

IODP Science Advisory Structure Executive Committee

3rd Meeting, 22-23 March 2007

Videoconference locations:

Washington, D.C., USA

Tokyo, Japan

Cambridge, United Kingdom

Science Advisory Structure Executive Committee - SASEC

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|--------------------------------|--|
| Keir Becker | RSMAS, University of Miami, USA |
| Michael Bickle | Department of Earth Sciences, University of Cambridge, United Kingdom |
| John Hayes | Woods Hole Oceanographic Institution, USA |
| Susan Humphris (chair) | Woods Hole Oceanographic Institution, USA |
| Rachel James ¹ | Department of Earth Sciences, The Open University, United Kingdom |
| Gaku Kimura | Department of Earth and Planetary Sciences, University of Tokyo, Japan |
| Masaru Kono | Okayama University, Japan |
| Young-Joo Lee* | Korea Institute of Geoscience and Mineral Resources, Korea |
| Kenneth Miller | Department of Geological Sciences, Rutgers University, USA |
| Toshiyasu Nagao | Earthquake Prediction Research Center, Tokai University, Japan |
| Eli Silver | Earth Sciences Department, University of California, Santa Cruz, USA |
| Jianshong Shen* | Ministry of Science and Technology, China |
| Manik Talwani | IODP Management International, Inc. |
| Yoshiyuki Tatsumi (vice-chair) | Institute for Research on Earth Evolution, JAMSTEC, Japan |
| Gerald Wefer* | Center for Marine Environmental Studies, University of Bremen, Germany |

¹Alternate for Gerald Wefer

*Unable to attend

Liaisons, observers, and guests

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|-----------------------|--|
| Jamie Allan | National Science Foundation, USA |
| Rodey Batiza | National Science Foundation, USA |
| Steve Bohlen | JOI Alliance, Joint Oceanographic Institutions, Inc., USA |
| David Divins | JOI Alliance, Joint Oceanographic Institutions, Inc., USA |
| Dan Evans | ECORD Science Operator, British Geological Survey, United Kingdom |
| Issa Kagaya | Advanced Earth Science and Technology Organization, Japan |
| Yoshihisa Kawamura | Center for Deep Earth Exploration, JAMSTEC, Japan |
| Kelly Kryc | IODP Management International, Inc. |
| Hans Christian Larsen | IODP Management International, Inc. |
| Toshi Oshima | Ministry of Education, Culture, Sports, Science, and Technology, Japan |
| Yoichiro Otsuka | IODP Management International, Inc. |
| Kazuya Shukuri | Ministry of Education, Culture, Sports, Science, and Technology, Japan |

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EXECUTIVE SUMMARY

2. Approval of the Minutes from the November 2006 SASEC Meeting

SASEC Motion 0703-01: SASEC approves the minutes, with the revision suggested by John Hayes, of its second meeting on 1-2 November 2006 in Odawara, Japan.

Silver moved. Kono seconded. 10 in favor, 0 abstained, 0 against.

3. Approval of the Agenda

SASEC Motion 0703-02: SASEC approves the agenda for its third, but first videoconference, meeting on 22-23 March 2007 from the three sites: Washington, DC; Tokyo, Japan, and Cambridge, UK .

Miller moved. Tatsumi seconded. 10 in favor, 0 abstained, 0 against.

4. Update on Action Items from the November 2006 meeting

SASEC Consensus 0703-03: SASEC agrees to nominate, via email, a mission review panel of appropriate experts after they have received the list of mission proposals submitted by the April 1, 2007 deadline.

7. Education and Outreach – Clarification of its Role

SASEC Consensus 0703-04: SASEC endorses the guidelines for Education and Outreach as provided by the Lead Agencies, and recommends that all effort be made to ensure the roles of IODP-MI and the IOs be well-defined and well-coordinated. IODP-MI's role in Education and Outreach should be focused on, if not restricted to, efforts that are international in scope.

9. Items from the March SPC meeting

SASEC Consensus 0703-05: SASEC approves Jim Mori as the next chair of the Science Planning Committee.

Unanimous vote by e-mail after the March meeting.

SASEC Consensus 0703-06: SASEC thanks the SAS Working Group for their efforts to review the SAS structure. SASEC requests that the SAS WG complete their report of recommendations to date. SASEC also requests that the group include a scenario of a reduced SAS in the event that financial projections require such a scenario.

11. Dealing with Financial Projections

SASEC Consensus 0703-07: The financial projections for the next few years of IODP indicate that full-time operation of both the riser and riserless vessel for science are likely unsustainable. Hence, SASEC recommends that IODP-MI actively pursue collaborative arrangements with industry that are mutually beneficial to both parties and that will provide additional science operating days, and that do not impact the scientific integrity of the program. SASEC recognizes that such arrangements will require some flexibility in procedures and process, and that collaborations will need to be dealt with on an individual basis.

13. IODP-ICDP Relations

SASEC Consensus 0703-08: SASEC recognizes the common goals and interests of IODP and ICDP in exploration and drilling of the Earth and, in principle, endorses steps toward integration. SASEC recommends that an *ad hoc* implementation group be formed with 2-3 representatives from both programs, plus specific curatorial expertise. The *ad hoc* implementation group is charged with: 1) developing and implementation plans that includes financial implications for common core storage and metadata integration; 2) fostering cross-program evaluation of proposals. We envision that the latter will be initially accomplished with liaisons between the ICDP Science Advisory Group (SAG) and the IODP SPC, but charge the committee to consider a broader view.

14. Policies and Procedures

SASEC Consensus 0703-09: SASEC agrees that, in general, SPC will deal with policy changes and that SASEC will approve them as part of the Annual Program Plan. However, if situations arise where more timely approval is required, SASEC will consider specific policy changes put forward by SPC at its regular meetings.

SASEC Consensus 0703-10: SASEC approves the recommended changes to the Site Survey Data Policy. In addition, SASEC encourages IODP-MI to investigate further opportunities provided by the advantages that service companies with seismic data might gain from cooperating with IODP to enable a scientific hole to be drilled in proximity to a seismic line.

SASEC Consensus 0703-11: SASEC approves the recommended changes to the Sample, Data and Obligations Policy.

SASEC Consensus 0703-12: SASEC approves the Interim Proposal Confidentiality Policy.

17. Update of the IODP Initial Science Plan

SASEC Consensus 0703-13: SASEC recognizes that it is important to update the Initial Science Plan, and that, given the budget and time limitations, the Plan needs to be focused on a few, specific scientific objectives. While maintaining a high degree of excitement about the science, it will also be important to manage community expectations. SASEC nominated a list of potential members of an editorial board, but will wait on finalizing the list until it is clear whether this can be included as part of the FY'08 and FY'09 budgets.

18. Workshop proposals

SASEC Consensus 0703-14: SASEC supports funding the two requests for co-funding in FY'07 in the following ranked order:

- 1) Drilling to Decipher Long-Term Sea Level Changes and Effects: a Joint JOI-IODP-ICDP-DOSECC-Chevron Workshop (Craig Fulthorpe and others)
- 2) Neogene Polar Marine Diatom Workshop (David Harwood)

However, SASEC notes that in future, all requests for funds or co-funds, will only be considered as part of a specific Request for Workshop Proposals, and will not be considered at other times of the year.

SASEC Consensus 0703-15: SASEC recommends that, if FY'08 funds allow, IODP-MI fund the proposed High- to Ultra-High Resolution Sedimentary Records Workshop (Juergen Thurow and others).

SASEC also recommends that, if FY'08 funds allow, IODP-MI provide co-funding in the amount of \$10-20K to the proposed CO2 sequestration in sub-sea geologic strata: securing a safe solution to mitigate climate change workshop (David Goldberg and others); however, SASEC would like the PIs to submit a revised, more focused proposal (based on feedback from SASEC) before committing to this co-fund amount.

SASEC Consensus 0703-16: SASEC recognizes that the budget for FY'2008 may preclude some activities (workshops, DRILLS, topical symposia) that it had previously endorsed and that some prioritization may be necessary.

SASEC recommends the following be included in ranked order as is possible in the FY'08 budget:

- 1) DRILLS
- 2) High to Ultra-High Resolution Sedimentary Workshop
- 3) Contribution to Carbon Sequestration Workshop
- 4) Topical Symposium

19. Future Meetings

SASEC Consensus 0703-17: SASEC agrees to hold its next meeting in Bremerhaven, Germany, 25-26 June 2007, and the January-February 2008 meeting in Santa Cruz, CA. The following meeting will be held in China.

In the future, SASEC likely will meet only twice per year. Face-to-face meetings are preferable, and a must for the June meeting when the Annual Program Plan is approved. A third meeting could be conducted via teleconference if required.

20. Closing remarks

SASEC Consensus 0703-18: SASEC thanks Kelly Kryc, Issa Kagaya, and Sue Rogers who were responsible for organizing and maintaining a successful videoconference meeting.

ADDENDUM: Dealing with Financial Projections

The following is the summary of the discussions on financial projections compiled by S. Humphris on the basis of the SASEC discussion as input to the IODP Management Forum that directly followed the SASEC meeting. The SASEC discussions addressed a series of questions that had been submitted by IODP-MI.

1. If SOC funding is severely reduced, where should budget cuts be applied?

REDUCED DRILLING TIME

- **How should IODP address the breadth of expedition costs when planning operations?**
- **Should drilling be aimed at a few spectacular and generally expensive targets, rather than a larger number of less expensive targets, aimed at keeping the drill ships busy for a longer period with the same funding?**
- **What should the balance be between projects with societal impact, and projects of only spectacular scientific merit?**
- Must do high priority, first quality science as defined in the ISP, and projects should continue to be selected based on their scientific merit
- In looking forward to renewal, the issue of the balance between spectacular science and science of societal benefit is critical. IODP must accomplish some highly visible science in societally relevant areas (e.g. climate change, geohazards, etc).
- Within that science, we must find ways to demonstrate a truly integrated program.
- The scientific problems addressed in the next five years must be broad enough to maintain the interests in participation in all the IODP member nations/consortia.
- Recommendations for basic principles that the SSEP and SPC should follow in selecting science for the program:
 - highest priority science
 - demonstration of an integrated program that requires all platforms
 - a mix of high risk, expensive programs with the potential of spectacular scientific returns and lower risk, less expensive programs of high scientific quality
 - make progress of less well-served and new thematic areas (e.g. biosphere, geohazards)
 - optimize the ships' operating days.
- **Will changes in the proposal process be necessary? For example, should drilling**

proposals originate only from individual scientists without any restriction as to topic, or should they be submitted within a framework decided by SPC and/or SASEC? Do we need to shorten the proposal residence time within SAS?

- Drilling proposals should continue to originate from individuals/groups without any restriction as to topic or theme.
- Currently, pre- and full proposal can be submitted twice a year. Given the large number of proposals already in the system, and their long residence times, SASEC recommends that the proposal submission and timing be revised as follows:
 - (i) proposals are submitted as preliminary proposals to only one deadline each year. SSEP uses more stringent criteria for recommending submission of full proposal
 - (ii) full proposals are submitted to only one deadline each year. Limit the number of revisions permitted before SSEP either sends it for review or rejects it.
- **If drilling projects have to be supported by funding from other sources, what is the process by which SAS decides whether modifications to the current IODP protocols will be needed?**
- There are two end-member scenarios for ship operations: IODP uses the ships year-round (preferable, but unrealistic), and the ships go off-contract (unattractive given that (for at least) the US vessel, the day rate still applies unless other work can be found). The middle ground is that external funding (e.g. federal agencies, governments, industry) is found and a “collaborative” arrangement can be made.
 - (i) Proposals completely funded by external sources that will use the ships during down-time (hence saving the program money) must still be reviewed for scientific merit by SAS but will require a modified and streamlined review process
 - (ii) The Complementary Project Proposal process (suggested by Keir Becker) suggests that such proposals have a single-pass review by SSEP and SPC for a positive or negative decision, and are then forwarded to OTF for scheduling.
 - (iii) If IODP funds are required to augment those of the external source, the proposal will go through the normal review and ranking process.
- Such arrangements will require flexibility, and consideration of each situation in an individual way.

