

IODP Science Advisory Structure Executive Committee
11th Meeting, 18-19 January 2011
Miami, USA

Science Advisory Structure Executive Committee – SASEC

Shoji Arai	Kanazawa University, Japan
Keir Becker	University of Miami, USA
Se Won Chang (observer)*	Korea Institute of Geoscience and Mineral Resources (KIGAM), Korea
Jan Willem de Leeuw	Royal Netherlands Institute for Sea Research, (NIOZ), The Netherlands
Gabe Filippelli (non-voting)	Indiana University-Purdue University Indianapolis, USA
Susan Humphris	Woods Hole Oceanographic Institution, USA
Kenji Kato	Shizuoka University, Japan
Hiroshi Kitazato	Japan Agency for Marine-Earth Science and Technology, Japan
Kozo Takahashi	Kyushu University
Terry Quinn	University of Texas at Austin, USA
Rasik Ravindra* (observer)	National Centre for Antarctic and Ocean Research, India
Maureen Raymo (chair)	Boston University, USA
Jianzhong Shen (observer)	Ministry of Science and Technology (MOST), China
Kiyoshi Suyehiro (non-voting)	IODP Management International, Inc., Japan
Damon Teagle	University of Southampton, UK
Chris Yeats (observer)	Australian Resources Research Centre, CSIRO, Australia

*Unable to attend

Liaisons, Observers and Guests

Jamie Allan	National Science Foundation, USA
Wataru Azuma	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Rodey Batiza	National Science Foundation, USA
Dismas Coelho	Petrobras, Brazil
Brad Clement	Integrated Ocean Drilling Program, Texas A&M University, USA
David Divins	Consortium for Ocean Leadership, USA
Nobuhisa Eguchi	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan
Robert Gatliff	British Geological Survey, UK
Dave Goldberg	Lamont-Doherty Earth Observatory, USA
Shinji Hida	Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
Tom Janecek	National Science Foundation (NSF), USA
Hiroshi Kawamura	IODP Management International, Inc., Japan
Yoshi Kawamura	IODP Management International, Inc., Japan
Shin'ichi Kuramoto	Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
Hans Christian Larsen	IODP Management International, Inc., Japan
Sarah Menassian	National Science Foundation, USA
Catherine Mével	ECORD Managing Agency (EMA), France
Alan Mix (PAGES)	Oregon State University, USA
William Ridley	National Science Foundation (NSF), USA
Yusuke Sakai	Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
Jeff Shuffert	U.S. Science Support Program, Consortium for Ocean Leadership, USA
Shingo Shibata	Ministry of Education, Culture, Sports, Science and Technology (MEXT), Japan
Adriano Viana	Petrobras, Brazil
Michiko Yamamoto	IODP Management International, Inc., Japan
Masaoki Yamao	Center for Deep Earth Exploration (CDEX), JAMSTEC, Japan

Science Advisory Structure Executive Committee
11th Meeting, 18-19 January 2011
Miami, Florida USA
EXECUTIVE SUMMARY (v1)

1. Introduction

1.5. Approve meeting agenda

SASEC Motion 1101-01: SASEC approves the agenda for its eleventh meeting on 18-19 January 2011 in Miami, USA.

Humphris moved, Teagle seconded; 9 in favor (Arai, Becker, de Leeuw, Humphris Kato, Kitazato, Takahashi, Teagle ,Raymo); 2 non-voting (Filippelli, Suyehiro)

1.6. Approve last meeting minutes

SASEC Motion 1101-02: SASEC approves the minutes of its tenth meeting on 18-19 June 2010 in Kyoto, Japan.

Quinn moved, Humphris seconded; 9 in favor (Arai, Becker, de Leeuw, Humphris Kato, Kitazato, Takahashi, Teagle ,Raymo); 2 non-voting (Filippelli, Suyehiro)

2. SPC report

SASEC Motion 1101-03: SASEC accepts the SPC Chair's proposal for handling conflict of interest at the March 2011 SPC meeting.

Becker moved, Quinn seconded; 9 in favor (Arai, Becker, de Leeuw, Humphris Kato, Kitazato, Takahashi, Teagle ,Raymo); 2 non-voting (Filippelli, Suyehiro)

6. Linkages to scientific/national initiatives (PAGES, OOI, etc.)

SASEC Action Item 1101-04: Maureen Raymo to attend PAGES Scientific Steering Committee meeting in Bern which takes place in conjunction with INQUA meeting.

7. Program renewal

7.3. Discussion of Science Plan

SASEC Action Item 1101-05: Damon Teagle, Chris Yeats and Catherine Mevel to write “Resource” focused section for the new science plan.

SASEC Action Item 1101-06: Terry Quinn, Susan Humphris, Robert Gatliff, and David Divins to help draft Education & Outreach chapter.

SASEC Action Item 1101-07: Maureen Raymo and Hans Christian Larson to charge Ellen Kappel to come up with few possible names of the new science plan that will be circulated for consideration to SASEC over email.

7.4. Timeline of Science Plan review and Blue Ribbon Comm.

SASEC Action Item 1101-08: There is still time for SASEC to nominate candidates for Blue Ribbon Committee.

8. Renewal of IODP website

SASEC Consensus 1101-09: SASEC recommends IODP home page to revert back to the old home-page, and that IODP-MI develop a new home page for consideration and comment by SASEC.

9. Reports of committee building model for new program SAS structure

9.1. Discussion of new SAS Terms of Reference

SASEC Motion 1101-10: SASEC approves in principle the draft Terms of Reference as prepared by the SASEC SAS Terms of Reference subcommittee and forwards them to the IWG+.

Becker moved, de Leeuw seconded; 9 in favor (Arai, Becker, de Leeuw, Humphris Kato, Kitazato, Takahashi, Teagle, Raymo); 2 non-voting (Filippelli, Suyehiro)

SASEC consensus 1101-11: The current IODP Memorandum specifies that the SAS Executive Authority Chair should initially rotate between US and Japan. SASEC suggests to IWG+ that the first SIPCOM chair during the FY2012-2013 transitional period should be from long-term contributing IODP member ECORD.

SASEC Consensus 1101-12: SASEC recommends that the two year term of Chairperson of SIPCOM be rotated, with the position to be held twice by Japanese scientists, twice by US scientists and once opened to all members during the ten year duration of the new program (2014-2023). Additionally, SASEC considers that each Chair should be selected by an international panel, in the spirit of the program, rather than nominated by National program offices.

SASEC Consensus 1101-13: SASEC forms a subcommittee to assess structural models in the post-2013 IODP for (a) advising on engineering development and industry-IODP technology transfer, and (b) ensuring adequate long-term engineering advice to the new SAS. The subcommittee should consult with the IODP agencies, CMO, and IO's and provide its report at the June 2011 SASEC meeting. Subcommittee members include Keir Becker, Shoji Arai, Damon Teagle, and Susan Humphris.

SASEC Consensus 1101-14: SASEC thanks Keir Becker, Jan Willem de Leeuw, Gabe Filippelli, and Shoji Arai for their effective efforts in crafting the new SAS Terms of Reference that lays a strong foundation for the SAS structure within the new International Ocean Discovery Program. This subcommittee is now officially disbanded.

9.5. Proposal categories and guidelines

SASEC Consensus 1101-15: SASEC nominates Gabe Filippelli (Chair), Jan De Leeuw, Chris Yeats and one of SSEP co-chairs as members of a subcommittee to work with IODP-MI to develop proposal guidelines prior to the next Call for Proposal.

10. Workshops in FY2011-12: Budget and Process

SASEC Consensus 1101-16: SASEC has reviewed four workshop proposals (No. 5, Indian Ocean Drilling, No. 3, Continental Transform Boundaries, No. 4, Slow Slip Events, and No. 6, Gulf of Lion Drilling) and recommends funding for the first three and resubmission of a revised proposal based on the recently held workshop of the Gulf of Lion community. SASEC strongly suggests urgent development of a guideline for workshop proposals.

13. Other business

SASEC Consensus 1101-17 : Hiroshi Kawamura has been a steadfast resource for the Science Advisory Structure and IODP-MI. His knowledge of proposal details and his extremely efficient management of the correspondence and business of the SAS were great assets. We congratulate him on his new position with the IPCC, and wish him and his family the very best as they move back to Germany.

SASEC Consensus 1101-18 : SASEC thanks Keir Becker for his organizational skills, hospitality and panache in hosting this meeting in balmy Miami, taking many (but not all) of us away from the cold grip of the Northern Winter. We appreciate the warmth and sunshine, and eagerly anticipate the refreshments that will be provided for us.

Science Advisory Structure Executive Committee

11th Meeting, 18-19 January 2011

Miami, Florida USA

Draft Minutes (ver. 1.0)

Tuesday	18 January 2011	09:00-17:00
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1. Introduction

1.1. Call to order and opening remarks

The Science Advisory Structure Executive Committee (SASEC) chair Maureen Raymo called the meeting to order at 09:00 and welcomed everyone to the meeting.

1.2. Introduction of participants

Maureen Raymo asked all meeting participants to introduce themselves. Each participant introduced himself/herself. Raymo informed that Indian participants could not come to the meeting.

1.3. Welcome and meeting logistics

Local meeting host Keir Becker welcomed everyone to the Rosenstiel School of Marine and Atmospheric Science at the University Miami and gave some basic logistical information for the meeting.

1.4. Rules of engagement (Robert's rules, COI policy, etc.)

Maureen Raymo went over some salient points of Robert's Rules of Order, including that members should take turns speaking, no member should speak twice until everyone has had a chance to speak, each person should raise his/her hand before speaking, members should not speak in the background, and everyone should speak slowly and clearly.

Raymo indicated that the full text of the Conflict of Interest (COI) policy is found in the agenda

book. She noted that all actual or potential COIs must be declared. SASEC member declared the following COIs regarding potential discussions:

Name	Declaration
Raymo	Proponent of Proposal 595-Full4 Indus Fan and Murray Ridge and workshop WS_FY11_05 Indian Ocean Drilling
Teagle	Proponent of Proposals 522-Full5 Superfast Spreading Crust, 545-Full3 Juan de fuca Flank Hydrogeology, 769-APL Costa Rica Crustal Architecture and 772-APL North Atlantic Crustal Architecture
Becker	Proponent of Proposals 734-APL Cascadia Accretionary Prism CORK, 769-APL Costa Rica Crustal Architecture, 772-APL North Atlantic Crustal Architecture, and 774-APL Costa Rica Subseafloor Microbial Mats
Takahashi	Proponent of Proposal 477-Full4 Okhotsk/Bering Plio-Pleistocene
Eguchi	Proponent of workshop WS_FY11_06 Gulf of Lion Drilling
Yeats	Proponent of workshop WS_FY11_05 Indian Ocean Drilling

1.5. Approve meeting agenda

Maureen Raymo asked if there were any suggested changes to version 1.4 of the meeting agenda. There were no changes, and the agenda was approved by consensus.

SASEC Motion 1101-01: SASEC approves the agenda for its eleventh meeting on 18-19 January 2011 in Miami, USA.

Humphris moved, Teagle seconded; 9 in favor (Arai, Becker, de Leeuw, Humphris Kato, Kitazato, Takahashi, Teagle, Raymo); 2 non-voting (Filippelli, Suyehiro)

1.6. Approve last meeting minutes

Maureen Raymo asked if anyone liked to amend the last meeting minutes and no one raised concerns.

SASEC Motion 1101-02: SASEC approves the minutes of its tenth meeting on 18-19 June 2010 in

Kyoto, Japan.

