unterirdisch'.

The major achievements since October 2015 are listed below:

- 35,696 samples (249 requests) taken,
- New version CurationDIS 6.0 implemented & routinely used,
- Improved online curatorial data availability (XDIS),
- Upgrade of the CoreWall system with high-resolution 4k-monitors,
- Offshore Exp. 357 (Atlantis Massif) & Onshore Science Party (OSP),
- Offshore Exp. 364 (Chicxulub) & Onshore Science Party (OSP),
- Participating in a variety of ECORD meetings & conferences,
- Organizing & teaching ECORD Training Course 2016 (March),
- Organizing & teaching ECORD Summer School 2016 (Sept),
- SEDIS Software maintenance, adoption of the SEDIS portal technique to new PANGAEA search technique (ElasticSearch),
- Participating in nominating new CAB members.

Milestones in 2017 are:

- XRF scanning & sampling of more recent expeditions (339, 342, 347, 357, 364),
- Update of the CurationDIS to integrate new data types from X357 and X364,
- Data transfer from ExpeditionDIS-357/-364 to CurationDIS
- Hardware updates, e.g. 64bit operating systems, increasing RAM (CoreWall, Correlator-PC)
- Update the IODP-related publications SEDIS catalogue (*manually*)
- Harvesting of AGI Web Site / including incremental XML update (from AGI) with IODP-related publications for SEDIS publications index
- IGSN numbers for all BCR samples – process underway
- Participating in a variety of meetings
- Planning of core workflow and compilation of sampling plans for future MSP expedition(s)
- ECORD Training Course 2017 (Mar)
- ECORD Summer School 2017 (late Aug)

U. Röhl continued to present the BCR FY17 budget (Table 9).

Table 9: BCR FY17 budget (January 1-December 31, 2017)

Core Curation		TOTAL
Salary and Fringes	1.6 FTE	\$ 254,450.00
Travel		\$ 3,920.00
Supplies		\$ 5,488.00
Shipping		\$ 17,640.00
Student workers		\$ 10,192.00
CurationDIS update		\$ 4,704.00
SEDIS maintenance 24/7 & upgrades		\$ 17,248.00
Total Core Curation		\$ 313,642.00

ECORD Council Consensus 16-10-13:

The ECORD Council approves the Bremen Core Repository (BCR) FY17 budget of \$313,642 USD.

25 Exp. 357 Review Committee (G. Lericolais)

(12:06)

G. Lericolais reported on the Expedition 357 Operational Review Committee Meeting that was held on October 24-25, 2016 at the MARUM. The two external reviewers were Christopher MacLeod (Cardiff University, UK) and Bo Barker Jørgensen (Aarhus University, DK).

ECORD Council Consensus 16-10-14:

The ECORD Council accepts the Operational Review report of Expedition 357 «Atlantis Massif» and supports the recommendations therein. The ECORD Council thanks the Review Committee for their work.

Action Item 17: EFB

to prepare with the Co-Chief scientists guidelines for scientists on MSP expeditions

26 JOIDES Resolution Facility Board and Operations: Report and views from ECORD (T. Janecek/G. Camoin/J. Behrmann)

(12:26)

T. Janecek presented updates from the *JOIDES Resolution* Facility Board (JR-FB), the new JR expeditions scheduled for FY17-19 and the long-term JR track.

The IODP Proposal Submission Guidelines were simplified. All information for writing and submitting an IODP proposal can be found in one single document. The revised and formatted IODP Proposal Submission Guidelines and the IODP Site Characterization

Guidelines were approved by the *JR*-FB. A *JR*-FB subcommittee on Policies and Guidelines was formed (see *JR*-FB 1605 Consensus Statement 3).

The JRSO proposed to implement XRF scanning of cores as a new IODP Standard Onshore Post-expedition Measurement. The scientific demand for elemental analysis provided by XRF scanning is increasing and the *JR*-FB supported this proposition (see *JR*-FB 1605 Consensus Statement 17).

JR100 Shallow Coring Program: NSF proposed to use the *JR* in a non-IODP mode to collect high-resolution Advanced Piston Corer (APC) cores from 0-100 mbsf. The *JR*-FB supports this plan (see *JR*-FB 1605 Consensus Statement 16).

Amphibious Drilling Proposals (ADPs): The ADP Proposal Guidelines were updated and approved by the *JR*-FB (see *JR*-FB 1605 Consensus Statement 6). The changes include 1) having two separate but closely related initial proposals (ICDP workshop proposal and IODP pre-proposal) and 2) a revised workshop-funding pathway. The *JR*-FB subcommittee on Policies and Guidelines will merge the ADP guidelines into the IODP Proposal Submission Guidelines. The ADP Implementation Guidelines were discussed at the *JR*-FB and require more work and discussion with the other Facility Boards and finally with ICDP.

T. Janecek presented the *JR* expeditions scheduled for FY17-19 (Tables 10 and 11). Five *JR* expeditions per year will be implemented in FY17-19, i.e. one extra expedition was added to each year.

Table 10: *JR* expedition schedule for FY17

Fiscal Year 1 Oct - 30 Sept	Expedition Dates	Title
FY17	Oct 6 - Dec 8, 2016	Western Pacific Warm Pool
FY17	Dec 8 2016 – Feb 7, 2017	Marianna Convergent Margin
FY17	Feb 7 2017 – Apr 9, 2017	South China Sea Rifted Margin A
FY17	Apr 9 2017 – Jun 11, 2017	South China Sea Rifted Margin B
FY17	Jun 11 2017 – July 27 2017	Tie up
FY17	Jul 27 2017 - Sept 26, 2017	Tasman Frontier Subduction Initiation and Paleogene Climate