REDUCED ANNUAL BUDGETS

- **Should reduced budget targets be addressed by (i) decreasing the number of operations, (ii) reducing/removing program services, or (iii) some combination of both?**

- It is desirable not to decrease the number of ship operating days, but it is likely a combination of both ship day reduction and program service reductions will be required.
- **If program services must be reduced, what services are available for reduction (e.g., shipboard/shore based measurements, publications, etc), and what is the overall programmatic priority of each service?**
- SASEC believes that in order to make decisions over which services to reduce or maintain, some cost-benefit analyses need to be completed so their effectiveness can be better analyzed. However, there are a number of areas (probably more than listed here) that might be considered.

Shipboard measurements

- Investigate reducing the size of the shipboard science party and doing more on shore.
- Reduce technical staffing levels needed to accomplish science on the ships by engaging scientists more in analysis and data collection
- Reduce some of the shipboard analytical work – particularly those data and sample analyses that are repeated later in shore-based labs
- Redefine the minimum required shipboard measurements
- Apply this same philosophy across all platforms
- Stagger expeditions on Chikyu and SODV to the extent possible to use common technical staff and minimize size of permanent, seagoing technical staff.

Data Management

- The three IOs have different data management systems – could these activities be combined? It would help integration and would be beneficial in the long run, although might be expensive to implement.

IODP-MI

- Consider collapsing into one office – where should it be located, or should it rotate between countries? Is there an alternative model to the current one?
- Analyze the *total* costs of program management and determine possible cost savings and efficiencies.
- **Should we restructure SAS with fewer and smaller panels?**
- Reduce the size of the panels as suggested by the SAS WG.
- Consider eliminating SASEC and create an Executive Committee of SPC that conducts business in association with SPC meeting (NSF indicated this would not be acceptable to the Lead Agencies).
- **Should IODP move towards becoming a strongly integrated program where the infrastructure among the CMO, SAS, and IOs is designed to maximize efficiency and reduce costs. Or should integration continue at the present level?**

- IODP should be as structurally integrated as possible (data management; sharing engineering and technical staff, etc.) and should reduce administrative and management costs.
- At present, everything is paralleled in each IODP country or consortium. Is this necessary for national program reasons?

2) *Where should we look for additional funding and what accommodations to the IODP model would be necessary?*

3) *What role does SAS want to play in raising additional funds?*

- **Is it desirable to get funding from other entities (e.g. industry, other countries) to support IODP programs?**
- This is highly desirable and highly preferable to going off-contract (see earlier discussion).
- **What accommodations to IODP programs might have to be made to obtain such funding?**
- A streamlined review procedure by SAS (as already described).
- A willingness to deal with issues relating to accessibility to cores and data immediately, etc.
- **What role should the SAS play in raising new funds?**
- SAS members can assist in presenting IODP science to prospective industry collaborators, as well as to other nations.
- IIS-PPG can assist in fostering “hybrid” (IODP-external source) proposals.

IODP Science Advisory Structure Executive Committee

3rd Meeting, 22-23 March 2007

Videoconference locations:

Washington D.C., USA

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Minutes

Thursday

22 March

0700-1200 EST

1. Opening Remarks

Susan Humphris opened the meeting at 0700 (EST). The committee members and other meeting participants introduced themselves individually. The videoconference rules of engagement were described and participants were asked to identify themselves prior to speaking. In addition, participants were asked to not interrupt or to hold side conversations during the proceedings.

2. Approval of the Minutes from the November SASEC meeting

Humphris asked the committee members if any additions or changes were required to the November 2006 SASEC meeting minutes. John Hayes noted that the year 2006 should be changed to 2007 in item 4 on Page 8. There were no other changes suggested.

SASEC Motion 0703-01: SASEC approves the minutes, with the revision suggested by John Hayes, of its second meeting on 1-2 November 2006 in Odawara, Japan.

Silver moved. Kono seconded. 10 in favor, 0 abstained, 0 against.

3. Approval of the Agenda

Humphris asked the committee members if any additions or changes were required to the agenda. None were noted.

SASEC Motion 0703-02: SASEC approves the agenda for its third, but first videoconference, meeting on 22-23 March 2007 from the three sites: Washington, DC; Tokyo, Japan, and Cambridge, UK .

Miller moved. Tatsumi seconded. 10 in favor, 0 abstained, 0 against.

4. Update on Action Items from the November Meeting

Status of IODP DRILLS (K. Kryc)

Kryc informed SASEC that all three nominated DRILLS speakers (Bo Barker Jorgensen, Ted Moore, and Yoshiyuki Tatsumi) had accepted IODP-MI's invitation to participate in the inaugural year of the IODP DRILLS program. Promotional materials are in the

process of being designed and will be distributed to academic institutions and museums in late May. An online application will allow interested hosts to apply for a speaker and the schedule should be finalized by late summer.

IODP call for drilling & mission proposals (S. Humphris)

Humphris reminded SASEC that they must nominate individuals to serve on the mission review panel for any mission proposals submitted by the April 1, 2007 proposal deadline.

SASEC Consensus 0703-03: SASEC agrees to nominate, via email, a mission review panel of appropriate experts after they have received the list of mission proposals submitted by the April 1, 2007 deadline.

Status of long-term evaluation of IODP climate variability theme (H.C. Larsen)

Larsen reported that a review committee was in the process of being formed and that they would attend the IODP Topical Symposium in Bremen, Germany and then meet August 17-18 to review the science impact of the first phase of IODP drilling in the Arctic and North Atlantic. The following scientists have agreed to serve on the review committee: Bill Curry, Gabe Filippelli, Gerald Haug, Ken Miller, Hodaka Kawahata, and Michael Schulz. Larsen asked SASEC if they want to receive a draft report for comments. Humphris said no. Larsen added that the committee will look at the publication impact and any omissions in the literature and asked if SASEC had any comments on the proposed approach. James asked what the cutoff would be between ODP and IODP. Larsen clarified that if the review committee were to look at statistical impact, they would have to include ODP. So, they will only use IODP.

Allan offered that the review will be used to assess the impact of IODP and that there may be some ODP results that are relevant. This might mean that IODP doesn't need to address some issues in the ISP and can reallocate resources in the event that the ISP is being addressed in some areas. Larsen agreed that this is a valid point; however, the review committee is only assessing how IODP is achieving the ISP. He thought that there could be a background section that includes relevant ODP results. Humphris added that the ISP was written based on progress made during ODP and that, if we are going to include ODP material, then it should include only those results that came AFTER the ISP was written in 2000 or 2001.

Miller agreed that in terms of publication metrics this is important. The impact of N. Atlantic drilling must be taken in the context of previous ODP and DSDP drilling. The status of the science is somewhat based on previous literature and we shouldn't consider IODP in a vacuum. Humphris agrees and suggests that the review committee consider all post-ISP drilling results. There was no further discussion.

5. Agency Reports

NSF, MEXT, and EMA were asked if they would like to add anything to the reports submitted to the March 2007 SASEC agenda book. None of the agencies had anything to add. Hayes asked for clarification about the exceptional meeting convened on February 27, 2007. Evans stated that the meeting was called to discuss the implications of the

ECORD evaluation review and to consider changes the ECORD should make in light of that report. Humphris asked if any of the changes were structural and Evans replied that most were related to the operation of ESSAC. However, there wasn't an ESSAC representative to the meeting so the issue will be considered during the ESSAC meeting in May and then reported back to the IODP Council. Miller asked when ECORD expects to know about the 60% increase in membership fees. Talwani stated that Germany has approved the funds, but that France is still considering it.

6. IODP-MI & Implementing Organization (IO) Reports

IODP-MI had nothing to add to their report and there were no questions. Divins reported on behalf of the USIO that the JOI Alliance had received the final shipyard estimates and they expected to have the contract in place the first week of April. There were no additional questions for the USIO. Kawamura, on behalf of CDEX, stated that Chikyu is currently in Australia operating in a 2nd riser hole that is 3000 m deep. They are doing conventional coring, not wire line coring and are expected to complete drilling on August 10 and return to Japan by the end of August. There were no questions. Evans provided a brief update on ECORD efforts with respect to New Jersey. ECORD Council made funds available for the additional cost of a larger drilling rig and contract negotiations are ongoing. The geotechnical survey was contracted to ALPINE although a CPT vessel has not been identified. The results of the vibracore and seismic survey may be critical to the expedition. In addition, ECORD is pursuing permits for using air guns in Great Barrier Reef and they convened a successful meeting with the marine park authority. ECORD is preparing an extensive Environmental Impact Statement to submit with their application to drill in the region hopefully in September 2008. There were no further questions for ECORD.

7. Education and Outreach

Humphris introduced the agenda item and clarified that the SASEC needs to provide guidance on what education and outreach (E&O) activities can be supported with commingled funds. The agenda book includes background information provided by IODP-MI and NSF. Allan clarified that E&O is not addressed in the memorandum and that IODP-MI was being pushed heavily by members of the community to define these roles, which were solidified before the program was ready. At this time, the guidelines provided by the Lead Agencies are an attempt to define relative roles with E&O. The guidelines take advantage of the lessons learned with respect to what is possible and what is not, as well as recognize the cultural challenges of developing healthy cooperative relationships. Talwani added the IODP-MI considers formal education (curriculum development) a national issue, but that informal education can't be distinguished from outreach. There has been some confusion since the NSF guidance was distributed. The affiliated E&O staff do not understand their roles and responsibilities. Talwani further emphasized that E&O is extremely important and that we must inform the community about IODP. Thus far, IODP-MI has continued its discussions with the Lead Agencies and will continue to discuss this issue at the Management Forum and with a meeting of the principles in June to sort out the confusion. Allan said that the efforts so far were healthy and that progress is being made.

Humphris interjected to request clarification as to what SASEC is being asked to do: to decide whether E&O is important or to define the difference between education and outreach. Allan answered that that the Lead Agencies thought that the topic should be brought to SASEC and to the IODP Council to provide guidance for FY08 activities. Talwani emphasized that there has to be agreement between IODP-MI, the IOs and the Lead Agencies. If SASEC endorses the process going forward, that would be a good outcome.

Humphris asked Japan and Europe to clarify their opinion on E&O, and whether they agreed with the guidance. Tatsumi agreed that separation would work. Bickle didn't have a strong opinion and stated that most educational efforts are done on a national basis anyway. He concluded that Europe is happy with the proposal.

Miller asked what is happening at the meeting in April. Talwani answered that they would be sorting out the roles and responsibilities of each entity. Both IODP-MI and the National Programs are doing outreach and the roles need to be better defined. Miller asked if the meeting was an E&O Taskforce meeting. Talwani answered no: it is a meeting of the E&O staff and their supervisors to come to an agreement on how to move forward. Miller stated that there must be efficient collaboration with press releases and that there has been progress from IODP-MI on coordinating these efforts. Allan contributed that the guidance spells out what an IODP-MI press release is and it also details the importance of the IOs in formulating national press releases, but official program press releases should be handled by IODP-MI.

Humphris said that there is a grey area between E&O that is particularly true for informal education like public lectures. Even the national efforts are grey as to whether these efforts are education OR outreach. Allan acknowledges this and said that, while most of education is a national priority, outreach is a mix. In the U.S., outreach is funded through Systems Integration Contract (SIC) using non-program funds. Most of IODP outreach in the US tends to be national in character whereas the outreach budget in the IODP-MI program plan reflects the use of commingled funds on behalf of the entire program.

Miller offered that education should mean that you are in a classroom and that everything else should be considered outreach. Talwani agreed with Miller and emphasized that we need to recognize this division. Allan added that the guidance was prepared with input for members of the community and that the definitions are those used by the K-12 community.

Kono asked why the funding agencies were dealing with this at all and why SASEC was discussing it. Humphris answered that they were discussing the merits of what commingled funds can and can't be used for in terms of E&O and what the national programs should be doing with their funds. Kono asked what a commingled fund was and Allan responded that the Central Management Organization (IODP-MI) is under contract to NSF. NSF can take funds from various countries, mix them and then redistribute them. Japan gives \$1 million per year to NSF, which is then mixed and delivered to IODP-MI

for use. Kono then added that E&O activities are important for IODP and that education includes those activities in the classroom, but that outreach is much broader.

Humphris surmised that nationally-oriented activities should be national and that information coming out of IODP-MI, including press releases, should continue to be led by IODP-MI and should use commingled funds.

Allan provided an example of when the lines were blurred. IODP-MI recently supported the efforts of the Smithsonian Oceans Hall. Should they have done that as the Smithsonian is a US National Museum? Allan suggested that IODP-MI provide a facilitating and coordinating role rather than a primary one.