Quinn moved, Humphris seconded; 9 in favor (Arai, Becker, de Leeuw, Humphris Kato, Kitazato, Takahashi, Teagle, Raymo); 2 non-voting (Filippelli, Suyehiro)

1.7. Review of items approved since last meeting

Maureen Raymo noted that no items had been approved since the June 2010 SASEC meeting.

2. SPC report

Science Planning Committee (SPC) chair, Gabe Filippelli, provided the SPC report on the following four points. 1. SPC update from August meeting, 2. Global proposal review process, 3.

Communication with ocean observation programs, 4. Request for temporary COI change.

As the item 1. "SPC update from August meeting", he introduced the following two consensuses;

SPC Motion 1008-07: The SPC recommends IODP Proposal 681-Full2 Lesser Antilles Volcanic Landslide as the preferred contingency for Proposal 553-Full2 Cascadia Margin Hydrate for FY 12 JR schedule.

SPC Consensus 1008-03: The SPC recognizes the spirit of SSEP consensus statement 1005-5, but, given the upcoming changes in science advisory structure, declines the statement at this time.

As the item 2. "Global proposal review process", he explained the need of the global review process and its timeline;

SPC Consensus 1008-10: SPC will consider OTF and SPC proposals at March 2011 for transferring to the new SAS

SPC Consensus 1008-11: At the March 2011 SPC meeting, SPC will consider the prioritization of proposals from SSEP when SPC decides which proposals to transfer to the new SAS

SPC Consensus 1008-12: SPC will work with IODP-MI in the March-August 2011 timeline to individually advise proponents of all proposals as to the status of their proposal

Filippelli introduced the 3 tier evaluation system that the SSEP adopted for their last meeting to sort the SSEP proposals into 3 groups based on each proposal's scientific potential. He also explained what the next SPC would do for it. They will likely do; 1. Transferring top tier proposals to the new program, 2. Returning bottom tier proposals for potential resubmission as new proposals, 3. Reviewing middle tier proposals with respect to the new Science Plan and operational factors.

As the item 3. "Communication with ocean observation programs", he introduced the observation programs that have potential to collaborate with IODP, which were reported from SPC subcommittee members, Donna Blackman, Gretchen Früh-Green and Junzo Kasahara. In US, Ocean Observatory Initiatives (OOI) is developing cable network that will be operational in 2013. Scripps has a preexisting wireline re-entry system that has not been used for a few years, which could be an asset to IODP. In Europe, Neptune Canada is collaborating with US and European groups and making progress in cable observatories. Also, European initiative, "Deepsea Frontier Initiatives" that includes a group for ocean drilling was introduced as an additional funding source not as competitor to IODP. In Japan, JAMSTEC is installing DONET (Dense Ocean-floor observatory Network for Earthquakes and Tsunamis) in Nankai Trough. DONET will be under full operation by March 2011.

As the item 4. "Request for temporary COI change", he requested for SPC's COI policy change because many COIs are expected and it makes it difficult to keep enough expertise in review. He proposed to arrange watchdog groups to avoid COI yet retain expertise (i.e., SSEP-like rules) for the global review, and a platform-specific basis discussion and exclude COI members for the normal review and ranking.

Yeats asked how many proposals are in the system. Filippelli answered 105. Raymo asked if Filippelli meant that the two-third of the proposals would be reviewed at the next SPC meeting. Filippelli replied yes and explained that the result from the next SPC meeting would provide to the next June SASEC. The proposals currently within OTF would simply transfer to the new SAS

structure. Larsen commented that the panels need to think carefully about when to inform the proponents about the fate of their proposals. To give proponents enough time to be able to submit before the October 1st deadline, they need to inform the community and proponents what is the fate of their proposals sometimes shortly after the SPC. Filippelli agreed with Larsen and also pointed out that information would leak out anyway and proponents need fairness in preparation.

Kenji Kato asked if SPC will inform the proponent just their tier ranking or proposal-specific advice. Larsen replied that SPC would need comment on why proposal should not move forward. It should not be an apologetic letter but just to state these are the facts. Filippelli agreed with Larsen.

Jamie Allan asked if Becker has used the Scripps wireline re-entry system before. Becker replied that he was the last one who used it. The reason why it has not been used is only the lack of the budget for technical support, so there is a capability there.

Filippelli asked JAMSTEC for any update on DONET. Masaoki Yamao replied that DONET currently has eight sites and the number is increasing.

Jan de Leeuw remembered that there was a presentation about deep carbon observatory (DCO) at the last SASEC meeting, and wondered whether it should be added on the US list. Suyehiro replied that DCO is not the same kind of observatory as the others like OOI or DONET. de Leeuw commented that it might be important to have them on the list, although if it is still in very early stages. Filippelli noted that he would let the SPC subcommittee know about DCO and that SPC would carry on with another update in March and provide the update at SASEC's disposal. Susan Humphris noted that the last SASEC concluded that SPC subcommittee should be in charge of this kind of issue, but, she pointed out, it's grassroots level efforts that is really needed for integrating the different programs. She suggested not giving the subcommittee some vague charge because she thought it could be not so productive.

Larsen commented that IODP could send the draft of the science plan to the key individuals in those programs to inform them of IODP's plan in future and to get support from them back. Raymo agreed with Larsen.

Becker informed that SPC did platform-specific review during his term as SPC chair even though there is no global ranking. Susan Humphris saw no problem in the new COI rule Filippelli proposed. She asked why it is important to review on a platform-specific basis. Filippelli replied that one MSP proposal would conflict three of four of hard rock members, meaning they conflict all of that SPC review and ranking, therefore SPC have to bring them in. Allan commented that global ranking does not make sense unless SPC is pooling resources. Damon Teagle agreed with Allan and commented that it pragmatically makes a sense. Hiroshi Kawamura asked Filippelli how SPC would treat APLs that SPC members has also COI. Filippelli replied that he had not decided how to handle APLs, but he would coordinate with IODP-MI to figure out how best to handle. Terry Quinn agreed on the pragmatic approach if it keeps the discussion going without a potential conflict. Chris Yeats pointed out that the new program would have the same problem. He suggested more flexibility in the new COI rule for the new program.

de Leeuw asked about the case that a COI member staying in the room is asked only for advice but no judge voting. Raymo replied that it would a separate issue of how to define COI in the new SAS.

Jeff Schuffert asked Filippelli if the rule would be adopted only for single platform proposal. Filippelli replied that it would be only for one platform but could not answer that unequivocally. Larsen commented that MSP and Hawaiian Drowned Reefs could be an issue because there are plans on the table that could involve both JR and MSP. It's up for the OTF to discuss at the next meeting.

Becker asked how many potential slots remain to actually schedule. Filippelli answered that there are only two at most, perhaps only one more.

Raymo made sure that all members agreed on the new COI rule for the next SPC meeting and wrapped up the discussion.

SASEC Motion 1101-03: SASEC accepts the SPC Chair's proposal for handling conflict of interest at the March 2011 SPC meeting.

Becker moved, Quinn seconded; 9 in favor (Arai, Becker, de Leeuw, Humphris Kato, Kitazato, Takahashi, Teagle ,Raymo); 2 non-voting (Filippelli, Suyehiro)

3. Annual program plan

3.1. IODP-MI Budget updates on FY11, timeline of FY12

Kiyoshi Suyehiro reported on FY11 Annual Program Plan. The current version that MI submitted on October 28 had accepted by the lead agencies. The difference between the current version and old version that SASEC accepted in the last June meeting is the smaller overall amount, meaning MI successfully reduced the amount spent by itself. There is a slight increase in USIO's budget proposal because of Superfast schedule change. CDEX's budget proposal needed some minor adjustments on outreach and configuration part. The FY11 APP should be revised again soon in February because of the schedule change of Chikyu. At the end of FY11, the riser drilling of stage 3 NanTroSEIZE will start and it will be done in two-time windows with 5-7 months extension each in FY12 and FY13. Chikyu will be engaged in a commercial drilling in the August timeframe. Concerning this change, IODP-MI informed the community through the web and had discussion with SAS, Board of Governors and the Lead Agencies and they approved that IODP-MI revises the APP under the condition that CDEX commits to engage Chikyu in IODP riser drilling in FY12 and 13 long enough to complete the objectives of the NanTroSEIZE.

IODP-MI has more than one million carry-forward from FY10 to 11 because of saving and some tasks that could not be done within FY10 and has to be rescheduled in the following fiscal years. IODP-MI has sent out a carry-forward request to NSF last week and now waiting for their approvals. Carry-forward and its process repeat every year, but it has never reported to SASEC by this time although such report is easily found in MI's quarterly report.

FY12 timeline is that the budget guidance will come up in February and IODP-MI will notify all the sub-contractors, IOs and the SASEC budget sub-committee. Then the process starts in the timeframe of February to May in order to bring FY12 APP to SASEC discussion in June. Finally, the APP will go through the Board of Governors and lead agencies no later than August 1. As the program keeps the same international members, the same moderate level of commingled funds would be expected.

Raymo asked if Humphris will be a new liaison for the budget subcommittee. Humphris replied she thought so but not sure. Raymo asked if any one of the members want to replace Yoshiyuki

Tatsumi on the budget sub-committee as the BoG liaison. Catherine Mevel noted that it would be difficult for Europe to have budget guidance in February, because the budget changes every year and there are also financial difficulties.

Raymo asked Suyehiro to show the future Chikyu schedule. Suyehiro replied that the last two months of FY11 dropped out and the rest remains the same. Raymo asked how the Chikyu's rescheduling was discussed in December. Suyehiro replied CDEX assured that Chikyu will be back to IODP after six months in Sri Lanka for commercial activities. Raymo asked what months. Suyehiro answered it will be June to December. Nobuhisa Eguchi noted that December 11 to January 12 is IODP window. But thinking the fishing restriction in January, it is impossible to operate riser drilling (NanTroSEIZE) in that December-January window, so the next possible window for riser drilling would start from June 2012.

de Leeuw asked how much money of the 1 million carry forward was being reserved. Suyehiro replied that the amount requested as carry-forward was 700,000 and the only new thing that would use the CF is pre-scoping activities and engineering feasibility study for mantle drilling.

Yeats and Humphris asked what did not get done in 2010 that would be implemented in 2011. Suyehiro replied some data management, some engineering development projects. Humphris asked if any of them would impact the schedule. Yoshi Kawamura replied that the expeditions would be safe, but sea test could be influenced, although he believed CDEX could manage to complete the development before the sea trial period and have a chance to test the equipment on board. Suyehiro asked Humphris if she had any specific engineering development in mind. Humphris replied no and she was just curious. Yoshi Kawamura commented that one is for SCIMPI, which is a simple observatory system, there is a project to develop its deployment system. Second one is University of Texas project on decoupling system for the temperature measurement, which is delayed about one year. But finally they completed the system in this summer. If those two projects go fine and we have time, we can test those together. Yeats asked if that engineering development is for Chikyu. Kawamura answered that it's for both of Chikyu and JR. The test will be probably done by the JR. Yeats asked if it would be done before Cascadia's drill. Kawamura replied it's a different issue. Allan commented that there are two that NSF and MEXT approved in December already. One of them was to modify a tool to make it have greater interoperability. The

requested budget was \$180,000. The other one was to digitize and make a digital archive of the DSDP and ODP legacy material that is housed here at University of Miami. Yeats asked what kind of material that is. Becker replied that it is the document including minutes related to old panels since 1997. Raymo commented that it is an important historical archive that should be preserved.

