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<sup>\*</sup> Apologies \*\* By videoconference

### 21 September 2023

#### 1. Introduction

### 1.1 Welcome and logistics (A. Turchyn/D. McInroy/J. Everest)

# **1.2** Welcome, opening remarks and rules of engagement (A. Turchyn) (9:35)

A. Turchyn welcomed the participants and opened the meeting. D. McInroy presented the logistical information.

### 1.3 Introduction of participants (All)

(9.37)

A. Turchyn let all the participants begin self-introductions.

### 1.4 Meeting agenda approval (A. Turchyn)

(9:44)

A. Turchyn presented the agenda and the roster. The ECORD Facility Board approved the agenda.

### **ECORD Facility Board Consensus 23-09-01:**

The ECORD Facility Board approves the agenda of the ECORD Facility Board Meeting #12.

### 2. ECORD Facility Board and other ECORD entities

Reports were presented for the EFB (A. Turchyn), EMA (G. Camoin), the BCR (U. Röhl), the EPC (T. van Peer), ESO outreach (U. Prange), ESSAC (A. Camerlenghi) and MagellanPlus (N. Hallmann).

# **2.1 EFB: Membership changes and activities since last meeting (A. Turchyn)** (9:48)

A. Turchyn gave an update on the ECORD Facility Board (EFB) activities.

<u>EFB members</u> are 1) the six Science Board members: EFB Chair Alexandra Turchyn (UK), EFB Vice Chair Gabriele Uenzelmann-Neben (GER), Michele Rebesco (ITA), Beth Christensen (USA), Yuki Morono (JPN) and Jody Webster (AUS); 2) the members of the ECORD Vision Task Force: ECORD Council core members, EMA Director, ESO Manager and ESSAC Chair; and 3) NSF and MEXT with one representative each.

Alexandra Turchyn (UK) replaced Gabriele Uenzelmann-Neben (GER) as EFB Chair on 1 January 2023. Yasuhiro Yamada (JPN) and Fengping Wang (CHN) rotated off on 31 December 2022.

### **ECORD Facility Board Consensus 23-09-02:**

The ECORD Facility Board thanks Beth Christensen and Michele Rebesco for agreeing to serve an extra year on the ECORD Facility Board until the end of the programme.

Currently, IODP Expedition 389: Hawaiian Drowned Reefs is implemented. IODP Expedition 405: New England Shelf Hydrogeology will be implemented in 2024.

### 2.2 ECORD News and Budget (G. Camoin)

(9:51)

G. Camoin presented the ECORD news and budget projections until FY24.

### 20<sup>th</sup> anniversary of ECORD in 2023:

- Marine Geology Special Issue: "Twenty years of Mission-Specific Platforms expeditions in scientific ocean drilling"; Editor in Chief: Michele Rebesco; Guest Editors: Angelo Camerlenghi, Gilbert Camoin, Beth Christensen, Ken Ikehara, Gabi Uenzelmann-Neben
- Celebration at the EGU 2023 ECORD-ICDP Townhall Meeting

Extension of ECORD through 2024: At the moment, ECORD has 15 member countries. The ECORD Council supports the extension of the 2019-2023 ECORD MoU through 2024 (see ECORD Council Consensus 21-10-05). A commitment of the ECORD funding agencies for FY24 is needed. The CNRS produced an addendum to the 2019-2023 ECORD MoU covering FY24, which has been sent to the ECORD Council members for signature on 4 September 2023. The ECORD Council decided to extend the terms of EMA (CNRS), ESO (BGS), ESSAC (OGS-Trieste) and the BCR through 2024 (see ECORD Council Consensus 21-10-06).

ECORD membership: In 2019 and early 2020, ECORD was in contact with its past members Israel, Poland and Belgium as well as with Croatia, Greece and Russia concerning a potential membership. In 2021, ECORD has been in contact with the United Arabian Emirates through the Italian community concerning a potential ECORD membership. In 2022, Iceland contacted ECORD.

<sup>\*</sup> Moment of silence for Judith McKenzie \*

ECORD partnership: USFY24 is an 'option' year in Memoranda underlying the JR Consortium for IODP. The ECORD Council decided to extend the 2019-2023 ECORD-NSF MoU through USFY24 and to pay half of the current contribution to the funding of the *JOIDES Resolution* in FY24, i.e., \$3.5M USD (see ECORD Council Consensus 21-10-07). As outlined in the CNRS-NSF draft MoU, NSF-owned cores from the different ocean drilling programmes will be stored, archived and available for sampling at no cost to NSF (see ECORD Council Consensus 22-11-10).

The 2013-2023 ECORD-JAMSTEC MoU does not include an 'option' year. The ECORD Council decided to extend the 2019-2023 ECORD-JAMSTEC MoU through 2024 (see ECORD Council Consensus 21-10-08).

There are following changes in the ECORD structure:

- 1) F. Lagroix (FRA) is ECORD Council Chair in 2023. A. Iadanza (ITA) is incoming Vice-Chair during the second half of 2023.
- 2) Alexandra Turchyn (UK) is EFB Chair and G. Uenzelmann-Neben (GER) is Vice-Chair until 31 December 2024.
- 3) A. Camerlenghi (ITA) is ESSAC Chair and A. Morris (UK) is ESSAC Vice-Chair until 31 December 2024. The extension of the term of the current ESSAC Office by one year will be discussed at the ECORD Council-ESSAC meeting in October 2023.

Tim Reston (UK) is SEP Co-Chair and Henk Brinkhuis is IODP Forum Chair until 30 September 2024.

The objectives of the next <u>ECORD Council ESSAC meeting</u>, which will be held in Nice, Italy, during the week of 2 October 2023 are:

- Transition from IODP to IODP<sup>3</sup>
- ECORD post-2024 and IODP<sup>3</sup>

G. Camoin presented the ECORD FY20 to FY24 budgets\*.

# **2.3 ESO:** Curation activities and update on policies (U. Röhl) (10:05)

U. Röhl gave an update on the Bremen Core Repository (BCR). The BCR currently archives about 178 km of cores from the Atlantic Ocean, Arctic Ocean, Mediterranean Sea, Black Sea and Baltic Sea. Core curation includes the documentation, preservation and protection of the cores as well as the promotion of the responsibility of taking samples from the cores for scientific purposes. The BCR is organizing and hosting Onshore Science Parties (OSPs). The MARUM is also involved in data management tasks, outreach and training. A total of 630 participants have been involved in the ECORD Summer Schools and ECORD Training Courses.

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<sup>\*</sup> See confidential annex.

BCR team: Nina Rohlfs will take over Curation & Logistics from Alex Wülbers (in October 2023.

Activities over the last year: The BCR hosted four Sampling Parties for IODP Expeditions 391, 390/393, 397 and 398. A high level of sampling has been performed, including the Sampling Parties for IODP Expeditions 391 and 390/393: from June 2022 to May 2023, 39,935 samples for 202 requests have been taken. On-site support has been provided for the Samling Party of IODP Expedition 386: Japan Trench Paleoseismology. Visitors and tours are at pre-pandemic level. An Open Campus has been organized in July 2023. The 15<sup>th</sup> ECORD Summer School "From Greenhouse to Icehouse - The Cenozoic Arctic Ocean and (global) climate history" was held on 4-15 September 2023.

Milestones in 2024: A high level of sampling will be performed on cores from more recent expeditions (Expeditions 390/393, 391, 397 and 398). The BCR will host 5-6 Sampling Parties for IODP-JR Expeditions with about 25 km of core. The IODP Expedition 389: Hawaiian Drowned Reefs OSP will take place in February 2024. The BCR will get prepared for the offshore phase of IODP Expedition 406: New England Shelf Hydrogeology. The ECORD Training Course and Summer School will be organized in 2024.

The BCR is well prepared for <u>post-2024</u>. The current IODP reefer has a remaining capacity of 12 km. The new research building including a new reefer is under construction and the opening will be in mid-2024.

# 2.4 ESO: Downhole logging data and core petrophysics measurements (S. Davies/T. van Peer)

(10:13)

T. van Peer presented the activities of the European Petrophysics Consortium (EPC).

<u>Staff updates:</u> Katharina Hochmuth left the EPC team and has been replaced by Andrew McIntyre in December 2022.

<u>IODP Expedition 386: Japan Trench Paleoseismology</u>: EPC supported the OSP Phase 2 / Personal Sampling Party of Expedition 386 as well as the the Editorial Meeting. EPC attended the Expedition 386 review meeting.

<u>IODP Expedition 389: Hawaiian Drowned Reefs:</u> A new petrophysics container is used. Comprehensive technical training has been provided. Petrophysics Staff Scientists Marisa Rydzy (Leicester) and Erwan Le Ber (Montpellier) are currently onboard. Creative solutions were required to ensure the shipping of the key elements of equipment (e.g., source).

<u>IODP</u> Expedition 406: New England Shelf Hydrogeology: EPC is preparing for IODP Expedition 406. The new logging tools have been incorporated in the equipment. EPC is exploring the use of a Nuclear Magnetic Resonance tool, as addition to the existing slimline tools. Onshore fresh/salt water logging has been incorporated into the Summer School.

ECORD Summer School: The summer school "Downhole Logging for IODP Science" has been organised from 24 to 28 July 2023. Participants from 11 countries by institution and 14 countries by nationality attended this in-person course. ECORD, ANZIC and USSSP fully funded 16 participants (four, four and eight, respectively) and UK IODP supported four participants. Five participants are or will be sailing on IODP Expeditions 400, 401, 402 and 403. A BGS visit and "petrophysics in the kitchen" have been organised. Partner visits and conference attendance are back to pre-COVID times.

<u>2024</u>: EPC is getting prepared for the offshore phase of IODP Expedition 406 and will support IODP Expedition 389 XCT scanning at the BGS in Keyworth.