Miller thought that the Smithsonian example was good, but also thought that if the exhibit were to travel that it might more appropriate than if it was stationary in one country.

Allan offered that he is happy that SASEC is considering this issue and would welcome suggested changes in wording.

Kimura offered that some educational issues could be international and thought that IODP should be concerned with how to engage the next generation. It is critical for SASEC to think about this, but the answer might not be so simple. Talwani countered that SASEC was getting bogged down in details and suggested that the outreach funds be mingled and then distributed nationally. Humphris said that SASEC should approve the guidance in principle and that part of the consideration in using commingled funds should be whether the activity is international in scope. Kono thought that references to national/international be removed. Humphris asked Talwani if he wanted SASEC to approve the guidance given and he replied that would be simplest. Miller offered to write a consensus statement. Japan agreed, but asked how it would be implemented and who would define international. Humphris answered that the E&O staff of the IOs will meet in April and determine the path forward. Miller wrote a consensus statement and all members of SASEC agreed.

SASEC Consensus 0703-04: SASEC endorses the guidelines for Education and Outreach as provided by the Lead Agencies, and recommends that all effort be made to ensure the roles of IODP-MI and the IOs be well-defined and well-coordinated. IODP-MI's role in Education and Outreach should be focused on, if not restricted to, efforts that are international in scope.

8. IODP Topical Symposia

2007: Arctic and North Atlantic Climate Variability

Humphris introduced the topic and Kryc updated the committee on progress. All of the steering committee members accepted Wefer's invitation as did all of the invited speakers. IODP-MI developed a web page and a registration site for the symposium,

which will open in early April. Upwards of 200 people are expected to attend. Humphris asked if there were any questions. There were none.

2008: Ocean crust formation and evolution

Humphris suggested that this discussion be tabled until after the FY08 budget was discussed. This activity needs to be prioritized with other programs including IODP DRILLS.

9. Items from the March SPC meeting

Becker presented an update of the March SPC meeting (Appendix 1), which highlighted the need for SPC to reconsider the SODV schedule in light of budgetary reality. SPC also reviewed forwarded proposals.

Silver asked if it might be realistic to put SPC and SSEP activities on hold for a year to see if things normalize. Becker thought that this would be a disservice to those new proposals coming in. He added that the SPC ranked proposals (see Appendix 1) 7, 10 and 13 would be very expensive to drill and that Mevel declared at the SPC meeting that there was no way EMA could provide funds to drill 10. SASEC needs to consider how to deal with expensive drilling. Is this a disservice to science? SPC doesn't have budgetary influence to make that statement, but someone needs to.

Allan was concerned with the concept of SAS assuming a lobbying role. Becker clarified that wasn't the intent. Hayes commented that this was never an issue for NASA who lobbied for specific missions. Bohlen added that providing information is different from lobbying, which tries to affect some specific detail of legislation. Talwani supported Bohlen's statement and declared that IODP would not participate in lobbying activities, but will only provide information. Talwani also mentioned the May IODP New Members Forum, which will bring representatives from countries to encourage them to join IODP.

Becker elaborated on SPC's response to the questions Talwani sent about budget limitations. Talwani asked directly if SPC would prefer a few expensive expeditions or a greater number of less expensive expeditions. In terms of programs on board the ships, would SPC prefer to remove some services to minimize costs and if so, which ones? Talwani expressed some disappointment that SPC didn't directly address these questions. Becker replied that SPC wasn't informed what the cost benefit of these options may be and so, it was too vague. Humphris iterated that SASEC needs to provide IODP-MI with guidance on these same questions, which will be discussed over the next two days.

Humphris asked whether the operational schedule may need to be changed again if sufficient funds were not available and when the OTF recommendations would be revisited since SASEC will vote to approve the 2008 Annual Program Plan at its June meeting. Divins replied that budget estimations are being calculated now and that they should be finalized by April 2. The USIO Program Plan is due April 20, which is when they will know if they can conduct the current schedule.

Humphris asked if there were additional questions for Becker. Miller asked if it would be appropriate to discuss the idea of SPC revisiting the 25 proposals currently held at OTF. Humphris thought that once SASEC understands what kinds of proposals they would like to see drilled, they can provide a recommendation to SPC on how to revisit those proposals. Miller replied that SPC does things based on scientific validity, which can have a shelf life and recommended that there be a timeline for how long a proposal will reside at OTF. He cited the Hudson drilling proposal as an example of an ODP proposal that stalled before the ship returned to the Atlantic.

Tatsumi acknowledged that much of the 2008 reductions involved a decrease in the number of observatories, which are critical for completing science targets at Nankai. He asked if the SODV would return in the future to complete these objectives if the financial environment changes. Becker suggested that observatories need to be considered specifically and that, as far as SPC is concerned, they are not off the table.

Humphris asked Evans about the expensive MSP projects like East Asia Margin riser drilling. Is there some upper bound on cost to prevent MSP drilling or, if there were some advance planning, could these expeditions happen? Evans replied that while they are bound by an SPC consensus to drill the highest priority science targets, they must save money where necessary. An example of this is Chicxulub drilling which would require ECORD to save money for ~4 years to carry it out. He thought that it would be difficult for an IO to maintain itself under this scenario.

Kimura asked what are the specific criteria for ranking. Becker answered that there are plans to have a watchdog for each proposal, who will present its relevance to the ISP as well as the history of the proposal review. This will add an additional half-day to the meeting. They will then break out into thematic groups and place the proposals into a priority for achieving the ISP. The reality is that SPC must take into account the cost of drilling to provide a realistic analysis.

Humphris argued that the process needs to be informed by some sort of SASEC recommendation as to what the future mix of science should be. She revisited Talwani's question about drilling cheap legs that are low risk, or fewer, high-risk spectacular science, or some mix of the two. One of SASEC's tasks between videoconferencing meetings is to consider these questions. Humphris asked if there was any further discussion on this matter. Larsen added that Humphris summarized the issues well and requested that SASEC create a portfolio that addressed the key issues while balancing the risk.

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| SASEC Consensus 0703-05: SASEC approves Jim Mori as the next chair of the Science Planning Committee. |
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Unanimous vote by e-mail after the March meeting.

10. Review of the Science Advisory Structure (SAS)

Becker presented an interim report of the SAS Review Group (Appendix 2). Afterwards, Humphris opened the floor for questions. Miller asked how it might be possible to limit

the number of observers at a public meeting. Allan responded that there have been complaints about the numbers of observers at the SAS meetings, but with 3 funding agencies, 3 IOs and 3 PMOs, observers are inevitable. Becker added that there are liaisons who are expected at all meetings and there is no limit on the number of them. Humphris reminded SASEC that SPC only discusses scientific merit when ranking proposals in the absence of site survey data and asked if site-survey readiness would help this process. Becker replied that SPC is already doing this, but that perhaps SSEP should.

Evans added that with respect to panel sizes, this number is specified in the ECORD MOU and that any changes would have to go to the IODP Council. Tatsumi agrees that IODP should try to save money and pointed out that reducing the size of panels would save money from the national offices, not IODP-MI. Larsen concurred but added that the meetings may be more efficient with less people on them.

Humphris asked SASEC to consider the possibilities of streamlining the entire SAS by combining some of the panels. Becker said that the review group had considered combining SSP and SSEP. He clarified that there is still a need for the IOs to convene private safety panel meetings in addition to ESPS for liability reasons.

Talwani stated that ICDP has a much more streamlined process and asked if the SAS WG considered using it as an example. Becker replied that he would attend the ICDP meeting in three weeks. Talwani said that there is a fundamental difference between their system and ours, which is that they don't nurture proposals – it is either yes or no and there is no attempt to improve a proposal. IODP is a very consumer friendly program, but in times of budget shortfall this may need to be reconsidered. Miller added that another fundamental difference is the lack of external review. Allan said that their conflict of interest policies are not as stringent. Miller agreed with Talwani that we may be nurturing too much although scientists from other countries, where the proposal writing isn't as mature, certainly benefit. He asked what the cost of maintaining this standard was and at what point do you consider cutting it off? Allan suggested that we enhance the work that starts with the SSEP and take into account the analytical capabilities of the IO and then highlight challenges earlier in the process. He highlighted Chicxulub as an example and the South China Sea clearance issues. During ODP, these issues were brought forth earlier due to closer relationships with TAMU. Becker agreed on behalf of SPC and said that iPC and SPC have been requesting earlier scoping of challenging projects since the beginning of the transition period before IODP.

Talwani clarified that the cost, timeline and national clearance clearly should be examined before the proposal goes anywhere. Allan thought that this could be done with no additional costs, but Talwani disagreed. Kono added that reducing the number of people attending panel meetings is one way to save money, but he was concerned that that proposal ranking process may suffer and didn't think that reducing the panel sizes is a viable option. SPC also thought that it should stay at the current level of membership and would like some guidance from SASEC on this topic.

Humphris proposed something she termed as “totally unacceptable” by entirely changing the model. Perhaps instead of having completely open deadlines, the proposals should be solicited thematically. Then smaller panels of experts could be convened to exclusively deal with those proposals. She acknowledged that this solution represented one, top-down, end member. Miller agreed with Humphris, but thought that there should be some kind of overlap and then asked what the current size of SSEP was. Becker replied that SSEP is double the other panels with approximately 40 members. Hayes thought that getting SSEP down to 30 people is a good idea, but added that if you add site survey evaluation to that you would just get longer meetings, which he doesn’t agree with. Bickle also agreed with Humphris, but thought that it would be very hard to break the proposal solicitation into themes given the interdisciplinary nature of the proposals.

Humphris asked what the SAS working group needed from SASEC. Becker responded that some comment on the long-range and policy issues brought forth would be appropriate in addition to some indication that the working group is heading in the right direction. Hayes asked which policy and Becker replied those according to the MOU. Humphris clarified that these are the essential rules that govern the program.

Talwani said that IODP-MI is working on the policies and procedures and suggests that the changed policies and procedures be approved as part of the Annual Program Plan rather than consider them individually. SPC can handle this and SASEC does not need to get involved at that level. Humphris agreed with that model and suggested that SPC deal with modifications and send them forward. If some of them have a time critical component, SASEC will consider them outside of the APP approval. Talwani didn’t think this would work because a policy change has to be part of the APP for it to be implemented and piecemeal approval by SASEC is not appropriate. Humphris questioned this and Allan clarified that changed policies and procedures could be reviewed by the Lead Agencies mid-year if necessary.

Humphris summarized that SPC will deal with policy changes and SASEC will approve them as part of the APP, unless a time critical issue arises at which time, SASEC will consider it.

Miller requested that the discussion move away from policy and into planning. SASEC is taking one aspect of long-range planning and SPC is taking another. Humphris clarified that SPC has taken on the task of reviewing the science on a 1-2 year basis, but long-range planning is SASEC’s responsibility. SASEC’s planning efforts are based on the program view with respect to the ISP and how we need to move forward to get planning underway as opposed to SPC, which tends to be on a shorter timeframe. Ultimately, she doesn’t see a problem with both groups having some responsibility for planning.

Humphris asked SASEC if they feel they need to request the SAS working group to work on a scenario with a more extreme reduction in the SAS given that there will be reduced expeditions. Silver thought that was a good question but it might be more relevant in light of the upcoming discussions of financial projections. Humphris agreed and suggested tabling the discussion until after the financial discussions.

Kono asked whether or not all of the panels in the SAS structure are necessary. Humphris replied that this is the current recommendation; however it would be possible to streamline the SAS by reducing the panels. Kono asked if some of the panels could meet together once a year. Becker thought that STP and EDP could perhaps meet together once a year to consider common business.

SASEC Consensus 0703-06: SASEC thanks the SAS Working Group for their efforts to review the SAS structure. SASEC requests that the SAS WG complete their report of recommendations to date. SASEC also requests that the group include a scenario of a reduced SAS in the event that financial projections require such a scenario.

11. Dealing with Financial Projections

Humphris sent a letter separate from the agenda regarding what SASEC needed to discuss and what information IODP-MI would like in dealing with the projected financial outlook. Humphris will be participating in the Management Forum next week to represent SASEC. She requested the Lead Agencies provide more information on the long-range projections so that SASEC can be more informed during their discussions.

Batiza replied that the NSF budget in FY08 and following years falls considerably short of those expected. Given the shortfall, it is fair to say that the approach throughout the program will have to be minimalistic. There should be a good balance, but the community should start thinking about new models of operations. Humphris asked if that includes new models for the overall structure of IODP. Batiza thought that this line of questioning may be premature.