Suyehiro noted that the three-year budget comparison that he presented to the budget subcommittee would not so helpful and hard to understand because the items are not consistent over the time. However, if the committee asks, he could answer to it.

Damon Teagle raised a concern that the way to release the change of the Chikyu schedule to the community was not done in the most effective way. While the change was leaked out, IODP advertized that UK may have opportunities to sail on the leg postponed by a year. IODP need better plan to do in a more coordinate way. Suyehiro commented that we learned an important lesson that we need more effective communication with CDEX, MEXT and NSF. Raymo indicated that communication line did not exist outside of IODP rather than within. She did not think it was a communication issue between IODP-MI and SAS structure. Yeats added that if the plan changes every year, it is difficult for SASEC to do long-term planning and difficult to attract scientists whose schedule could get easily changed and ruined in months or years because of the ship schedule. At least 12 months consistency and certainty in planning is very important. Raymo agreed with Yeats. She noted that people arrange to have sabbaticals and once they are awarded, they usually cannot change because department teaching schedules are reorganized around that. Suyehiro suggested discussing on it in IWG+ meeting.

4. ICDP-IODP linkages update

Terry Quinn reported an update on ICDP-IODP linkages. He noted that communication with Uli Harms from ICDP is usually twice a semester, and their last communication was in December. He noted that there were no burning issues that he was aware of, but the both recognized that the two programs could better leverage each other's science if they continue the communication and increased interactions.

Catherine Mevel commented that ECORD had a joint committee and she did talk with Harms just a

few days ago, and he was very much in favor of pragmatic approach in grassroots level, which people develop joint proposals and make sure that their program finds a way to be accommodated. Raymo noted that the linkage factor should be included in the new system for proposal evaluation. Filippelli informed that SPC had approved a joint program planning group with ICDP. But there has been a hold up from the ICDP side and they are not yet releasing funds for the workshop. He hoped the joint planning would happen and believed Harms might know more soon. Hiroshi Kitazato noted that IODP and ICDP have different budget structures. He asked how to improve the joint proposals had been discussed. Quinn replied that New Jersey Exp.313 is a good example of where there is ICDP drilling on land, the standard ICDP budgetary situation and their model. Raymo commented that it is very valuable to have grass-root efforts that are operating through many people. Suyehiro suggested that IODP-MI science managers could communicate to the ICDP science advisory group and look at potential proposals with similar objectives and geographical locations. The best timing would be before their meeting of science advisory group and the March SPC meeting. Raymo asked if their meeting will be before SPC March meeting. Suyehiro replied that they have that kind of meeting every year. Mevel commented that Harms' concern is not to have a double evaluation system and we have to find a way to build the single evaluation system. Hiroshi Kawamura indicated their meeting would be at the same timing as SPC meeting.

Raymo asked Quinn to be the SASEC liaison to them and question about what specific joint proposals are being considered. Quinn replied he has done that unofficially and be happy to do that more officially. Raymo also asked Quin to work with Filippelli. She also asked Filippelli to follow up what proposals cross between the two programs.

5. IODP-DCO linkage update

Kiyoshi Suyehiro reported on IODP-DCO linkage update. He explained that DCO stands for Deep Carbon Observatory. Its initiative is funded by Sloan Foundation, and the program office is at the Geophysical Laboratory of the Carnegie Institution in Washington. SASEC had Tony Brook from DCO in the last Seoul meeting and learned the program and IODP-MI has been successful in getting funding from Sloan Foundation to host a workshop in Washington DC in September of last year. Its

summary will be published in the upcoming Scientific Drilling Journal in March and a longer report will be posted on the IOD-MI website. The information is circulating among the people who made significant contributions to the workshop. The next action would be forming a scoping group and its member nomination. DCO targets deep life, reservoir and fluxes, energy, environment, climate, and physics and chemistry of carbon. Reservoirs and fluxes are the most relevant to mantle drilling and its PI is Erik Hauri from the Geophysical Lab. Suyehiro will be in close touch with them and visit Geophysical Lab in early February.

He indicated that the two programs needs to build a formal relationship and it needs a long lead time, one year or so, while IODP develops the new science plan. Basically IODP has very interesting science that can attract them because they are new to the drilling science knowing very little about it. This is a chance to expand our science outside of IODP.

Raymo asked if the leaders of DCO have a recognition or appreciation of the importance of the drill ships. Suyehiro answered their science plan mentions it. Raymo asked if he continues to liaise. He replied yes.

Rodey Batiza commented that DCO initiative and workshops are really significant, which brings new money from the Sloan foundation into the drilling program.

Raymo asked what the next DCO's action is. Suyehiro replied that they would have their executive committee meeting in March. Raymo asked if someone from the drilling community will be in that meeting. Suyehiro replied someone from IODP-MI should be there.

Kenji Kato asked about the size of the community. Suyehiro replied he was not sure, but perhaps a few hundred. de Leeuw replied that from his involvement with writing their Science panel in the past, the DCO consists of 2000-3000 people, but he thought the number of scientists really tied could be about 1000. They get funded not only from Sloan Foundation but also seed money. He added that he was glad that they also focus on deep life. He liked to ask more attention from IODP to the deep life section.

6. Linkages to scientific/national initiatives (PAGES, OOI, etc.)

Alan Mix represented PAGES and he introduced what PAGES is about. PAGES is a core project of the International Geosphere and Biosphere program, focusing on addressing past changes in the earth systems by quantitative process, understanding of the climate system, biogeochemical cycles, human impacts, etcetera. A key goal is to be a conduit for feeding paleoclimate information into the very practical issue of projections of the future climate and environment, particularly through the IPCC process. PAGES is co-funded by the Swiss and US National Science Foundation, NOAA and IGBP. IGBP is connected to biodiversity programs, world climate programs, and human dimensions IHDP programs. PAGES as a sort of integrator picks up the time dimension agendas from many agendas within IGBP. PAGES has formal liaison to other international programs.

PAGES is not a funder of research projects or field study, but a organizer of the community. It forms scientific working groups to do both science planning and synthesis. But PAGES co-funds international meetings. PAGES develops outreach products at good range from school children to science bodies like the IPCC, and publicize science programs and results. PAGES is interested in integrating international research across disciplines and interested in the great hiatus at the beach between IODP and land programs. PAGES successfully integrated programs and communities by encouraging research partnerships among different groups. PAGES has a specific agenda to encourage involvement of scientist from developing countries. PAGES has been quite effective at having workshops and educational programs for example in Africa and South America and various places around the world that helps those communities tap into the science programs in the more developed countries. Also it has agenda to facilitate public access to data.

Pages is an international network as large as having 5000 registered users in 28 countries. It has organized activity leaders, rotating scientific steering committee with the formal rotation process, which balances scientific expertise and geographic distribution. It has two elected co-chairs, chairs are Alan Mix himself and Hubertus Fisher from Bern.

PAGES has an international project office in Bern. Many member countries have their national PAGES organization and website. PAGES is well distributed and is growing.

PAGES has its science program plan, which is available on PAGES webpage. Its four foci are Climate forcings, regional climate dynamics, global or system dynamics, and human climate ecosystem

interactions. And there are also cross-cutting themes, which are geochronology, proxy development, modeling, and data management. All of those are addressed both in the larger program plan and in the pocket guide, all available on the web page. Some of PAGES's foci are relevant to IODP. For example, sea level up, dust and atmospheric dynamics, climate evolution of the last 21,000 years, the end of the ice age, ocean acidification, global monsoons, marine nitrogen cycle, past interglacial dynamics, regional integration soils, soil and sediment, climate of last 2000 years. These working groups have their own program plan. They report their update annually or more frequently. And every four years, there is a major open science meeting that is open to the entire world community. There are also two joint meetings, one is specifically for young scientists meeting to encourage both graduate students and very recent PhDs, and the other is open science meeting.

PAGES has several information platforms, newsletter, web presence and also Facebook. He was very skeptical of Facebook when it started, but it's only been going some months, 5000 scientists registered, though if they are from outside or inside is unknown. The number of registration is growing by about 100 a month. It actually seems to be reaching out, particularly to the younger science community.

Mix showed some examples of PAGES workshop reports. He announced PAGES next steering committee meeting is this summer in Bern. He invited IODP liaisons.

Catherine Mevel asked about the relation to IMAGES. Mix replied that IMAGES is an endorsed sub-program and it has their own funding stream including a little stream from PAGES. IMAGES has a meeting in February and will report to PAGES. Mevel asked if IMAGES is an equal level organization to PAGES. She found it having relationship to IODP MSP project and contact with Ralph Schneider who is the current chair. Raymo asked if IODP has a liaison to their meeting. Meve replied it is easy to have it because the meeting will be in Brussels. Teagle noted that it will be next week and he will be attending.

Raymo commented that there are a lot of scientific groups and initiatives that need the tools that IODP can provide. Grassroots activity is what the communities need to get the message up to the funding agencies that they need a drilling program. All panel members need to act as mini

ambassadors and try to make web of connectivity. But it would be more useful to have formal requests from organizations like PAGES and DCO, saying that a drilling program will be an essential need to them, and pass it up to the decision makers of the new program. She asked Mix if such action would be effective. Mix replied that giving voice to that 5000 people and funneling them into the development of IODP science would be an idea because PAGES consists of workshop-oriented people. Raymo commented that the question is how these different communities get their voices heard in Washington and at ECORD level.

Susan Humphris asked if Mix has any matrix about how much of what the PAGES community has published on drilling data. Mix replied no but it's a lot.

Filippelli asked the budget size. Mix replied it's very small, \$750,000 a year. PAGES is trying to partner with other organizations including with national organizations to co-fund meetings and get three or four times as much work out of that \$750,000 at this point. Yeats asked how much of it goes directly to workshops. Mix answered the half of it.

Larsen asked what kind of activities for data management and data distribution, and indicated a possibility of collaboration between the two programs on it. Mix replied that it is a new initiative and no intention to be a data center. But many data centers like NOAA, Pangea, ODP etc are cropping up and it's hard to find specific data even we have access. PAGES working group is trying to address that issue, specific to the paleo issues, and perhaps getting a sort of database of databases as a vehicle into them. Larsen asked if its target is a scientific community or general public level. Mix replied that it's under discussion. Larsen asked for the contact person of the working group. Mix replied he would provide it.

Allan commented that he was surprised by how many people who are involved in planning effort, even climate modelers who often have poor appreciation about the history of earth. Mix commented that their models are strong, but they are not necessarily fully tested against the paleo record, which is one of PAGES agenda items. Another agenda item is incorporation of biogeochemical models into the climate models that will lead towards climate impact projections.

PAGES is trying to occupy the interface between them to get people connected.

Allan asked if Mix knew Belmont Forum. Mix replied no. Allan explained that it set out by inter-governments to solve climate modeling issues and addressing climate issues. One of the leaders of it was Tim Killeen who is Assistant Director for Geosciences. Belmont's challenges have absolutely nothing in understanding past climate. It is all forward looking in spite of a recent paper that shows how current models underestimate the forcing factors of CO₂ by a factor of two from looking at past point. Raymo asked if Allan meant they underestimated because they do not look at past climate. Allan replied yes and noted that their models cannot reproduce the past. Raymo added it is because they do not get all the feedbacks. de Leeuw referred his experience with the most advanced climate model that has never worked for the past, and he noted that it is not only because wrong CO₂ estimation, but missing parameters that we never know. He also commented that this is very critical issue that should be written in the science plan. Quinn commented that average climate modeling groups would know nothing about IODP. He warned the risk of showing IODP side's distrust of modeling to the modeling community and he pointed that their model would work with past 100 years input and future 100 years output. He suggested that IODP could demonstrate what IODP actually has and does. Raymo commented that people need to think about how best to integrate, and suggested sending IODP liaisons to INQUA meeting to talk about IODP science plan and vision of workshops and proposals generation in the new program.