Table 11: *JR* expedition schedule for FY18-19

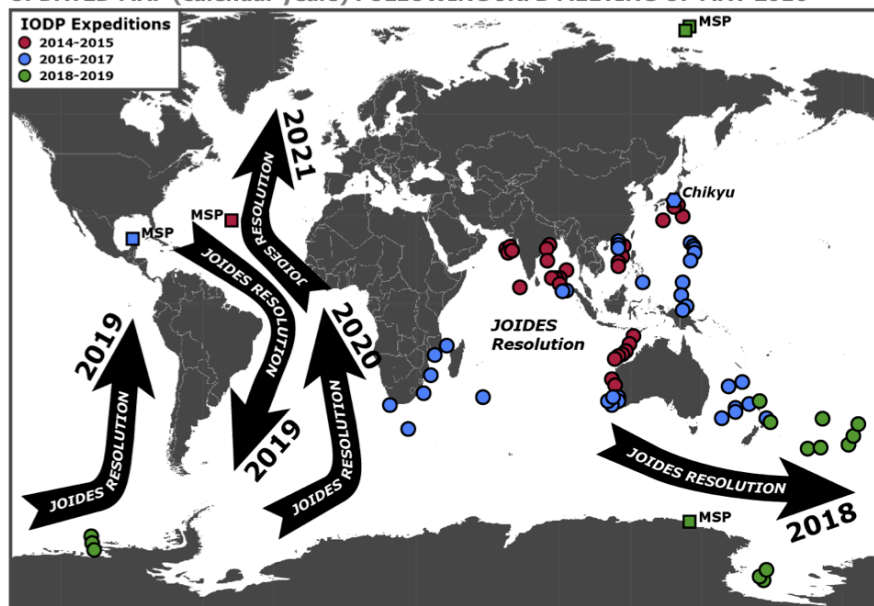
Fiscal Year	Proposal Expedition	Title
FY' 18	Sep 26 - Nov 26, 2017	Australia Cretaceous Climate and Tectonics and OAE2 Black Shales
FY' 18	Nov 26 2017 - Jan 4 2018	Combined Expedition Creeping Gas Hydrate Slides and LWD portion of Hikurangi Observatory
FY' 18	Jan 4 - Mar 8, 2018 **	West Antarctic Ice Sheet Climate (Ross Sea)
FY' 18	Mar 8 - May 5, 2018	Hikurangi Observatory (CORK installations)
FY' 18	May 5 - July 5, 2018	Brothers Arc Flux
FY' 18		Mandatory 5-year Inspection JOIDES Resolution
FY' 19	Oct 14 - Dec 14, 2018	South Pacific Paleogene
FY' 19		2-4 weeks (move from Tahiti to Punta Arenas, Chile)
FY' 19	Jan 18 - Mar 20, 2019 **	Amundsen Sea Ice Sheet History

The *JR* schedule for FY18-19 is subject to funding being available for ship operations in FY18-19. Two Antarctic expeditions are part of the schedule (P751 'West Antarctic Ice Sheet Climate' and P839 'Amundsen Sea Ice Sheet History') and may be subject to the availability of ice-breaker support.

The long-term *JR* cruise track will follow a path from the Southern Ocean along the west coast of South America to the Caribbean in order to implement one CPP (if highly rated by SEP) and other proposals along that track (Figure 3). Then the *JR* will go to the South Atlantic in 2019 and will potentially implement another Antarctic expedition during that time period. Finally, the *JR* will go north again in 2020 to reach the North Atlantic in 2021.

Figure 3: Long-term *JR* cruise track until FY21

UPDATED MAP (calendar years) FOLLOWING JRFB MEETING OF MAY 2016



Miscellaneous updates: Sean Gullick is the new SEP co-chair for site characterization. Wolfgang Bach (Germany) and Liping Zhou (China) are new JR-FB science members. The JR-FB deactivated 16 proposals at SEP that were inactive since more than five years. The JR-FB has decided to limit the number of proponents to 20 for a single proposal. The next EPSP meeting will be held on May 2-3, 2017.

COMMENT on long-term JR cruise track:

The ECORD community has to advertise the JR cruise track. The JR stays in the regions depending on the proposal pressure. Proposal submission has to be initiated, for example through MagellanPlus, to get the JR in the Northern Atlantic and the surrounding seas (G. Camoin).

Action Item 18: EMA

to advertise the long-term *JOIDES Resolution* cruise track

Action Item 19: EFB

to work on the implementation plan for the ADPs

27 Chikyu: Report and views from ECORD (N. Eguchi/G. Camoin)

(12:43)

CDEX/JAMSTEC Stance: JAMSTEC needs IODP expeditions in the 2016-2018 window. Two riserless IODP expeditions were implemented in JFY16 (#365 and #370). The JFY17 operation schedule will be discussed at the next CIB meeting in March 2017. High scientific impact IODP expeditions affect the MEXT budget allocation. CDEX manages the budgets from MEXT, commercial works and *Chikyu* membership fees.

Chikyu Operational Plan: From September to December 2015 the *Chikyu* has been in the dry dock for repair and maintainance. IODP Expedition 365 NanTroSEIZE was implemented in March-April 2016. From May to June 2016 commercial work was carried out followed by a period of repair and maintainance. IODP Expedition 370 was implemented from September to November 2016. There are two time windows for commercial work: April-June 2017 and January-February 2018. A potential window for IODP and/or commercial operations is from June to December 2017.

N. Eguchi presented the Chikyu 5-year inspection and refurbishment that was done from September to December 2015. The major work items were Class NK/ABS required inspections and maintainances, 5-years certification works and the replacement of deteriorated instruments. The laboratories were modified to optimize the Deep Riser Drilling, to have more flexibility in the lab operation and to have a safe and comfortable work environment. For example, the core processing deck and the lab management deck were modified. Furthermore, a library was built. ECORD's and ANZIC's annual contributions were used for the renovation of the *Chikyu* lab facilities.

Chikyu IODP Expedition 365 is one of the NanTroSEIZE operations. The main aim of this expedition was the installation of observatories systems. It was a technical expedition from March 26 to April 27, 2016. A GeniusPlug that was installed during IODP Expedition 332 in November 2011 was successfully recovered. A second NanTroSEIZE LTBMBS was successfully installed. In addition, 70 m could be cored. Two ECORD scientists were part of the Science Party including one Co-Chief scientist.