Shukuri added that MEXT is trying to keep budget levels high to promote IODP activities, but, that it will be more difficult to increase the budget. In FY08 and FY09, the level of funding will remain the same, but will not increase. Otsuka replied that he is not in a position to represent MEXT, but wanted to relay that MEXT budgeting will affect POC and that the level of funding is not enough to fully support Chikyu operation more than 50-60% of the time. So, CDEX is considering operating 14 out of 24 months for IODP and another 10 months with alternate funding. Kawamura interjected that this wasn't quite right and that if Chikyu pursues cheaper operations, they can operate much longer. This leads to Talwani's earlier question of, "What kind of science do you want to do?"

Talwani reiterated that it would be helpful if the Lead Agencies provide some projection of the magnitude of the fiscal situation and some suggestions about how to deal with it. Those projections would also be very helpful for the Management Forum. Otsuka responded that if the Lead Agencies could also include some specific figures of POC and SOC levels in FY08 and how it may change in FY09 that would provide a good overall view of the funding situation. Batiza replied that they would prepare something for tomorrow.

Humphris stated that SASEC needs to provide some advice on how to minimize the budget for the whole program. The Talwani memo highlighted three questions with sub-questions that SASEC will address for homework. The program will be seeking renewal in 2013 and we will need to start that process in 2011, which gives us only four more years of drilling to emphasize the value of the program.

Humphris then asked ECORD about their financial issues. Evans responded that they have a reasonable indication for FY08, but that he doesn't really know what will happen in the next four years. ECORD will likely receive a similar amount to what they have received for the past four years.. Bickle added that the more serious issues is that the UK is only committed until 2008 when they come up for renewal and that the situation is not ideal for other European renewals, which may be a sensitive issue.

Humphris replied that SASEC would discuss this when they reconvene tomorrow. Each meeting site should convene and try to come back tomorrow with answers to these questions. SASEC will hear reports from each site and discuss them. Does the committee have additional questions that should be considered?

Bickle asked if the ship will only operate part time, how much of a savings is there given the day rate? Divins replied that the US is already paying the day rate for the full year so it wouldn't be more expensive. However in the absence of additional off-contract work, the cost will be nearly the same since the staff still need to be employed. Bickle then asked if it should be easy to employ Chikyu in exploration. Kawamura said no, that it has to be justified because Japanese taxes paid to build the ship. In addition, industry requires long periods of available time to contract the ship. While the program saves on day rate, CDEX still needs money for staff and maintenance.

Talwani suggested that there are two end-members and a potential hybrid model. The current model uses funds exclusively from the Lead Agencies. The second option is to go totally off-contract where IODP would have nothing to do with the way the ship is run. The hybrid model is where IODP gets money from industry and other countries to jointly propose expeditions. The off-contract model doesn't help IODP at all as the scientific community gains nothing. In the hybrid model, IODP still benefits. The question is whether or not SASEC should consider the possibility of the hybrid model. It may be a little outside the box, but given the current funding situation, it may be worth considering.

Humphris asked if there is evidence that such arrangement with industry and other countries are even possible. Talwani thought so, but that there was no point in pursuing this unless SAS and the Lead Agencies buy into it. Becker added that the Industry PPG recently posed a potential option. Industry indicated that if IODP drilled in the Arctic again, they would have an interest in cost sharing stratigraphic test wells.

Silver reiterated that, if SASEC had budgetary guidance, they would be more effective at identifying program priorities. Talwani reminded him that we have the FY07 budget. Miller calculated that the total day rate for operating the SODV for two months would be

approximately \$4 million. Divins added that the difference in day rate between operating and tie-up is only \$1/2 million per month. Bohlen elaborated by saying that there are things that don't scale, including personnel. While there are some savings, there just isn't enough.

Humphris asked what it costs to run the Chikyu for one month and Kawamura replied that it costs more than \$10 million a month. Allan provided a preliminary FY09 budget estimate of \$42 million for USIO POC, which is dependent on NSF actually receiving the funds. NSF and MEXT haven't considered the FY09 SOC budget yet, although it probably won't change much unless ECORD increases its contributions. In addition, KIGAM was not able to increase their contribution between FY06 and FY07. If this happens again in FY08, the program will lose an additional \$1/2 million. China's funding scenario is currently unknown. Humphris reminded Allan that SASEC still didn't have the FY08 budget numbers and Otsuka responded that the total POC of the program is estimated at \$150-160 million. He then asked how much POC funding CDEX anticipates in FY08. Kawamura replied \$80 million a year.

Humphris asked SASEC if there were any other budgetary questions that would be helpful in discussing identifying cost-saving measures. Becker asked about personnel costs and specifically, if some of the technical staff were involved in off-contract work would that be a savings to the IODP budget? Bohlen replied that they were investigating that option. There were no further budget questions.

Humphris then asked SASEC to consider what kinds of science the program should pursue in light of budgetary projections and how best to balance high-risk, spectacular science and lower-risk status-quo science. Bickle, having just written the UK bid, concluded that it is apparent that operating for more months per year will be much more rewarding. Currently, the UK's interests are in climate-related topics and so it suits their strategic position to encourage more expeditions rather than fewer. Humphris asked Bickle to elaborate on the science priorities in the bid. Bickle replied that they were mostly climate-related although there is also some interest in hazard and hard rock drilling. While the new technology sounds intriguing, he is afraid that the program can no longer support it, and we already know that we can address climate targets fairly easily.

Miller said that during the past 28 years both the JR and the Challenger sailed with minor breaks and thought the priority should be to keep the ships drilling as much as possible and commit to more expensive science at a specific interval. Humphris reminded SASEC that this is the INTEGRATED Ocean Drilling Program so care needs to be exercised in finding this balance.

Larsen informed SASEC that he asked SPC to meet a series of scientific goals during the next four years including rapid and extreme climate events with linkages to sea level change, microbiology, and observatory science on timescales relevant to society. Tatsumi added that the balance obviously needs to be based on the ISP and should not be totally related to cost. Humphris reminded SASEC that they would be discussing updating the ISP, which will inform how it gets rewritten as relevant to society.

Kimura pointed out that the difference between IODP and previous programs is the integration and the multiple drilling platforms. How does the program take advantage of this to maximize science and minimize cost? Bickle added that it would be useful to assess what had been accomplished during Phase 1 drilling, which included climate, corals, ocean crust gabbros, observatories, gas hydrates, and some microbiology too. At the moment, nothing is missing and so the program should be proud of its contributions thus far. Humphris agreed that we should take that positive record and develop the best strategy to move forward as an integrated effort. Larsen said that the underlying assumption for the ISP was that there would be two permanently operating drill ships with one MSP per year. So, the ISP has to be refocused to account for 50% less drilling. Humphris agreed and suggested that they focus on new areas to make progress.

SASEC Consensus 0703-07: The financial projections for the next few years of IODP indicate that full-time operation of both the riser and riserless vessel for science are likely unsustainable. Hence, SASEC recommends that IODP-MI actively pursue collaborative arrangements with industry that are mutually beneficial to both parties and that will provide additional science operating days, and that do not impact the scientific integrity of the program. SASEC recognizes that such arrangements will require some flexibility in procedures and process, and that collaborations will need to be dealt with on an individual basis.

12. Between Videoconferences Assignment

Humphris reiterated the instructions for the assignment and reminded each site to come back the next day with a report that would be used to identify recommendations for the Management Forum.

SASEC adjourned day one of the meeting at 11:50 EST.

Friday

23 March

0700-1200 EST

13. IODP-ICDP Relations

Proposal review

Larsen presented (Appendix 3) information about the ICDP proposal process and described three potential ways to proceed with respect to integrating IODP and ICDP proposal reviews: 1) To maintain the status quo, 2) To better coordinate the proposal process, or 3) To totally integrate the proposal process. The latter options will require more thought by a dedicated group although the basic question is something that SASEC should answer here.

Becker stated that SPC didn't discuss this topic in detail at the last meeting although he will attend the next ICDP SAG proposal review committee meeting to see how they approach the process. Humphris asked SASEC for comments. Bickle thought that we should have a system by which the proposals are reviewed concurrently without adding costs and that it should be explored further. James didn't think that there were a huge

number of proposals so it likely wouldn't have too large a cost implication. Kono asked SASEC to proceed cautiously as ocean drilling is funded internationally while continental drilling is funded nationally. While there is some need to coordinate the process for the amphibious projects, it isn't overwhelming yet. Humphris asked Kono if he supported coordination over integration and he replied yes.

Kimura introduced two examples to highlight the need to coordinate in order to maximize the science. In the first example, climate scientists have recently proposed land drilling in lakes and ocean drilling so, the community is the same, but the drilling is different. The second example is Nankai drilling, which is mostly an ocean drilling effort, but also a potential continental component to install land-based observatories.

Silver offered that it would be a great idea to start coordinating the proposal review process, especially for the hybrid projects. Miller clarified that ICDP only reviews about 15 proposals a year, although a number of those are workshop proposals rather than full proposals. Miller also recommended that Uli Harms be encouraged to attend either SSEP or SPC as well as have Becker attend the SAG.

Hayes suggested that the final goal should be for total program integration that proceeds in a step-wise fashion due to the scientific and fiscal advantages of merging the two programs.

Humphris said that it sounded like SASEC was reaching a consensus to endorse the concept of further coordinating the two programs. Humphris asked if there were any more comments on this topic. There were none.

Core archiving

Larsen explained that ICDP does not have a systematic core archiving system whereas IODP does (Appendix 3). He submitted that all the scientific cores from both programs should fall under the same umbrella although implementing this will require significant thought. Miller agreed and pointed out that there are at least two cases where ICDP core have been lost, although all of the lake cores have been archived properly. The ideal scenario would be if Kochi, Gulf Coast, Bremen and the Minnesota Lake Core Facility were to work together. The ICDP scientific community recognizes that they have a problem and they are willing work together to coordinate the effort. An implementation group should be formed that ultimately reports back to the SAS.

Humphris asked if anyone else had something to add. Kono welcomed this kind of effort and argued that the cores were very similar and can be handled properly by IODP facilities, which should be offered to ICDP. If they accept, it will open up good opportunities to study the archived cores. Bickle also endorsed investigating the option further. Talwani asked if SASEC would like IODP to organize the effort. Humphris clarified that SASEC just needed to provide a consensus statement in favor of coordinating proposal review and core archiving.

Miller asked who would comprise the working group and Talwani interjected that the concept must first be endorsed by ICDP at which time a joint IODP-ICDP implementation group could be identified. Humphris assigned Miller to write a consensus statement. Allan asked that the implementation group be prepared to present a financial plan that includes other potential funding agencies. Miller didn't think there would be a huge financial burden since the volume of ICDP cores is an order of magnitude less than IODP. In addition, the cores are stored dry, which costs less than cold storage.

Humphris asked Miller to include in the consensus statement that SASEC recommends that a group be established comprising 2-3 reps each from IODP and ICDP and that they be charged with developing an implementation plan with financials. Humphris asked if there was further discussion on the topic. There was none.

SASEC Consensus 0703-08: SASEC recognizes the common goals and interests of IODP and ICDP in exploration and drilling of the Earth and, in principle, endorse steps toward integration. SASEC recommends that an *ad hoc* implementation group be formed with 2-3 representatives from both programs, plus specific curatorial expertise. The *ad hoc* implementation group is charged with: 1) developing an implementation plan that includes financial implications for common core storage and metadata integration; 2) fostering cross-program evaluation of proposals. We envision that the latter will be initially accomplished with liaisons between the SAG and SPC, but charge the committee to consider a broader view.

14. Policies and Procedures

Humphris introduced this agenda item by reminding SASEC that normally, policies and procedures will be addressed in the APP vote. However, there were three brought forth individually that require SASEC to endorse them.

SASEC Consensus 0703-09: SASEC agrees that, in general, SPC will deal with policy changes and that SASEC will approve them as part of the Annual Program Plan. However, if situations arise where more timely approval is required, SASEC will consider specific policy changes put forward by SPC at its regular meetings.

Site Survey Data Policy

Larsen presented supporting material (Appendix 4) and asked SASEC if it was acceptable. Humphris thought that the changes appear relatively straightforward and allow industry to maintain some proprietary control over their data. Talwani saw an opportunity to take advantage of the data generated by service companies (not energy companies themselves) and make it available. In many cases, they are trying to sell the data and having a drill site near their lines is beneficial to them. He suggested investigating this option further to ascertain whether or not a mutually beneficial agreement can be brokered. Miller argues that there has to be some kind of minimum data released in order to even drill a hole. Talwani thought that one seismic line might be made available rather than the whole set. SASEC at large agreed.