# **2.5 ESO:** Outreach activities on MSP expeditions (U. Prange/M. Bednarz) (10:22)

U. Prange presented outreach activities related to MSP expeditions.

### **IODP** Expedition 389: Hawaiian Drowned Reefs:

Start of offshore phase:

- Media plan and outlook on possible outreach activities shared with Science Party
- Press release
- Media event / science meeting on Hawai'i prior to sailing

### Offshore phase:

- Blog by Onboard Outreach Officer Marley Parker: https://expedition389.wordpress.com/
- Social media activities
- Ship-to-shore event during ECORD Summer School

### IODP Expedition 386: Japan Trench Paleoseismology:

- PSP aboard *Chikyu* in fall 2022
- Press release for scientific publication in *Nature Communications* on 11 September 2023

#### IODP Expedition 406: New England Shelf Hydrogeology:

- First talks about outreach with Co-chief Scientists
- Starting with Communications Plan, planning outreach activities and preparing the science party
- Involving an offshore and possibly an onshore Outreach Officer

### 2.6 ESSAC: Staffing, courses and other activities (A. Camerlenghi)

(10:52)

Staffing of ECORD scientists on IODP Expeditions:

**Expedition 398**: Hellenic Arc Volcanic Field: Staffing is completed. Twelve ECORD scientists including two Co-chief Scientists were sailing.

**Expedition 399**: Building Blocks of Life, Atlantis Massif: Staffing is completed. Seven ECORD scientists including one Co-chief Scientist were sailing.

**Expedition 395**: Reykjanes Mantle Convection and Climate: Staffing is completed. Ten ECORD scientists including one Co-chief Scientist were sailing.

**Expedition 400**: NW Greenland Glaciated Margin: Staffing is completed. Eight ECORD scientists including one Co-chief Scientist are sailing.

**Expedition 389**: Hawaiian Drowned Reefs: Staffing is completed. Eleven ECORD scientists are sailing.

**Expedition 401**: Mediterranean-Atlantic Gateway Exchange: Staffing is completed. Eight ECORD scientists including two Co-chief Scientists are ready to sail in 2023/2024.

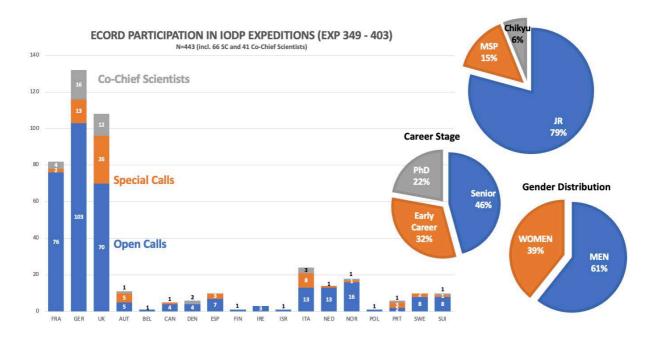
**Expedition 402**: Tyrrhenian Continent-Ocean Transition: Staffing is completed. Eight ECORD scientists including one Co-chief Scientist are ready to sail in 2024.

**Expedition 403**: Eastern Fram Strait Paleo-Archive: Staffing is completed. Seven ECORD scientists including one Co-chief Scientist are ready to sail in 2024.

**Expedition 406**: New England Shelf Hydrogeology: Staffing in progress. Fourteen applications received.

**Expedition 405**: Japan Trench Tsunamigenesis: Staffing in progress.

During the ECORD staffing process four parameters need to be considered: 1) expertise (1<sup>st</sup> quintile of independent rankings); 2) carrer stage (at least one PhD and one early-career scientist); 3) gender (equal) and 4) membership (reflecting financial contributions). ESSAC provides a short list of applicants so that Co-chief Scientists and operators can choose.



ECORD Summer Schools and Scholarships: Three ECORD Summer Schools have been organised in 2023:

- 1) "Downhole Logging for IODP Science" was held from 24 to 28 July. Twenty-six participants, of those 16 from ECORD, attended this summer school.
- 2) The 2023 Urbino Summer School in Paleoclimatology was held from 6 to 22 July. Fourty-nine participants, of those 30 from ECORD, attended this summer school.
- 3) The 2023 Bremen Summer School with the topic "From Greenhouse to Icehouse The Cenozoic Arctic Ocean and (global) climate history" was held at MARUM from 4 to 15 September. Twenty-two participants, of those 18 from ECORD, attended this summer school. Besides supporting the three traditional ECORD Summer Schools in Bremen, Urbino and Leicester, ESSAC supported the INA Summer School on Evolution and Taxonomy (INASSET 2023 Mesozoic Nannofossils), which was held at the University of Parma, Italy, from 25 June to 1 July 2023.

In 2023, 37 ECORD Scholarship applications have been received.

ECORD Training Course: In total, 30 participants attended the course "The Shipboard Simulation Experience".

ECORD Research Grants: In total, 17 grant applications have been received.

## 2.7 Past and future MagellanPlus workshops (N. Hallmann)

(10:43)

N. Hallmann presented the composition of the <u>MagellanPlus Steering Committee</u>. The Chair is Lucas Lourens and the Vice-Chair is Johan Lissenberg.

ECORD and ICDP fund MagellanPlus workshops and travel grants to support the development of new and innovative scientific drilling proposals for all IODP platforms and ICDP. The MagellanPlus workshop programme provides financial support of up to 15 k€ per workshop. Since 2014, 42 MagellanPlus workshops have been organised and 28 IODP preand full proposals have been generated. Since 2012, more than 1600 participants from 15 ECORD and 30 non-ECORD countries, of those seven IODP and 23 non-IODP countries, have been involved in MagellanPlus workshops. On average, 24% of early-career scientists are involved in the workshops.

The MagellanPlus Steering Committee suggested to issue two calls for workshop proposals with deadlines of 15 January and 15 May 2023 generating MSP drilling proposals addressing the Strategic Objectives of the 2050 Science Framework. In 2023, three workshop proposals have been received and the MagellanPlus Steering Committee decided to fund two workshops: MSP drilling the SE-Asian Sunda Shelf and 21st Century Drilling: Building Capacity in the Digital Domain on scientific ocean drilling legacy material. The latter is not a classical proposal to develop a drilling proposal, but a proposal on scientific ocean drilling legacy material. The proponents plan to organize two linked workshops in 2024 based on

their proposal. The third proposal needs to be revised.

So far, three workshops have been organised in 2023, and one more workshop will be held in October 2023. A MagellanPlus call for workshop proposals with a deadline of 15 January 2024 will be issued in October 2023.

In 2023, nine travel grants have been received to attend four different workshops:

- Three French scientists have been supported to attend the USSSP workshop on "Development of Scientific Drilling Proposals in the Gulf of Papua", which was held in Arizona, USA, in March 2023.
- A Norwegian scientist has been supported to attend the IMMAGE pre-cruise (IODP Expedition 401) workshop in Bristol, UK, in July 2023.
- Two ECORD scientists from the UK and from Portugal have been supported to attend the USSSP workshop on "Developing Strategies for the Scientific Investigation of Sediment Drifts on Campeche Bank, Gulf of Mexico", which was organized in Mexico City in August 2023.
- Three ECORD scientists from the UK, Austria and Germany have been supported to attend the J-DESC/KCC workshop on "Repository Core Re-Discovery Program (ReCOrD) pilot", which was held at the KCC in August-September 2023. As a pilot project, this workshop was based on scientific ocean drilling legacy material.

#### For further information:

 MagellanPlus Workshop Series Programme: <a href="https://www.ecord.org/science/magellanplus/">https://www.ecord.org/science/magellanplus/</a>

> (10:53) coffee break (11:17)

### 3. IODP<sup>3</sup> and the IODP-2 - IODP<sup>3</sup> transition

## 3.1 IODP<sup>3</sup> update overview (G. Camoin/N. Eguchi)

(11:17)

- G. Camoin, N. Eguchi and Dave McInroy on behalf of the IODP<sup>3</sup> Planning Working Group gave an update on IODP<sup>3</sup>.
- G. Camoin presented the IODP<sup>3</sup> principles and architecture. The basic principles of IODP<sup>3</sup> reaffirm the principles of the successive scientific ocean drilling programmes: a single international Science Framework; international staffing of expeditions and advisory panels; being transparent, open, flexible and international; programme-wide standard policies and guidelines; sustainable management of knowledge-based resources (samples, data and

publications) and public access to knowledge-based resources.

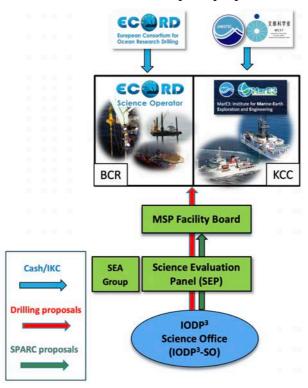
IODP<sup>3</sup> was conceived from an international perspective and will start on 1 January 2025. IODP<sup>3</sup> will implement 1) offshore expeditions following an expanded MSP concept by diversifying drilling and coring technologies and applying them to all drilling environments; and 2) Scientific Projects using Ocean Drilling ARChives (SPARCs) that are international and multidisciplinary projects that have objectives originating from or that are based on ocean drilling archives.

### **Programme Organization**

- ECORD and Japan will keep their own identity and entities.
- ECORD-Japan joint entities: Vision Task Force (VTF), Communication Task Force (CTF) and the Magellan<sup>3</sup> Workshop Programme.



- ECORD and Japan agree to establish a joint MSP Facility Board.
- IODP<sup>3</sup> needs services of an IODP<sup>3</sup> Science Office for proposal and data management as well as those of a SEP and the SEA Group for proposal evaluation.