Chikyu IODP Expedition 370 is currently implemented from September 10 to November 10, 2016 and focuses on the T-limit of the deep biosphere. The drilling will take place in a subduction zone off Muroto where already ODP Leg 190 was implemented. At this time the detection limit for cells was reached at 600 mbsf and 70°C. However, since then the detection limit for cells has been drastically improved. The aim of this expedition is to drill down to the sediment/basement interface at 1210 mbsf where 130°C are expected. A temperature observatory will be installed. There are nine ECORD Science Party members including one ECORD Co-Chief scientist.

CDEX outreach: *Chikyu* Open House was held in November 2015 and August 2016. A third event is planned for November 2016. In July 2016 the International *Chikyu* Onboard School took place for the first time and two ECORD participants (Portugal and UK) attended. Several videos were published for Expedition 365. The Dutch company Science Media is also under contract for Expedition 370.

ECORD Council Consensus 16-10-15:

The ECORD Council acknowledges the important science now being done by the *Chikyu* and decides to resume its funding for its operations of \$1 M USD a year from 2017 onwards.

28 ESSAC: ECORD Expedition staffing and quotas (J. Behrmann)

(13:12)

J. Behrmann summarized expedition staffing and quotas.

Staffing:

Expedition 362 'Sumatra Seismogenic Zone': Nine ECORD scientists including one UK Co-Chief scientist just sailed.

Expedition 363 'Western Pacific Warm Pool': Nine ECORD scientists including one German Co-Chief scientist are sailing.

Expedition 366 'Mariana Convergent Margin': This expedition is fully staffed and nine ECORD scientists are ready to sail.

Expedition 367/368 'South China Sea': Staffing was successfully completed. 10/11 ECORD scientists will be sailing. One Danish Co-Chief scientist was appointed.

Expedition 369 'Australia Cretaceous Climate and Tectonics': 21 applications were received. ESSAC is in the process of preparing a nomination proposal for the JRSO.

Expedition 370 'T-Limit of the Deep Biosphere off Muroto' has a total of nine ECORD scientists currently sailing including one Co-Chief scientist.

Expedition 371 'Tasman Frontier': At the moment ESSAC is in the process of staffing this expedition. The call was issued and 23 applications were received. The ranking is completed and a nomination proposal was forwarded to JRSO. The proposed scientists will be invited. This nomination proposal includes three French berths.

Expedition 372/375 'Hikurangi': Applications were received and the ranking will start soon.

Expedition 373 'Antarctic Cenozoic Paleoclimate': 24 applications were received, however, the process was stopped because this expedition was postponed.

Expedition 374 'Ross Sea': 35 applications were received. Ranking and evaluation is in progress.

There are Co-Chief scientist invitations to several scientists from ECORD countries: R. Hobbs from the UK for Expedition 371, C. Escutia from Spain for Expedition 373 and L. de Santis from Italy for Expedition 374.

Quotas:

The large contributors are 6.5 underquota and the smaller contributors are 6.5 overquota (Table 12). France is three and Germany four berths underquota, in contrast, the UK is almost one berth overquota. However, there is a reservoir of candidates that applied so that this situation can be balanced. The UK and Germany are doing very well on Co-Chiefs but Co-Chiefs from France are needed. France has to take some efforts and the IODP advisory structure has to nominate French Co-Chiefs. The smaller contributors are overquota and this shows the enthusiasm in these countries and that they should consider increasing their contribution to ECORD. Denmark is underquota but a Danish scientist will likely sail. Norway has the potential to change the quota within the next two or three years.

Table 12: Projected quotas 2014-2017

Projected Quotas 2014 - 2017 (Exps. 349 - 366 & 370)							
Total Berths invited	Total Berths special calls/IK C	berths entitled - excl. Sp.	Difference	Total Sailed, incl. co-chiefs	Member	Financial Contribution (%)	total co-chiefs 2014 - 2016
33	1	36,22	-3,22	35	France	25,51%	1
40	2	43,89	-3,89	48	Germany	30,91%	6
32	8	31,33	0,67	45	UK	22,06%	5
105	11	111,45	-6,45	128	Sum	78,48%	12
3	1	0,78	2,22	4	Austria	0,55%	0
1	0	0,15	0,85	1	Belgium	0,11%	0
4	0	0,47	3,53	4	Canada	0,33%	0
0	0	1,26	-1,26	1	Denmark	0,89%	1
0	0	0,63	-0,63	0	Finland	0,44%	0
0	0	0,08	-0,08	0	Iceland*	0,06%	0
0	0	1,04	-1,04	0	Ireland	0,73%	0
1	0	0,24	0,76	1	Israel	0,17%	0
5	3	3,14	1,86	8	Italy	2,21%	0
6	0	3,92	2,08	6	Netherlands	2,76%	0
5	0	8,62	-3,62	5	Norway	6,07%	0
1	0	0,24	0,76	1	Poland	0,17%	0
2	1	0,71	1,29	3	Portugal	0,50%	0
0	0	0,00	0,00	0	Spain	0,00%	0
4	1	4,14	-0,14	5	Sweden	2,91%	0
5	1	4,70	0,30	7	Switzerland	3,31%	1
37	7	30,55	6,45	46	Sum	21,52%	2
142	18	142,00	0,00	174	TOTAL ECORD		14

COMMENT on the quotas:

Spain is ECORD member since 2016 and their financial contribution should be included in the quotas table (G. Camoin).

(13:22)

lunch break

(14:20)

SCIENCE**30 SEP: Report – Highlights on MSP proposals (W. Piller)**

(15:09)

Membership: Sean Gulick (USA) replaced Dave Mallinson (USA) as new Chair for the site survey sub-group. W. Piller summarized ECORD SEP members for the science and site

survey sub-groups. Sebastian Krastel will rotate off and has to be replaced.

