ECORD Council - ESSAC Meeting #8

30 September – 1 October 2020 (virtual)

MINUTES

AGENDA

30 September 2020 – 02:00 pm / 5:00 pm CET

1. ECORD and IODP News (G. Camoin)

2. ECORD budgets 2020 and 2021 (G. Camoin)

3. Update on scheduled MSP expeditions (D. McInroy / D. Smith)

4. 2021-2023 ECORD Strategy for MSP expeditions (G. Uenzelmann-Neben)

1 October 2020 – 02:00 pm / 5:00 pm CET

5. Update on 2050 Science Framework (A. Morris)

6. IODP Forum – Post-2023 ECORD strategy (G. Camoin)

7. IODP Forum – Post-2023 implementation strategies and ECORD partners' intentions (D. Kroon)

8. Post-2023 renewal of EMA and ESO – draft Expression of Interest - (Council Members)

ROSTER

ECORD COUNCIL	***NAME***	***EMAIL***
ÖAW - Austria	Bernhard Plunger	Bernhard.Plunger@oeaw.ac.at
CCOD - Canada	John W. Jamieson	jjamieson@mun.ca
DAFSHE - Denmark	Marit-Solveig Seidenkrantz*	mss@geo.au.dk
DAFSHE - Denmark	Paul Knutz (Alternate)	pkn@geus.dk
Academy of Finland	Hanna Pikkarainen	hanna.pikkarainen@aka.fi
CNRS - France	Stéphane Guillot	Stephane.GUILLOT@cnrs.fr
CNRS - France	France Lagroix (Alternate on Day 2)	lagroix@ipgp.fr
DFG - Germany	Guido Lüniger	guido.lueniger@dfg.de
GSI - Ireland	Koen Verbruggen	Koen.Verbruggen@gsi.ie
CNR - Italy	Annalisa Iadanza	annalisa.iadanza@cnr.it
NWO - The Netherlands	Bernard Westerop (Chair)	b.westerop@NWO.NL
Forskningsradet Norway	Markus Engelhardt	men@rcn.no
FCT - Portugal	Fatima Abrantes	fatima.abrantes@ipma.pt
MCIN - Spain	José Juan Sánchez Serrano*	josej.sanchez@ciencia.gob.es
VR - Sweden	Magnus Friberg	magnus.friberg@vr.se
FNS - Switzerland	Martina Kern-Lütschg	martina.kern@snf.ch
UKRI - UK	Michael Webb (Vice-Chair)	mweb@nerc.ac.uk
ESSAC		
Austria	Michi Strasser	Michael.Strasser@uibk.ac.at
Canada	John Jamieson	jjamieson@mun.ca
Denmark	Marit-Solveig Seidenkrantz*	mss@geo.au.dk
Denmark	Paul Knutz (Alternate)	pkn@geus.dk
Finland	Joonas Virtasalo	joonas.virtasalo@gtk.fi
France	Georges Ceuleneer	georges.ceuleneer@get.omp.eu
Germany	Jan Behrmann (Vice-Chair)	jbehrmann@geomar.de
Ireland	David Hardy	David.Hardy@gsi.ie
Italy	Riccardo Tribuzio	tribuzio@crystal.unipv.it
Netherlands	Martin Ziegler	m.ziegler@uu.nl
Norway	Helga F. Kleiven	kikki@uib.no
Portugal	Antje Voelker	antje.voelker@ipma.pt
Spain	Carlota Escutia	cescutia@ugr.es
Sweden	Jorijntje Henderiks	jorijntje.henderiks@geo.uu.se
Switzerland	Gretchen Früh-Green	frueh-green@erdw.ethz.ch
UK	Antony Morris (Chair)	A.Morris@plymouth.ac.uk
LIAISONS		
EMA	Gilbert Camoin	camoin@cerege.fr
EMA	Nadine Hallmann	hallmann@cerege.fr
EMA	Malgorzata Bednarz	bednarz@cerege.fr
ESO - BGS	David McInroy	dbm@bgs.ac.uk
ESO - BGS	David Smith	djsm@bgs.ac.uk
ESO - BGS	Jeremy Everest	jdev@bgs.ac.uk
ESO - MARUM	Ulrike Prange	uprange@marum.de
ESO - EPC	Sarah Davies*	sjd27@leicester.ac.uk
ESO - EPC	Simon Draper	sd227@leicester.ac.uk
ESO - BCR	Ursula Röhl	uroehl@marum.de
ECORD FB	Gabi Uenzelmann-Neben	Gabriele.Uenzelmann-Neben@awi.de
ESSAC Office	Hanno Kinkel	essac@plymouth.ac.uk
MagellanPlus	Lucas Lourens	l.j.lourens@uu.nl
IODP Forum	Dick Kroon	dick.kroon@ed.ac.uk

* *Apologies*

30 September 2020

(14:05)
B. Westerop opened the meeting and presented the agenda and the roster. The ECORD Council approved the agenda.

ECORD Council Consensus 20-09-03: The ECORD Council approves the agenda of the ECORD Council-ESSAC Meeting #8.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

B. Westerop presented the main objectives of the meeting: 1) post-FY20 *JOIDES Resolution* (JR) and MSP operational plans; and 2) post-2023: the future of scientific ocean drilling.

1. ECORD and IODP News (G. Camoin)

(14:11)
G. Camoin presented the ECORD and IODP news.

G. Camoin presented the rotation scheme for the ECORD Council. M. Webb (UK) is the incoming ECORD Council Vice-Chair since 1 July 2020 and he will become ECORD Council Chair starting on 1 January 2021. B. Westerop (NLD) will be outgoing Vice-Chair during the first half of 2021. Following the rotation scheme, the new incoming Vice-Chair during the second half of 2021 should be Guido Lüniger (GER).

Rotation scheme	Chair	Country	Vice Chair	Country
Oct 12 - March 13	Mike Webb	UK	Anne De Vernal	Canada
April 13 - Dec 13	Mike Webb	UK	Guido Lüniger	Germany
Jan 14 - Jun 14	Guido Lüniger	Germany	Mike Webb	UK
Jul 14 - Dec 14	Guido Lüniger	Germany	Michel Diament	France
Jan 15 - Jun 15	Michel Diament	France	Guido Lüniger	Germany
Jul 15 – Dec 15	Michel Diament	France	Magnus Friberg	Sweden
Jan 16 – Jun 16	Magnus Friberg	Sweden	Michel Diament	France
Jul 16 – Dec 16	Magnus Friberg	Sweden	Mike Webb	UK
Dec 16 – Jun 17	Mike Webb	UK	Magnus Friberg	Sweden
Jul 17 – Dec 17	Mike Webb	UK	Guido Lüniger	Germany
Jan 18 – Jun 18	Guido Lüniger	Germany	Mike Webb	UK
Jun 18 – Dec 18	Guido Lüniger	Germany	Eric Humler	France
Dec 18 – Jun 19	Eric Humler	France	Guido Lüniger	Germany
Jun 19 – Dec 19	Stéphane Guillot	France	Bernard Westerop	The Netherlands
Dec 19 – Jun 20	Bernard Westerop	The Netherlands	Stéphane Guillot	France
Jun 20 – Dec 20	Bernard Westerop	The Netherlands	Mike Webb	UK
Dec 20 – Jun 21	Mike Webb	UK	Bernard Westerop	The Netherlands

ECORD Council Chair rotation scheme

The ECORD Council core group consists of five members: the Chair, the Vice-Chair and three additional Council delegates. The three major contributors will automatically belong to this core group. The current members of this core group are M. Webb (UK), G. Lüniger (GER), S. Guillot (FRA), M. Engelhardt (NOR) and B. Westerop (NLD).