SASEC Consensus 0703-10: SASEC approves the recommended changes to the Site Survey Data Policy. In addition, SASEC encourages IODP-MI to investigate further opportunities provided by the advantages that service companies with seismic data might gain from cooperating with IODP to enable a scientific hole to be drilled in proximity to a seismic line.

Data and Obligations Policy

Larsen presented (Appendix 4) supporting material. Humphris asked if there were any comments. Becker said that SPC did not look at this policy. There were no further comments and SASEC agreed to approve the policy changes.

SASEC Consensus 0703-11: SASEC approves the recommended changes to the Sample, Data and Obligations Policy.

Interim proposal confidentiality policy

Humphris reminded SASEC that the policy was in the agenda book and invited discussion. There were no comments and SASEC agreed to approve the policy.

SASEC Consensus 0703-12: SASEC approves the Interim Proposal Confidentiality Policy.

15. Dealing with IODP Financial Projections

Before proceeding, Shukuri clarified that the opinions about long-term financial projections he offered the day before were his personal thoughts and wanted to make sure that he wasn't conflicted. Humphris didn't think this was the case. Shukuri stated that the official MEXT position is that the budget is still under consideration. The Japanese fiscal year starts next April and MEXT will receive guidance in August.

Each videoconference site was provided an opportunity to share their responses to the previous day's homework. Hayes presented in Washington, Tatsumi presented in Tokyo, and Bickle presented in Cambridge – presentations are in Appendix 5.

Tatsumi noted that the current system schedules expeditions based solely on scientific merit, not on cost, and that without further budget guidance it was very difficult to fully discuss how to reduce costs. He would like to know how IODP-MI intends to reduce M&A costs and added that, ideally, we could obtain funding from other entities without changing present IODP policies or structures.

Humphris asked SASEC to consider the questions individually and started with the topic of reduced drilling time. Everyone agreed that the program should strive to retain the priorities set forth in the ISP and to include challenging projects with high societal

benefit. Everyone agreed that we need to do excellent science, but the issue of balance arises when we try to look forward to the renewal in 2013, and to accomplishing some visible science of great importance that demonstrates our integrated approach. SASEC members in Tokyo preferred that everything be done on scientific merit and that ranking should not be based on cost. Tatsumi added that the scientific merit should be emphasized by SPC. Humphris noted that all three videoconference sites seemed to agree on this point and asked how to best balance low risk/low cost science with high risk/high cost science.

Humphris asked if everyone was in agreement that NanTroSEIZE is a program that we need to commit to making a success. Bickle said yes since we have already started it, but that if it is the only program that will be drilled in the next five years, ECORD may not buy in. It is important to keep the program broad enough to attract the support of those involved. Kono thought it is not a good idea to pick one program over another and that this is best handled by SPC and OTF. SASEC should not narrow its focus too much. Humphris understood but would still like to set some boundaries on what to try to accomplish in the next five years. There are 25 proposals currently at OTF that are not all going to get drilled in the next five years. At this time, they are just getting inserted into the schedule based on cruise tracks and logistics. So, does SASEC have a role in identifying high priority targets in the next five years?

Miller suggested that SASEC endorse a concept rather than a program. For example, the program should strive to make significant progress on a CDP rather than name NanTroSEIZE specifically. Humphris felt that since we have started Nankai, despite the funding situation, we should be committed to making it a success. Nagao said that the Japanese members have a conflict of interest issue regarding this discussion. Silver thought that it was a mistake to start focusing on specific science. Proposals should continue to be ranked by SPC. Humphris argued that SASEC is considering a much bigger issue and that, rather than being reactionary on a year-to-year basis, it would be better to strategically plan the program with 30% less funding than anticipated. Hayes thought that the question had already been answered. Nankai is highly ranked and fits the criteria of expensive science. Obviously, no one wants to see the number of operating days reduced and so best to proceed with the cheaper science. Miller agreed with Hayes and reiterated that the program should keep the ships drilling. An important objective is to demonstrate that operating two platforms in concert are necessary and will ultimately reveal spectacular science. At this time, we can not afford several CORK installations per year and at a point, a decision will have to be made whether or not to either keep working on Nankai or install a CORK. Since we have already committed to Nankai, we should drill it.

Kimura questioned what there is to think about beyond five years. Since there are already 25 proposals to consider, the cheaper science will likely be drilled. He asked that SPC consider that the Japanese community has invested a lot in Nankai although there are other equally important drilling targets to consider. Humphris asked if he was saying that SPC should consider costs during the proposal ranking process. Kimura replied no, that OTF and IODP-MI should do that. Humphris agreed and said that SASEC's charge is

long-range planning and that they need to look five years or more ahead for a successful renewal. She asked Bickle if he felt that it was important to either drill in a number of different geographical locations or address a number of different themes. Bickle responded that different themes were more important and that sending the ships around the world may not be a good use of resources. Humphris and Bickle both concurred that SPC should continue to rank proposals based on scientific priorities and that SASEC should provide higher-level guidance as to what should be drilled.

Miller suggested that they consider the proposals currently residing at OTF. Of 19 proposals, nine are CORKs and it is clear that we can't afford all those programs any longer. SPC has selected these based on scientific merit; it is SASEC's job to make the hard decision. Allan added that even with good resources, the program would still be facing a financial crisis. Prioritizing science will inevitably lead to ambitious science, which is often expensive. Humphris added that there are some drilling programs that have been sitting at OTF since 2003 and that SASEC should consider asking SPC to revisit and re-rank those to remove some from the pool in the event that some are no longer high priority. Becker replied that SPC is planning to do this at their August meeting.

Humphris returned to the topic of balancing high cost and low cost science for the program and how best to demonstrate the success of a multi-platform, integrated program. She further emphasized that we can't do this on an annual basis and that SASEC must come to an agreement on how to proceed. Silver suggested forming a subgroup to discuss the topics within the context of firm budget guidance. Talwani disagreed and asked SASEC to identify broad principles rather than deal with specific numbers. Larsen added that the ISP was written on the basis of a drilling volume that we could no longer achieve. The plan was ambitious to start and no one expected the program to achieve every objective, so SASEC needs to provide these principles without being proposal specific so that SPC can do their job.

Humphris identified a preliminary list of principles for SASEC to consider:

1. Do highest priority science
2. Mix of high risk and low risk science
3. Address new themes
4. Demonstrate integration
5. Keep the ships operating (added by Silver)

Humphris thought that this list implied that the program do nothing but low risk science. Hayes disagreed. Becker asked what "addressing new themes" meant. Humphris replied drilling to address new topics like the deep biosphere and geohazards. James asked for clarification on the term "integrated." Did that mean two ships drilling concurrently on one expedition or using multiple platforms to achieve the objectives of the ISP? Humphris replied that her personal opinion was that it means using the platforms to achieve the goals, but that it would very useful to demonstrate that using them in a complementary way has added value. Silver added that it could also include integrating to save money in this financial reality. Humphris stated that she was hoping for more from

SASEC, but that it was clear that they were struggling with this concept in the absence of quantitative financial information.

SASEC next discussed specific questions asked by IODP-MI.

Changes in the proposal process

The objective of this discussion is to identify a way to limit the time a proposal spends in the system while still permitting some nurturing.

Bickle doesn't want proponents to be required to resubmit the same proposal every year, but believes that there should be a limit on the number of revisions that will be accepted. Hayes suggested that every proposal first enter as a pre-proposal with the option for one more revision after submitting a full proposal. This will maintain the flexibility and integrity of the system before the proponents have invested too much time. Becker said that submitting a pre-proposal is the current model. Humphris thought that SSEP needs to be a little more discriminating about which proposals will go on to be a full proposal. Becker clarified that proponents only get one chance to re-submit a pre-proposal before a SSEP decision to recommend a full proposal or deactivation. Kono asked Becker to clarify this a bit more. Becker replied that a pre-proposal is requested first.

Becker commented that a bigger change might be to have just one proposal deadline. The Washington group suggested one deadline for pre-proposals and one deadline for full proposals. The rationale was that, with two deadlines for full proposals, the program is asking the community to write lots of proposals without much hope of drilling most of them. The goal is to limit the total number of proposals, but maintain strong proposal pressure. Kono suggested making the pre-proposal a requirement. Humphris proposed one submission deadline for pre-proposals and a second deadline for full proposal so that proponents can revise based on SSEP guidance. There was no further discussion on this issue.

Externally funded projects

This topic overlaps with Agenda item 16 and will be discussed simultaneously. Becker proposed a scenario for proposals with external funding (Appendix 6). The basic concept is that the externally funded projects would be permitted to use the ship provided the ship is not being used full-time for IODP operations and that the proposals have scientific merit. These proposals would have a single SAS review and would pass review with a simple "yea" or "nay" vote as to scientific interest to IODP. If the proposal is jointly funded and is using IODP resources, then it would have to go through the same ranking process as other proposals.

SASEC members had specific questions. Nagao asked if these operations would still be considered IODP expeditions. Humphris answered that it would best if it were a collaborative effort between IODP and industry so that scientists could still participate. Talwani clarified that it could be IODP scientists putting the science forward, but the operations would be funded through a different source. Tatsumi asked if these proposals would be required to adhere to the ISP, as it would be very difficult for the SAS to

evaluate them. Humphris wasn't sure but answered that SAS would look at the proposals for scientific merit but would not rank them against other IODP-funded proposals.

Bickle was unclear about the specifics and asked how much ship time might be surrendered and whether these programs would use IODP resources, like databases and publications. Humphris replied that they should try to find a middle ground between two end-members. The first is that IODP uses the ship all the time, which is no longer possible. The second is that the ship goes off-contract entirely and IODP has no jurisdiction, which has no benefit to IODP. The middle ground is through relationships with industry, agencies, and other countries by mutually endorsing externally funded projects that still have some benefit to IODP scientists. Bickle agreed with this compromise.

Evans thought that Becker's proposal had merit as the middle ground, although some funding by IODP would be required to maintain control of certain aspects of the program. Evans asked whether these proposals, if approved and forwarded to OTF, would have increased priority for scheduling. Allan replied that there are some unfortunate constraints to this concept. The drill ships are not under the control of IODP - they are brought to the program by nations or groups of nations and are subject to the MOU. NSF is considering these issues for legal and contractual issues and there are strict regulations regarding the use of the ship and federally-owned resources. It is clear that any use of the ship within the confines of the program must be held to the MOU, including data policies, core ownership, etc. If there is an externally funded expedition, it will have to adhere to the MOU and specifically, there can be no proprietary data.

Humphris asked whether IODP still pays the day rate if the ship is off-contract. Allan answered no, that if it is off-contract, the subcontractor pays the day rate. He reiterated that there are strict rules on how federal property can be used. Divins added that if the ship is not being used and if it is not off-contract, then IODP still pays the day rate. Hayes thought that SPC might prefer the hybrid arrangement, but that NSF preferred the off-contract model. Allan added that the US ship had gone off-contract twice and that the process is neither straightforward nor simple. Humphris said that the US ship is a national issue and that it is still worth pursuing these collaborations despite some of the Lead Agency issues. She added that SASEC should provide clear guidance that these efforts are worth pursuing.

Talwani agreed and said that if there are any hybrid proposals, IODP will need encouragement from both the Lead Agencies and SASEC. If it turns out to be too difficult, then it won't be considered further. Becker interpreted Allan's response to mean that if SAS approves, and if the policies are adhered to, that NSF will agree to it. Humphris concluded the discussion by stating that she had the general feeling from SASEC that it would be acceptable to have a collaborative proposal process to consider potential externally funded, hybrid drilling opportunities.

Reduced Annual Budgets

SASEC decided that they needed to know exactly how cost effective certain actions might be before they offer specific guidance. Bickle was skeptical that much money could be saved from cutting things like the technical staff, which may not have a big impact. Everyone agreed that they needed more information to conduct a cost-benefit analysis. Humphris asked if there were any further suggestions for potential budget cuts. There were none offered. Talwani said the BoG had requested a specific cost breakdown of M&A and that IODP-MI could provide those numbers. One option is to save money by combining the two offices, although he thought that would actually cost more. Eliminating IODP-MI would save programmatic funds, but there needs to be a cost-benefit analysis for this solution.