Active proposals: At the moment there are 104 active proposals in the system: 54 at SEP, 44 at the Facility Boards (7 of those at the EFB) and six in the holding bin (status: April 2016). 54 of the active proposals are full proposals and 28 are pre-proposals. There is one ADP in the system. In terms of science plan themes there is a clear dominance of proposals on « Climate and Ocean » (49 proposals). 68 of the active proposals are *JR*, 18 MSP and eight *Chikyu* proposals.

At the January 2016 SEP meeting proposal #730 ‘Sabine Bank Sea Level’ was forwarded to the EFB. Eighteen proposals were discussed at the June 2016 SEP meeting. Of those there are 12 new proposals, four have been revised and two returned from external review. At the June 2016 SEP meeting three of the 18 proposals were deactivated: 852-CPP2 ‘North Sea GlaciStore’, 896-Pre ‘North Atlantic Fjord Sediment Archives’ and 863A-Pre ‘ISOLAT: Indian Antarctic Paleoceanography’ (see Table 13).

Table 13: IODP proposal destinations from the June 2016 SEP meeting.

Proposal#	Type	Title	PI	Stage	Platform	Theme	Result
835	Full2	Japan Trench Tsunamigenesis	Shuichi Kodaira	SEP	NR-Chikyu	EM	CIB -Excellent
852	CPP2	North Sea GlaciStore	Heather Stewart	SEP	MSP	CO	Deactivate
853	Full	South Atlantic Transect	Rosalind Coggon	SEP	JR	CO	Revise
859	Full	Amazon Margin Drilling	Paul Baker	SEP	JR	CO	Revise
871	CPP2	Lord Howe Rise Continental Ribbon	Ron Hackney	SEP	Chikyu	EC	External Review
887	Add (CPP2)	Gulf of Mexico Methane Hydrate	Peter Flemings	SEP	JR	EM	JRFB - Excellent
895	Pre(ADP)	Mediterranean-Atlantic Gateway Exchange	Rachel Flecker	SEP	JR	CO	Full
896	Pre	North Atlantic Fjord Sediment Archives	Jacques Giraudeau	SEP	MSP	CO	Deactivate
897	APL	Southern Ocean Cretaceous Anoxia	Simon Holford	SEP	JR	CO	JRFB - Exp369
898	Pre	Fore Arc Mohole-to-Mantle	Katsuyoshi Michibayashi	SEP	JR-Chikyu	EC	Full
899	Pre	Tyrrhenian Continent-Ocean Transition	Nevio Zitellini	SEP	JR	EC	Deactivate
900	Pre	Rainbow Massif Hydrothermalism	Muriel Andreani	SEP	JR	BF	Full
901	APL	Taiwan Arc-Continent Collision	Tim Byrne	SEP	JR	EC	Deactivate
902	Full	Iceberg Alley Paleoceanography	Michael E. Weber	SEP	JR	CO	External Review
903	Pre	Argentine Margin Seaward Dipping Reflectors	Denise K. Kulhanek	SEP	JR	EC	Full
904	Pre	Sao Paulo Plateau Continental Rifting	Julio Almeida	SEP	JR	EC	Deactivate
905	APL	Goodenough Basin Subduction System	Roger Buck	SEP	JR	EC	Deactivate
863A	Pre	ISOLAT: Indian Antarctic Paleoceanography	Xavier Crosta	SEP	MSP	CO	Deactivate

: Came back from external review
 : Revised
 : New

The next SEP meeting will be held on January 10-12, 2017 at the Scripps Institution of Oceanography in La Jolla, USA.

31 MagellanPlus: Report and FY17 budget (L. Lourens)

(15:19)

L. Lourens presented the composition of the MagellanPlus Steering Committee (SC). The Chair is Lucas Lourens and the Vice-chair is Johan Lissenberg. In 2016 Michele Rebesco replaced Marco Roveri and Karsten Haase replaced Rüdiger Stein.

Every year there is one call for workshop proposals. For the February 1st, 2016 deadline five proposals were submitted: one ICDP-related, two amphibious and two IODP-related. These were ranked during the SC meeting in Vienna in February 2016. Two proposals were accepted, one proposal was rejected and the proponents of two proposals got the opportunity to revise and re-submit their proposal within two months. Finally, one of the revised proposals was accepted. Following three proposals were accepted:

- 1) Antarctica's Cenozoic ice and climate history: New Science and new challenges of drilling in Antarctic waters by Santis et al. (Italy);
- 2) Structure and Evolution of Magmatic and Hydrothermal Volcanic Systems in offshore collapse/resurgent calderas - Development of an IODP Drilling Proposal and links to active ICDP Drilling Initiatives by Spiess et al. (Germany);
- 3) Carbon Cycling at the Ultraslow Arctic Spreading Ridge System by Jørgensen et al. (Norway).

In late 2015-2016 four workshops were implemented:

- 1) Haiti-DRILL in Rueil-Malmaison, France on October 26-28, 2015;
- 2) Brazilian Equatorial Margin – BEM II in Ubatuba, Brazil on March 30 – April 1, 2016;
- 3) Antarctica's Cenozoic Ice and Climate History: New science and new challenges of drilling in Antarctic waters in College Station, USA on May 9-11, 2016;
- 4) Bend-Fault Serpentinization: Implications for plate dynamics, Earth's deep carbon and water cycles, and deep life in London, UK on June 18-20, 2016.

So far, there are two upcoming workshops for 2017:

- 1) Caldera Drilling – Campi Flegrei in Naples, Italy on February 25-28, 2017;
- 2) Carbon Cycling at the Ultraslow Arctic Spreading Ridge System by Jørgensen et al. (Norway).

Four further proposals will be funded for the February 2017-2018 time frame.

The MagellanPlus SC has not supported funding of travel grants since October 2015.

The MagellanPlus website has been re-designed.

Publications: Articles regarding MagellanPlus workshops were published in *Scientific Drilling* #20 and the ECORD Newsletters #25 and #26.