Wataru Azuma asked how to share the data between the programs and what kind of collaboration would be the most effective. Mix replied that the best way would be that the collaboration starts at very early stage through workshop to build a proposal and they are disconnected when they hit the review stage. Teagle suggested using Scientific Drilling or newsletter more effectively by distributing it to PAGES, GeoPRISMS and InterRidge. Mix offered to pick up the paleo relevant page from Scientific Drilling and make it into a special issue page. Raymo thought this issue should be in the next meeting agenda to think how Scientific Drilling could be the most effective outreach magazine. Jeff Schuffert asked if PAGES publicizes to its community the opportunities to sail on IODP expeditions. Mix replied that he thought if the PAGES office gets that information from IODP, it could be publicized, but not in a systematic way. Schuffert commented that if that could happen in a systemic way, it might also be a very fruitful area of collaboration. Mix noted that some parts of PAGES community in less developed countries are not interested in joining the drilling legs, but

finding a way that they benefit from it would be helpful.

Raymo asked if we can share the new science plan with the steering committee of PAGES. Mix commented that would be welcomed.

Yeats suggested sending a message to tell what people can do with the ocean drilling program. Quinn commented that he trusts Raymo to present the overlapping parts between the programs. Mevel named InterRidge program that should be also taken into account. Raymo noted that this project needs helps from leaders who understand the essential nature of having ocean drilling. Mix offered his support from PAGES side.

SASEC Action Item 1101-04: Maureen Raymo to attend PAGES Scientific Steering Committee meeting in Bern which takes place in conjunction with INQUA meeting.

7. Program renewal

7.1. IWG+ report

Rodey Batiza reported that Mevel, Shibata and himself had a meeting at the last AGU and he would report on the outcomes on Thursday IWG+ meeting. The funding agencies are concentrated mostly on renewal within each country. NSF was spending most of their time to prepare international science board packages because the all of the tasks have to be done between now and when we go to the board in May of 2012. Most of the IWG Plus' work is done. Batiza hoped that IWG+ could strongly endorse the new SAS structure. IWG+ should not discuss over a little details of the new SAS because it still beta version.

Yeats asked for the timing of decision in US, Europe and Japan for the new program. Batiza replied that it depends on country. They will keep everybody in IWG Plus informed about where we are. He expected that somewhere in that interim period before May 2012, he would receive an indication from the board whether it's going to be thumbs up or thumbs down.

7.2. Status of new science plan

7.3. Discussion of Science Plan

Hans Christian Larsen reported on new science plan. He showed the NSP-related activities since the last SASEC meeting.

- Late July 2010:** Review (pre-view) by US NRC.
- Early August:** SPWC presented draft 2.0 to NRC.
- Mid-August:** Completion of 2nd draft (2.0).
- Late August – late September:** Broad Community Review
- September:** Science writer Ellen Kappel Contracted.
- October:** SPWC meets in DC.
- December:** Summary of draft 2.1 presented at AGU Fall 2010 IODP Town Hall Meeting.
- February 2011:** Draft 3.0 expected

Larsen introduced the four themes of the science plan:

- CLIMATE AND OCEAN CHANGE**
 - Reading the Past, Informing the Future
- BIOSPHERE FRONTIERS**
 - “Deep Life” and Environmental Forcing of Evolution
- EARTH CONNECTIONS**
 - Deep Processes and Their Impact on Earth’s Exterior Environment
- EARTH IN MOTION**
 - Processes and Hazards on Human Time Scales

Larsen explained that there was no plan of any change to these themes. Yeats asked why “Deep Life” has "" and if it implies no deep life. Larsen replied that it might be come from some initial draft and stay there without any good reason. Raymo commented that it is probably because nobody really knows what the deep life is down there, but she could not find a good reason to have it in parenthesis or quotes. Larsen replied that it could be taken out.

Larsen informed that that the name of the new science plan had not been decided. One idea was just ISP (IODP science plan).

He introduced the challenges for each theme.

Climate -----

Challenge 1. How does Earth's climate system respond to elevated levels of atmospheric CO₂?

Challenge 2. How resilient is the climate system to chemical perturbations to the ocean? (to be combined with Challenge 7)

Challenge 3. What is the pace and pattern of ice sheet response to a warming climate?

Challenge 4. What controls regional changes in precipitation patterns and variability?

Biosphere -----

Challenge 5. What are the origins and functions of communities in the deep biosphere?

Challenge 6. What are the limits of life in the deep biosphere?

Challenge 7. What are the consequences of acidification and hypoxia for the health of ocean ecosystems? (to be moved to Climate)

Challenge 8. How sensitive are ecosystems and human societies to environmental change?

Earth Connections -----

Challenge 9. What is the composition, structure, and physical properties of Earth's upper mantle?

Challenge 10. How are mantle-derived melts accreted and distributed in oceanic crust?

Challenge 11. How do the different styles of oceanic crustal accretion influence global geochemical cycles?

Challenge 12. How do subduction zones initiate and arcs develop?

Earth in Motion -----

Challenge 13. What properties and processes govern the flow and storage of carbon in the subseafloor?

Challenge 14. How do fluids link subseafloor tectonic, thermal, and biogeochemical processes?

Challenge 15. What mechanisms control the occurrence of destructive earthquakes, landslides, and tsunamis?

Larsen noted that in particular Chapter 2 and 3 need considerable edit.

Kiyoshi Suyehiro asked if the sentence of Challenge6 is correct English. Larsen replied that it is fair to say that the science writer has been so busy getting sort of the fundamental scientific pieces together in a proper way and there is still work to be done with a grammatically unified and correct style. Kato suggested changing "Deep biosphere" to "subseafloor biosphere"

Rodey Batiza pointed that there was a rifted margins section before. Larsen replied that no strong support was founded for it. Batiza raised a concern that if IODP wants to have partnerships with industry or if people want to write proposals on it, missing it from ISP is a problem. Larsen repeated there were no strong community proposals or group within the community to pursue it. Raymo noted that it did not have its own challenge at this point, but it could be possible to find places to reside naturally within the document. Teagle commented that there would be many groups who feel they are left out. Larsen commented that there could be a way to highlight it without promising too much, including a sentence like "IODP has done a lot in the past that we can be proud in that area", looking back in the past.

Yeats asked Larsen if he meant that 9 and 10 could not be combined just in case we cannot manage them all. Larsen answered that was one reason and another reason is the highlight is about getting to the pristine mantle, not only getting to Moho, and combining the challenges dilutes it. Larsen also pointed that because it is not sure that the program technically can get to the mantle, it's dangerous to mix things. Yeats replied that the bright side of combining them into one challenge is that if we do everything else except getting to the mantle, it means that the goal would be mostly achieved. On other hands, if they are different challenges and getting mantle is not successful, it means that you lose all of the challenge. Teagle commented that mantle drilling is a challenge to itself and there might be different ways of getting samples about mantle rather than just a deep single hole. Larsen replied that either way creates difficulties. Teagle noted that Challenge 10 is principally about the heterogeneity of ocean ridges, which is new and links quite nicely into 11. On the other hand, Challenge 9 is something very specific.

Yeats noted that the older version had a topic about oceans floor resources in the "Earth in motion" chapter and he asked why it was gone. Larsen replied that it had not really been in there, it was scattering in some paragraphs in the other chapters. Yeats noted that resource part is very important to attract government funding and engage industry. Mevel agreed with Yeats. Larsen asked where it can fit. Yeats replied the "Earth in Motion" chapter, because it is about human time scale of questions. "Resources" should be at least a short section somewhere. Raymo suggested forming a working group to write as a box or challenge, then SASEC can decide where it can fit in. Larsen and Mevel agreed. Teagle suggested having it in chapter 3 or 4 . Larsen liked the idea of a box. Batiza suggested putting the recourse part somewhere at the beginning in the executive summary to show it is "science and service to society" and he explained that three Es, environment, economy, and energy, and sustainability are strong in NSF. Raymo summarized the executive summary should be having broad issues including the resources by referring some specific drilling experiments that can be done to promote resource exploration and understanding.

SASEC Action Item 1101-05: Damon Teagle, Chris Yeats and Catherine Mevel to write "Resource" focused section for the new science plan.

Larsen introduced the outreach chapter and explained that outreach is very important to the new science plan, which will show a big number of IODP published papers and refer education, publication, all data available.

Humphris commented that it is a really important part of the new science plan to get scientific ocean drilling out into the citizenry. Yeats agreed with Humphris and commented that one of the great legacies of the program is the fact that we are training the next generation. Its influence is more than publishing in the Science and Nature. Raymo agreed that there has to be education and outreach chapter with explicit discussion to the general public. Ian Ridley commented that it could be a red flag for NSF if the issue is covering too large area, getting information over the general public, etc. Allan commented outreach must be included. Teagle commented that outreach to the public is not something that ocean drilling has done particularly well over the decades, although drilling projects keep improving. Humphris agreed with Teagle and commented that there needs to be a commitment at international level that education and outreach would be

an important part of the new program. David Divins noted that it has to highlight the value and the necessity of outreach. Larsen and de Leeuw agreed. Batiza commented that training of next generation needs to be recognized as a very important product of this whole program. Quinn suggested having it as a separate challenge. Larsen replied it is now a separate chapter.

Raymo suggested forming a writing subcommittee for outreach part.

SASEC Action Item 1101-06: Terry Quinn, Susan Humphris, Robert Gatliff, and David Divins to help draft Education & Outreach chapter.

Larsen explained NSP future timeline.

- February-March:** Blue-ribbon panel review, SASEC review, name of NSP to be decided, Capacity Building/Outreach to be completed in parallel with reviews
- Mid/late March:** Final SASEC and IWG+ comments
- Late March/early April:** Final editorial meeting with IODP-MI, SASEC chair, 4 theme leaders.
- Late April/early May:** Print-ready version
- Late May:** US NRC review meeting
- Early June:** Print and distribution

Teagle raised a concern about when the graphical improvement can occur. Raymo replied she heard that the editor was trying to get the text in shape first, and text is still actually changing quite dramatically, so, the editor does not want to engage graphic designer until text is ready to go. Teagle noted that graphics are still subject to be reviewed. Larsen assured it will be improved. Filippelli commented that he was surprised with the header every other page, he thought it was once gotten rid of. Larsen replied it will go away.

Raymo liked to hear about how the new program name came about. Sarah Menassian of NSF explained the background, which there were three workshops, one was in US, one was in Europe, and one in Asia. Also there was an online survey to advertise as widely as possible, then, their

input was summarized and came up with some draft names. The key aspect is that acronym does not change. Tom Janecek informed that the name selection was helped by Sarah Saunders who is a marketing expert. Teagle commented that he heard from scientific community that they do not like the name, International Ocean Discovery. Yeats noted that the name without “drilling” sounds like we encapsulate what the program does.

Raymo invited panel discussion on the name of science plan that should be a new name to sell it to lead agencies. Mevel suggested “exploring” because IODP is not discovering ocean. Ridley commented that “exploring” remind him of NOAA that has whole bunch of people exploring the earth under the sea, though they do not do much research. Raymo asked Larsen who is the best to craft title. Larsen replied SASEC. Batiza suggested working with Ellen Kappel the science editor. He would send Ellen all of Sara Saunders’ ingredients. Raymo suggested creating an action item for it.