Further changes in the ECORD structure: Angelo Camerlenghi (ITA) has been nominated as the incoming ESSAC Vice-Chair starting on 1 January 2021 and he will become ESSAC Chair on 1 January 2022 for two years. The term of Gabriele Uenzelmann-Neben (GER) as EFB Chair was extended by one year until 31 December 2022 as the EFB did not meet in 2020 due to the COVID-19 crisis. EFB Vice-Chair G. Lericolais (FRA) will rotate off on 31 December 2020 and he will be replaced by the new Science Board member Michele Rebesco (ITA). Marit-Solveig Seidenkrantz will be the new ECORD Council member representing Denmark and she will stay as the Danish ESSAC delegate.

2019-2023 ECORD Memorandum of Understanding (MoU): At the moment ECORD has 15 member countries. The 2019-2023 ECORD MoU has been distributed for approval and signature by the ECORD funding agencies. Only Spain and Germany still need to sign the 2019-23 ECORD MoU.

ECORD Council Consensus 20-09-04: The ECORD Council confirms the validity of the ECORD MoU 2019-2023 that was not signed by the Spanish Ministry of Economy, Industry and Competitiveness (MINECO). MINECO will be replaced by the Spanish Ministry of Science and Innovation (MCIN) as new ECORD member for Spain starting on January 1st, 2021.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

ECORD membership: In 2019 and early 2020, ECORD was in contact with its past members Israel, Poland, Iceland and Belgium as well as with Croatia, Greece and Russia concerning a potential membership. Since the start of the COVID-19 crisis there was no contact anymore, but the contact will be started again as soon as the global health situation improves.

MagellanPlus Workshop Series (L. Lourens/G. Camoin): In 2019, three workshops have been implemented, of which two involved also land drilling: 1) Haiti-DRILL involving *JOIDES Resolution* (JR) and land drilling; and 2) New Caledonia Peridotite Amphibious Drilling involving JR, MSP and land drilling. Drilling land-to-sea transects will be a part of the future of the programme. One workshop has been implemented in January 2020 and three workshops have already been postponed to 2021 due to the COVID-19 crisis. At the moment, four workshops are already scheduled for 2021. In addition to the regular call for proposals with a deadline of 15 January 2020, a second call for proposals was issued with a deadline of 15 May 2020 and two proposals have been received. Further details on the various MagellanPlus workshops appear on the ECORD website: https://www.ecord.org/science/magellanplus/

ECORD Annual Report and resources (M. Bednarz/G. Camoin): The Annual Report 2020 and the two 2020 ECORD Newsletter issues have been suspended as there were almost no activities (expeditions, workshops, etc.) due to the COVID-19 crisis. The latest news can be found on the regularly updated ECORD website.
Several ECORD giveaways, such as pens, notebooks, glass cloths, markers, USB sticks and hammers, have been created. The ECORD brochure and video for stakeholders/external funders have been finalised. The video can be found on the ECORD homepage. These resources will be used to contact external funders like foundations and companies. G. Camoin contacted the CNRS Legal Department and the CNRS will be able to handle such external funds. An agreement/contract needs to be set up with the foundations/companies and the funds can be directly received on the ECORD account. These funds might be used for technology, expeditions, education, etc.

ECORD Puffersphere: D. McInroy presented an update on the status of the ECORD Puffersphere. The Puffersphere is a touch sphere with 80 cm in diameter. This project is in the last development phase and it should be finalised and launched by the end of October or latest by the end of November 2020. D. McInroy presented the different modes and the structure of the ECORD Puffersphere. A version 1 will be produced and tested with users so that the Puffersphere can be further developed and updated based on the user feedback. First, the physical sphere will be shipped to the BGS and then it will be ready for display at various exhibitions, etc.

ECORD photo gallery (M. Bednarz): The photo gallery is still under development. The main framework has been set up and the photo gallery is running. High-resolution photographs can be downloaded or shared on the social media platforms. Some features still need to be finalized and more photos need to be added.

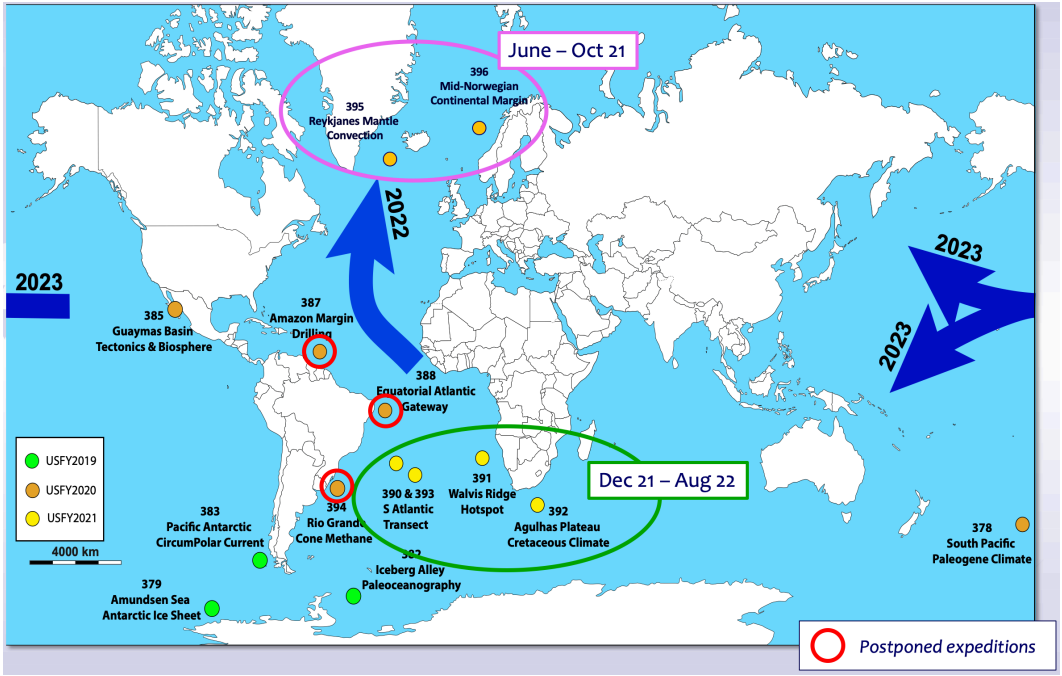
ECORD core replicas (M. Bednarz): A Tahiti core replica has been produced in September 2020 to replace the one which was lost during shipping. Two more Chicxulub core replicas will be produced soon so that in total there will be nine ECORD core replicas.