### • IODP<sup>3</sup> Support Office (IODP<sup>3</sup>-SO)

- Will provide logistical support for all scientific aspects of the programme including development, implementation and management of the community-led, bottom-up drilling proposal submission and evaluation system (and associated databases), the participant portal and IODP<sup>3</sup> website, an online, open-access publication system, expedition-related reports, and an expedition-based bibliographic database.
- o Call for applications issued on 18 September 2023
- o Start phase: late spring 2024

### • IODP<sup>3</sup> Science Evaluation Panel (IODP<sup>3</sup>-SEP)

- Will be the entity responsible for scientific peer review and evaluation of drilling proposals submitted by the international scientific ocean drilling research community and of the SPARC proposals submitted by IODP<sup>3</sup> members.
- o Composition: core group of about 30 scientists/experts + ad-hoc members
- SEA (Safety and Environmental Advisory) Group: pool of experts to identify
  potential risks early in process; Operators will have responsibility for safety and
  environmental issues of the programme.

#### • MSP Facility Board (MSP-FB)

- Will be the entity responsible for selecting and scheduling drilling/coring proposals for implementation by the ECORD Science Operator (ESO), JAMSTEC, or as expeditions implemented jointly by ESO and JAMSTEC/MarE3.
- o Selection and scheduling of SPARC proposals

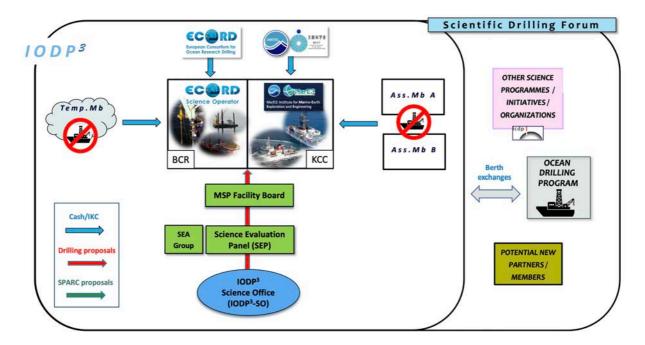
#### Scientific Projects using Ocean Drilling ARChives (SPARCs)

- Large-scale research projects that may address any aspect of the 2050 Science Framework.
- Objectives that maximise the return on the legacy assets (i.e., cores, samples and data) from current and past scientific ocean drilling programmes without new drilling or other operations at sea.
- Will provide a mechanism for the international ocean drilling science community to develop large-scale interdisciplinary collaborations, further extending the legacy asset-based concepts introduced towards the end of the International Ocean Discovery Program (LEAPs, ReCoRD, AILAF).
- Will be reviewed by SEP.
- Accepted proposals will be forwarded by SEP to the MSP-FB, along with associated nominations for Co-Chief Scientists, and the MSP-FB will select projects to be funded for implementation in each annual round.
- An open call for international scientific participation will be issued for each scheduled SPARC.
- Applications for participation will be evaluated by the IODP<sup>3</sup> Programme Member Offices (PMOs).
- PMOs will take into account the need to balance required expertise, national quotas

- (according to financial contributions to IODP<sup>3</sup>), gender and career stages.
- Will have a funded duration of three years and will receive €300,000 for its implementation. Proposals should have a maximum of five co-proponents.
- Co-proponents of a funded SPARC will automatically become Science Party members (with two selected as Co-Chief Scientists), but the remaining Science Party members will be selected following an open call for applications.
- Overall size of the final Science Party for a SPARC is flexible and can be adapted to project needs.
- SPARCs will have the potential to expand shore-based participation, increase value of legacy data, generate data to develop new drilling proposals, contribute to implementation of FAIR data, generate opportunities for ECRs and reinforce bottom-up, proposal-driven, international character of scientific ocean drilling.

### Membership/Partnership

- Core Members: platform providers (currently ECORD and Japan)
- Associate Members: regular cash contributions to IODP³ (± 1 M€) and not regularly providing platform(s) to IODP³
- Temporary Members: providing cash and/or project-based IKCs (minimum ± 0.5 M€) to access IODP³ expedition(s) and/or other service(s), and not regularly providing platform(s) to IODP³



- Proposal submission is open to scientists from all nations
- Selection of panel and board members is subject to a competitive process, and national representation ratios are subject to the relative levels of financial contributions by IODP<sup>3</sup> members
- Participation rights in IODP<sup>3</sup> expeditions and SPARCs are based on relative financial contributions of IODP<sup>3</sup> members. Co-chief Scientists not counted towards quotas.
- Educational activities are coordinated at the programme-level

	Panels	Proposal submission	Offshore expeditions	SPARCs	Samples/Data	Workshops - Att. / Supp	Training - Att / Supp
Core	1	1	1	1	1	11	11
Associate	1	1	1	1	1	11	11
Temporary	x	1	<b>/</b> *	<b>√</b> *	1	V X	1 1*
Non- members	x	1	×	X	<b>√</b>	V X	V X

<sup>\*</sup> subject to cash and/or in-kind contributions = financial contribution

### (11:43)

D. McInroy presented the IODP<sup>3</sup> operational plans based on the MSP concept. MSP expeditions will continue to offer scientific drilling access to a full range of geographic areas and drilling depths, drilling environments and science targets, including through collaboration with other programmes and initiatives (e.g., L2S transects jointly implemented by IODP<sup>3</sup> and ICDP). During the offshore phase of an MSP expedition ephemeral properties are measured and observations are made to guide drilling. During the two to three months time window between the offshore phase and the Onshore Science Party (OSP), core measurements can be performed (e.g., X-ray CT scanning, dating), the Science Party can digest the offshore data and produce a targeted sampling plan. A full suite of IODP measurements is done during the OSP.

### MSP expedition format

- Flexible duration of expeditions determined by scientific requirements
- Geographical and/or technological clustering
- Three different implementation plans (Basic, Intermediate and Full Plan)

### **Expedition participation**

- Co-chief Scientists not counted towards quotas and may come from non-member nations
- Flexible size of Science Party determined by scientific requirements
- Three routes to join the Science Party:
  - o apply to the PMOs to sail offshore and/or attend the OSP (highest priority);
  - o propose to PMOs a research plan pre-expedition without the intention to sail or attend the OSP:
  - o submit a sample request to the Sample Allocation Committee (SAC) during the moratorium (lowest priority).
- Anyone who is granted samples or data access during the moratorium is a Science Party member.
- Any researcher can submit a post-moratorium sample request, which is assessed by curatorial staff at the appropriate repository.

### ECORD already used following platform types:

- geotechnical vessels with marine heave-compensated wireline coring rigs;
- lift boats with land-based mining-style coring rigs;

• research and multipurpose vessels deploying alternative coring apparatus: seafloor drills (SFD) and giant piston corers (GPC).

### (12:03)

N. Eguchi presented two potential vessels for IODP<sup>3</sup>: DV *Chikyu* and RV *Kaimei*. DV *Chikyu* can be operated in a riser and riserless drilling mode. RV *Kaimei* can deploy a GPC system and a Boring Machine System.

### **QUESTION** about IODP<sup>3</sup> Science Office:

How might the costs of the IODP<sup>3</sup> Science Office impact the implementation of IODP<sup>3</sup> expeditions (R. Hackney)? Information about the budget and the staff of the IODP<sup>3</sup> Science Office will be provided, but the costs will have no large impact on implementing drilling expeditions (G. Camoin).

# 3.2 Proposal guideline changes for $IODP^3$ and report on how IODP-2 proposals will be considered in $IODP^3$ (A. Turchyn)

(12:19)

A working group (WG) met three times over the summer to discuss the IODP<sup>3</sup> proposal guidelines. WG members are A. Turchyn, G. Uenzelmann-Neben, L. Krissek, D. Blackman, N. Seama, M. Kinoshita, R. Hackney; and Ex Officio N. Eguchi, D. McInroy and C. Meth. Proposals must be submitted with three implementation plans, which requires discussion with the operators early in the process. Proposals need to address scientific objectives from the 2050 Science Framework. The WG recommended one proposal type in IODP<sup>3</sup> (no APLs anymore) and that short duration proposals do not need three implementation plans. Furthermore, the WG concluded that EPSP is essential. EPSP tasks will be taken over by the IODP<sup>3</sup> SEA Group. The WG recommended that external persons might be invited to SEP to guarantee required scientific expertise and to ensure a dedicated critical eye.

### DISCUSSION:

EPSP will be replaced by the SEA Group, which will be as early as possible involved in the process, i.e. there will be already an early advice during workshops (G. Uenzelmann-Neben). The SEA Group will follow a drilling proposal and do a final check before a proposal will be forwarded to the MSP-FB (G. Uenzelmann-Neben). A formal process needs to be established for the SEA Group (D. Strack). A process will be followed until a proposal is forwarded to the MSP-FB (G. Uenzelmann-Neben).

SEP will include core members and ad-hoc members, who can be invited when an expertise is needed, i.e. the external review is not cancelled (G. Camoin). Proponents will need to start thinking early about outreach/communication (A. Turchyn). An external reviewer should not be part of the drilling community to guarantee transparency (T. Reston). An external review needs to be critical and come from outside the community, and it should be done before a proposal is forwarded to the FB (C. Meth). An external review is more effective when it is

done earlier in the process (T. Reston). External reviewers could be former SEP members (D. McInroy). External reviewers should not have been recent SEP members (C. Meth).

# 3.3 Overview of the process for transfer of proposals from the JRFB to the EFB (A. Turchyn)

(12:45)

In summer 2023, a working group designed a process for a potential transfer of proposals at the JRFB to the new MSP Facility Board. The submission of an addendum until 1 October 2023 would allow a consideration at the SEP meeting in January 2024. The addendum needs to list three implementation plans and align the scientific objectives to the 2050 Science Framework. The second deadline to submit an addendum is 1 April 2024.