The deadline for the next call will be on January 15, 2017. The next SC meeting will be held on February 1-3, 2017 in Cardiff, UK.

The budget is 70,000 € per year. Travel grants of up to 10,000 € can be funded.

COMMENTS:

The diversity of science themes in the upcoming workshops is appreciated (G. Camoin). The Corinth proposal is the result of a MagellanPlus workshop that was held in 2014 (L. Lourens). The Atlantis Massif expedition is also the outcome of a MagellanPlus workshop (G. Früh-Green). The MagellanPlus workshops lead not only to proposals but to proposals that are drilled (J. Behrmann). MagellanPlus is a tool for all IODP-ICDP platforms (G. Camoin).

32 IODP Forum: Progress towards IODP Science Plan challenges and views from ECORD (J. Austin/J. Behrmann)

Not done.

33 PMOs: views from ECORD (J. Behrmann)

Not done.

COLLABORATION

34 ICDP: Recent and future activities (U. Harms)

(15:32)

U. Harms summarized the 2015-2017 ICDP operations. Four operations will be started on November 1, 2016: 1) Oman Ophiolite Drilling Project, 2) Deep Drilling at Konya, India, 3) Lake Challa Drilling and 4) Drilling in a mine in South Africa. The description of the Oman cores will be done in summer 2017 on the *Chikyu* and after the second campaign in summer 2018 on the *JR*.

The ICDP Deep Lake Drilling System rig was used for the Chicxulub expedition. Major repairs are underway and construction issues were detected causing a downgrading of the certification. The ICDP Dynamic Positioning System was used on Lake Malawi and since it was not used again it was sold.

AGU and EGU: There will be no IODP-ICDP Town Hall Meeting at the AGU 2016 but ECORD and ICDP will have a joint booth. A joint ECORD-ICDP Town Hall Meeting and booth are planned for the EGU 2017.

The 20-years ICDP symposium «Supporting Continental Scientific Drilling – Perspectives from Within and Without» was held in Potsdam on October 20-21, 2016. Four working groups on Outreach & Education, Project Management, Data-Samples-Curation and Measurements were created. The outcome of the working groups discussions will be published as a white paper. There is a continuous increase in ICDP drilling project activity over the past ten years.

Funding: In contrast to IODP, ICDP is only funding shares. ICDPs share is usually in the order of 20-50%. Many funding agencies have to come together to make projects happen. Usually there are 8-10 different funding sources.

The time between a workshop proposal and an operation is usually 4-8 years. The time between the submission of a full proposal and the operation is about 2-5 years. The waiting time is due to the allocation of funds and also the permitting.

35 Amphibious Drilling Proposals: Implementation and implications for MSP ADPs (D. McInroy/U. Harms)

Not done.

36 Collaboration with industry: ECORD views (A. Moscariello/M. Friberg)

Not done.

39 ECORD OETF: Outreach activities related to recent MSP expeditions and forward look (A. Stevenson/U. Prange)

(15:48)

A. Stevenson summarized ESO outreach activities for IODP Expedition 357 'Atlantis Massif' and IODP Expedition 364 'Chicxulub Impact Crater'.

For Expedition 357 'Atlantis Massif' a communication plan, flyers and expedition logo stickers were produced and distributed to all Science Party members. A press conference was held at the Foreign Press Association in London on October 22, 2015. This was accompanied by a press release and invitation to journalists. ESO liased with NERC/NOC outreach managers. Tours of the *RRS James Cook* were organized on October 23, 2015 in Southampton. There was high local, national and international media coverage, including interviews on the BBC. A press conference was held at the OSP in Bremen on February 1, 2016 and a press release was issued.

For Expedition 364 'Chicxulub Impact Crater' the outreach was supported by ICDP and Mexican collaborators. The communications plan, flyers, etc. were produced and distributed to all Science Party members and media relations offices of all Science Party member organisations. There was a close collaboration with the University of Texas in Austin. The logos of IODP, ECORD and ICDP were prominent from all angles of approach and onboard as backdrop to filming. A press conference was held at the Gran Museo del Mundo Maya in Mérida, Mexico on April 13, 2016 followed by a tour of the museum where they had a Chicxulub exhibition. At the press conference more than 30 media groups were present. A press release was issued in Spanish and English. There was an extensive coverage in the Mexican press throughout and a huge international interest. A TV production company followed the expedition throughout and they will also follow the OSP to make a documentary. Media and VIP visited the platform including a 'Media

Day' on April 23. A reddit 'Ask me Anything' Day was organized by Kevin Kurtz. The scientific and technology press, radio, TV, newspapers, online media, schools, universities, museums and social media were reached. An expedition blog was updated with short articles for the duration of the expedition. Expedition 364 received the support of the Mexican scientific collaborators and the Mexican and Yucatan Governments.

(16:05)

U. Prange summarized outreach activities at the Expedition 364 Onshore Science Party (OSP). An expedition blog was updated by scientists during the offshore phase and by two teachers during the OSP. Expedition 364 was present on the social media. On the Media Day in Bremen there were representatives from BBC and local media. There were interviews requests by Nature and BBC. Barbara Matyssek (ECORD) and Kevin Kurtz (USA) were Education Officers at the OSP. They were working on projects to transport science and research into classrooms. B. Matyssek produced short interview films to be published on the ECORD website (20 clips with 8 interviews). K. Kurtz participated at live events and did 26 sessions with 33 classes and a total of 1400 participants.

40 ECORD OETF: Report and FY17 budget (P. Marúejol)

(16:14)

N. Hallmann summarized ECORD Outreach and Education Task Force (OETF) activities on behalf of the ECORD OETF. The mandate, members and tasks of the OETF were presented. The OETF has two meetings per year.

OETF tasks: The OETF is promoting ECORD and IODP to various audiences, i.e. scientists, educators, the press and the public, in ECORD countries. Furthermore, the OETF is collaborating with the IODP partners and promoting the IODP and ICDP programmes under the umbrella of "Scientific Drilling".