ECORD partnership: G. Camoin continued to summarize the status of the 2020-2021 JR expeditions. IODP Expedition 378: South Pacific Paleogene Climate has been shortened due to problems with the derrick. The maximum length of drill-string that could be deployed has been restricted, i.e. not all sites could be drilled. Expedition 384, an engineering testing, has been postponed due to travel restrictions related to the COVID-19 crisis. IODP Expeditions 387 and 388 had to be postponed as permission for drilling in Brazilian waters has not been received. IODP Expeditions 395: Reykjanes Mantle Convection and Climate offshore Iceland has been scheduled instead as it was the only proposal at the JRFB that had sites in international waters close enough for the JR to implement. Finally, this expedition also had to be postponed due to travel restrictions related to the COVID-19 crisis. At the JRFB meeting in August 2020 it has been decided

to postpone all Southern Atlantic expeditions, i.e. IODP Expeditions 390-394. G. Camoin presented the new JR schedule:

Reykjanes Mantle Convection and Climate	395	June 6-Aug 6, 2021	Reykjavik / Reykjavik	JRSO
Mid-Norwegian Continental Margin Magmatism	396	Aug 6-Oct 6, 2021	Reykjavik/Kristiansand	JRSO
Walvis Ridge Hotspot	391	Dec 6 2021-Feb 5 2022	Cape Town / Cape Town	JRSO
Agulhas Plateau Cretaceous Climate	392	Feb 5-Apr 7, 2022	Cape Town / Cape Town	JRSO
South Atlantic Transect #1	390	Apr 7-Jun 7, 2022	Cape Town / Montevideo	JRSO
South Atlantic Transect #2	393	Jun 7-Aug 7, 2022	Montevideo / Montevideo	JRSO

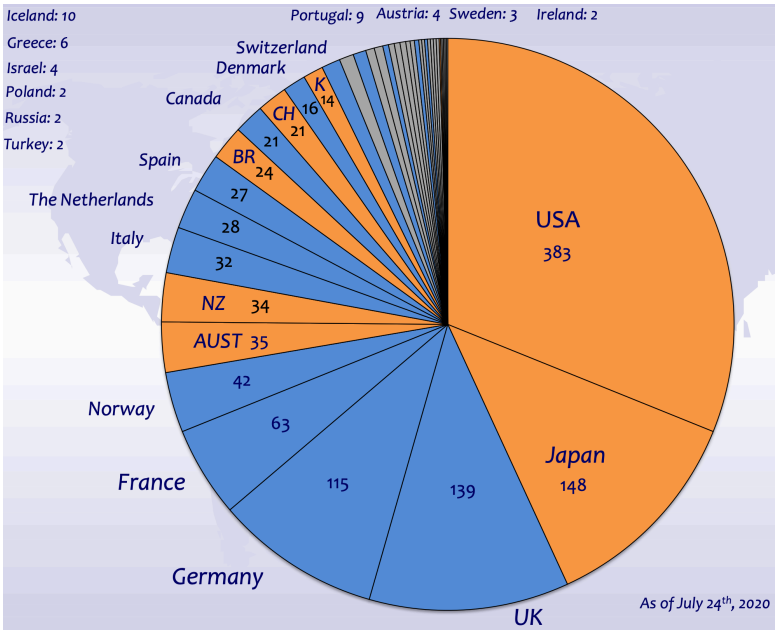
The plan is to continue with IODP Expedition 395 in June 2021. IODP Expedition 396 will be implemented soon after although it was not the first choice by the JRFB based on the SEP review, but at the moment the owner of the JR is only comfortable with implementing expeditions starting in Norway. After the implementation of these two expeditions in the Northern Atlantic from June to October 2021, the JR will implement four expeditions in the Southern Atlantic from December to 2021 to August 2022 (see table above and map below). The JR will operate again in the Northern Atlantic later in 2022 and in 2023.



The JR is behind the initial schedule due to the COVID-19 crisis, but also technical problems. At the moment the US is facing increasing maintenance costs for the JR and there is also a maximum number of expeditions per year due to the age of the vessel. There is a strong proposal pressure in the Northern Atlantic and the JRFB needs to decide how long the JR should stay in this region. Parts of expeditions that have not been implemented properly need to be rescheduled by the JRFB. Postponed IODP expeditions (e.g., #387, 388 and 394) and orphan sites in the Southern Ocean (e.g., #378) need to be considered by the JRFB. The JRFB will consider to keep unimplemented sites on the board for later completion in exceptional circumstances (e.g., mechanical failures of the JR, but not weather-related issues) and on a case-by-case basis. Currently, there are 12

orphan sites from five expeditions for potential future drilling. These orphan sites are not located in the same area implying transit time. Proponents have to submit an addendum to SEP if the sites are for more than five years at the JRFB. These sites will not be considered anymore for future drilling in case science has evolved. The proponents should consider an APL if sites can be drilled in a few days. Undrilled sites may also be considered in a new proposal to SEP.
JRSO has produced a document called COPE - COVID Mitigation Protocols Established for Safe JR Operations - for implementing IODP expeditions during the pandemic: http://iodp.tamu.edu/index.html The idea is to implement JR expeditions with only ten to 12 scientists onboard, a similar format as for the MSP expeditions, to limit the risks. In addition, there are protocols and procedures for the scientists before sailing on the JR, for example, staying for days in the port and testing. These procedures are constraining and have a big impact for the PMOs as there will be extended travel times.

G. Camoin summarized the proposal statistics. Since October 2013, 167 IODP proposals have been submitted. Of those, 11 (6.6%) have been drilled, eight (4.8%) have been scheduled, 84 (50.3%) have been deactivated, 12 are at the Facility Boards and 52 are at SEP. At the moment (as of 24 July 2020) there are 99 active IODP proposals in the system: 74 *JR*, 10 *Chikyu*, 8 MSP and 7 multiple proposals. The majority of the proposals covers the themes Climate and Ocean (42) and Earth Connections (31). Most of the proposals address the Pacific (42) and Atlantic (25) Oceans. ECORD and the US are nearly equal in the number of lead proponents (ECORD: 41, US: 37, Others: 21). ECORD has the highest number of unique proponents (ECORD: 516, US: 383, Japan: 148, Others: 184). There are also proponents of active proposals from non-ECORD/IODP member countries, such as Iceland, Greece, Israel, Poland, Russia and Turkey. This might be an argument to contact them and to convince them to join (again) ECORD/IODP.