### DISCUSSION about proposal transfer:

Proponents asked if proposals might be transferred among the different ocean drilling programmes (A. Turchyn). The evaluation of proposals should be considered before discussing a transfer between the different programmes (G. Camoin). Proponents need clarification concerning submission and transfer of proposals (Y. Morono). There are two deadlines to transfer proposals to IODP³, 1 October 2023 and 1 April 2024 (A. Camerlenghi). Most of the proponents will probably wait until the second deadline and they will ask what will happen after this deadline (A. Camerlenghi). At the moment there is no preocedure for post-2024 (A. Turchyn). A proposal transfer between programmes might be difficult as there are different evaluation systems (A. Morris). An addendum can be submitted until the 1 April 2024 deadline, but post-2024 a new proposal needs to be submitted (G. Uenzelmann-Neben).

# 3.4 Expedition and meeting scheduling during the IODP-2 - IODP<sup>3</sup> transition (A. Turchyn)

(13:00)

A virtual joint EFB-CIB meeting will be organized in February/March 2024 to consider the outcomes of the SEP January meeting. A joint CIB-EFB meeting is planned for June/July 2024 following the SEP June meeting.

#### DISCUSSION:

An interim FB will make decisions before the MSP-FB will be in place (N. Seama). Current EFB and CIB members should be asked if they are willing to continue (G. Camoin). A rotation scheme needs to be considered with experienced and new members (G. Camoin). The new IODP<sup>3</sup> Science Office will be in place and the IODP<sup>3</sup> MoU will be signed in summer 2024 (G. Camoin).

Proponents receive all reviews and they need to agree if they want to release this information (C. Meth).

### **ECORD Facility Board Consensus 23-09-03:**

The ECORD Facility Board understands that planning for an interim MSP Facility Board must begin before the MSP Facility Board replaces the current EFB and CIB at the end of IODP. This schedule will ensure that IODP<sup>3</sup> operations can start immediately in 2025. The current chairs of the EFB and CIB have agreed to contact their ECORD and Japanese members to see if they are willing to serve on this interim facility board for 2024. The chairs of the EFB and CIB agree that the first meeting of the interim facility board should take place in March 2024, when the outcome of January SEP is available. At this meeting the EFB recommends that the interim MSP Facility Board considers scheduling opportunities for 2025.

### **ECORD Facility Board Consensus 23-09-04**:

The ECORD Facility Board recognizes that planning for scientific drilling beyond 2024 must begin now to avoid significant disruption and fears the potential loss of the global collaborative community that has sustained scientific ocean drilling for decades. The EFB recognises the significant effort that will be required to maintain the global collaborative community going forward, particularly due to funding limitations. The EFB therefore urges all parties to continue open and collegial discussion to ensure the continuation of a fully international approach to scientific ocean drilling.

(13:13) lunch break (14:10)

### 4. Review of MSP proposals @ EFB

Three MSP proposals that are currently at the ECORD Facility Board were reviewed and discussed: 1) #813-Full: Antarctic Cenozoic Paleoclimate (Expedition 373), 2) #730-Full2: Sabine Bank Sea Level and 3) #708-Full: Arctic Ocean Paleoceanography (Expedition 377).

A. Turchyn gave an overview of MSP proposals at the EFB:

**708-Full - Expedition 377**: Arctic Ocean Paleoceanography - in the EFB waiting room.

730-Full2: Sabine Bank Sea Level - in the EFB waiting room.

**813-Full - Expedition 373**: Antarctic Cenozoic Paleoclimate - in the EFB waiting room.

### 4.1 IODP Expedition 373: Antarctic Cenozoic Paleoclimate

## **4.1.1** Summary of objectives, SSD and previous EFB decision (B. Christensen) (14:10)

B. Christensen summarized the scientific objectives, the drilling plan and the proposal history. SEP forwarded this proposal to the EFB in January 2014. Expedition 373 was scheduled for 2018, but had to be postponed. Bidding in 2018 for a commercial seafloor drill was unsuccessful. In 2022, the proponents submitted an addendum to align the proposal to the 2050 Science Framework.

# **4.1.2** Drilling operations and costs (D. McInroy) (14:20)

Water depths:	353 – 1407 m
# of sites	16 primary, 47 alternate
Coring strategy	Up to 16 holes
Penetration: (primary sites):	50 mbsf per hole 800 m total
Lithologies:	Semi-lithified siltstone, mudstone, sandstone, conglomerate, lignite
Timing	Dec – Feb Minimum ice season

Water depths range from 353 to 1407 m. Penetration depths are 16 x 50 mbsf. There are three platform options using 1) a commercial seafloor drill and a hired vessel, 2) a commercial seafloor drill and a research vessel as IKC, and 3) an academic seafloor drill and a research vessel as IKC. D. McInroy presented cost estimates for these three options.\* The most likely option is a commercial seafloor drill and a research vessel as IKC.

<u>Permitting:</u> ESO needs to proceed under the Antarctic Treaty and consulted the UK Foreign & Commonwealth Office (FCO).

<u>IKC potential</u>: Commercial vessel options are expensive and there are only few research vessels that can carry a commercial seafloor system. One option is the Australian research and supply icebreaker RSV *Nuyina*, however, it is challenging to secure. Following exchanges with the Australian Antarctic Division (AAD), a strong representation of Australian scientists on the proposal who can apply for ship time is needed. ECORD needs to encourage the donation of a significant, in-demand facility in prime Antarctic summer season.

### 4.2 Proposal 730-Full2: Sabine Bank Sea Level

# **4.2.1** Summary of objectives, SSD and SEP review of Addendum (M. Rebesco) (14:30)

M. Rebesco presented the scientific objectives, the drilling plan and the history of proposal #730. The pre-proposal was submitted in 2009 and the full proposal was submitted in 2014. This proposal was forwarded to the EFB in 2016 and since then it has been in the waiting room. It was ranked secondary priority for the sea-level studies (EFB consensus 16-06-03). A new Principal Investigator (PI), Jud Partin, has been identified. In 2023, an addendum has

<sup>\*</sup> See confidential annex.

been submitted to assess the relevance to the 2050 Science Framework.

### 4.2.2 Drilling operations and costs (D. McInroy) (14:37)

Water denths: 14 – 110 m (SB) and 750 – 1400 m (BG)

water deptils.	14 - 110 III (3B) alid 730 - 1400 III (BG)	
# of sites	11 primary, 0 alternate	
Coring strategy	Up to 11 holes	
Penetration: (primary sites):	125 mbsf per hole (penetration limited by new lead proponent) 1,375 m total	
Lithologies:	Coral reefs and volcanic basement	
Timing	October to December, avoid weather/swell	

The proposal was descoped in May 2017 to fewer, shallower holes, which has reduced the expedition duration. Water depths range from 14 to 110 m at Sabine

Bank and from 750 to 1400 m ar Bougainville Guyot. Penetration depths were reduced to 125 mbsf at the 11 primary sites. A geotechnical ship with coring rig, a research vessel as IKC with a commercial or academic seafloor drill or a hired vessel with a commercial seafloor drill could be used. The weather window is from October to December. D. McInroy presented cost estimates for four different options.\* The two likely options are a geotechnical ship with coring rig and a hired vessel with a commercial seafloor drill.

Permitting: All sites are in the Vanuatu EEZ.

IKC potential: Commercial vessel options are expensive and there are only few research vessels that can carry a commercial seafloor system. A strong representation of scientists from the IKC-country on the proposal is needed who can lobby/apply for ship time.

### 4.3 IODP Expedition 377: Arctic Ocean Paleoceanography

### 4.3.1 Summary of objectives, SSD and SEP review of Addendum (G. Uenzelmann-Neben)

(14:45)

G. Uenzelmann-Neben summarized the scientific objectives and the proposal history. The overall goal is to recover a complete (composite) stratigraphic sedimentary record on the southern Lomonosov Ridge in order to reconstruct the Cenozoic climate history of the central Arctic Ocean. SEP reviewed proposal 708-Full in January 2014. In March 2015, Expedition 377 was scheduled for summer 2018. The expedition was cancelled in September 2017. The proposal has been descoped in 2019 to one deep (900 mbsf) and one shallow (40 mbsf) site. The expedition has been rescheduled for 2022, and finally cancelled due to the uncertainty of offshore operational safety. The EFB offered a transfer of the proposal to IODP3, and therefore asked the proponents to submit an addendum until the 1 April 2023 deadline. The proponents submitted Addendum 5 to the April 2023 deadline, in which they linked their objectives to the 2050 Science Framework and updated the list of propoenents following EFB's suggestion. The proponents plan to update their proposal depending on results of recent and upcoming IODP expeditions in the northern subpolar North Atlantic.

<sup>\*</sup> See confidential annex.

### 4.3.2 Drilling operations and costs (D. McInroy)

(14:53)

D. McInroy summarized the operational planning and the costs. In 2022, the costs of ArcOP were of \$27.04M USD, including the BGR contribution of \$590K USD. Assuming a 4% inflation per year, an identical expedition scheduled, for example, in 2028 might cost \$35M USD. The RV *Oden* was provided by SPRS at a preferred rate. The primary Russian icebreaker has been significantly cheaper than European icebreakers. The Medevac provision utilized Russian route and suppliers. On security grounds it is not feasible to schedule ArcOP due to the proximity to the Russian EEZ, the Northern Sea Route and being within the Russian Arctic claim.