SASEC Action Item 1101-07: Maureen Raymo and Hans Christian Larson to charge Ellen Kappel to come up with few possible names of the new science plan, which will be circulated for consideration to SASEC over email.

Humphris asked if it is possible to edit the document into a shorter version less than 50-60 pages. Raymo replied that what NSF asked, and it should be done quickly in some way like by cutting the repetition. Larsen replied that he thought the realistic volume to cut would be 10%-15%. Humphris asked the time frame for revising it into the shorter version. Larsen asked when the short version will be needed. Humphris replied that it is needed very soon to engage community and to show it their administrators. Mevel agreed with Humphris and commented that new funding agencies need time to decide and they would not go through 80 pages. Larsen replied that 1st April would be a possible day to start working on the shorter version because the long version is supposed to be in review until then.

7.4. Timeline of Science Plan review and Blue Ribbon Comm.

Becker noted that there is a request for additional nominations for the Blue Ribbon Committee.

Raymo noted that they have not been asked yet.

Larsen noted that the required time for Blue Ribbon Committee would be two months, if they need to come up with a lot of consensus, and it would be four weeks, if it is individual comment without consensus. Raymo clarified that high level prestigious scientist will be asked to review the science plan in such short time and provide their output individually. Larsen commented that he didn't know whom he would physically hand in the document yet, although it is aiming for February 1st to have that document.

SASEC Action Item 1101-08: There is still time for SASEC to nominate candidates for Blue Ribbon Committee.

7.5 National reviews

Raymo asked the result from UK survey. Teagle replied that he did not know well about the result. He reported that there was a request from Nature Geoscience for an article about why UK needs to be a member of scientific ocean drilling, and he and Mike Bickle wrote the article and published on January 4th.

Humphris reported that US has a small team whose charge is to energize the community in support of a new drilling program. Last year, they accomplished the 8 pages brochure that is now available for everyone. They also wrote an article for Eos that will be published in mid February, which was written based on the premise what science could do and not do if there was no ocean drilling program. They are also currently in the process of trying to develop a PowerPoint presentation that is about the new science plan. They have a letter writing campaign in which they are trying to get major universities to send in letters to NSF in support of the drilling program in terms of how important it is. 5 letters are promised so far.

There will be a workshop at the end of March for early career scientists funded by the US Science Support Program.

Yeats reported that Jeffery Garrett became the chair of Australian governing council around six

months ago and a large part of the reason behind is he has connections in all places of camera and potentially get audience that we wouldn't otherwise have gotten. So, he is a key part of our strategy to refer newer funding our intentions to stay in program. ANZIC is trying to involve GI in the discussions. CEO of GI is much more supportive of already, but it's a just a matter of funding and flexibility.

Mevel reported that European review committee has a meeting on February in Paris. The report should be delivered in June of this year. In parallel, a business plan would be sent in September to the funding agency.

Shibata reported that Japan was still at the initial stage. Japan formed a committee consisting of 16 scientists. Their first meeting was held last week and four or five more meetings are planned trying to finalize by April or May. Main agenda is the possible options of Chikyu projects and also the science plan. The next level review will be held after the June. Kitazato added the IODP made very good scores and a broader plan would be selected at the end of March.

Larsen noted that Teagle's group got very nice comment from Journal Nature.

7.6. Forwarding/Call for proposals for new program (timing/format)

Larsen explained that the next deadline will be October 1st and the good time to announce the call for proposals would be late April to early May. Science plan should be available by then, maybe not printed but at least on the web front.

8. Renewal of IODP website

Kiyoshi Suyehiro introduced the new IODP website. Raymo pointed out the broken links on the web page and the website with broken links is the worst of the worst. That should be fixed immediately. She also pointed that loading a lot takes too long.

Larsen explained the background of the site design change, which started from SASEC request and

now it has a separate front page with links to the original front page instead of restructuring the entire webpage. He showed that the options are to go back to the old front page, or to stay with the new one and work on the broken links in parallel. Suyehiro welcomed complains and positive comments.

Filippelli commented that the front webpage should never take time to load, not even half a second. The reason why it takes time is that it needs to build the front page by searching and loading a bunch of active content. Front pages are never supposed to be built but they are supposed to be there immediately. Raymo pointed out another problem that she cannot back to the first page with the back button. Yeats suggested a new front page design because the blue writing on the black background is invisible to him. de Leeuw commented that it is easy to understand what kind of program it is, but it should be more clearer as you go to the second layer and third layer. Yeats commented there is no obvious prompt to make the globe spin around and have a look. Humphris pointed that the front page has the funny little symbols that say expedition, but you don't know what the expedition is about. There is no picture of a drilling ship.

Raymo asked if this was done by a contracted service with professional web designers and she commented that people do not like the rotating globe, it takes too long to load. Humphris commented the entire site seems to be flash based, so it is not even loading at all and she added that it is a very unprofessional looking website. Raymo commented that maybe there was no high enough level expert. Dismas Coelho commented that the page should have some gates to specific target like students, academia, and sponsors, then people simply go straight to what they want.

Quinn pointed out that he heard earlier that there were some carry over funds, so it could be used to hire a webmaster. Suyehiro commented that the carry-forward request actually includes revamping the whole website. Raymo asked if it was a company who did the front page. Suyehiro answered yes. Filippelli advised not hire them again. Raymo asked if MI can ask them to fix the page within 48 hours. Suyehiro replied that he couldn't understand how it was processed between Tokyo office and an American company. But he would be able to work on it.

SASEC Consensus 1101-09: SASEC recommends IODP home page to revert back to the old

home-page, develop a new home page for consideration and comment by SASEC.

9. Reports of committee building model for new program SAS structure

9.1. Discussion of new SAS Terms of Reference

Kier Becker reported on new program SAS structure. He introduced the original ideas for new SAS, which is simpler structure, more effort being placed into proposals development and nurturing the program in the workshops and potential SAS working groups, earlier scoping by the IOs, produce fewer but more competitive proposals in shorter residence time in the proposal evaluation process. The subcommittee also suggested that single JR and MSP proposals can be evaluated using a common process, but planning for riser projects and complicated long-term non-riser projects may need a separate pathway. He introduced an older version of the new SAS structure and how it changed to the current version with PEP and SIPCom. He explained that there is still room to change the name of the panel, he asked members idea on new name if they have. The current version of the term of reference was considered as a beta version and the new SAS will revise by themselves.

Becker introduced ToRs for service panels. EPSP is much like the current EPSP. Site Characterization Panel looks at how well the site survey meets the science objectives and justifies the science objectives of the proposal. Technology panel has a similar mandate of Scientific Technology Panel. There is no EDP. And it would be the most controversial aspect.

Teagle asked why no Engineering Development Panel in the new structure. Becker replied that the committee found that the IODP had been not much investing to engineering development, which leads to the question, “why do we need a independent engineering panel if we are not doing that much in engineering development?”. Teagle noted that there is a desperate need for engineering development. Becker replied yes and noted that it is also true that IODP does not much funding to engineering development.

Kenji Kato commented that STP people want to keep their name STP, not TP. Becker commented that the reason for changing the name to technology panel was that if there will be engineering

development issues and EDP does not exist in the SAS, a possibility would be to have a subgroup in the technology panel. However, as technology panel's mandate has become much more like the STP, giving them back their name would be an option.

Becker explained that the first meeting of the proposal evaluation panel could occur this coming fall. The new panel will review the new proposals and those that will be forwarded from the current IODP. Proposal development workshops and working groups could be this year as well. The first meeting of the Science Implementation Policy Committee could be late 2011 or early 2012.

Becker questioned if SASEC would phase out completely or phase out more slowly and continue to exist through 2013, because SASEC will be responsible for approving annual program plans for the current IODP, or responsible for transfer to SIPCom.

Raymo asked if SASEC should just approve the current ToRs and she pointed that it is important to recognize that maybe one year after each panel will be impelled to do a self evaluation. Becker expected that there would be a review almost immediately because it happened when ODP moved to IODP.

Raymo questioned how the panel members would be chosen. Becker showed what happens in the transition from ODP to IODP, which the nominations were coordinated in four-five months and the IWG wrote a request to JOIDES and OD-21 to make nominations for a new interim SAS that became the design for the SAS in IODP. Only four months later IWG approval came out and they started meeting right away.

Suyehiro asked the new SAS system is within the current program or next program. Mevel replied that it has to be part of the current IODP. Larsen commented that new SAS will start October 1st and the same SAS will continue into the new program. The new SIPCom will have its first meeting in 2012. There is always only one SAS and that is the new SAS, no transition time.

Larsen suggested approving everything because staffing needs to start very quickly. CMO has to contact all the national office and need to get input to the new population and the membership fee. Raymo asked if SASEC needs to think about National representation balances. Suyehiro noted

that if the new SAS is within the current program, the scheme is bound by the MoU. Allan commented that IODP-MI has a responsibility under the contract to facilitate and support the SAS, and a part of that is overseeing population according to memorandum, guidelines and understandings as well as the funding.

Raymo asked for member's thought on chairmanship. Currently chair alternates between Japan and the US. She asked who decides the chairmanships of SIPCom.

Kenji Kato commented that comparing the former transition from ODP to IODP is not meaningful because IODP and new IODP have similar structure, not like the previous transition.

Yeats commented that the role of SASEC is to make a recommendation regarding the structure in the terms of reference of the SAS. It is IWG+ who decides how we select the chairs. Schuffert noted that SIPCom chair will be approved by the CMO Board of Governors and PEP chair will be approved by SIPCom. He questioned, since the PEP will meet before the SIPCom, how the SIPCom is going to approve the PEP chair. Batiza commented that the term of reference mentions that the chair of SIPCom is chosen by the IODP-MI Board of Governors, which means PGB. Humphris commented that the SAS is the responsibility of IODP-MI, which means the Board of Governors should play a role in determining who was part of that structure. Allan commented that the chairing job is delegated to IODP-MI and whether they consult with BoG or not, it's a box. Larsen commented that IODP-MI should do it for SIPCom but he was not sure if it also for PEP. He explained that IODP-MI had been strongly encouraged by the Triennial Reviewers and all other reviews to have open competition and nominations, collect applications for the PEP chair. There will be a subcommittee involving IODP-MI that will determine who is the best candidate. Raymo suggested that Hans Christians write an advertisement and circulate it to SASEC and IWG+, then it goes to public. She expected the requirement being not about national or study field, but just excellence of science. Larsen noted that the SIPCom candidates need to be from an IODP member country.

Yeats suggested Filippelli for an interim PEP chair. Raymo replied that it is not bad idea to have an interim PEP chair by the time an obvious successor would come out from the PEP committees. Teagle agreed on having an interim chair so that they maintain that corporate memory.

Raymo noted that the PEP committees are very complex and large committee with an incredibly difficult mandate, so the chair must be a master of all the science. She assumed that PEP will have an interim PEP chair that has a lot of corporate memory and experience. Mevel commented that a program with the same chair and the same proposals from the old program is too far from "new" program.

de Leeuw commented this is very confusing discussion because he thought that approval or non-approval of the terms of references was the point to discuss, but now how to fill in the terms of references seems the point to discuss. Raymo replied that she would like to decide how SASEC wants it to happen, that has to circle back and be written into the terms of reference. Quinn suggested making a general statement like "SASEC supports these terms of reference", then go into. Yeats commented that SASEC have endorsed these twice already basically, and that is the reason why SASEC delves down into the details. Quinn understood Yeats's point, but he thought it was still needed because of new SASEC members. Yeats commented SASEC should have agreement on the structure and what the panels will be like, and staffing needs to be sorted out at IWG+ in the last two days of this week. Batiza agreed with Yeats. SASEC could approve the terms of reference and just give an action item to CMO to come up with some recommendation on how to select chairs and how to do with the other things. Raymo agreed Batiza.