99 active IODP proposals: 1231 unique proponents by country
(as of 24 July 2020); blue: ECORD countries; orange: IODP, non-ECORD countries

(15:35)
coffee break
(15:46)

2. ECORD budgets 2020 and 2021 (G. Camoin)

(15:46)

G. Camoin presented the ECORD FY20 and FY21 budgets (Tables 1-4).

At the moment ECORD has 15 member countries. France, Ireland and Spain are paying in euros, Denmark in krones and the UK in pounds. The ECORD member contributions do not include additional project-based cash and in-kind contributions. Annual national IKCs and science costs, which are in the order of about $7M USD, are also not included. About 95% of the ECORD budget is spent on IODP expeditions. ECORD contributes $7.12M USD to the annual funding of the *JOIDES Resolution* and $1M USD to the annual funding of the *Chikyu*.

G. Camoin summarized the ECORD budget situation for FY20 (Tables 1, 2).

Table 1: ECORD FY20 member contributions

FY20 Contributions (US$)	
DFG (Germany)	5,600,000
CNRS (France) *	3,908,000
UKRI (United Kingdom) *	3,364,000
Forskningsradet (Norway)	1,100,000
FNS (Switzerland)	600,000
NWO (The Netherlands)	600,000
CNR (Italy)	500,000
VR (Sweden)	400,000
MCIN (Spain) *	163,000
DAFSHE (Denmark) *	146,000
GSI (Ireland) *	109,000
CCOD (Canada)	106,000
ÖAW (Austria)	100,000
FCT (Portugal)	90,000
Academy of Finland	80,000
TOTAL	**16,866,000**
** Contributions in other currencies*	

Table 2: ECORD FY20 budget

ECORD FY20 Budget (US$)		
FY19 balance	18,829,700	
FY20 contributions	16,866,000	
ECORD-NSF MoU		7,120,000
ECORD-MarE3 MoU		1,000,000 *
ESO		3,151,000 *
EMA		305,880
MagellanPlus		86,800
IODP Chairs Support		169,000
ESSAC		319,064
BCR		392,162
Outreach basic		66,400
TOTAL	35,695,700	12,610,306
Expected FY20 balance	**23,085,394**	
** X 386 postponed – operational costs deduced from budget*		

FY19 ended with a positive balance of $18.83M USD, which was carried over to FY20. Together with the FY20 member contributions of $16.87M USD (Table 1), the FY20 income will yield $35.69M USD. The expenses will be of $12.61M USD without the implementation of an MSP expedition in 2020. IODP Expedition 386 has been postponed and the operational costs have been deduced from the ECORD FY20 budget. FY20 should finish with a positive balance of $23.08M USD (Table 2). Potential additional contributions (cash, IKCs) are not considered in this calculation.

ECORD Council Consensus 20-09-05: The ECORD Council approves the revised FY20 ECORD Science Operator budget of $3,150,999 USD to be administered by the British Geological Survey, Edinburgh, United Kingdom.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

G. Camoin summarized the ECORD budget situation for FY21 (Tables 3, 4).

Table 3: ECORD FY21 member contributions

FY21 Contributions	
DFG (Germany)	5,600,000 US$
CNRS (France)	3,590,000 €
UKRI (United Kingdom)	2,600,000 £
Forskningsradet (Norway)	1,100,000 US$
FNS (Switzerland)	600,000 US$
NWO (The Netherlands)	600,000 US$
CNR (Italy)	600,000 US$
VR (Sweden)	400,000 US$
MCIN (Spain)	168,000 US$
DAFSHE (Denmark)	1,000,000 DKR
GSI (Ireland)	100,000 €
CCOD (Canada)	115,000 US$
ÖAW (Austria)	100,000 US$
FCT (Portugal)	90,000 US$
Academy of Finland	80,000 US$
TOTAL	**16,966,000**

Table 4: ECORD FY21 budget

ECORD FY21 Budget (US$)		
FY20 balance	23,085,394	
FY21 contributions	16,966,000	
ECORD-NSF MoU		7,120,000
ECORD-MarE3 MoU		3,000,000*
ESO		3,123,155 *
EMA		343,480
MagellanPlus		86,800
IODP Chairs Support		169,000
ESSAC		290,675
BCR		365,490
Outreach basic		56,150
TOTAL	40,051,394	14,554,750
Expected FY21 balance	**25,496,644**	
** Including X386 implementation costs*		

The FY21 member contributions will be of $16.97M USD (Table 3). Together with the positive FY20 balance the FY21 income will yield $40.05M USD (Table 4). The FY21 expenses have been approved by the ECORD Council at its June 2020 meeting and they will be of $14.55M USD. FY21 should finish with a positive balance of $25.5M USD (Table 4). The ESO FY21 expenses include the implementation of Expedition 386: Japan Trench Paleoseismology. ECORD provides $2M USD to MarE3 to use the Japanese vessel RV *Kaimei* for IODP Expedition 386, in addition to the annual payment of $1M USD for the *Chikyu*. Potential additional contributions (cash, IKCs) are not considered in this calculation. MarE3 provides $2.5M USD as IKC for IODP Expedition 386. ECORD continues to pay the NSF invoices, but depending on the number of not implemented JR expeditions, there might be renegotiations with NSF for 2024. ECORD might also reduce its contributions to the JR in the two last years of the programme, 2022 and 2023.

ECORD Council Consensus 20-09-06: The ECORD Council members approve the table of FY21 contributions as shown below:

FY21 Contributions	
DFG (Germany)	5,600,000 US$
CNRS (France)	3,590,000 €
UKRI (United Kingdom)	2,600,000 £
Forskningsradet (Norway)	1,100,000 US$
FNS (Switzerland)	600,000 US$
NWO (The Netherlands)	600,000 US$
CNR (Italy)	600,000 US$
VR (Sweden)	400,000 US$
MCIN (Spain)	168,000 US$
DAFSHE (Denmark)	1,000,000 DKR
GSI (Ireland)	100,000 €
CCOD (Canada)	115,000 US$
ÖAW (Austria)	100,000 US$
FCT (Portugal)	90,000 US$
Academy of Finland	80,000 US$

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

G. Camoin continued to present the ECORD FY20-FY23 budget. ECORD might spend about $36M USD to implement MSP expeditions in 2022 and 2023. As IODP Expedition 386 had to be postponed due to the COVID-19 crisis, no MSP expedition has been implemented from 2018 to 2020.