### 5. Review of MSP proposals currently at SEP

A. Turchyn summarized MSP proposals at the SEP:

**796-ADP**: NADIR: Nice Amphibious Drilling **931-Pre**: East Antarctic Ice Sheet Evolution

1003-Pre2: N. CAVA Volcanic Ash

1005-Full: Sunda Sea Level and Weathering

1006-Pre: Mediterranean - Black Sea Gateway Exchange

1007-Full: Sunda Shelf Carbon Cycling

1008-Pre: Belize Barrier Reef Postglacial Sea Level

1011-Pre: Greenland Glaciated Margins

1012-Pre: North Sea Cenozoic Environments

# 5.1 Proposals at Full to Full2 stage - Summary of scientific objectives and potential costs

(15:05)

#### 5.1.1 Proposal 1005: Sunda Sea Level and Weathering

### 5.1.2 Proposal 1007: Sunda Shelf Carbon Cycling

Y. Morono presented the scientific objectives and the drilling plan. The objective is to reconstruct sea-level variation, shelf exposure, chemical weathering contributing to atmospheric  $CO_2$  and the carbon budget for SE Asia.

D. McInroy summarized the operational planning and the costs.

### Proposal 1005-Full: Sunda Sea Level and Weathering

Water depths:	32 – 424m
# of sites	7 primary, 7 alternate
Coring strategy	Assumed 1 hole per site
Penetration (primary sites):	258 – 884 mbsf per hole 2932 m total
Lithologies:	Sandstones, siltstones, mudstones
Timing	October-May Avoid summer monsoon

There are seven primary and seven alternate sites. Water depths range from 32 to 424 m. Penetration depths are 258 to 884 mbsf per hole. There are two platform options using a geotechnical vessel with coring rig or a drillship as IKC / collaboration. D. McInroy presented cost estimates for these two options.\*

<u>Permitting</u>: Clearance from Vietnam would be needed. It has to be considered that the proposed drill sites are close to oil and gas fields.

IKC potential: Potential collaboration with China Multifunction Platform.

### Proposal 1007-Full: Sunda Shelf Carbon Cycling

Water depths:	46 – 161m
# of sites	10 primary, 10 alternate
Coring strategy	2-3 holes at 5/7/10 sites (Basic/Int/Full)
Penetration (primary sites):	Assumed 2 holes per site, 5 site basic plan 166-466 mbsf per hole 3370 m total
Lithologies:	Sandstones, siltstones, mudstones
Timing	October-May Avoid summer monsoon

There are ten primary and ten alternate sites. Water depths range from 46 to 161 m and penetration depths from 166 to 466 m. There are two platform options using a geotechnical vessel with coring rig or a drillship as IKC / collaboration. D. McInroy presented cost estimates for these two options.†

Permitting: Clearance from Thailand, Malaysia and Indonesia would be needed.

IKC potential: Potential collaboration with China Multifunction Platform.

It should be discussed if the proposals 1005-Full and 1007-Full could be merged.

(15:20) coffee break (15:38)

<sup>\*</sup> See confidential annex.

<sup>†</sup> See confidential annex.

# 5.2 Proposals at Pre/Pre2 to full stage - Summary of scientific objectives and potential costs

## **5.2.1 Proposal 1003: N. CAVA Volcanic Ash** (15:38)

B. Christensen presented the scientific objectives and the drilling plan of proposal 1003-Pre2: Northern Central American Volcanic Arc (CAVA) Volcanic Ash. The objective is to construct ~750 kyr to 7.5 Myr records of the frequency, magnitude, and composition of the volcanic ash (layers and dispersed) in the marine sediments offshore of Southern Mexico and Northern Central America; and to constrain the effects of subseafloor post-depositional alteration of volcanogenic material on carbon cycling pathways and the subseafloor biosphere. The proposal was reviewed by SEP in July 2021 and January 2022. The proponents were asked to develop a full proposal. In response to SEP feedback, the number of primary sites has been reduced from 28 to 20, the depth of the holes has been reduced from 100 m to 60-75 m. Proponents need to submit a full proposal and seismic survey data.

### D. McInroy summarized the operational planning and the costs.

Water depths:	1208 – 4714 m
# of sites	20 primary, 36 alternate
Coring strategy	2-3 holes per site, 51 holes
Penetration: (primary sites):	75 mbsf per hole (max. , GPC likely less) 3825 m total
Lithologies:	Clay, silty clay, ash layers
Timing	November - June

The proponents proposed 20 primary and 36 alternate sites at water depths of 1208-4714 m and with a maximum penetration depth of 75 m. The coring strategy includes two to three holes per site. There are two platform options: 1) an IKC research vessel with Giant Piston Coring (GPC) and 2) a geotechnical vessel. D. McInroy presented cost estimates for these

two options.\*

<u>Permitting:</u> Clearance from five non-IODP countries would be needed: Costa Rica, Nicaragua, Guatemala, El Salvador and Mexico.

IKC potential: RV *Marion Dufresne* or another research vessel with long GPC.

### COMMENT:

Penetrating ash layers with GPC is difficult (N. Eguchi). The JR looks for opportunities post-contract with NSF and could be considered (D. McInroy).

<sup>\*</sup> See confidential annex.

### 5.2.2 Proposal 1008: Belize Barrier Reef Postglacial Sea Level

(15:54)

M. Rebesco presented the scientific objectives and the drilling plan of proposal 1008-Pre2: Belize Barrier Reef Postglacial Sea Level. The objective is to revise the LGM-Holocene sealevel rise "paradigm". In January 2023, SEP encouraged the proponents to develop a full proposal.

### D. McInroy summarized the operational planning and the costs.

Water depths:	12 – 145 m
# of sites	14 primary, 0 alternate
Coring strategy	1 hole per site, 14 holes
Penetration: (primary sites):	50 – 125 mbsf (but logging required) 980 m total
Lithologies:	Reef limestone with siliciclastic portions
Timing	Mid-April to mid-June (weather)

The proponents proposed 14 primary sites at water depths of 12-145 m and with penetration depths of 50 to 125 mbsf. D. McInroy presented one platform option, a geotechnical vessel with a coring rig, and the cost estimates for this option. \*

Permitting: Clearance from Belize would be needed.

<u>IKC</u> potential: A research vessel, which is large enough to carry a seafloor drill if wireline logging is abandoned.

#### COMMENT:

It would be important to get an accurate Carribean record of the Last Deglacial and to compare the Pacific with the Atlantic record (G. Camoin).

### **5.2.3 Proposal 1012: North Sea Cenozoic Environments**

(16:01)

G. Uenzelmann-Neben presented the scientific objectives and the drilling plan of proposal 1012-Pre: North Sea Cenozoic Environments The objective is to study Late Cenozoic glaciers, landscapes, climates and ecosystems of the North Sea (GLACE-NS). Besides the full operational plan, intermediate and basic plans are missing.

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<sup>\*</sup> See confidential annex.

### D. McInroy summarized the operational planning and the costs.

Water depths:	26 – 94 m
# of sites	3 primary, 8 alternate
Coring strategy	1 hole per site, 3 holes
Penetration: (primary sites):	1200 mbsf at each site 3600 m total
Lithologies:	Muddy to fine-grained marine sediments
Timing	May – September (weather)

The proponents proposed three primary and eight alternate sites at water depths of 26 to 94 m and with a maximum penetration depth of 1200 mbsf. There are two platform options: 1) a geotechnical vessel with a coring rig and 2) a large lift boat with a rig. D. McInroy presented cost estimates

for these two options.\* The preferrable option is the geotechnical vessel.

<u>Permitting:</u> Clearance from the UK, Denmark and the Netherlands would be needed.

# **5.2.4 Proposal 1006: Mediterranean-Black Sea Gateway Exchange** (16:09)

G. Uenzelmann-Neben presented the scientific objectives and the drilling plan of proposal 1006-Pre: Mediterranean-Black Sea Gateway Exchange. The objective is to address fundamental questions concerning the dynamic evolution of the Mediterranean-Black Sea gateway and its paleoenvironmental consequences. Three primary and five alternate sites are proposed in the northern Aegean, Sea of Marmara and the Black Sea. The proposal was last reviewed by SEP in January 2022 and the proponents were asked to develop a full proposal.

### D. McInroy summarized the operational planning and the costs.

The second second second	
Water depths:	41 – 424m
# of sites	3 primary, 5 alternate
Coring strategy	6 holes at 3 sites AEG-01: 730 + 100 mbsf MAR-01: 400 mbsf BSB-01A: 470 + 200 + 200 mbsf
Penetration (primary sites):	100-650 mbsf per hole 2100 m total
Lithologies:	Silts, sands, clay, clayey silt, clastic sediments with potential intercalation of thin (detrital) evaporite layers, distal clastics and hemipelagics.
Timing	No constraints

The proponents proposed three primary and five alternate sites at water depths of 41-424 m and with 100-650 m penetration depths. The coring strategy includes six holes at three sites. A geotechnical vessel needs to be used. D. McInroy presented a cost estimate for this option.\*

<u>Permitting</u>: Clearance from Greece, Turkey and Bulgaria (alternate sites only) would be needed.

<sup>\*</sup> See confidential annex.

The future security situation in the Black Sea needs to be considered.

### 5.3 Proposals deactivated or pending deactivation

# **5.3.1 Proposal 796: NADIR - Nice Amphibious Drilling** (16:18)

T. Reston presented the scientific objectives, the drilling plan and the history of proposal 796-ADP: NADIR Nice Amphibious Drilling. The aim is to characterize the strata of the Plio-Quaternary Var aquifer, and the marine metastable slope E and W of the 1979 collapse structure and its redeposited material downslope at the Ligurian margin (Nice, France). The proposal was last reviewed by SEP in June 2015 and needs to be revised. There is no current ICDP proposal: proposal was submitted to ICDP in January 2015; proponents were asked for a revision; proposal has been rejected in 2016 with encouraging feedback. The proponents communicated a couple of years ago that they are planning to resubmit the proposal. The proposal will need reformatting into the new joint Land-2-Sea proposal format. Two onshore and four offshore sites along a narrow corridor have been selected. A revised proposal with new data still needs to be submitted.