SAS Restructure

All three videoconference sites agreed that SAS could be reduced. The US group also suggested eliminating SASEC in favor of an SPC executive committee. Tatsumi asked how big were the cost savings of reducing the SAS. Humphris replied that streamlining the committees and panels might not be a huge savings, but that it would be a start. Bickle agreed that the savings might be quite small, but that Kryc's quality of life might increase. Talwani added that Otsuka had also suggested eliminating SASEC in favor of an SPC executive committee, but that Malfait thought that this would introduce a conflict of interest in that SPC would be in the position of approving itself. Humphris said that the BoG also has a say. Allan clarified that the IODP-MI BoG represents the corporation, not the community, and so these two entities are entirely separate.

Additional funding

Humphris asked what role can the SAS play in raising new funds. This would require a large time commitment that is probably unrealistic. However, SAS members could potentially help by presenting IODP science to prospective industry collaborators and to new member countries. The IIS-PPG can foster joint proposals and may be quite effective at doing that. Any other ideas? Bickle agreed that we should involve SAS members in these enterprises. Nothing more was added.

Humphris volunteered to summarize the notes for the IODP Management Forum (see Executive Summary Addendum for final guidance).

17. Update of the IODP Initial Science Plan

Humphris reminded SASEC that they developed a timeline for updating the ISP at their November 2006 meeting. The current implementation plan is obsolete and needs to be rewritten and some sections need to be added. The updated ISP shouldn't strive to raise community expectation, but there should still be a good set of scientific objectives. During this meeting, SASEC needs to nominate an editorial board. Humphris asked Talwani if, in light of FY08 budget projections, the ISP could still be revised. Talwani didn't have an answer and replied that SASEC should tell IODP-MI what they need and that IODP-MI will try to achieve it.

Humphris asked SASEC for nominations and suggested that the full list be refined over email prior to inviting individuals. If there is a budget to revise the ISP in FY08, then the individuals will be asked to serve.

Bohlen added that this effort is the ideal vehicle to reach out beyond the drilling community and that SASEC should consider if this is important and cited microbiologists as an example. Humphris agreed that this was a good idea and that the workshop could potentially inform this process. She also suggested that someone from ICDP and the ocean observing initiative be included and asked that SASEC members send her some suggestions. Becker volunteered to ask the ICDP committee for volunteers when he attends their meeting.

Miller recommended that the review board have several externals on it for balance. Evans nominated Janecek to rewrite the implementation plan. There was no further discussion.

SASEC Consensus 0703-13: SASEC recognizes that it is important to update the Initial Science Plan, and that, given the budget and time limitations, the Plan needs to be focused on a few, specific scientific objectives. While maintaining a high degree of excitement about the science, it will also be important to manage community expectations. SASEC nominated a list of potential members of an editorial board, but will wait on finalizing the list until it is clear whether this can be included as part of the FY'08 and FY'09 budgets.

18. Workshop proposals

2007 supplemental workshop proposals

Humphris opened the topic by reminding SASEC that they had received two small workshop proposals requesting additional funding for workshops in FY07. They also received seven full proposals for workshops in FY08. Humphris thought that SASEC needed to prioritize their activities in FY08 given that they are also considering a topical symposium in 2008 on ocean crust, IODP DRILLS, and the ISP update. All of these programs can't be done with the current budget scenario and so SASEC needs to determine what are the highest priority items for 2008. She suggested that SASEC move forward with IODP DRILLS because the speakers have already been invited and that it reaches out to the broader community. It is important that we continue to do outreach activities at this stage in IODP.

SASEC started discussing the small 2007 requests first. Miller has a conflict and excuses himself. Two requests were submitted: One for co-funding of a workshop on long-term sea level changes and the second for a Neogene diatom workshop. Talwani informed SASEC that there is funding available in 2007 to fund both requests, but that in the future a firm deadline should be adhered to.

The Fulthorpe Sea level change proposal was considered first. Hayes noted that it was joint with ICDP and that he was attracted to it. Becker said that it was also on the list to be reviewed at the upcoming ICDP SAG meeting. Humphris asked if it was important

that IODP send a message to ICDP that we are interested in joint efforts in terms of planning drilling. Silver added that the topic is important, that the proposal is well written, and that he was in favor of supporting it. Kono shared Silver's opinion. Bickle commented that the proposal is central to IODP's main research themes, that it is joint with ICDP and that they should approve it. SASEC agreed to fund the proposal.

SASEC next considered the Harwood Neogene diatom workshop proposal. Kono thought that the scope was limited. Humphris thought that since Antarctic drilling is on the schedule, the topic was relevant. Bickle added that stratigraphic correlation is critical in this region, but that it might not encourage future drilling proposals. Humphris agreed that it was geared toward taxonomic issues but that it would assist in the future interpretation of drill cores. Talwani said that ANDRILL is trying to work together with IODP and that there is some merit in looking at their proposal seriously. Humphris agreed and thought that if we are going to drill these cores, we should be able to interpret them. Since there are funds available, and since we are trying to encourage further collaborations, SASEC should go ahead and fund the proposal.

SASEC agreed to fund both proposals. Humphris asked SASEC how they would like deal with future proposals that are submitted outside of the workshop proposal cycle. Talwani said that IODP-MI needs to budget more stringently and that there should be a firm deadline. Humphris suggested that any future calls for workshop proposals include wording to include co-funded workshops as well. SASEC agreed.

SASEC Consensus 0703-14: SASEC supports funding the two requests for co-funding in FY'07 in the following ranked order:

- 1) Drilling to Decipher Long-Term Sea Level Changes and Effects: a Joint JOI-IODP-ICDP-DOSECC-Chevron Workshop (Craig Fulthorpe and others)
- 2) Neogene Polar Marine Diatom Workshop (David Harwood)

However, SASEC notes that in future, all requests for funds or co-funds, will only be considered as part of a specific Request for Workshop Proposals, and will not be considered at other times of the year.

2008 Full Workshop proposals

SASEC received seven proposals for workshops in 2008, which indicates that the community likes the workshops. However, given the funding situation, SASEC is in the awkward position of having put out a call for proposals without the certainty of available funds. Humphris suggested that if there are funds available in 2008 that the Ocean Crust Topical Symposium be eliminated in favor of funding one of the submitted workshop proposals. Bickle asked if the ocean crust review would be affected, and Humphris replied that the review would happen in the absence of an associated symposium. Larsen concurred that this would be possible. Talwani reminded SASEC that the preliminary budget guidance makes this decision difficult and suggested that SASEC only commit to one activity between IODP DRILLS, workshops, or symposia. Humphris agreed and

reiterated that the topical symposium should be the lowest priority. Miller concurred and recommended that co-sponsorship be a requirement for workshops. Talwani argued that the workshops were originally meant to inspire missions and that continuing to hold workshops may convey the wrong message. Humphris agreed but thought that since there was an RFP and the response was huge, SASEC should at least consider funding one. Everyone agreed that future topical symposia were the lowest priority.

Humphris asked that SASEC consider each of the proposals individually and started with the Coakley Arctic proposal, which succeeded in obtaining \$30K in co-sponsorship. Humphris then asked each SASEC member to name their top two proposal choices.

Miller: Arctic and Deep Biosphere

Becker: Arctic and Deep Biosphere

Hayes: Ultra-high resolution and Arctic

Silver: CO2 sequestration (although the costs are high), Arctic, and ultra-high resolution.

Kono asked about the CO2 budget (\$167K) and asked what they required. Humphris answered that \$40K will come from other sources, but that they still need \$120K. Talwani offered that this topic is societally relevant and that industry may consider co-funding it.

Silver: CO2 and Arctic

Kono: Ultra-high resolution and Deep Biosphere

Tatsumi: Ultra-high resolution and CO2

Nagao: Deep Biosphere and ultra-high resolution, with a small amount of funding to CO2

Kimura: Deep Biosphere and CO2

Bickle: Ultra-high resolution and monsoons, possibly CO2

James: Abstained

Humphris: Arctic and Deep Biosphere.

The tally revealed that the Deep Biosphere, Arctic, CO2 sequestration, and Ultra-high resolution proposals were all in contention. Humphris asked SASEC for comments.

James asked if the program would realistically drill the Arctic again in the next five years. Humphris thought that it was possible. Evans agreed but wondered if it is realistic to send that message out to the community given the current budget projections. Humphris thought that since the program would build on the success of the first Arctic expedition that it would be OK to consider the proposal.

Bickle suggested that the CO2 proposal was the most relevant to society, although they would have to work to sell the idea of sequestering CO2 in the ocean crust. He would like the proponents to come back with a better proposal that addresses what actually happens in the reservoirs. Humphris agreed.

Bickle reminded SASEC that they had already just sponsored a deep biosphere workshop. Humphris agreed and suggested not funding this proposal. Larsen said that he attended the 2006 Seafloor Life workshop and considered it a success. He does think that there is a missing link from a diverse workshop to specifying shorter-term objectives

and that a smaller, focused meeting with proposed implementation ideas might be a good direction. Hayes recognized that there was no budget provided for the Deep Biosphere proposal and that he didn't think the CO2 proposal was mature, although DOE is a likely co-funder. He proposed approving \$35K for the CO2 workshop and see what else they come up with. Miller added that there are lots of groups looking at CO2 sequestration and that the interest level is high. He suggested that SASEC request that the proposal be revised for reconsideration. Talwani thought that SASEC should offer them a token amount of money for political reasons and to get name recognition. Silver agreed that the steering committee could successfully identify other funding.

Humphris asked SASEC to comment on the ultra-high resolution proposal. Kono thought that workshop would help to resolve the climate record in a detailed way and that it is a good complement to upcoming polar drilling. Bickle agreed. Humphris reminded SASEC that this proposal was originally forwarded by SSEP and that it was considered at the November 2006 meeting. She also stated that, of the six IODP workshops, not one has addressed the sedimentary record, which represents a large part of the drilling community. She summarized that SASEC discussed giving the CO2 proposal a small amount of money, that the Arctic proposal already has co-funding, that there has already been a deep biosphere workshop, and that the ultra-high resolution proposal originally received the most votes. She then suggested that they prioritize the four proposals under consideration.

Bickle: High-resolution and Arctic
James: High-resolution and CO2 (partially funded)
Kimura: High-resolution and CO2
Nagao: High-resolution and CO2
Tatsumi: CO2 and High-resolution
Kono: High-resolution and CO2
Silver: High-resolution (\$35K) and CO2 (\$15K)
Hayes: High-resolution and CO2 (\$15K)
Becker: High-resolution and Arctic
Miller: Arctic and High-resolution
Humphris: High-resolution and CO2

SASEC agreed that the High-resolution proposal would receive funding and that some commitment (between \$10-20K) be made to the CO2 workshop proposal, but that the budget needs to be finalized first. Bickle also argued that the CO2 proposal needs to be revised and resubmitted for consideration.

SASEC Consensus 0703-15: SASEC recommends that, if FY'08 funds allow, IODP-MI fund the proposed High- to Ultra-High Resolution Sedimentary Records Workshop (Juergen Thurow and others).

SASEC also recommends that, if FY'08 funds allow, IODP-MI provide co-funding in the amount of \$10-20K to the proposed CO2 sequestration in sub-sea geologic strata: securing a safe solution to mitigate climate change workshop (David Goldberg and

others); however, SASEC would like the PIs to submit a revised, more focused proposal (based on feedback from SASEC) before committing to this co-fund amount.

SASEC then discussed potential guidance to IODP-MI regarding priorities for IODP DRILLS vs. workshops. Everyone agreed that they would like to do both, but that IODP DRILLS is the first priority, followed by the High-resolution workshop, and then a small contribution to the CO2 workshop.

SASEC Consensus 0703-16: SASEC recognizes that the budget for FY'2008 may preclude some activities (workshops, DRILLS, topical symposia) that it had previously endorsed and that some prioritization may be necessary.

SASEC recommends the following be included in ranked order as is possible in the FY'08 budget:

- 1) DRILLS
- 2) High to Ultra-High Resolution Sedimentary Workshop
- 3) Contribution to Carbon Sequestration Workshop
- 4) Topical Symposium

19. Review of Action Items/Motions from the Meeting

Due to time constraints, Humphris recommended not taking the time to review the motions and consensus statements. She suggested that a draft version be prepared and emailed to everyone for approval. A few items are still outstanding, including nominating a review panel for mission proposals. Humphris recommended that SASEC wait to receive a list of mission proposals and then, over email, put a panel together of the correct expertise to review the proposals. All agreed.