ECORD FY20–FY23 budget (MUS$)				
	FY 20	FY 21	FY 22	FY 23
Contributions	16.866	16.966	16.866	16.866
Total income	35.695	40.051	42.366	47.736
Est. fixed costs	12.6	11.55	11.5	11.5
MSP expeditions	X386 postponed	X386 3.0	TBD	TBD
Balance	**23.1**	**25.5**	**30.87**	**36.236**

3. Update on scheduled MSP expeditions (D. McInroy / D. Smith)

(15:56)

D. McInroy presented an update on the planning and scoping of 1) Expedition 386: Japan Trench Paleoseismology, and 2) Expedition 377: Arctic Ocean Paleoceanography (ArcOP).

IODP Expedition 386: Japan Trench Paleoseismology:

ESO continued the joint expedition planning with MarE3 and JAMSTEC for IODP Expedition 386. The offshore phase is planned from the end of April to mid-June 2021 and the Onshore Science Party (OSP) onboard the *Chikyu* is planned from mid-October to mid-November 2021. The platform RV *Kaimei* is provided by JAMSTEC as an in-kind contribution. ESO participated in giant piston coring (GPC) trials on the RV *Kaimei* in February 2020. The GPC trigger system has been modified and tested and MarE3 have conducted further offshore trials. Science Party coordination is ongoing. ESO intends to keep preparations going, including shipping of equipment in December 2020 or January 2021. This involves unrecoverable expenses, e.g. for the ESO staff. A final decision on the implementation of this expedition will be taken six to eight weeks before sailing.

ESO is monitoring the COVID-19 outbreak and liaising with MarE3 on the JAMSTEC COVID-19 measures. At the moment this expedition could not be implemented as Japan is currently barring entries from most of the countries. Even if the full restrictions might be replaced by quarantine periods, some participants might not reach the expedition due to institutional policies or personal circumstances. For participants joining both phases of the expedition in March and in October the total quarantine time period could be up to eight weeks if there is a quarantine for two weeks in both directions of travel. ESO explores how to mitigate risks by replacing staff as participants could be lost at short notice or by reducing the activities on the RV *Kaimei* and at the OSP. If participants are able to travel, there is a strong likelihood that JAMSTEC COVID-19 protection measures will be in effect. At the moment these protection measures include 1) to record health and activity 18 days before boarding; 2) to start taking infection prevention measures 14 days before boarding; 3) to submit a COVID-19 test within five days of boarding; 4) to measure body temperature and to take infection prevention measures during the cruise; and 5) to isolate suspected COVID-19 cases during the cruise and, if required, to abort the cruise.

DISCUSSION about IODP Expedition 386: Japan Trench Paleoseismology:

--- *CONFIDENTIAL* ---

IODP Expedition 377: Arctic Ocean Paleoceanography (ArcOP):

--- *CONFIDENTIAL* ---

DISCUSSION about IODP Expedition 377: Arctic Ocean Paleoceanography (ArcOP):

--- *CONFIDENTIAL* ---

Action Item 1: ECORD Facility Board
To ask SEP for advice on the scientific reward of IODP Expedition 377: Arctic Ocean Paleoceanography (ArcOP) when drilling only the upper 500-700 mbsf, i.e. the Miocene, and therefore not reaching the deeper Eocene-Oligocene target

The meeting was closed at 17:45.

1 October 2020

(14:02)
B. Westerop opened the meeting.

(14:05)
D. McInroy presented an update on the ESO staff.
D. Smith will retire in October 2020. G. Camoin informed the ECORD Council and ESSAC that D. Smith will receive an ECORD award to acknowledge his services to ECORD. A new ESO Operations Manager will be recruited and the ESO Operations Manager duties will be handled by D. McInroy and Graham Tulloch until recruitment in early 2021. Carol Cotterill will leave the BGS in November 2020 and her duties are taken over by D. McInroy (ESO Science Manager) being the ESO Outreach Manager and J. Everest (Expedition Project Manager) contributes to the ESO Outreach. S. Davies (EPC Manager) has been promoted to Head of College at the University of Leicester and some extra management duties have been passed to S. Draper (EPC Project Manager). U. Röhl will remain ESO Lab and Curation Manager at the MARUM.

4. 2021-2023 ECORD strategy for MSP expeditions (G. Uenzelmann-Neben)

(14:15)

G. Uenzelmann-Neben presented MSP proposals at the EFB:

Proposal	Type	Short Title	PI	Country	Exp.
637	Full2	New England Shelf Hydrogeology	Dugan	USA	
708	Full	Central Arctic Paleoceanography	Stein	ECORD (Germany)	377
716	Full2	Hawaiian Drowned Reefs	Webster	ANZIC (Australia)	389
730	Full2	Sabine Bank Sea Level	Taylor	USA	
813	Full	Antarctic Cenozoic Paleoclimate	Williams	USA	373
866	Full2 (MSP or Ck)	Japan Trench Paleoseismology	Strasser	ECORD - Switzerland	386

G. Uenzelmann-Neben continued to summarize MSP proposals at the SEP:

Proposal #	type	Short Title	PI	Country	
796	ADP	NADIR: Nice Amphibious Drilling	Kopf	ECORD (Germany)	Revise @SEP
863	MDP	ISOLAT Southern Ocean Paleoclimate	Peterson	USA	Revise @SEP
915	Full (MSP or JR)	North Atlantic Fjord Sediment Archives	Giraudeau	ECORD - France	Revise @SEP
931	Pre	East Antarctic Ice Sheet Evolution	Shevenell	USA	Develop Full @SEP