### D. McInroy summarized the operational planning and the costs.

Water depths:	20 – 104 m
# of sites	4 primary, 4 alternate, 2 onshore
Coring strategy	3 holes per site 1 cored, 2 opened and instrumented
Penetration: (primary sites)	60-150 mbsf per hole 1200 m total (400 m cored, 800m opened)
Lithologies:	Gravel to clay, pro delta sequences, transgressive shelf deposits
Timing	June to August Weather/ swell (if using barge)

The proponents proposed four primary and four alternate sites at water depths of 20-104 m and with 60-150 m penetration depths. The coring strategy includes three holes per site. There are three platform options: 1) a barge with a small rig, 2) a geotechnical vessel with a rig and 3) an academic seafloor drill with a ship as IKC. D. McInroy presented cost estimates for these three options.\* The barge approach would be much cheaper than using

a geotechnical vessel, but requires low-swell conditions. The significant wave height is generally below 1 m (August 2013). The use of seafloor drills might complicate instrumentation installation. The proponents have stated that they have 3<sup>rd</sup> party instruments to be installed in the boreholes. The drill sites are located in French waters close to the airport of Nice so that there might be special requirements. Onshore and offshore operational components could be ligned up as perhaps the same infrastructure, the coring rig, could be used. Mobilisation costs could be shared and operational consistency could be achieved if the same equipment is used for both operational phases.

#### **COMMENTS:**

The lead proponent is overcommitted and somebody needs to be identified to reactivate the proposal (G. Camoin). French scientists should take the lead (A. Camerlenghi).

The deepest sample of the MeBo200 has been taken in soft sediments at 147 mbsf (D. McInroy).

<sup>\*</sup> See confidential annex.

### **5.3.2 Proposal 931: East Antarctic Ice Sheet Evolution**

(16:31)

T. Reston presented the scientific objectives and the drilling plan of proposal 931-Pre: East Antarctic Ice Sheet Evolution. The target is to recover Late Cretaceous to late Quaternary strata from the Sabrina Coast shelf, offshore of the Aurora Basin, East Antarctica, in order to reconstruct ice sheet evolution and paleoclimate. The proposal was last reviewed by SEP in January 2018 and the proponents were asked to develop a full proposal.

### D. McInroy summarized the operational planning and the costs.

Water depths:	336 - 679 m
# of sites	7 primary, 6 alternate
Coring strategy	1 hole per site
Penetration: (primary sites):	150-200 mbsf per hole 1400 m total (max.)
Lithologies:	Diamict, silt, sand, and mud
Timing	Dec – Feb Weather / ice

The proponents proposed seven primary and six alternate sites with one hole per site and up to 200 m penetration. There are three platform options: 1) an IKC vessel with an academic seafloor drill, 2) an IKC vessel with a commercial seafloor drill and 3) a commercial ship with a commercial seafloor drill. D. McInroy presented cost estimates for these three options.\* The offshore duration is limited to 60

days for costing, i.e., this will require a descoping of the coring strategy, e.g., limiting penetraton depth in some holes and/or the number of holes.

<u>Permitting:</u> ESO needs to proceed under the Antarctic Treaty and consult the UK Foreign & Commonwealth Office (FCO).

<u>IKC potential:</u> Commercial vessel options are expensive and there are only few research vessels that can carry a commercial seafloor system. One option is the Australian research and supply icebreaker RSV *Nuyina*, however, it is challenging to secure. A strong representation of scientists from the IKC-country on the proposal who can apply for ship time is needed. ECORD needs to encourage the donation of a significant, in-demand facility in the prime Antarctic summer season.

### **ECORD Facility Board Consensus 23-09-05:**

The ECORD Facility Board recommends that Proposals 796 and 931, which have been dormant at SEP for an extended period of time, do not get deactivated before the April 1<sup>st</sup> 2024 IODP-Proposal submission deadline. These proposals will be deactivated if there is no progress for the April 1<sup>st</sup> deadline.

<sup>\*</sup> See confidential annex.

# **7. Expedition 386: Japan Trench Paleoseismology (M. Strasser)** (16:39)

Science Talk: Expedition 386: Japan Trench Paleoseismology (M. Strasser)

A. Turchyn closed the meeting at 17:14.

### 22 September 2023

# 8. Ship-to-shore call ongoing MSP expedition: Expedition 389: Hawaiian Drowned Reefs

(8:56 - 9:16)

# 6. Proposals that have requested transfer from the JRFB to the EFB (Addendums will be submitted October 1 for SEP review in January)

## 6.1 Proposal 1004: Nadir K-Pg Impact Crater

(9:33)

A. Turchyn presented proposal 1004-APL3: Nadir K-Pg Impact Crater. The proponents request seven days of JR time to test the hypothesis that this structure was caused by a marine-target impact of Late Cretaceous to Early Paleogene age.

D. McInroy summarized the operational planning and the costs.

Water depths:	903 – 907 m
# of sites	2 primary, 2 alternate
Coring strategy	1 hole at 2 sites
Penetration (primary sites):	600 mbsf & 700 mbsf 1300 m total
Lithologies:	Marine mudstone, mud, sand, breccia
Timing	No constraints

The proponents proposed two primary and two alternate sites at water depths of 903 to 907 m and with penetration depths of 600 and 700 mbsf. The coring strategy includes one hole at two sites. A geotechnical vessel needs to be used. D. McInroy presented a cost estimate for this option.\*

<sup>\*</sup> See confidential annex.

The basic implementation plan includes one drill hole, the intermediate plan two drill sites and the full plan three sites. The proponents will submit a revision at the October 1<sup>st</sup> deadline.

Permitting: Clearance Guinea would be needed.

## 6.2 Proposal 979: Arctic-Atlantic Gateway (IODP Expedition 404)

(9:38)

A. Turchyn presented the scientific objectives of proposal 979-Full2-Add2: Arctic-Atlantic Gateway, which was scheduled as Expedition 404 for late 2024. The aim is 1) to constrain the geological history of the only deep-water connection to the Arctic Ocean and its impacts on Earth's Cenozoic climate evolution, and 2) to understand the role of the Arctic-Atlantic Gateway region for the cryosphere-ocean evolution of the Northern Hemisphere.

### D. McInroy summarized the operational planning and the costs.

<u> </u>	1 1
Water depths:	2100 – 3102 m Combined water depths and penetrations 3197- 3902 m
# of sites	4 primary, 14 alternate
Coring strategy	1 to 4 holes at 4 sites
Penetration (primary sites):	300 - 1300 mbsf 6900 m total
Lithologies:	Clay, silty clay, sandy silt, sand, glacio-marine sediments, ice-rafted debris
Timing	Aug-Sep (sea ice minimum)

The proponents proposed four primary and 14 alternate sites at water depths of 2100 to 3102 m and with penetration depths of 300 to 1300 mbsf. The coring strategy includes one to four holes at four sites. A JR-type drillship needs to be used. D. McInroy presented a cost estimate for this option.\*

Permitting: Clearance from Greenland/Denmark would be needed.

IKC potential: Possible collaboration with NSF. The JR could be used.

Ice management needs to be considered.

### 6.3 Proposal 971: Kane Megamullion Deep Drilling

(9:44)

A. Turchyn presented the scientific objectives and the drilling plan of proposal 971-Full2: Kane Megamullion Deep Drilling. The objective is to drill two 500-meter cores into mantle rocks in a detachment fault on the Mid-Atlantic Ridge.

<sup>\*</sup> See confidential annex.

#### D. McInroy summarized the operational planning and the costs.

Water depths:	2080 – 2473 m Combined water depths and penetrations 2580 – 2973 m
# of sites	2 primary, 4 alternate
Coring strategy	1 hole at 2 sites
Penetration (primary sites):	500 mbsf per site 1000 m total
Lithologies:	Pelagic ooze, peridotite, talc-serpentine schist
Timing	December to May to avoid Atlantic hurricane season

The proponents proposed two primary and four alternate sites at water depths of 2080 to 2473 m and with a penetration depth of 500 mbsf per site. The drill sites are located in international waters. A large

geotechnical vessel needs to be used. D. McInroy presented a cost estimate for this option.\*

### 9. IODP Facility Boards and entities

There were reports on the *Chikyu* IODP Board (N. Seama), the *JOIDES Resolution* Facility Board (L. Krissek), the *JOIDES Resolution* Science Operator (G. Acton), the IODP Forum (H. Brinkhuis), the Science Support Office (C. Meth) and the Science Evaluation Panel (T. Reston).

### 9.1 Chikyu IODP Board (N. Seama)

(9:50)

<u>CIB membership:</u> There are two ECORD CIB members: Gilbert Camoin presenting the ECORD funding agencies and Achim Kopf as Science Board member.

eCIB\_Consensus-1022-01 on the selection of IODP Proposal 835 for DV *Chikyu* implementation. IODP Expedition 405: JTRACK - Tracking Tsunamigenic Slips Across and Along the Japan Trench will be implemented during the FY2024 operational window.

eCIB\_Consensus-1022-03 on the creation of a project coordination team (PCT) along with the lead proponent of proposal 835. The PCT will also review operational requirements for 939-APL3 to see if this could be implemented along with the expedition.

CIB Consensus-1122-01 on JTRACK PCT membership.

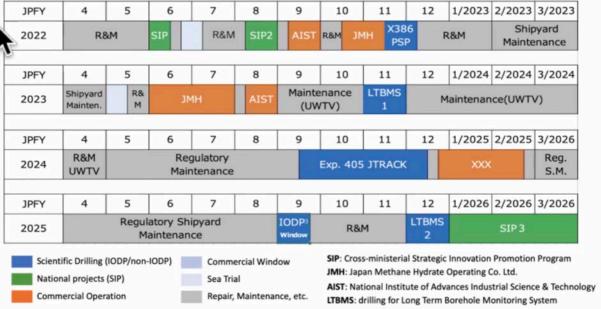
CIB\_Consensus-0323-01 on an IODP NanTroSEIZE synthesis workshop.