Schuffert raised a concern about the potential lack of flexibility in membership and definition of PEP. He pointed that the current ToRs was so rigid that the national programs would get locked in having to supply somebody with the very specific expertise over and over again. Larsen noted that national balance is open between sub-panels.

Hiroshi Kawamura commented that vice chair is not mentioned in the current ToRs. Becker replied that the reason was that vice chair is just a chair designate for all this panel in the current system. The subcommittee thought such system would not be needed.

SASEC Motion 1101-10: SASEC approves in principle the draft Terms of Reference as prepared by the SASEC SAS Terms of Reference subcommittee and forwards them to the IWG+.

Becker moved, de Leeuw seconded; 9 in favor (Arai, Becker, de Leeuw, Humphris Kato, Kitazato, Takahashi, Teagle, Raymo); 2 non-voting (Filippelli, Suyehiro)

9.2. Position of Technology Development in new SAS

Raymo asked to discuss about the technology development issue. Allan disagreed on the current concept that technology panel reports to the IODP-MI, not to IOs. He also suggested an engineering subgroup within the technology panel.

Raymo asked if the letter from the engineering panel states strongly that they should stay. Allan replied that he did not think it is possible for them to stay. But there still need for advice within the program for engineering. He also questioned, if it is about a delivery device development, how it can be separated from science. He argued that engineering development and technology development are too interrelated to be separated. Yamao commented that IOs should discuss with the oil industries which possess the most developed technology. Mevel commented that they spent a lot of time developing roadmap which was a wish list covering everything which was not realistic. Allan commented there need to be an entity that works for the IOs directly. Raymo asked if IOs want their own separate group. Allan replied that there is a need for a group that is able to give advice to the USIO from outside but also need a group within the SAS. Raymo commented that independent advisory committee could come to SAS and keep SAS updated on their activities. Larsen commented that IODP-MI likes to have a taskforce involving the IOs, industry representation and other program science community, which would integrate the knowledge. Raymo asked if it is a taskforce within the SAS. Larsen replied that it needs OTF-like task force, i.e. a hybrid entity working closely with SAS, IO and CMO.

Teagle commented that EDP did what they were supposed to do. It is about money versus return. He suggested pre-mortem taskforce involving IOs not like current post-mortem review. Divins agreed with Teagle. Quinn concerned the case that proponents have little knowledge of the technology. Divins commented that that kind of advice to the proponent should come from a SAS panel not from the operator. Tom Janecek commented that operator with a task force is better because there are operational issues related specifically to day-to-day drilling that needs input from knowledgeable people. Maintenance and upgrades are clearly issues related to their platform, and scoping of proposals that are going to be also related to specific platforms. These issues are

very IO-centric, especially if you don't have and agree with funds for centralize engineering programs. That's why IO's independent advisory taskforce works better. The other reason is that the most operational issues are funded directly by each funding agency for each platform. With this funding stream, it is responsible to have IO as the center of the taskforce.

Raymo suggested making a statement that TP should also advice on technical feasibility and make sure that the initial panel has technology development experts or experts in it. One of their roles will be the liaison to the operators who can exploit your own models of getting advice outside the SAS structure. Eguchi commented that the statement sounds about EDP. Allan commented that it should be simple and flexible. The responsibility for scoping of potential expeditions should lie with the operator. Larsen asked if the CMO has responsibility in overseeing not physically but intellectually engineering development. If IWG+ wants CMO has it, CMO need the kind of taskforce and IOs can have whatever they want. Teagle commented that it seems clear that SAS does not need an engineering panel and the individual expedition advices are operator-based issues. Allan commented that there was a real lesson that IODP model was originally built on one platform, but now IODP has different platforms, resulting in a lot of things that cannot be integrated, like EDP that made recommendations to each platform. He stressed that it is necessary to take those tasks down to the IO level. Teagle commented that SAS panel needs the liaisons from the IOs for proposal evaluation to be knowledgeable.

Raymo commented that Larsen stated clearly what kind of guidance is needed from IWG+. She suggested starting on that part next day and she adjourned day1.

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Raymo asked the panels for their thoughts on technology development, engineering development, and how it needs to be done within the new program. Becker suggested setting up a subcommittee and getting some guidance from IWG Plus in a next couple of days. Allan commented USIO will have an engineering taskforce and independently seek its own engineering

device. Larsen commented that IOs should provide advice to the SAS at the beginning of proposal review. Yeats commented that it is clear that engineering development belongs to outside of SAS and SASEC need to talk about SAS, so engineering is not an issue. Raymo said that IODP-MI would disagree. Larsen replied that an engineering panel needs to be within the program but not necessarily within the SAS.

Humphris liked to have a subcommittee because there were very different opinions from different groups with different interests on this topic and it seems hard to reach a consensus. Raymo replied that she would agree with Humphris if IOs, LAs, and the CMO would agree on it. de Leeuw agreed with Humphris, and he suggested inviting the present chair or vice chair of EDP to that subcommittee. Larsen doubted de Leeuw's idea because the current EDP was very much constrained by the current situation. He instead proposed to send someone from the subgroup to the EDP meeting to get their input.

Raymo listed potential members of the subcommittee, Larsen, Allan, Becker. Filippelli suggested sending someone in Europe because EDP meeting will be in Grenoble. Shibata commented Mext can send one person. Teagle would not be able to attend the meeting, but he would be in the subcommittee. Filippelli suggested Gretchen Früh-Green who will be going to be part of the EDP meeting anyway.

Janecek noted that IWG Plus has already said that Engineering panel will be a second-tier activity, which was decided based on the lessons learned from the past. He suggested one-time committee to look at 3-5 years engineering development, and bring them back in 3-5 years to look it again.

Mével noted that engineering development is not the right word because IODP need engineering expertise from outside industry, not trying to develop.

Raymo noted that it does not seem possible to decide whether there should be a new EDP right now. Allan commented that it is important to understand that we may not have a solution and the discussion may not lead to consensus. Raymo suggested having half-day agenda item at the final SESAC meeting where people come prepared. Humphris disagreed with Raymo, and noted that SASEC needs to come up with a position on engineering development. She preferred forming a

subcommittee including some SASEC members, one of them would be a Japanese member. Yeats agreed with Humphris, and commented that now SASEC knew what IOs want to see and what MI wants to see. SASEC can put them on the table and make a decision, and whether that position is fundable or not is another issue. Kato suggested forming rather small subcommittee. Raymo suggested a model with 3-4 SASEC members who go out to the stakeholders and get their opinions and advice, and formulate their own opinion of what is the best.

SASEC Consensus 1101-13: SASEC forms a subcommittee to assess structural models in the post-2013 IODP for (a) advising on engineering development and industry-IODP technology transfer, and (b) ensuring adequate long-term engineering advice to the new SAS. The subcommittee should consult with the IODP agencies, CMO, and IO's and provide its report at the June 2011 SASEC meeting. Subcommittee members include Keir Becker, Shoji Arai, Damon Teagle, and Susan Humphris.

Raymo asked if the panels are happy with the future revision on ToRs, which SASEC would not be involved. No objection was raised. Teagle noted that SIPCom will write their own. Larsen commented that CMO has responsibility for the whole SAS and it approves ToRs, and asked SASEC to let him know if they want to change something.

9.3. Staffing of new SAS

Shingo Shibata asked about the perspective of SIPCom chairmanship. He suggested that the current rotation system should be maintained to secure domestic funding and understanding among Japanese taxpayers. Larsen commented that he couldn't understand how securing funding could be connected to the rotation between LAs as CMO pays for travel and salary for SIPCom. Raymo spoke for Shibata that it was about funding for the whole program. She informed that all discussion she had heard on SIPCom chairmanship concluded the rotation constraint should go away. However, now she heard it opposite. She invited the members to the discussion.

Kenji Kato agreed with Shibata and he also suggested discussing chairs of SIPcom and PEP separately. Teagle did not agree with the rotation system. He suggested selecting the best person

doing the job without any national or even expertise bias. Kato commented that “select the best person” rule would be good for PEP chair but not for SIPcom chair, because it could ruin its internationalism. He added that Japanese community wants to keep the current rotation system for SIPCom.

Jan de Leeuw supported Teagle’s argument. He pointed that the panel was preparing a new phase, meaning there was room to change the rules. As a scientist to deal with scientific panel, calling for the best person is a common understanding.

Kozo Takahashi commented that he would agree with the choosing the best person, however, he does not agree with the same way to do it for SIPCom. Japanese funding agency has the need to secure the rotational scheme. There is a significant difference in the cultures between Asian culture versus US or European. Unless the rotational scheme stays in SIPCom, it would be difficult to get supports from the scientific community, especially from Japan.

Kitazato commented that PEP is surely scientific but SIPCom is not. Budget contribution and how often which country keeps the chairing positions mean to the IODP system, so the rotation between LAs is very important factor for Japanese people to decide if the IODP is a good program to them.

Suyehiro suggested a compromised plan that the chairs are selected by an international nomination committee, not by their home offices. Raymo and de Leeuw agreed with Suyehiro.

Raymo concerned about SIPcom’s role, if it is directly involved in proposal’s science or just like the current SASEC, it steps back from the proposal’s science.

Humphris noted that, according to the ToRs, it should be different from the current SASEC. Yeats commented that the TOR is saying that SIPCom basically generates the drilling plan.

Becker informed that the Triennium Review committee and SASEC subcommittee ensures that SIPCom does not engage in re-review of individual proposals. OTF puts together potential packages, and then SIPCom takes a look at the big package on which will achieve the high-priority objectives

for the program. SIPcom doesn't go through "this proposal is better than that proposal". Humphris explained that, according to the current ToR, SIPCom receives the high priority group but then at the same time OTF provides scheduling options. So, PEP inputs SIPcom with a top ranked group and OTF inputs how they could potentially do it.

Maureen Raymo clarified that the point was if SIPcom needs to understand the science of the selected proposals. Yeats replied that it has to. SIPCom would take a more whole of program view and more long-term strategic view towards the science plan goals. SIPcom has to understand the proposal's science to understand how they achieve the science plan goals. Jan de Leeuw agreed with Yeats. SIPCom is not only for annual plan but also for long range science operation plans and assessment of success in achieving its scientific objectives. In that sense, it is scientific. Quinn commented that the members of SIPCom would come from PEP, just like some people were elevated from SPC to SASEC. In that case, there is carryover knowledge. Proposals in OTF should be already the very best proposals and SIPcom would have no need to see into each proposal.

Kenji Kato switched back to the SIPcom chair nomination and asked Suyehiro how the international nomination could be done. Suyehiro replied that he did not like to be dictated here, but it should be easily done. Yeats commented that Kato's question was very fundamental. Suyehiro noted that the question was still open in the point whether only Japanese and US scientists or whether the entire scientific community can be considered as the chair, but the message from the former discussion was that it should be between only Japanese and US.

Raymo pointed that the SIPcom would be more scientific than the current SASEC. She questioned if SIPCom's scientific level has any impact onto Japanese stance that they still think that it should rotate between the two LAs because it has a perceived political impact that is important back with their home.