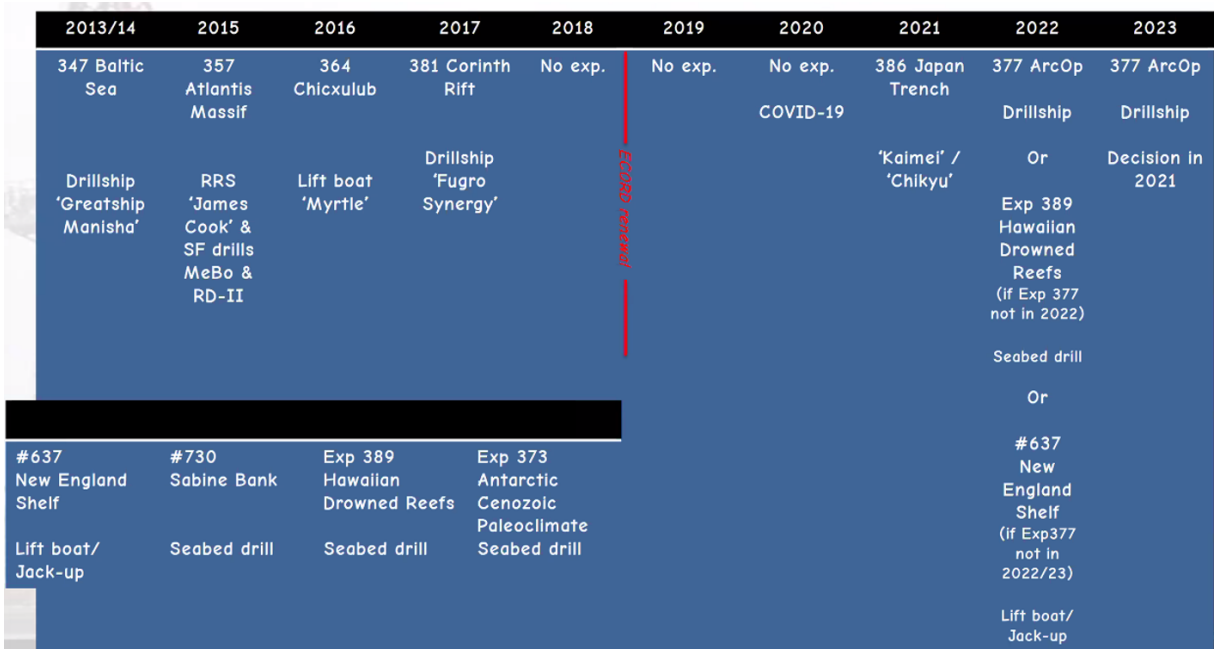
Proposal #796: no activity over the last years

Proposal #863: no activity over the last years

Proposal #915: The proponents decided not to resubmit the proposal.

Proposal #931 was submitted in 2018.

G. Uenzelmann-Neben has shown the MSP 2020-2023 operational plan:



The remaining budget after the implementation of IODP Expedition 386: Japan Trench Paleoseismology would be of $36M USD.

IODP Expedition 377: Arctic Ocean Paleoceanography should be implemented in 2022 or 2023 within the budget limit agreed by the ECORD Council. A decision was expected before 31 October 2020 (ECORD Facility Board Consensus 20-06-02).

IODP Expedition 389: Hawaiian Drowned Reefs should be implemented if IODP Expedition 377: Arctic Ocean Paleoceanography is scheduled in 2023 (ECORD Facility Board Consensus 20-06-03). IODP Expedition 389 has already been well prepared for implementation in 2019. An expedition based on proposal #637: New England Shelf Hydrogeology should be implemented in 2022, if IODP Expedition 377: Arctic Ocean Paleoceanography cannot be implemented before the end of the programme (ECORD Facility Board Consensus 20-06-04). This expedition would have close links to ICDP and to JR proposal #972. It is still too early to schedule an expedition for 2023.

5. Update on 2050 Science Framework (A. Morris)

(14:24)

A. Morris presented an update on the 2050 Science Framework "Exploring Earth by Scientific Ocean Drilling".

A series of international workshops (J-DESC, PROCEED, ANZIC, NEXT, IODP-China, IODP-India) attended by over 650 scientists has been organised in 2019 that led to the scientific input in this document. It has taken about one year from July 2019 to July 2020 to go from the idea to the final document. The PROCEED – Ex**p**anding F**ro**ntiers of S**cie**ntific Oc**e**an **D**rilling – workshop was held on 6-7 April 2019 prior to the EGU at the Austrian Academy of Sciences in Vienna to define new goals for a future international scientific ocean drilling programme to be developed beyond 2023. The PROCEED

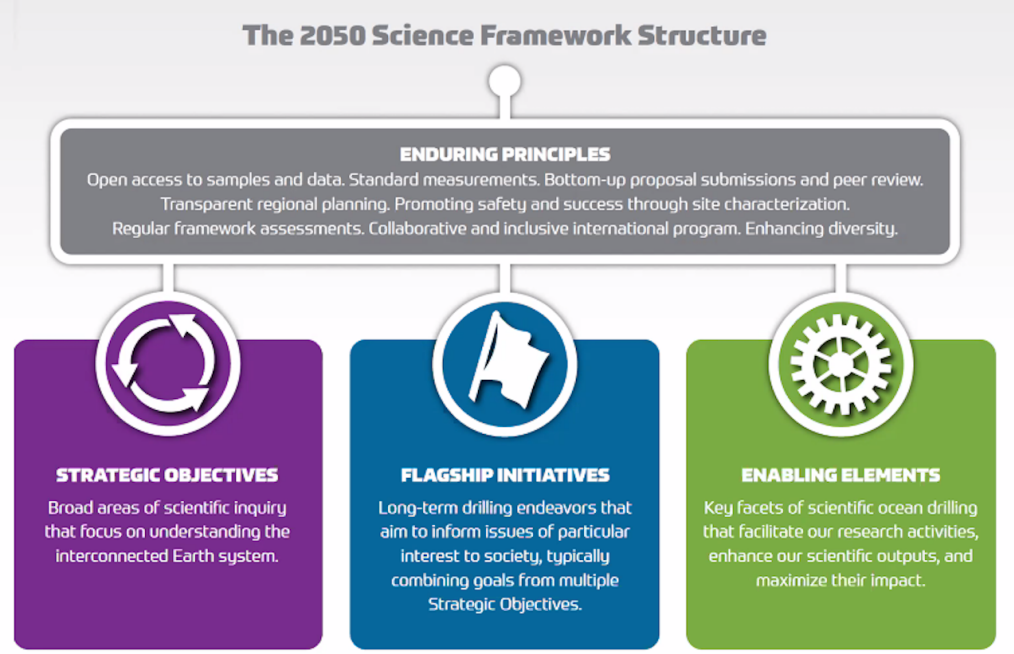
scientific and organising committees were composed of 16 and six members, respectively. The PROCEED attendees agreed that the content of the IODP Science Plan is still appropriate, but the architecture needs to be changed. The new Science Plan needs to highlight that this is a new programme. The content and architecture depend on the target audience and purpose. There are three versions of the Science Framework for multiple audiences: funding agencies, public and scientists.

The new big science ideas include planetary hazards; land to sea transects; life cycle of a plate; origin of life: planetary dynamics to habitability; tectonic, oceanography and climate sensitivity; future evolution of life: from past to future. A new science plan should consist of achievable topics, but should also include aspirational goals, which may not be completed within a 15-year programme. The science plan should include science that is achievable in 5, 10, 15 and more than 15 years. Science questions should be clear, broad and important for society. A focus should be on interdisciplinary links between research fields. All mentioned ideas and suggestions from the PROCEED workshop were included into the new Science Framework.