CIB\_Consensus-0323-02 on IODP Expedition 405 Co-chief scientists.

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<sup>\*</sup> See confidential annex.

## N. Seama presented the tentative *Chikyu* operational plan for JPFY2022 to JPFY2025:



The 7-year operational plan ends at the end of March 2026.

CIB\_Consensus-0623-03 on the creation of a working group for writing the proposal submission guidelines for IODP<sup>3</sup>.

CIB\_Consensus-0623-01 on the IODP<sup>3</sup> proposal submission guidelines working group adapting the current IODP proposal guidelines.

CIB Consensus-0623-04 on the transition between IODP and IODP<sup>3</sup>.

CIB Consensus-0623-07 on the management of active proposals.

CIB Consensus-0623-05 on moving proposals from one Facility Board to another.

### For further information:

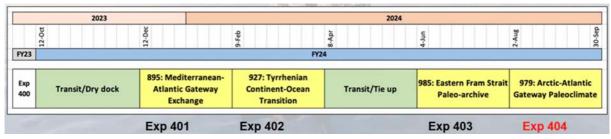
• Minutes of the CIB meetings: <a href="https://www.jamstec.go.jp/cib/">https://www.jamstec.go.jp/cib/</a>

### 9.2 JOIDES Resolution Facility Board (L. Krissek)

(10:01)

L. Krissek presented the FY24 JR schedule, the outcomes of the working group on virtual expeditions (LEAPs) and the May 2023 JRFB meeting.

<u>FY24 JR schedule:</u> Guidance from NSF was to schedule four expeditions of low cost and low operational risk, and to realize that the fourth expedition may have to be canceled due to increased operational costs or start of JR demobilisation.



Expedition 404 has been removed from the schedule.

Tasks of the <u>JRFB Working Group on Virtual Expeditions</u> (Legacy Asset Projects "LEAPs") will include to define the minimum requirements for a research effort to be considered a virtual expedition and to develop recommendations for procedures related to the evaluation, endorsement and scientific outcomes of such an expedition. Chair of this working group is Larry Krissek. A report has been approved by the JRFB and a pilot project is underway. Proposal guidelines have been drafted by a small group and approved by the JRFB. A call for LEAPs preliminary proposals has been issued with a deadline of November 1st, 2023. These proposals will be reviewed at the January 2024 SEP meeting. Two informational webinars have been held and the next one will be organized on 4 October 2023. LEAPs provide a new opportunity for a portfolio of stand-alone research endeavors without new drilling. Each LEAP is larger than a conventional single or multi-investigator project, and mirrors the collaborative and focused nature of shipboard experience (research, collaboration, mentoring and professional development). LEAPs do not preclude conventional single or multiinvestigator projects. For this pilot programme during IODP, the LEAP lifecycle is: preproposal by proponents, including a Project Management Plan; review by SEP; conduct engagement activities to broaden the Science Party; full proposal, and review and endorsement by SEP. Endorsement of a LEAP does not directly provide any funding.

L. Krissek presented consensus statements and action items from the May 2023 JRFB meeting.

### For further information:

• Minutes of the *JOIDES Resolution* Facility Board May 2023 meeting: https://iodp.org/jrfb-minutes/1208-jrfb-2023-may-minutes/file

### **ECORD Facility Board Consensus 23-09-06:**

The ECORD Facility Board applauds the JRFB and its international working group for developing the LEAPs concept over the past year. The EFB recommends that any LEAPs that are approved at the June 2024 SEP and have ECORD or Japanese lead proponents are considered for funding as suggested for SPARCs in 2025, so that IODP<sup>3</sup> has legacy projects that can begin at the start of the programme.

### 9.3 JOIDES Resolution Science Operator (G. Acton)

(10:24)

G. Acton presented results of IODP Expeditions 398: Hellenic Arc Volcanic Field, 399: Building Blocks of Life, Atlantis Massif, 395 + 384 (Engineeering Testing) + 395C: Reykjanes Mantle Convection and Climate as well as an update on the ongoing IODP Expedition 400: NW Greenland Glaciated Margin. XSCAN installation has been performed during Expedition 398P tie-up in Tarragona, Spain.

JRSO developed COVID Mitigation Protocols Established (COPE) for Safe JR Operations: <a href="http://iodp.tamu.edu/scienceops/JR\_COVID-Mitigation-Protocols.pdf">http://iodp.tamu.edu/scienceops/JR\_COVID-Mitigation-Protocols.pdf</a>

JRSO budget, demobilization and closeout proposal: The FY24 Annual Program Plan includes a budget of \$70.4M USD. Property that can be re-purposed will be shipped to Texas A&M. Disposition of property that cannot be re-purposed will occur in port. A closeout proposal needs to be submitted in December 2023. Cost estimates are required for extended closeout activities. Publication closeout extends about five years from the last expedition.

Long-term data access on Zenodo: Access will be further improved and data will be added.

(10:41) coffee break (11:14)

### 9.4 IODP Forum (H. Brinkhuis)

(11:14)

H. Brinkhuis summarized the outcomes of the IODP Forum meeting, which was held in Vienna, Austria, on 22-23 April 2023. The next IODP Forum meeting will be held in Wollongong, Australia, on 11 October 2023.

Consensus Statements of the April 2023 IODP Forum meeting:

 $\underline{https://www.iodp.org/forum-minutes-and-consensus-items/1203-forum-2023-april-consensus-items/file}$ 

### 9.5 Science Support Office (C. Meth)

(11:23)

The tasks of the IODP Science Support Office (SSO) are: 1) to support the JRFB and its advisory panels, including liaison functions with other facility boards, the IODP Forum, science operators and PMOs; 2) to manage the IODP proposal submission/review process; 3) to provide an IT platform (PDB, SSDB); and 4) to maintain the IODP website.

SSO supported the JRFB Working Group on Virtual Expeditions. LEAPs proposal submission guidelines have been written and approved by the JRFB. Three webinars concerning LEAPs have been organized. A call for LEAP proposals has been issued and the LEAP proposal submission deadline will be on 1 November 2023. A new proposal section for LEAPs has been created in the PDB and is currently in the final testing phase. The first SEP review of LEAPs will take place in January 2024 and feedback of SEP will help to determine future improvements.

C. Meth summarized the proposal statistics. At the moment there are 93 <u>active IODP proposals</u> in the system: 63 JR, 13 *Chikyu*, 12 MSP and 5 Multiple proposals. Of those, 56 are at the Facility Boards and 37 are at SEP. ECORD and the USA are nearly equal in the number of lead proponents (ECORD: 34, U.S.: 36, Others: 23).

### 9.6 Science Evaluation Panel (T. Reston)

(11:41)

T. Reston gave a panel update. SEP is responsible for the evaluation of all IODP proposals in terms of scientific excellence as well as completeness and quality of the site characterization data packages.

<u>SEP membership:</u> The Science Subgroup has 31 members and the Site Subgroup has 19 members (as of June 2023). SEP Co-chairs are Kathleen Marsaglia (USA) and Tim Reston (UK). Pre-SEP introductory meetings are organised for new panel members and a similar meeting is held before every SEP meeting.

Five watchdogs with expertise in science, site survey data and operation are responsible for the <u>evaluation of an IODP proposal</u>. General evaluation criteria for IODP proposals include 1) wide interest of scientific questions, 2) compelling and feasible scientific proposal, 3) advancement of the IODP Science Plan and 4) engagement of new communities or other science programmes. Site Characterization Classification to assess if the reviewed data are sufficient to support the scientific objectives.

The last three SEP meetings were hybrid: Southampton in June 2022, La Jolla in January 2023 and Pavia in June 2023.

At the <u>January 2023 SEP meeting</u>, six proposals have been reviewed, of which four were JR proposals and two MSP. The results of the January 2023 SEP meeting are shown in Table 1. MSP proposal 1008-Pre: Belize Barrier Reef Postglacial Sea-Level needs to be revised and MSP proposal 1009-Pre: Timor Sea Palaeoenvironment was declined.

Table 1: Outcomes of the January 2023 SEP meeting.

ID	Туре	PI	Short Title	Ship	Theme	Possible Decisions
941	Full2 Add2	Yasuhiko Ohara	Godzilla Megamullion Lithosphere Architecture	JR	EC	JRFB - Excellent
992	Full2	Peter Haeussler	Prince William Sound Subduction and Climate	JR	со	External Review
1002	Full	Taryn Noble	Totten Glacier Climate Vulnerability	JR	со	Revise to Full2
1004	APL3 Add	Uisdean Nicholson	Nadir K-Pg impact Crater	JR	СО	JRFB
1008	Pre	Eberhard Gischler	Belize Barrier Reef Postglacial Sea-level	MSP	СО	Revise Pre2
1009	Pre	Uwe Balthasar	Timor Sea Palaeoenvironment	MSP	СО	Decline

At the <u>June 2023 SEP meeting</u>, one full proposal, three pre-proposals, two APLs and two addenda at the request of the EFB have been reviewed. The results of the June 2023 SEP meeting are shown in Table 2. MSP proposals 1008-Pre2: Belize Barrier Reef Postglacial Sea-Level and 1012-Pre: North Sea Late Cenozoic Environments need to be developed into a full proposal. MSP proposal 1011-Pre: Northeast Greenland Glaciated Margin was declined.

Table 2: Outcomes of the June 2023 SEP meeting. Red: EFB special request, green: back from external review, orange: revised, blue: new proposal.