Jeff Schuffert commented that the P of SIPcom is Policy, so it would be reasonable that politics might come into play.

Filippelli noted that there does not seem to be as a strong agreement on how much science SIPCom will be engaged with. He asked Becker for explanation. Becker answered that SIPcom

discussion should not be “this proposal is better than one so we have to choose them.” But they are looking at the package of potential schedule.

Raymo questioned how the interaction of OTF and SIPCom is happening. Humphris answered that OTF considers the long-range and overall programmatic priorities, while SIPcom selects which one is the best. Raymo replied that SIPcom has to know the science to say that. Kato commented that, in order to simplify the system, SIPCom needs not to touch on science directly if everything is okay. Raymo repeated that SIPcom needs to know the science otherwise it cannot evaluate the ship tracks forwarded from OTF. Humphris replied that SIPcom also has input from PEP, which could cover that part. Raymo replied that, in that case, SIPcom need much more scientific input.

Raymo noted that SASEC now found that SIPcom is covering both of science and policy. She questions again how this impact on other issues.

Yeats suggested two year term of two Japanese chairs, two US chairs, and one other, as a compromise, thinking that Japanese members are quite adamant that they want this to be rotational. Raymo agreed on the idea. Teagle commented he would agree on it if there would be an international selection.

Shibata asked Suyehiro what the international actually means. Suyehiro replied it means an agreement by an international committee. Shibata asked how it could be done actually and asked if he had a specific idea. Suyehiro asked if Shibata thought it is impossible. Jan de Leeuw asked Suyehiro if his international selection means US and Japanese and then go for the international inspection procedure, or it is completely open. Suyehiro answered that it is US and Japan.

Quinn agreed with Yeats. He commented that the Yeats’ idea has the spirit of the international collaborative research organization and some other criteria that can be used in how the chairs could be selected. The 2:2:1 notion is the right track and it will work. Filippelli also supported 2:2:1 concept, and he wondered if language could be an issue for the first SIPCom chair. Raymo pointed that is a practical issue.

Takahashi noted that the first SIPCom chair would be within this fiscal year of FY12 and 13, which

is the end of the present 10-year period. So it has to be within the rule of MOU between the two agencies. Mevel pointed that the last SASEC decided to modify the rule and consider the possibility of having somebody not from the two lead agencies. Raymo replied that she thought that was the spirit of the discussions of the terms of reference of the new SAS and that was the message from IWG+.

Rodey Batiza commented that the concept of new SAS was to establish the future program that is better, faster, and cheaper than the old system. MOU was already violated in many areas. It should be more flexible. He thought IODP was not bound by the MOUs anymore. Shibata agreed with Batiza, and he commented that there were many violations for MOU, it was because the current MOU is too inflexible. In the future program, it is needed to be more flexible or simple.

Shinichi Kuramoto commented that LA has the ultimate responsibility to implement the new program and oversee this program, based on the IWG points of agreement. He insisted that LA has the responsibility to find out the best person to be a SIPCom chair. That could be one of the ways to succeed in smoothly doing this program. Allan commented that LAs needed to talk more on this problem.

Larsen commented that the chair should not cast a designing role. The chair is to facilitate the best possible discussion and make sure that everyone is heard at the table. He thought it could not be so important at these national standpoint, though he did understand some politics involved.

ASEC consensus 1101-11: The current IODP Memorandum specifies that the SAS Executive Authority Chair should initially rotate between US and Japan. SASEC suggests to IWG+ that the first SIPCOM chair during the FY2012-2013 transitional period should be from long-term contributing IODP member ECORD.

SASEC Consensus 1101-12: SASEC recommends that the two year term of Chairperson of SIPCOM be rotated, with the position to be held twice by Japanese scientists, twice by US scientists and once opened to all members during the ten year duration of the new program (2014-2023). Additionally, SASEC considers that each Chair should be selected by an international panel, in the

spirit of the program, rather than nominated by National program offices.

9.5. Proposal categories and guidelines

Hiroshi Kawamura explained that the new proposal guideline has to be public very soon and the current version contains new proposal categories but other things are basically the same as the old guidelines. Humphris asked when it should be published. Larsen replied May. Humphris commented that the current version was too complicated for new proponents to know what to do. There must be simpler way to say the same thing with a table or flow diagram for non-drilling people. Yeats noticed that the required page length was changed and asked if this change was an arbitrary decision or a rationale. Kawamura replied that this was just a suggestion. Mevel pointed that it still mentioned SOCS and POCS. Kawamura replied because it was still for the current IODP. Mevel and Yeats replied no. Mevel suggested no mentioning it because it will be abolished. de Leeuw commented that it also included extra information like response letters, project of drilling science, nation, etc, which are not about proposal. This could be very confusing for newcomers. Humphris commented that it should not encourage people to submit a multiphase drilling project, as a much bigger project, because we do not want a workshop to create 10 proposals that are all addressing the same goals of the project. It should be realized with integrated series of drilling legs.

Raymo suggested convening a subcommittee of SASEC to work with IODP-MI on editing and drafting the very best proposal guidelines. And they need to make it publishable by May. Yeats suggested postponing the call for proposals until the science plan will be there. Launching the call for proposals and science plan at the same time would be a good idea. Mevel agreed with Yeats. Teagle commented that science plan is not supposed to be a rulebook. It is a general state of the art things that we would like to achieve. Filippelli agreed to form a subcommittee. Raymo showed two options, the subcommittee will report to the next SASEC meeting and get approve, or they do it over email. The former requires a delay in publication till late June and the latter could have difficulty in time and smooth communication. Larsen noted that the guideline should be on web no later than mid to late May. It should get done much before the next SASEC meeting. He explained

that the two essential things to be considered are the complementary project proposals and multiphase drilling project.

Filippelli recommended having SSEP co-chairs in the subcommittee.

Raymo stated that the guideline work happens between now and May. The final version of this proposal submission guideline will be circulated to the full SASEC for approval of meeting.

SASEC Consensus 1101-15: SASEC nominates Gabe Filippelli (Chair), Jan De Leeuw, Chris Yeats and one of SSEP co-chairs as members of a subcommittee to work with IODP-MI to develop proposal guidelines prior to the next Call for Proposal.

de Leeuw questioned if ToR subcommittee came to the end. Raymo replied that it is disbanded.

SASEC Consensus 1101-14: SASEC thanks Keir Becker, Jan Willem de Leeuw, Gabe Filippelli, and Shoji Arai for their effective efforts in crafting the new SAS Terms of Reference that lays a strong foundation for the SAS structure within the new International Ocean Discovery Program. This subcommittee is now officially disbanded.

10. Workshops in FY2011-12: Budget and Process

Raymo and Eguchi left the room due to COIs. Arai took over chairmanship.

Hans Christian Larsen reported on the summary of cost and timing of four workshop proposals that were submitted for 1 December deadline.

Title: Indian Ocean Drilling

Lead proponent: Pandey

Country: India

Proposed date: Oct-Nov. 2011

Requested fund: \$35000

Title: Continental transform boundaries: Tectonic evolution and Geohazards

Lead proponent: McHugh

Country: USA

Proposed date: 2011

Requested fund: \$26490

Title: Workshop to develop a conceptual framework for ocean drilling to unlock thesecrets of slow slip events

Lead proponent: Wallace

Country: New Zealand

Proposed date: June 2011

Requested fund: \$41100

Title: Gulf of Lion Drilling

Lead proponent: Rabineau

Country: France

Proposed date: June 2011

Requested fund: \$59000

Larsen requested SASEC to consider their potential to turn out a good proposal and if they should be funded at the level required. SASEC can grant, reject, and ask to revise. Suyehiro commented that he had some experience with ICDP's workshop in which the proposals were examined with some criteria like if the key scientists are from international community.

Quinn reported on the Indian Ocean Drilling proposal.

They seek \$35,000 from IODP-MI. The total cost of their proposed workshop is \$110,000. They plan on their expected financial support is \$40,000 from the Indian host and also \$35,000 from

NSEC and other Australian agencies. The strength of this workshop proposal is that there is already a large number of proposals in the system. There is 15 or so with an opportunity to synthesize, prioritize, and build international alliances. It is more than a decade since IODP drilling has been Indian Ocean. India, the host country, has recently joined IODP and they are going to host a meeting in Goa. They have a strong international steering committee. Their science is along with new science plan in terms of climate variability, monsoon histories, plate tectonics, volcanism, and deep biosphere. So, given the level of matching, this seems like fairly reasonable. It is a reasonable investment with a potential for large return in terms of science.

Teagle reported on the proposal "Continental transform boundaries: Tectonic evolution and Geohazards".

This is a proposal for a workshop to look at the North Anatolian Fault where is a highly active region with a series of very large earthquakes, greater than magnitude 7+. They want to develop a drilling proposal to investigate these basins in the Sea of Marmara to look at mountain records of earth-like activity. They are requesting \$26,000. They would like a small focused workshop for about 20 scientists, and it will be held either until spring or like summer at Istanbul Technical University and one of the co-conveners is a Turkish scientist. It follows on from another workshop hosted by ESF in Bremen late last year whose acronym was RAMBO. One of the scientific goals of this proposal is to look at the evolution of the fault zone that moves across the basins. They want to develop a paleoseismic record over a 10,000-year timeframe. The workshop goals would be to develop a draft drilling proposal better to define the objectives. They already have quite a large amount of geophysical science survey data. The main justification of having this second workshop was to invite US and other international colleagues, though it is not clear why they could not have been done with this previous workshop. Teagle agreed that this proposal deals with a topical fields of geo-hazard, which are under-represented so far in what is being done in IODP. He thought that it was a fairly modest amount of money and IODP-MI could grant it.

Larsen asked when the previous workshop. Teagle replied October last year. Suyehiro asked if the proposal refer to ICDP. Azuma replied this proposal links to ICDP proposal.

Yeats commented this is extremely narrowly focused, while the Indian Ocean was once broadly focused. Yeats pointed that Teagle said this is a small amount of money but they were asking for \$26,500 for 20 people, while the Indian proposal is asking for \$35,000 for tens of hundred people.

This proposal has no matching funds. Teagle replied that they are going to other 20 people and they have matching funds from the local host as well. Yeats commented that it isn't in the same league as the other proposal, in terms of the return on investment, because one proposal tries to kick off some momentum in an ocean basin while the other proposal wants to drill a single target. Schuffert noted that it would not be able to get funded if they want the workshop in April-May timeframe. Teagle replied that they made some comment about they could set it in September. Larsen commented that the proponents need to be aware that non-member country members cannot get funded. He also commented that the question is if SASEC accepts workshops which goal is to build a pre-proposal, meaning no related proposal in the system.

Humphris reported on "Workshop to develop a conceptual framework for ocean drilling to unlock thesecrets of slow slip events".

This is a proposal from an international group of scientist basically to start thinking about how to investigate slow slip events through use of scientific ocean drilling. Slow slip events are a class of shifts that is found in subduction zones that is different from the strike slip that is being investigated mostly at Nankai. And the research area has come very much to the fore in recent years. This workshop is to discuss how to use drilling to look at not only slow strip slip occurrences but also what are the causes of those slow slip events, which are probably related to things like high fluid crushes and changes and stress along those subduction zones. There is already their pre-proposal in the system and they want to start thinking about it in the workshop. The target area gets slow slip events every two years offshore of the North Island of New Zealand. They are also interested in some other areas like Japan and also Costa Rica where there was obviously the crisp drilling. They are asking for \$41,000 that would allow them to bring in 10 key scientists from other countries and to support some minor aspects of the meeting.