Representatives from each of these international workshops were nominated to attend the Science Plan Working Group Meeting that took place in New York. This meeting led to the structure and roadmap of new science plan. Anthony Koppers (USA) and Roz Coggon (UK) were appointed as lead editors. The outcomes of the New York meeting were discussed, modified and approved by the IODP Forum. The Science Framework Writing Team selected by the editors was appointed. The Science Framework Writing Team, 46 people, was led by Anthony Koppers (USA) and Roz Coggon (UK). Besides the lead editor from the UK, eleven ECORD members (3 GER, 5 UK, 1 FRA, 2 SWE) contributed to the writing or the review of the new Science Framework.

The writing/reviewer team met in October 2019 for the first time and overall two internal versions of the new Science Framework were produced. Version #1 of the Science Framework has been posted on IODP.org for commenting and 120 reviews plus 1717 comments have been received. From April to July 2020, the Lead Editors worked with Ellen Kappel to transfer the chapters into the final design. In July 2020, version #2 was posted on IODP.org for commenting and 178 reviews plus 648 comments have been received. About half of the survey takers during the second community survey were early-career scientists (less than 15 years after the PhD). From August to September 2020, the Lead Editors worked with Ellen Kappel on version #3, which was endorsed by the IODP Forum on 22 September 2020.

The new Science Framework contains four main components: enduring principles, strategic objectives, flagship initiatives and enabling elements.



The seven strategic objectives form the core of the new programme and include topics that resonated across all of the international meetings. These strategic objectives are open-ended to encourage innovation and discovery through a bottom-up proposal process. The five flagship initiatives are multi-expedition endeavors that cross-cut multiple strategic objectives. They require a long-range vision and interdisciplinary efforts over 10-20-year time periods. Enabling elements include 1) Broader Impacts and Outreach; 2) Land to Sea; 3) Terrestrial to Extraterrestrial, and 4) Technology Development and Big Data Analytics.

The Science Framework is built around interconnections, international, multi-disciplinary collaboration and is aspirational with science that has societal impact. This document is built by and for the next generation of scientists and is inclusive. The Framework is in place before programmes are developed and implemented. It forms the structure on top of which new programmes and new facilities are built. The structure of the Science Framework is drastically different and thus also requires developing new programme rules, panel infrastructure and processes. The Framework is purposefully broad and open, and this has some implications for how proposals are written and reviewed. The Framework is built on top of eight enduring principles and it has to be considered how any future programme(s) ensure this foundation is propagated. It has to be made sure that the enabling elements actually enable and enhance science. The new flagship initiatives need to be incorporated into the proposal system. The Framework document is much longer ranging and will endure multiple programme cycles, and therefore, it is important how it can be maintained, revised and evaluated.

Three 2050 Science Framework documents have been produced: a 124-page Framework document, a 12-page summary or brochure and a 2-page flyer or pamphlet. These documents can be found on the IODP website: https://iodp.org/2050-science-framework

ECORD Council Consensus 20-09-07: The ECORD Council applauds all contributors to the new 2050 Science Framework for compiling this outstanding document, that will inspire the IODP community and open the path to the future of international scientific ocean drilling.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

6. ECORD post-2023: principles and intentions (G. Camoin)

(14:56)

In June 2020, the ECORD Vision Task Force (EVTF) drafted a document regarding the post-2023 ECORD strategy. This document will evolve over the next two years while building the future of ECORD. Implementation plans need to be developed to achieve the objectives of the '2050 Science Framework'.

--- *CONFIDENTIAL* ---

ECORD Council Consensus 20-09-08: The ECORD Council approves the 'Post-2023 ECORD strategy' document that was prepared by the ECORD Vision Task Force.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 20-09-09: The ECORD Council reaffirms ECORD's strong will to continue to be an independent platform provider in a post-2023 programme to conduct MSP expeditions that are essential to meet many scientific objectives of the '2050 Science Framework' in a post-2023 programme. The ECORD Council sees as a priority at least to maintain a similar MSP operational plan than in the current programme.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 20-09-10: The ECORD Council strongly supports the provision of a new, riserless, global-ranging US vessel to replace the JOIDES *Resolution* as such a platform is of pivotal importance to achieve many scientific objectives of the '2050 Science Framework' in a post-2023 programme.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 20-09-11: The ECORD Council expresses strong interest in the provision of the riser vessel *Chikyu* to fulfill specific scientific objectives of the '2050 Science Framework' in a post-2023 programme.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 20-09-12: The ECORD Council will consider other propositions dealing with the development of additional platform capabilities to fulfill the scientific objectives of the '2050 Science Framework' in a post-2023 programme.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

(15:54)
coffee break
(16:09)

7. IODP Forum - Post-2023 implementation strategies and ECORD partners' intentions (D. Kroon)

(16:09)
The IODP Forum endorsed the final version of the new Science Framework (see 2020 IODP Forum Consensus Statement #1).

Future IODP Forum issues (see 2020 IODP Forum Consensus Statement #2): The most important issue to be discussed at future IODP Forum meetings is the transitioning from the 2013-2023 Science Plan to the 2050 Science Framework. This transitioning phase should start on 1 October 2021 when it will be known if there will be a new US platform. An additional IODP Forum meeting is proposed for February 2021 to discuss this transitional period. Another issue to be discussed is the implementation of the 'Enabling Elements'. The 'facilities' need to be defined, including virtual expeditions. The role of the next 'Forum' and its membership structure needs to be defined. A descriptive and accurate "programme" name needs to be considered. A new implementation procedure for the second post-cruise meetings needs to be considered. There is the idea to hold these meetings at the core repositories or at other relatively cheap places. The IODP Forum can only coordinate and make suggestions.

Next meetings

(16:31)

ECORD Council Consensus 20-09-13: The ECORD Council decides that the next ECORD Council Spring meeting will be held in Lisbon, Portugal during the first two weeks in June 2021.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 20-09-14: The ECORD Council decides that the ECORD Council-ESSAC meeting #9 will be held in Granada, Spain in late October or in early November 2021.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

B. Westerop closed the meeting at 16:33.

Acknowledgements

ECORD Council Consensus 20-09-15: On behalf of the ECORD community, the ECORD Council warmly congratulates Dave Smith in his upcoming retirement on 9th October. The ECORD Council gives its upmost thanks to Dave for his 16-year contribution to ECORD as the ESO Operations Manager. Dave's dedication and professionalism has led to multiple successes for mission-specific platform Expeditions, from the coral reefs offshore Tahiti to the Chicxulub impact crater. We wish Dave all the best in his retirement.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 20-09-16: On behalf of the ECORD community, the ECORD Council warmly thanks Carol Cotterill for her contribution to ECORD over the last 12 years. Carol delivered her various roles for ESO with passion, from Expedition Project Manager on several mission-specific platform Expeditions, to ESO Outreach Manager where she demonstrated her keenness and ability to communicate IODP science to the public. We wish Carol all the best in her new role with USSSP, and we look forward to working with her in future.