ID	Туре	PI	Short Title	Ship	Theme	Destination/ decision
708	Add5	Stein	Central Arctic Paleoceanography	MSP	СО	EFB: Good for SF 2050
730	Add	Partin	Sabine Bank Sea Level	MSP	со	EFB: Good for SF 2050
992	Full2 (Add)	Haeussler	Prince William Sound Subduction and Climate	JR	со	Forward to JRFB
1008	Pre2	Gischler	Belize Barrier Reef Postglacial Sea-level	MSP	со	Revise to Full
1010	APL	Ikehara	JTRACK Deep-Time Paleoseismology	Chikyu	EM	Revise to APL2
1011	Pre	Perez	Northeast Greenland Glaciated Margin	MSP	СО	Decline
1012	Pre	Newton	North Sea Late Cenozoic Environments	MSP	со	Revise to Full
1013	APL	Fulton	JTRACK observatory redeployment	Chikyu	EM	Holding Bin

### T. Reston summarized MSP proposals currently at SEP that may be forwarded to the EFB:

#	type	platform	Last reviewed	Lead	Title	Status / last review
796	ADP	MSP	6/2015	Achim Kopf	NADIR – Nice Amphibious Drilling	Revise to L2S proposal
931	Pre	MSP	1/2018	Amelia Shevenell	East Antarctic Ice Sheet Drilling	Revise to Full
1003	Pre2	MSP	1/2022	Ann Dunlea	N. CAVA Volcanic Ash	Revise to Full
1005	Full	MSP	1/2022	Peter Clift	Sunda Shelf Sea Level	Revise
1006	Pre	MSP	1/2022	Wout Krijgsman	Mediterranean-Black Sea Gateway Exchange	Revise to Full
1007	Full	MSP	6/2022	Zhifei Liu	Sunda Shelf Carbon Cycling	Revise
1008	Pre2	MSP	6/2023	Eberhard Gischler	Belize Barrier Reef Postglacial Sea-level	Revise to Full
1012	Pre	MSP	6/2023	Newton	North Sea Late Cenozoic Environments	Revise to Full

### Overview of potential *Chikyu* proposals at SEP:

P#	type	Title	PI	note
800	MDP	Indian Ridge Moho	Dick	No component proposal for Chikyu
805	MDP	MoHole to Mantle	Umino	No component proposal for Chikyu. Last communication August 2017
857 <sub>b</sub>	MDP2	DREAM: Mediterranean Salt Giant	Camerlenghi	857A for Chikyu deactivated in 2015. Last submission 2014. JR component proposal 857C to JRFB in Jan 2020
876	Pre	Bend-Fault Serpentinization	Phipps Morgan	Full proposal(s) requested Jan 2015, not received
898	Pre	Fore Arc Mohole-to-Mantle	Michibayashi	non-riser. Full proposal requested June 2016, not received
951	Full	North Hawaiian Arch Crust	Umino	non-riser. Pre reviewed June 2019, Full in Jan 2021 requesting "stronger depth control on the seismic layer 2/3 transition, implying it should be submitted only after the inclusion of additional OBS data"
1010	APL	JTRACK Deep-Time Paleoseismology	Ikehara	Revise to APL2
1013	APL	JTRACK observatory redeployment	Fulton	Holding Bin

The next SEP meeting will be held in La Jolla, CA, USA, on 10-11 January 2024.

# **10.** Discussion of initial phase of research drilling in IODP<sup>3</sup> (11:55)

### **Closed session (EFB and CIB members)**

(11:55) lunch break (14:00)

## 11. 2024 IODP Expedition 406: New England Shelf Hydrogeology

(14:00)

Scientific presentation by Co-chief scientist Brandon Dugan (USA).

(14:16)

### D. McInroy summarized the operational planning.

Water depths:	33 – 79 m		
# of sites	2 primary, 2 alternate		
Coring strategy	1 hole per site, choose 3rd site at sea		
Penetration: (primary sites):	550 mbsf per hole 1650 m total		
Lithologies:	Sands, silts and clays		
Timing	March – August Avoid hurricanes and winter storms		

The drilling plan includes three sites (two primary and one of the two alternate sites) at water depths of 33-79 m and penetration depths of down to 550 mbsf at each of the three sites. A geotechnical vessel or a large liftboat could be used.

The call for the Science Party is closed and nominations will be done by 9 October 2023. In July 2023 a Prior Information Notice was published and there were two interested companies. A draft tender specification has been produced. The market consultation ended on 4 September and three companies signed up. On 18 October a UK Cabinet Office meeting will be held. The tender call is open from October to November and bid evaluation will be done in December 2023. The contract will be awarded in January 2024 and the offshore phase is anticipated in spring-summer 2024.

### DISCUSSION about IODP Expedition 406: New England Shelf Hydrogeology:

The study sites are in or close to a windfarm development area and maybe there will be an opportunity to use a platform, which is currently in the region doing windfarm development (D. McInroy). Mobilisation and demobilization costs could be saved. However, the vessels are busy with windfarm development so that their availability might be a problem (D. McInroy). ESO is in contact with Fugro, but other contacts are welcome.

### 12. Review of Decisions and Actions (N. Hallmann/A. Turchyn/All)

(14:30)

A. Turchyn presented the consensus items.

### 13. Next EFB meeting (A. Turchyn)

(15:12)

### **ECORD Facility Board Consensus 23-09-07:**

The next ECORD Facility Board meeting will be held potentially in Ireland in September 2024.

An interim MSP-FB is scheduled for March 2024. In September 2024, the present EFB and CIB will meet and an additional meeting day is planned for the MSP-FB.

### **ECORD Facility Board Action Item 1: EFB Chair**

To ask Koen Verbruggen and David Hardy if they are willing to host the next EFB meeting in Ireland in September 2024.

### 14. Any other business (A. Turchyn)

None.

### **ACKNOWLEDGEMENTS**

### **ECORD Facility Board Consensus 23-09-08:**

The ECORD Facility Board thanks Dave McInroy and Jez Everest from ESO for hosting the 12<sup>th</sup> meeting of the EFB in Scotland, at the excellent Summerhall venue and for organising the lovely historical tour of Edinburgh and the fantastic dinner.

The meeting was closed at 15:16.

### LIST OF ACRONYMS

AAD: Australian Antarctic Division

Add: Addendum

**ADP**: Amphibious Drilling Proposal **AILAF**: ANZIC IODP/ICDP Legacy

**Analytical Funding** 

ANZIC: Australian and New Zealand IODP

Consortium

**APL**: Ancillary Project Letter

ArcOP: Arctic Ocean Paleoceanography,

**IODP** Expedition 377

**BCR**: Bremen Core Repository **BGS**: British Geological Survey **CIB**: *Chikvu* IODP Board

**CNRS**: Centre National de la Recherche Scientifique - National Center for Scientific

Research, France

CO: Climate and Ocean Change – IODP

Science Theme

**COPE**: COVID Mitigation Protocols

Established

**CT**: Computed Tomography **CTF**: Communication Task Force

EC: Earth Connections – IODP Science

Theme

**ECORD:** European Consortium for Ocean

Research Drilling

ECR: Early-career scientist
EEZ: Exclusive Economic Zone
EFB: ECORD Facility Board
EGU: European Geosciences Union

**EM**: Earth in Motion – IODP Science Theme

EMA: ECORD Managing Agency

**EPC**: European Petrophysics Consortium **EPSP**: Environmental Protection and Safety Panel

**ESO**: ECORD Science Operator

ESSAC: ECORD Science Support and

**Advisory Committee** 

FAIR: Findable, Accessible, Interoperable,

Reusable

**FB**: Facility Board

FCO: UK Foreign & Commonwealth Office

FY: Fiscal Year (1 Jan. - 31 Dec.)

**GPC**: Giant Piston Corer

ICDP: International Continental Scientific

**Drilling Program** 

IKC: In-kind contribution

**IMMAGE**: Investigating Miocene

**INA**: International Nannoplankton Association **IODP**: Integrated Ocean Drilling Program

(2003-2013) & International Ocean Discovery

Program (2013-2024)

IODP<sup>3</sup>: International Ocean Drilling

Programme (2025-)

**IODP**<sup>3</sup>-**SO**: IODP<sup>3</sup> Support Office

JAMSTEC: Japan Agency for Marine Earth

Science and Technology

J-DESC: Japan Drilling Earth Science

Consortium

JOIDES: Joint Oceanographic Institutions for

Deep Earth Sampling

JPFY: Japanese Fiscal Year (1 Apr. - 31 Mar.)

JR: JOIDES Resolution

JRFB: JOIDES Resolution Facility Board JRSO: JOIDES Resolution Science Operator

KCC: Kochi Core Center LEAP: Legacy Asset Project

L2S: Land-to-Sea

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: meters below sea floor

MeBo: Meeresboden-Bohrgerät - seafloor drill

MEXT: Ministry of Education, Culture, Sports, Science & Technology, Japan MDP: Multi-phase Drilling Project MoU: Memorandum of Understanding MSP: Mission-specific platform

MSP-FB: Mission-specific platform Facility

Board

NanTroSEIZE: Nankai Trough SEIsmogenic

Zone Experiment

**NSF**: National Science Foundation

**OGS**: Istituto Nazionale di Oceanografia e Geofisica Sperimentale - National Institute of Oceanography and Experimental Geophysics

**OSP**: Onshore Science Party **PCT**: Project Coordination Team

PDB: Proposal Database PI: Principal Investigator PMO: Program Member Office PSP: Personal Sampling Party

**ReCoRD**: Repository Core Re-Discovery

Program (KCC and J-DESC)

**SAC**: Sample Allocation Committee **SEA Group**: Safety and Environment

Advisory Group

SEP: Science Evaluation Panel

SFD: Seafloor Drill

SF2050: 2050 Science Framework

**SPARC**: Scientific Projects using Ocean

Drilling ARChives

SPRS: Swedish Polar Research Secretariat

SSD: Site Survey Data

**SSDB**: Site Survey Data Bank **SSO**: Science Support Office

USFY: U.S. Fiscal Year (1 Oct. - 30 Sep.)

USSSP: U. S. Science Support Program

VTF: Vision Task Force