Outreach activities since the end of 2015 include international conferences (EGU, AGU, IGC) and support to IODP events in ECORD member countries (exhibition booths, public events). Townhall meetings were organized at the AGU 2015 and the EGU 2016. More than 200 persons attended the IODP-ICDP Town Hall meeting at the EGU 2016. Sessions were organized at the EGU and IGC 2016. Joint ECORD/IODP-ICDP booths were organised at the AGU 2015, EGU 2016 and IGC 2016. Diane Hanano (IODP Canada) was invited by CDEX/JAMSTEC to the IODP-JAMSTEC booth at the Goldschmidt 2016 conference. ECORD supported educators on every type of IODP platform: at the OSP of Expedition #364, onboard the *JR* and at the *Chikyū* Onboard School. No ECORD School of Rock was held in 2016.

OETF achievements: On September 19, 2016 the ECORD website was relaunched. All ECORD websites were re-designed under a single portal with the help of the web design

company COSIWEB, which is based in Toulouse, France. Furthermore, an ECORD Web App was created, which was successfully tested at the EGU and IGC 2016 booths.

Outreach resources for 2016: the ECORD Annual Report 2015, ECORD Newsletters (#26, #27), different flyers, the ECORD Calendar, six core replicas, videos on the ECORD-ESO channel, ECORD website, Wikipedia and the social networks Facebook and Twitter. The core replicas were presented at 18 events in 6 ECORD countries.

OETF 2017 timeline: ECORD will be present at following conferences: AGU 2016 and EGU 2017. The potential participation at the Goldschmidt Conference 2017 in Paris and at the AGU 2017 still needs to be discussed. The OETF meetings will be held on January 26-27 in Aix-en-Provence and in September/October. The Annual Report will be published in early-mid March and the ECORD Newsletters #28 and #29 will be published in mid-April and November, respectively.

N. Hallmann presented the OETF FY17 budget. (Table 14). The total request of the OETF to ECORD is \$63,300 USD.

Table 14: OETF FY17 budget (in USD).

Exhibit Booths (3)	20,000	+400
Publications	14,700	0
Other costs	8,600	+2,200
Shipping costs	3,400	0
Overheads	4,400	-100
Travel costs	12,200	-200
Total	63,300	+2,300 (+4,6%)

ECORD Council Consensus 16-10-16:
 The ECORD Council approves the Outreach FY17 budget of \$63,300 USD to be administered by EMA Nancy, France.

OUTREACH AND EDUCATION
37 ESSAC: Educational activities (H. Kinkel)
 (16:30)

Distinguished Lecturer Programme (DLP):
 A call to host a Distinguished Lecturer was issued in September 2016 with the deadline to apply until November 1, 2016. There are four speakers who cover the themes of the

Science Plan: 'Climate and Ocean Change', 'Biosphere Frontiers', 'Earth in Motion' and 'Earth Connections'.

Teachers at Sea:

Eight applications were received and five teachers were funded. IODP France and IODP Germany funded one teacher each (Expedition #362 and #366). Two teachers participated at the OSP for Expedition #364 and costs were shared with USSSP. One Italian teacher will sail on Expedition #367. Upcoming calls are for Expeditions #367, #368, #369, #371, #372 and #374.

ECORD Summer Schools - Scholarships:

The ECORD Petrophysics Summer School was held for the first time in Leicester in June/July 2016 and received a direct support of 10,000 €. Three scholarships were funded.

The ECORD Urbino Summer School in Paleoclimatology was held in July 2016 and received a direct support of 10,000 €. Six scholarships were funded.

The ECORD Bremen Summer School 2016 with the topic 'Submarine Geohazards: Mapping, Monitoring, and Modelling' was held in September 2016 and received a direct support of 10,000 €. Six scholarships were funded.

The total number of participants in ECORD Summer Schools is 120 with 78 from ECORD member countries and 42 from non-ECORD countries. Four applications to sail were received from ECORD Summer School participants. In total, 15 ECORD Scholarships were given. The next call for ECORD Scholarships will be released in December 2016.

ECORD Training Course:

The ECORD Training Course 2016 "Virtual Drillship Experience" that was held at the MARUM in March 2016 received a direct support of 6,500 €.

ECORD Research Grants:

In 2016 seven research grants were given to young researchers from five ECORD member countries. The maximum grant funding is 3,000 €. One of the seven awardees sailed already on Expedition #370 and another awardee applied to sail. The next call for ECORD Research Grants will be released in December 2016 with a deadline of January 30, 2017.

COMMENT:

The 2017 ECORD Bremen Summer School is on coral mounds and contourites (U. Röhl).

38 ESSAC: FY17 budget (J. Behrmann)

(16:41)

J. Behrmann presented the ESSAC FY17 budget (Table 15).

Table 15: ESSAC FY17 budget.

	Budget FY17 (EUR)	Budget FY16 (EUR)	Evolution 2016-17
Salaries			
Science Coordinator (TVÖD E14, 03-12, 2016)	68.686,00	66.686,41	3,00%
Science Coordinator ETHZ	0,00	20.000,00	-100,00%
Chair, Compensation	50.000,00	50.000,00	0,00%
Total Salaries/Compensation	118.686,00	136.686,41	-13,17%
Non-Salary Costs			
Travel and Subsistence Costs			
Science Coordinator	6.000,00	6.000,00	0,00%
Chair	15.000,00	15.000,00	0,00%
Office Costs			
General Office Costs	6.000,00	6.000,00	0,00%
Meetings			
ESSAC May Meeting	2.500,00	2.500,00	0,00%
ESSAC October Meeting	2.500,00	2.500,00	0,00%
Travel Support Invited Speakers to Meeting	3.000,00	3.000,00	0,00%
Travel Support ESSAC Liaison to SEP Meeting	3.000,00	0,00	100,00%
Conference Travel Support	4.000,00	4.000,00	0,00%
Education and Outreach			
Support ECORD Distinguished Lecturer Programme	12.000,00	10.000,00	20,00%
ECORD Summer School Support	30.000,00	30.000,00	0,00%
ECORD Training Course	6.500,00	6.500,00	0,00%
ECORD Summer School student support	15.000,00	15.000,00	0,00%
ECORD Research Grants	18.000,00	16.000,00	12,50%
Teachers at Sea, travel support	7.500,00	7.500,00	0,00%
Subtotal Non-Salary Costs	131.000,00	124.000,00	5,65%
Total ECORD Contribution in EUR	249.686,00	260.686,41	-4,22%

ECORD Council Consensus 16-10-17:

The ECORD Council approves the ESSAC FY17 budget of \$276,783 USD to be administered by the GEOMAR in Kiel, Germany.