In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

8. Post-2023 renewal of EMA and ESO - draft Expression of Interest

ECORD CLOSED SESSION (*ECORD Council members only*)

List of Consensus reached by email between the ECORD Council - ESSAC Meetings #7 (Nov. 2019) and #8 (Sep.-Oct. 2020) and validated at the ECORD Council - ESSAC Meeting #8

ECORD Council Consensus 19-11-10: The ECORD Council confirms the scheduling of Expedition 377 'Arctic Ocean Paleoceanography (ArcOP)' in FY21 in light of the Risk Assessment document provided by ESO. The ECORD Council thanks ESO for providing this informative and exhaustive document on time. (28 November 2019)
In favour: 13, **Abstain**: 1 (UK), **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 19-12-01: The ECORD Council approves the UKRI additional funding of £320k for 2019 on top of its usual subscription amount (£2.6M). (4 December 2019)
In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 20-02-01: The ECORD Council approves the French contribution to ECORD of 3,590,000 € for 2020. (12 February 2020)
In favour: 13, **Abstain**: 1 (Sweden), **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 20-03-01: The ECORD Council approves the Canadian contribution to ECORD of 96,500 € for 2020. (10 March 2020)
In favour: 14, **Abstain**: 0, **Against**: 0, **Absent**: 1 (Spain)

ECORD Council Consensus 20-05-01: The ECORD Council approves the nominations of Antje Voelker (Portugal) on the Science Evaluation Panel (SEP) / Science Group and of Tim Reston (UK) and Uisdean Nicholson (UK) on the Science Evaluation Panel (SEP) / Site Survey Group, as proposed by ESSAC. (15 May 2020)
In favour: 15, **Abstain**: 0, **Against**: 0, **Absent**: 0

ECORD Council Consensus 20-05-02: The ECORD Council approves the nomination of Toby Harrold (SP) as new EPSP member. (26 May 2020)
In favour: 15, **Abstain**: 0, **Against**: 0, **Absent**: 0

ECORD Council Consensus 20-06-01: The ECORD Council approves the nomination of Angelo Camerlenghi (ITA) as new ESSAC Vice-Chair starting on 1 January 2021 for one year and incoming ESSAC Chair on 1 January 2022 for two years. (5 June 2020)
In favour: 15, **Abstain**: 0, **Against**: 0, **Absent**: 0

ECORD Council Consensus 20-06-15: The ECORD Council approves the extension of the term of Gabriele Uenzelmann-Neben as Chair of the ECORD Facility Board for one year, i.e. until 31 December 2022. (12 June 2020)
In favour: 15, **Abstain**: 0, **Against**: 0, **Absent**: 0

ECORD Council Consensus 20-09-01: The ECORD Council approves the nomination of Michele Rebesco (ITA) as new member of the ECORD Facility Board starting on 1 January 2021. (18 September 2020)
In favour: 15, **Abstain**: 0, **Against**: 0, **Absent**: 0

ECORD Council Consensus 20-09-02: The ECORD Council approves the revised FY21 ECORD Science Operator budget of $ 3,123,155 USD to be administered by the British Geological Survey, Edinburgh, United Kingdom. (18 September 2020)
In favour: 15, **Abstain**: 0, **Against**: 0, **Absent**: 0

LIST OF ACRONYMS

ACEX: Arctic Coring Expedition
ADP: Amphibious Drilling Proposal
AGU: American Geophysical Union
AMS: Arctic Marine Solutions
ANZIC: Australian and New Zealand IODP Consortium
APL: Ancillary Project Letter
ArcOP: Central Arctic Paleoceanography, IODP Expedition 377
BCR: Bremen Core Repository
BGS: British Geological Survey
CCOD: Canadian Consortium for Ocean Drilling
CNR: Consiglio Nazionale delle Ricerche – National Research Council, Italy
CNRS: Centre National de la Recherche Scientifique - National Center for Scientific Research, France
DAFSHE: Danish Agency for Science and Higher Education
DEDI: Distributed European Drilling Infrastructure
DFG: Deutsche Forschungsgemeinschaft - German Research Foundation
ECORD: European Consortium for Ocean Research Drilling
EFB: ECORD Facility Board
EGU: European Geosciences Union
EMA: ECORD Managing Agency
EPC: European Petrophysics Consortium
EPSP: Environmental Protection and Safety Panel
ERIC: European Research Infrastructure Consortium
ESFRI: European Strategy Forum on Research Infrastructures
ESO: ECORD Science Operator
ESSAC: ECORD Science Support and Advisory Committee
EU: European Union
EVTF: ECORD Vision Task Force
FB: Facility Board
FCT: Fundação para a Ciência e a Tecnologia - National Funding Agency for Science and Technology
FNS: Fonds National Suisse de la Recherche Scientifique - Swiss National Science Foundation
FY: Fiscal Year
GPC: Giant Piston Corer
GSI: Geological Survey of Ireland
ICDP: International Continental Scientific Drilling Program
IKC: In-kind contribution
IODP: Integrated Ocean Drilling Program (2003-2013) & International Ocean Discovery Program (2013-2023)
ISOLAT: Integrated Southern Ocean Latitudinal Transect
JAMSTEC: Japan Agency for Marine Earth Science and Technology
J-DESC : Japan Drilling Earth Science Consortium
JOIDES: Joint Oceanographic Institutions for Deep Earth Sampling
JR: *JOIDES Resolution*
JRFB: *JOIDES Resolution* Facility Board
JRSO: *JOIDES Resolution* Science Operator
MarE3: Institute for Marine-Earth Exploration and Engineering
MARUM: Zentrum für Marine Umweltwissenschaften der Universität Bremen - Center for Marine Environmental Sciences, University of Bremen
mbsf: metres below seafloor
MCIN: Ministry for Science and Innovation, Spain
MDP: Multi-phase Drilling Project
MeBo: Meeresboden-Bohrgerät - seafloor drill
MEXT: Ministry of Education, Culture, Sports, Science & Technology, Japan
MINECO: Ministerio de Economía y Competitividad - Ministry of Economy and Competitiveness
MoU: Memorandum of Understanding
MSP: Mission-specific platform
NSF: National Science Foundation, USA
NWO: Nederlandse Organisatie voor Wetenschappelijk Onderzoek - Netherlands Organisation for Scientific Research
OCE: Division of Ocean Sciences, NSF
ÖAW: Österreichische Akademie der Wissenschaften - Austrian Academy of Sciences
OSP: Onshore Science Party
OTF: Outreach Task Force
PMO: Program Member Office
PROCEED: Expanding Frontiers of Scientific Ocean Drilling

RD2: Rockdrill 2
SEP: Science Evaluation Panel
SF drill: Seafloor drill
SPRS: Swedish Polar Research Secretariat
UKRI: UK Research and Innovation
VR: Vetenskapsrådet - Swedish Research Council