Humphris agreed that this proposal was very good, looking at the big picture and also key locations where you can investigate these events. They have good international representation.

Hiroshi Kawamura noted that their pre-proposal was considered to have high potential by SSEP. Schuffert informed that their funding request to USSAP were currently under review, and he expected a decision early next month at the USSAP meeting. The amount of their request was \$45,000 - \$50,000. Humphris added that they were also requesting \$25,000 from New Zealand, which makes the whole proposal about \$100,000.

Quinn noted that the recent GeoPRISMS meeting was focused on New Zealand slow slip sequence. So there are related program to emphasizing this workshop. Suyehiro commented that the understanding of slow earthquakes is ongoing in different countries. Each country is becoming very competitive trying to be there first inviting exciting papers. So this is a very good opportunity for these popular scientists to get together and try to find the best place to understand slow slip events.

de Leeuw reported on the workshop proposal, "Gulf of Lion Drilling".

This workshop proposal is different from the other ones in the sense of no active drilling proposal in the system and that it cannot be done without the Chikyu. Their previous drilling proposals have been deactivated by SSEP. If the Chikyu can come to the Mediterranean, it should be very well prepared. The ultimate goal of the project is to drill a deep hole on a unique and highly appropriate location to contribute our knowledge in many different fields. The quite unique point in this proposal is to try to cover climate change, co-evolution of life and planet, deep earth process, extreme events, and natural resources and geo-hazard, which seem to correspond with the themes of new science planning at this stage. So, it is highly multidisciplinary and therefore also highly complex. One of the questions is whether it is really feasible to do all these different things with one drill activity.

It has been a successful to have the first ECORD cosponsored workshop in France last year. They are planning a two-day meeting in Tokyo in June 2011 where about 40 scientists including a couple of people from oil industry representatives to develop a detailed proposal. The total cost is estimated \$75,000 and request to IDOP-MI is 59,000. It could worth investing in terms of a chance to pull Chikyu out of Japanese water, although there could be room for improvement.

Azuma commented Chikyu could come to Mediterranean if it is a good proposal. Teagle commented that their proposal was very poorly received by the SSEP 5 years ago. Hiroshi Kawamura informed that they had two proposals and both were deactivated. Mevel commented that she was attending their previous workshop in France. She thought that the reasons why they got deactivated was that it was delivered by the young scientists who knew little about IODP. But now they are assembling a group of experienced scientists and they have done very well. She believed that the next workshop would really help them to write a good proposal, but it takes time because it is a big project.

Suyehiro suggested that SASEC simply approves these four proposals, and let CMO decide on budget cut to fit in the amount we have. Humphris replied SASEC had not reached an agreement to approve all the four.

Quinn suggested discussing on each proposal. He was favor of Indian proposal because a lot of matching funding, no drilling in the past decade there, hosted by India who is new in the program and a very strong international steering committee. Humphris agreed with Quinn. No objection is raised.

de Leeuw indicated "Gulf of Lion" proposal and suggested advising them to focus on the science and see what the additional value of this multi-disciplinary approach. Quinn added that SASEC would also ask them to report on the previous workshop to organize themselves, then SASEC could pick it up again in the June meeting. Humphris agreed with de Leeuw and Quinn, and commented that they just had one workshop in October and it cost 70,000 euros and we had not seen the results. SASEC needs to seek some evidence that they are actually focusing in and coming up with something viable. Teagle commented that they need to refine what science is coming out of a 7.5 km core. Suyehiro agreed with Teagle. de Leeuw agree on the idea that SASEC keeps it in the hold waiting for a report on previous workshop, and ask them to submit a new proposal, despite the fact that it will not help to meet the proposal deadline in October. Mevel commented that the report had been already existed and she would send the SASEC members the link to it. Humphris made a clarification that SASEC does not fund it at this time, but welcome a new proposal that is built on the results of the first workshop. Larsen added that they should show the rationale for having one more very broad workshop.

Teagle indicated the goohazard proposal and asked if SASEC could support them to write a full proposal. Humphris questioned if IODP spends money on having them write a full proposal when they have not even done the pre-proposal step. Mevel commented that it could completely confuse community if you encourage people to have workshop to develop a proposal before you say a pre-proposal is needed to exist in the system beforehand. Humphris suggested not funding it at this time and encouraging them to write a pre-proposal and see how it fares. Teagle pointed that she was treating this proposals slightly harsher than the others. He suggested keeping balance. Yeats commented that it explored questions about important seismic situation and it could turn out what the drilling could do there. Mevel commented that she was trying to encourage people to

develop workshops, but now SASEC were trying to shy away and just wait to see. Humphris replied that IODP cannot be funding everything and the possible filter is if they have a pre-proposal in the system, then we fund them to develop a full-proposal. Mevel noted that it should be explicit. Humphris agreed on that point. Filippelli commented that the "pre-proposal needs to be in the system before workshop" rule should be mentioned in the new proposal guideline for future proposals, but SASEC could support the proposal already submitted.

Teagle summarized that SASEC was positive for the Indian Ocean proposal, there was recommendation to have resubmission for the Gulf of Lion proposal, and SASEC did not quite come to agreement on the Sea of Marmara proposal. Yeats noted that the call for workshop proposals did not say that pre-proposal should come to first, then you can move on to a workshop. The question is "do we want to tell the proponents in good faith have replied to the call to go back and do a pre-proposal?". Especially in this transition period, do we want to penalize them for their proposal that is following our call? Suyehiro suggested that SASEC considers this proposal as pre-proposal level, because the advertisement did not say the need of pre-proposal and we should be faithful and fair. Yeats expressed his favor of funding this proposal.

SASEC Consensus 1101-16: SASEC has reviewed four workshop proposals (No. 5, Indian Ocean Drilling, No. 3, Continental Transform Boundaries, No. 4, Slow Slip Events, and No. 6, Gulf of Lion Drilling) and recommends funding for the first three and resubmission of a revised proposal based on the recently held workshop of the Gulf of Lion community. SASEC strongly suggests urgent development of a guideline for workshop proposals.

11. Scoping of mantle drilling in new program

Raymo and Eguchi were back in the room.

Kiyoshi Suyehiro reported on the feasibility study of the mantle drilling in new program. IODP-MI was charged of the project by the BoG. The project goal is to characterize in situ section of oceanic crust and upper mantle, which was reaffirmed at the INVEST meeting. Three candidate sites have been identified by the international science community at the Kanasawa workshop and then

Washington DC workshop as well. The Mohole project is intended to start by 2017. The deadline for completion of the feasibility study is set to April 30, 2011. The first question to be answered is if the Mohole drilling project is feasible to start by 2017. This is not a commitment but just a question that feasibility study would answer. If so, the next questions are what new technologies are needed for it, how sensitive its success and costs are to the range of scientific experiments at each candidate sites and what the most efficient platform for establishing scientific success. These are initial feasibility studies to provide the estimated cost of the project. Two months is necessary to conduct this study. Yoshi Kawamura is in charged of these efforts.

Teagle commented that there are some important parameters, like temperature. Becker commented that they say that it is feasible and still need to continue the scoping effort, so we have to be faced with how to continue that scoping temperatures.

Suyehiro informed that the workshop came up with a solution and a list of possible members who could contribute to the scoping. He introduced the following basic concept of the scoping that was written at the workshop.

The scoping group will assess what is needed in order for the project to have a high likelihood of success. Scoping group will evaluate various engineering technology for all measurement of science efforts. Scoping activities need to be sufficiently advanced on the framework of the project prior to the new ocean drilling program. A report would be provided at the start of 2012, so that funding agencies can include the project in the consideration for funding of the new ocean drilling program.

This was written before the board changed, so this needs to be modified. But its spirit maintains and SASEC would be asked to approve. The document will be posted on IODP website to get comments from the community after the feasibility study is done.

Teagle asked if the feasibility study will be shared with the proponents of the Mohole project. Suyehiro replied yes. Teagle asked if SASEC will receive the feasibility report for the June meeting. Suyehiro replied yes. Raymo commented that packaging it with the SASEC engineering subcommittee report would be a good idea. Yeats asked if the scoping group has already its

subcommittee who is looking for potential members. Suyehiro replied yes.

12. Review of rotation schedule for SASEC members

Raymo noted that agenda item 12 was a non-issue because nobody was rotating off and rotating on.

13. Other business

SASEC Consensus 1101-17 : Hiroshi Kawamura has been a steadfast resource for the Science Advisory Structure and IODP-MI. His knowledge of proposal details and his extremely efficient management of the correspondence and business of the SAS were great assets. We congratulate him on his new position with the IPCC, and wish him and his family the very best as they move back to Germany.

SASEC Consensus 1101-18 : SASEC thanks Keir Becker for his organizational skills, hospitality and panache in hosting this meeting in balmy Miami, taking many (but not all) of us away from the cold grip of the Northern Winter. We appreciate the warmth and sunshine, and eagerly anticipate the refreshments that will be provided for us.

14. Review of action items, motions, and consensus statements

Panel members walked through the drafted consensuses and discussed on their wording.

Damon Teagle made an interim report from the resource subcommittee to write a box for the new science plan (cf. action item 1101-05).

The box needs 150-300 words with some powerful statements about resources, which is that very essential to society, the global demand is increasing at exponential rate, and that there is increasing requirements or energy security and increasing requirements for low carbon energy

sources. Then it is followed by clarification of the roles of scientific ocean drilling that is we have modern exploration project to discover how resources formed in the past and active analogues of ongoing resource information. Much of our research provides a knowledge framework that is useful for industry to understand the mechanisms of resource information and resource identification. There needs to be a sample list of the potential resources. Energy in the widest sense involves hydrocarbons but also maybe hydrogen from prototype reactions, abiotic hydrocarbon production and also geothermal heat. Carbon capture opportunities with the storage of CO₂ in sedimentary structure or hydro reservoirs should be written in. The subcommittee needs some resource specialist to build up the idea.

The box would be including de Leeuw's idea that is about nuclear waste or storage. Teagle will send the draft to the science editor.

Raymo asked what kind of figure would be in the box. Teagle replied he thought a 3D cross section on continental margin going to mid-ocean ridge, but some similar figures were already in there, so he now thought a picture with bubbles coming out of something. Humphris suggested having a big picture of societal relevance of scientific ocean drilling in the introduction page, and the resources could fit in there. Raymo asked if Humphris suggested not having a box for resources but it now moved into the introduction page. Humphris replied it is still a box but as a part of introduction. Raymo did not agree on the box in introduction, but agreed with Humphris on that the introduction page should be improved.

Quinn gave an interim report from the education & outreach subcommittee (cf. action item 1101-06). They built questions, what are the goals of the new IODP in terms of elevating understanding of the critical role, what ocean drilling plays in the earth, ocean scientists and stakeholders which included the general public, from elementary to high school, university and government. IODP is an international program with strong track record of turning research into knowledge of the exploration of the earth under the sea. Target audience is next generation of scientists, policymakers, industry partners, teachers, students and general citizenry. This chapter would be 2 to 3 pages with a half page summary box.

15. Future meetings

Raymo informed that de Leeuw will host the next SASEC meeting.

de Leeuw gave the information on the next SASEC meeting.

Date: 14-15 June 2011

Venue: Amsterdam

16. Closing remarks

Maureen Raymo noted that the afternoon joint session began at 15:00. She adjourned the meeting at 14:35.