ANY OTHER BUSINESS

None.

CONCLUSIONS

42 Review of Consensus and Actions (N. Hallmann/All)

(16:49)

N. Hallmann summarized consensus and actions.

43 Next ECORD Council-ESSAC meetings (M. Webb/J. Behrmann)

(17:03)

ECORD Council Consensus 16-10-18:

The ECORD Council agrees that the ECORD Council Spring meeting #3 will be held in Bremen after the EEC meeting in early June 2017.

Action Item 20: EMA

to create a Doodle poll to set the dates of the EEC meeting and the ECORD Council Spring meeting #3

ECORD Council Consensus 16-10-19:

The ECORD Council agrees that the ECORD Council – ESSAC meeting #5 will be held in Edinburgh in (late) October 2017.

Action Item 21: EMA

to create a Doodle poll to set the dates of the ECORD Council – ESSAC meeting #5

ACKNOWLEDGEMENTS

ECORD Council Consensus 16-10-20:

The ECORD community expresses its warm thanks to Alan Stevenson for his dedicated role in ECORD outreach activities and his insights regarding European initiatives over the last 13 years. We will miss his seriousness, his lack of humour and we wish him the best for a new chapter of his life.

ECORD Council Consensus 16-10-21:

The ECORD Council warmly thanks Magnus Friberg for his outstanding services and unshakeable enthusiasm as ECORD Council Chair in 2016.

ECORD Council Consensus 16-10-22:

The ECORD Council congratulates ESO and the Co-chief scientists for the successful implementation, both offshore and onshore, of Expedition 364 « Chicxulub Impact Crater », which will stay as a landmark in ocean drilling.

ECORD Council Consensus 16-10-23:

The ECORD Council and ESSAC thank the Bremen friends and colleagues, especially Ursula Röhl, for providing excellent facilities and arrangements, nice working atmosphere and typical Bremen weather at the occasion of their 4th joint meeting.

M. Friberg closed the meeting at 17:08.

ROSTER

ECORD COUNCIL	NAME	EMAIL
Austria	Bernhard Plunger	Bernhard.Plunger@oeaw.ac.at
Belgium	Jean-Pierre Henriet *	jeanpierre.henriet@ugent.be
Canada	Anne de Vernal *	devernal.anne@uqam.ca
Canada	Dominique Weis (Alt)	dweis@eos.ubc.ca
Denmark	Anders Kjaër *	akj@fi.dk
Finland	Teppo Huhtio	teppo.huhtio@aka.fi
France	Eric Humler *	Eric.HUMLER@cnrs-dir.fr
Germany	Guido Lüniger	guido.lueniger@dfg.de
Ireland	Koen Verbruggen	Koen.Verbruggen@gsi.ie
Israel	Zvi Ben Avraham *	zviba@post.tau.ac.il
Italy	Marco Sacchi	marco.sacchi@iamc.cnr.it
Netherlands	Bernard Westerop	b.westerop@NWO.NL
Norway	Heidi Roggen	hero@rcn.no
Portugal	Luis Menezes Pinheiro	Imp@ua.pt
Spain	José Ramón Sánchez Quintana	jose.sanchezq@mineco.es
Sweden	Magnus Friberg (Chair)	magnus.friberg@vr.se
Switzerland	Martina Kern-Lütschg *	mkern@snf.ch
Switzerland	Gretchen Früh-Green (Alt)	frueh-green@erdw.ethz.ch
UK	Michael Webb (Vice-Chair)	mweb@nerc.ac.uk
ESSAC	NAME	EMAIL
Austria & SEP	Werner Piller	werner.piller@uni-graz.at
Belgium	David Van Rooij *	david.vanRooij@ugent.be
Canada	Dominique Weis	dweis@eos.ubc.ca
Denmark	Marit Solveig Seidenkrantz *	mss@geo.au.dk
Finland	Outy Hyttinen	outi.hyttinen@helsinki.fi
France	Georges Ceuleneer	georges.ceuleneer@get.obs-mip.fr
Germany	Jan Behrmann (Chair)	jbehrmann@geomar.de

Ireland	Xavier Monteys	Xavier.Monteys@gsi.ie
Israel	Nicolas Waldmann *	nwaldmann@univ.haifa.ac.il
Italy	Andrea Argnani	andrea.argnani@bo.ismar.cnr.it
Netherlands	Lucas Lourens	llourens@geo.uu.nl
Norway	Helga F. Kleiven	kikki@uib.no
Portugal	Antje Voelker	antje.voelker@ipma.pt
Spain	Carlota Escutia *	cescutia@ugr.es
Sweden	Ian Snowball	ian.snowball@geo.uu.se
Switzerland	Gretchen Früh-Green (Vice-Chair)	frueh-green@erdw.ethz.ch
UK	Anthony Morris *	A.Morris@plymouth.ac.uk
UK	Kate Littler (Alt)	kate.littler@gmail.com
LIAISONS	NAME	EMAIL
EMA	Gilbert Camoin	camoin@cerege.fr
EMA	Nadine Hallmann	hallmann@cerege.fr
EMA	Patricia Maruéjol *	maruejol@crpg.cnrs-nancy.fr
ESO	David McInroy	dbm@bgs.ac.uk
ESO	Robert Gatliff	rwga@bgs.ac.uk
ESO	Alan Stevenson	agst@bgs.ac.uk
ESO	Carol Cotteril	cjcott@bgs.ac.uk
ESO	Ulrike Prange	uprange@marum.de
ESO - EPC	Sarah Davies	sjd27@leicester.ac.uk
ESO - EPC	Sally Morgan *	sm509@leicester.ac.uk
ESO - BCR	Ursula Röhl	uroehl@marum.de
ECORD FB	Gilles Lericolais	gilles.lericolais@ifremer.fr
ECORD FB	Stephen Gallagher	sjgall@unimelb.edu.au
ECORD E-ILP	Andréa Moscariello *	Andrea.Moscariello@unige.ch
ESSAC Office	Hanno Kinkel	essac@geomar.de
IODP Forum	James Austin	jamie@ig.utexas.edu
NSF	Tom Janecek	tjanecek@nsf.gov
ANZIC	Leanne Armand	leanne.armand@mq.edu.au