20. Membership rotations

Humphris referred SASEC to the table in the agenda book of the upcoming member rotations and J-DESC's nominations for future rotations. Tatsumi will be leaving SASEC to become a BoG member. Kono will take over as vice-chair and will become chair when Humphris steps down. Otsuka clarified that Tatsumi will not become a Board member until the June meeting, which is after the June SASEC meeting. Humphris asked Tatsumi if he was planning to attend the June SASEC meeting and he replied yes.

Humphris also reminded SASEC that Miller is due to rotate off after the upcoming June meeting and that USAC is considering replacements or an extension. Humphris asked what the ECORD situation was. Bickle wasn't sure but said that he would find out and email that information. Humphris thought that Bickle would be on until 2008 and Wefer would be on until 2009, but would like to confirm. Talwani said that that SASEC would need a vice-chair for the US once Kono steps up and Humphris said that USAC would advise shortly.

20. Future meetings

The next meeting is scheduled 25-26 June 2007 in Bremerhaven, Germany. A January/February 2008 meeting has been proposed for Santa Cruz, CA. Following that, there has been a request to hold the second 2008 meeting in China.

Humphris asked SASEC if they would like to continue meeting three times a year or that in the interest in saving money they could meet twice a year. There was no further discussion on this topic.

SASEC Consensus 0703-17: SASEC agrees to hold its next meeting in Bremerhaven, Germany, 25-26 June 2007, and the January-February 2008 meeting in Santa Cruz, CA. The following meeting will be held in China.

In the future, SASEC likely will meet only twice per year. Face-to-face meetings are preferable, and a must for the June meeting when the Annual Program Plan is approved. A third meeting could be conducted via teleconference if required.

21. Closing remarks

Humphris asked SASEC to provide their thoughts on the success of the videoconference. Personally, she thought there is a need for occasional face-to-face meetings. Kono thought that the videoconference went quite well. His past experiences were not so positive. Even though this was a good experience, he didn't think that it could be used to replace face-to-face meetings.

Bickle argues that it was very difficult to fully discuss issues and to be properly understood. The sound quality was challenging at times and it was difficult to not interrupt. He thought that the experience was not entirely satisfactory.

Miller thought it was great and that the experience addressed the limitations of the system. Nagao thought the conference worked well and argued on behalf of meeting three times per year. Humphris summarized by saying that the experience was more successful than she anticipated.

SASEC Consensus 0703-18: SASEC thanks Kelly Kryc, Issa Kagaya, and Sue Rogers who were responsible for organizing and maintaining a successful videoconference meeting.

The meeting adjourned at 11:57 EST.

Appendix 1

March 2007 SPC Report - Key SPC Actions

- Approved adjustments to FY08 SODV schedule recommended by OTF in response to budgetary factors and updated conversion schedule
- Reviewed 18 proposals and ranked 15 for schedule development for FY09 and beyond
- Responded to interim SAS WG report
- Provided SPC input for late March Management Forum - responded to 3 questions from IODP-MI President
- Indicated SPC acceptance of adding an exception clause to the draft site survey data confidentiality/access policy, allowing for retaining confidentiality of proprietary industry data on a case-by-case basis

March 2007 SPC FY08 Schedule Adjustment

- OTF had met Feb 22 and March 2 to develop SODV schedule options in response to NSF financial guidance and shift of start date of SODV international operations.
- SPC SODV schedule consensus on next 2 slides
- SPC accepted minor schedule adjustments made by OTF to previously approved Chikyu and MSP FY08/09 operations - these are essentially the same from science perspective.

SODV Schedule Adjustment - SPC Consensus (1 of 2)

SPC Consensus 0703-15. The SPC accepts the adjustments recommended by the Operations Task Force to the FY08-09 SODV science operations schedule in response to NSF budgetary guidance for FY08 and other logistical factors. After a January 1 start date to international operations and a short transit, the approved schedule would include the following sequence:

- NanTroSEIZE Stage I coring (Proposals 603A-Full2, 603C-Full; subduction inputs and NT3-01)
- Equatorial Pacific Paleogene Transect I (Proposal 626-Full2)
- Equatorial Pacific Paleogene Transect II, ending with remedial cementing of two Juan de Fuca CORKs installed on Expedition 301
- Bering Sea Pliocene/Pleistocene Paleoceanography (Proposal 477-Full4)
- Spanning the FY transition, a transit to the Southern Oceans with undetermined potential for brief additional science operations
- Canterbury Basin Sea Level (Proposal 600-Full)
- Wilkes Land Paleoceanography (Proposals 478-Full3, 638-APL2)

SODV Schedule Adjustment - SPC Consensus (2 of 2)

This adjusted schedule is as close as possible to the previously approved FY08-09 schedule given the budgetary and logistical constraints, except that it does not include an initial NanTroSEIZE observatory and the observatory-intensive second Juan de Fuca IODP expedition. Nevertheless, it still presents a strong mix of societally-relevant, highly-rated seismogenic zone, paleoclimate, and sea level objectives, early enough in Phase II that the results can be expected to have a significant positive impact on renewal of IODP post-2013.

In the event that NSF, IODP-MI, and the USIO cannot identify the resources to achieve the full sequence of FY08 SODV operations above, SPC recognizes that the fourth FY08 expedition (Bering Sea paleoceanography) would need to be deferred, and that a completely different model for FY09 SODV operations would need to be developed at the June 2007 Operations Task Force and August 2007 Science Planning Committee meetings.

March 2007 SPC Proposal Review/Ranking

- 18 proposals reviewed
 - 13 from previous SPC review/ranking meetings;
5 newly forwarded from SSEP in last year
 - (1 riser, 3 MSP, rest SODV)
- 3 excluded from ranking (consensus 0703-11)
 - 2 for completion of ongoing site survey data analysis and site characterization; these are expected to be available for review and ranking at March 2008 SPC.
 - 1 for a major expansion of proposed objectives in an addendum, rendering the past reviews inadequate and raising issues of site survey data adequacy; submission of revised proposal requested, with SSEP review.

SPC March 2007 Global Rankings

(excludes 3 reviewed proposals)

| Rank | | | Mean | Stdv |
|------|------------|--|-------|------|
| 1 | 505-Full5 | Mariana Convergent Margin | 5.59 | 3.36 |
| 2 | 659-Full | Newfoundland Rifted Margin | 5.76 | 3.80 |
| 3 | 633-Full2 | Costa Rica Mud Mounds | 6.12 | 3.48 |
| 4 | 552-Full3 | Bengal Fan | 6.29 | 4.06 |
| 5 | 644-Full2 | Mediterranean Outflow | 6.35 | 3.44 |
| 6 | 654-Full2 | Shatsky Rise Origin | 6.65 | 4.00 |
| 7 | 537B-Full3 | Costa Rica Seismogenesis Phase B (Riser) | 6.94 | 2.93 |
| 8 | 522-Full5 | Superfast Spreading Crust | 7.18 | 4.00 |
| 9 | 661-Full2 | Newfoundland Sediment Drifts | 7.29 | 4.13 |
| 10 | 548-Full2 | Chixculub K-T Impact Crater (MSP) | 8.18 | 5.04 |
| 11 | 612-Full3 | Geodynamo | 9.71 | 5.64 |
| 12 | 581-Full2 | Late Pleistocene Coralgall Banks (MSP) | 9.94 | 4.19 |
| 13 | 618-Full3 | East Asia Margin (MSP with riser) | 10.47 | 3.79 |
| 14 | 584-Full2 | TAG II Hydrothermal | 11.35 | 3.32 |
| 15 | 547-Full4 | Oceanic Subsurface Biosphere | 12.18 | 1.94 |

SPC March 2007 Rankings - Forwarded to OTF

(blue = Group 1* for FY09 and beyond
yellow = Group 2** for FY09/10 only)

| Rank | | | Mean | Stdv |
|------|------------|--|-------|------|
| 1 | 505-Full5 | Mariana Convergent Margin | 5.59 | 3.36 |
| 2 | 659-Full | Newfoundland Rifted Margin | 5.76 | 3.80 |
| 3 | 633-Full2 | Costa Rica Mud Mounds | 6.12 | 3.48 |
| 4 | 552-Full3 | Bengal Fan | 6.29 | 4.06 |
| 5 | 644-Full2 | Mediterranean Outflow | 6.35 | 3.44 |
| 6 | 654-Full2 | Shatsky Rise Origin | 6.65 | 4.00 |
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| 12 | 581-Full2 | Late Pleistocene Coralgall Banks (MSP) | 9.94 | 4.19 |
| 13 | 618-Full3 | East Asia Margin (MSP with riser) | 10.47 | 3.79 |
| 14 | 584-Full2 | TAG II Hydrothermal | 11.35 | 3.32 |
| 15 | 547-Full4 | Oceanic Subsurface Biosphere | 12.18 | 1.94 |

* All Group 1 proposals from 2003-2007 to be reevaluated at Aug SPC

** Group 2 to be re-ranked at March 2008 if not scheduled in FY09/10

SPC Input for March Management Forum

President of IODP-MI requested SPC and SASEC input on three issues prompted by FY08/09 budget shortfalls:

1. If SOC funding is severely reduced, where should budget cuts be applied?
2. Where should we look for additional funding and what accommodations to the IODP model would be necessary?
3. What role does SAS want to play in raising additional funds?

These issues primarily enter into strategic directions section for the intended MF IODP vision statement.

These questions were presented on first day of SPC, and discussion session were held on third day.

If SOC funding is severely reduced, where should budget cuts be applied?

- SPC felt poorly equipped to answer this question meaningfully
 - Science user cares about delivery of science - evaluate trade-offs regardless of SOC/POC budgeting.
 - To answer meaningfully requires a cost-benefit analysis and an understanding of the breakdown of originally planned Phase II budgets. What is the original basis to which budget cuts are to be applied?
- SPC requested that the MF devise a process so that SPC could answer meaningfully at its August meeting, when SPC is also intending a re-review of all proposals remaining at OTF with first-order cost-benefit analysis.

Where should we look for additional funding and what accommodations to the IODP model would be necessary?

- SPC noted two examples that required no “accommodations” to the ODP/IODP model: the ICDP contribution for highly rated NJ Sea Level program, and outside contributions to highly rated ODP/IODP gas hydrates programs.
- SPC agreed that any outside funding source should be welcome in support of any highly-ranked proposal forwarded to OTF - expands the third-party funding model without requiring a substantive “accommodation” to the IODP model.
- SPC then considered the Nov SASEC endorsement of partnerships with industry for drilling of mutual interest, as long as the “scientific integrity of the program” is preserved. SPC concluded that “scientific integrity of the program” would be preserved with adherence to (a) the regular proposal review process and (b) data/sample open access policies.
- Since the SPC meeting, SPC chair has independently suggested a model for a quick SSEP/SPC review of “Complementary Project Proposals” with external SOC/POC funding that would preserve the “scientific integrity of the program.”

What role does SAS want to play in raising additional funds?

- SPC felt that all SAS members should stand ready to help explain IODP science in any venue, including those that might help justify additional funding sources.
- There were concerns against SAS taking on a lobbying role, particularly with government funding sources. E.g., the US contingent was advised it would be OK to lobby Congress on behalf of increased NSF funding, but it might not be OK to lobby specifically for the IODP budget line.
- Complementary Project Proposal concept: SAS can adjust its proposal review process and maintain integrity for cases in which outside support might be offered for specific projects.