KIGAM	Gil Young Kim *	gykim@kigam.re.kr
MEXT	Eisho Sato	eishosato@mext.go.jp
CDEX-JAMSTEC	Nobu Eguchi	neguchi@jamstec.go.jp
OBSERVERS & GUESTS	NAME	EMAIL
IODP-Germany	Jochen Erbacher	Jochen.Erbacher@bgr.de
MARUM-Bremen	Michael Schulz	mschulz@marum.de
MARUM-Bremen	Gerold Wefer	gwefer@marum.de
ICDP	Uli Harms	ulrich@gfz-potsdam.de
DFG	Ismene Seeberg	Ismene.Seeberg- elverfeldt@dfg.de
Imper. Coll., London	Joanna Morgan *	j.v.morgan@imperial.ac.uk
Univ. Texas, Austin	Sean Gulick	sean@ig.utexas.edu

* Apologized

LIST OF ACRONYMS

ACEX: Arctic Coring Expedition	ETH: Swiss Federal Institute of Technology, Zurich
ADP: Amphibious Drilling Proposal	EU: European Union
AGI: American Geosciences Institute	EuroGOOS: European Global Ocean Observing System
AGU: American Geophysical Union	FY: Fiscal Year
ANZIC: Australian and New Zealand IODP Consortium	GEOMAR: Helmholtz Centre for Ocean Research Kiel
APC: Advanced Piston Corer	GFZ: German Research Centre for Geosciences, Potsdam
BCR: Bremen Core Repository	H2020: Horizon 2020
BEM: Brazilian Equatorial Margin	ICDP: International Continental Scientific Drilling Program
BGS: British Geological Survey	IGC: International Geological Congress
BMBF: German Federal Ministry of Education and Research	IKC: In-kind contribution
BSRG: British Sedimentological Research Group	INSU: National Institute of Sciences of the Universe
CAB: Curatorial Advisory Board	IODP: Integrated Ocean Drilling Program (2003-2013) & International Ocean Discovery Program (2013-2023)
CDEX: Center for Deep Earth Exploration	JAMSTEC: Japan Agency for Marine Earth Science and Technology
CEREGE: Centre for Research and Education in Environmental Geosciences, Aix-en-Provence	JFY: Japanese Fiscal Year
CIB: <i>Chikyu</i> IODP Board	JOIDES: Joint Oceanographic Institutions for Deep Earth Sampling
CNRS: National Center for Scientific Research	<i>JR: JOIDES Resolution</i>
CPP: Complementary Project Proposal	JR-FB: <i>JOIDES Resolution</i> Facility Board
DEDI: Distributed European Drilling Infrastructure	JRSO: <i>JOIDES Resolution</i> Science Operator
DFG: German Research Foundation	KIGAM: Korea Institute of Geoscience and Mineral Resources
DIS: Drilling Information System	LTBMS: Long-Term Borehole Monitoring System
DLP: Distinguished Lecturer Programme	LWD: Logging While Drilling
DS3F: Deep-Sea and Sub-Seafloor Frontier	MARUM: Center for Marine Environmental Sciences, University of Bremen
DSDP: Deep Sea Drilling Project	mbsf: metres below seafloor
EC: European Commission	MeBo: Meeresboden-Bohrgerät
EEC: ECORD Evaluation Committee	MEXT: Ministry of Education, Culture, Sports, Science & Technology, Japan
ECORD: European Consortium for Ocean Research Drilling	MoU: Memorandum of Understanding
EFB: ECORD Facility Board	MSCL: Multi-Sensor Core Logger
EGU: European Geosciences Union	MSP: Mission-specific platform
E-ILP: ECORD Industry Liaison Panel	NanTroSEIZE: Nankai Trough SEIsmogenic Zone Experiment
EMA: ECORD Managing Agency	NERC: Natural Environment Research Council
EMODnet: European Marine Observation and Data Network	NOAA: National Oceanic and Atmospheric Administration
EMSO: European Multidisciplinary Seafloor and Water Column Observatory	NOC: National Oceanography Centre
EPC: European Petrophysics Consortium	NSF: National Science Foundation
EPOS: European Plate Observing System	O&E: Outreach and Education
ERIC: European Research Infrastructure Consortium	
ESFRI: European Strategy Forum on Research Infrastructures	
ESO: ECORD Science Operator	
ESSAC: ECORD Science Support and Advisory Committee	

ODP: Ocean Drilling Program
OETF: Outreach and Education Task Force
OGS: National Institute of Oceanography
and Experimental Geophysics, Trieste
ORC: Operational Review Committee
OSP: Onshore Science Party
PI: Principal Investigator
PMO: Program Member Office
RD2: Rockdrill 2
SC: Steering Committee
SC: Societal Challenge
SEDIS: Scientific Earth Drilling Information
Service
SEP: Science Evaluation Panel
TAMU: Texas A&M University
UNOLS: University-National Oceanographic
Laboratory System
USSSP: U. S. Science Support Program
VAT: Value-Added Tax
VSP: Vertical Seismic Profiling
XRF: X-ray fluorescence