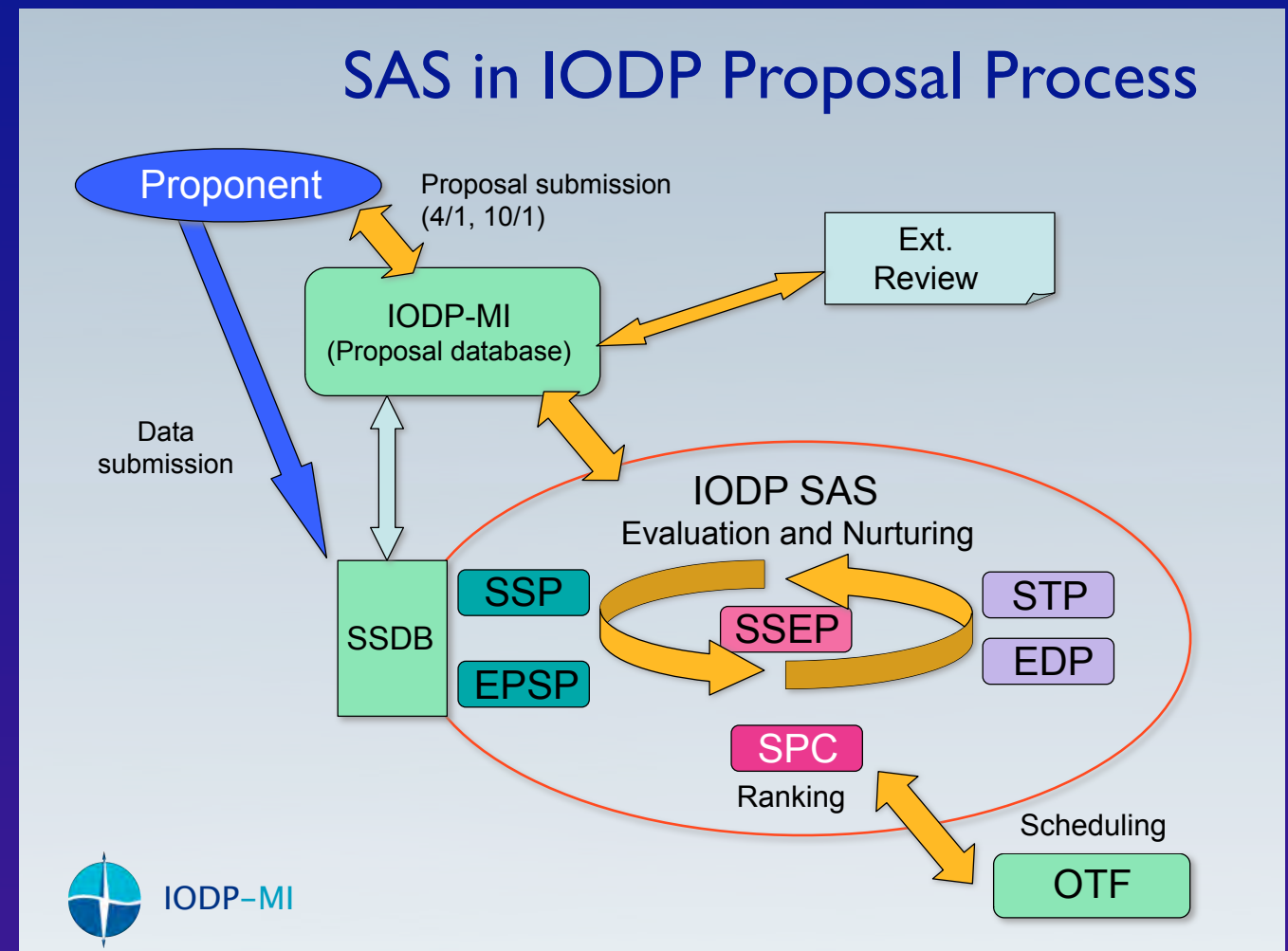
Appendix 2

SAS Working Group Interim Report - Background

In July, SASEC formed WG to review SAS and recommend “any changes to optimally configure its activities as IODP enters Phase II” or “any changes in structure necessary to integrate missions into the IODP proposal review process.”

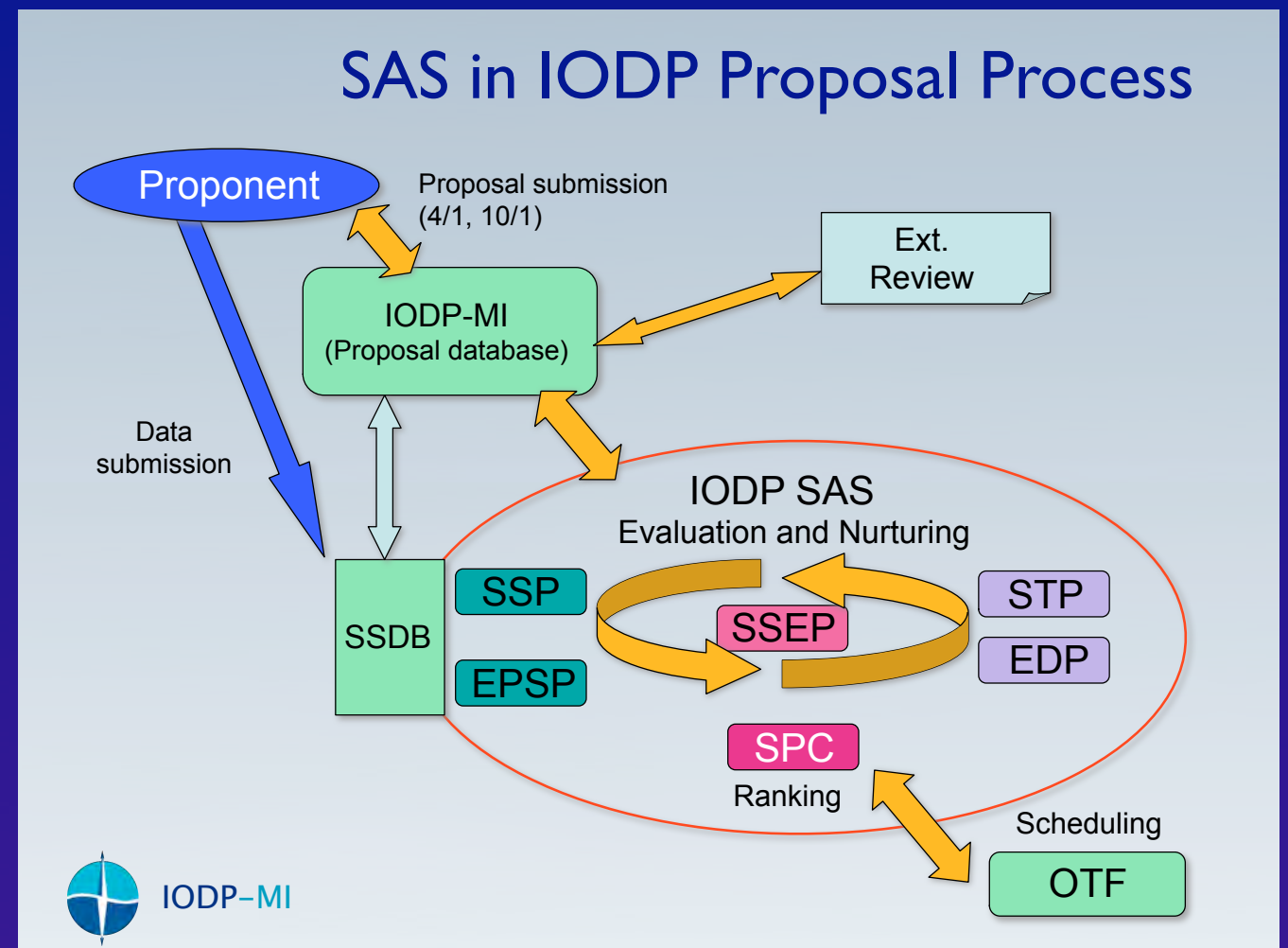
When FY08/09 budget shortfalls came to light in January, SASEC chair asked WG to also look at reduced SAS for cost savings.

As discussed at Nov SASEC meeting, interim WG findings are based on an “internal” review, with IODP community input via responses through Feb 28 to the WG questionnaire distributed in Dec.



SAS Working Group Interim Report - WG Perspective

Overall WG perspective and interim recommendations honor the clear statements of role of SAS in ISP (2001), IODP Principles (2002), and IODP Memoranda (2003). All three define a proposal-driven process for developing annual IODP science plans, with SAS providing the integrated proposal review and the recommended science plans to the CMO.



The interim WG recommendations preserve the core SAS proposal review process (SSEP/SPC), but identify significant efficiencies and cost savings in terms of reduced panel memberships and technical panel meeting frequencies. WG did not consider in depth the potential for joint ICDP/IODP evaluation of all IODP and ICDP proposals, but agreed that a coordinated process is needed for “amphibious” projects involving both IODP and ICDP drilling.

SAS issues raised in questionnaire responses or by WG

(✓ = key issues described in this presentation)

- ✓ Panel sizes and terms of membership - issues of (a) corporate memory vs new blood as well as (b) budget limits
- ✓ Focusing technical/engineering/survey advice better
- ✓ Need for more proactive long-term planning by SPC and SASEC
- ✓ Proposal review process and SAS “corporate memory”: Shortening/simplifying the process to reduce proposal residence times and possibility of inconsistent reviews
- SAS communication - between panels, among panels/IODP-MI/IO's, and among panels/PMO's
- Relationships between SAS panels and corresponding IODP-MI task forces
- Disconnect between site survey recommendations and funding process
- Need for earlier EPSP previews of proposals with likely safety concerns

Panel sizes and terms of membership

- WG: Voluntary reductions in technical panel membership levels (STP, EDP, SSP, maybe EPSP) - smaller “core” memberships augmented by expert advice as needed at one of two annual meetings.
 - ▶ Panel chairs agreed, assuming better interaction with PMO’s for expertise and activity level of members. SPC and PMO’s tentatively agreed on 5/5/3(1)/1 model rather than current 7/7/3(1)/1 (which is not actually mandated).
- WG and SPC: Consider reduced SSEP membership (perhaps 30 total), but keep SPC at current membership levels to ensure balance of expertise
 - ▶ PMO’s tentatively endorsed similar voluntary reduction for SSEP and SPC. It will be important for SPC to monitor SSEP membership for balance of expertise, as specified in current SPC terms of reference. Should SASEC monitor SPC balance?
- WG, SPC, and PMO’s: standard term of 3 years but allow flexibility for 3rd and 4th years of membership at PMO discretion upon request from SAS through IODP-MI.
- The reductions in membership levels and reducing some panel meeting frequencies (later slides) should result in ~25% cost savings for US and Japan SAS participation.
- WG and SPC: Following SASEC model, limit # of observers to no more than half the number of panel members (another 10-15% savings in overall program funds?).
 - ▶ Did not go over well with liaisons/observers at March SPC!

Better focus for technical/engineering/survey advice

- IODP-MI and IO's recognize a need to work on defining what constitutes useful STP and EDP advice. IODP-MI is setting up a tracking system for dealing with STP and EDP recommendations.
- EDP annual meeting cycle and long-term focus is working well, in terms of producing engineering development component of APP and a longer-term vision for engineering development.
- Continue efforts to apply model to STP, as mutually decided at Dec STP.
- For both STP and EDP, consider reduced core membership, with option for additional experts to be brought in at one of two annual meetings for focused discussion of selected issues. SPC and PMO's agreed.
- Also consider one annual joint or overlapping meetings of EDP + STP.
- If budget situation dictates reduced resources for IODP engineering development and/or support of measurement capabilities, should we reduce EDP or STP meeting frequency from twice to once per year?
- SSP and EPSP can probably reduce to 1 physical meeting per year because of electronic survey data availability and reduced IODP operations.

Need for more proactive long-term planning by SPC and SASEC

- WG and SPC: Need proactive planning based on milestones to achieve ISP objectives, along with identifying ISP objectives that realistically cannot be addressed in time for renewal.
- WG and SPC: There is a need to involve SPC more clearly in SASEC long-term planning process. (More on next slide).
- At its August meeting, SPC plans a reassessment of the significant number of proposals remaining at OTF, as well as its first review of mission proposals. Both will be done in context of assessing progress toward ISP given the current budget situation. This will help start a more proactive process at SPC. For this to work, SPC might need first-order budgetary estimates, from OTF or from IO's and agencies via OTF.
- WG: Retain SPC options for (a) PPG's and workshops for prioritized planning, and (b) DPG's for integrating multiple proposals in one theme - but be very selective in light of budget situation. How will budget situation impact likelihood of support of mission teams?

Clarification of SPC and SASEC Terms of Reference

- WG and SPC: There is a need to involve SPC more clearly in SASEC long-term planning process.
 - ▶ From SASEC ToR (April 2006): SASEC “conducts IODP long-range planning, as well as evaluation and assessment of the program”
 - ▶ From SPC ToR: (January 2006): “The SPC shall be specifically responsible for: the custody and initial implementation of the IODP ISP;...carrying out long-term science planning;...”
- WG: SASEC (and SPC) terms of reference should be revised to clarify policy-making roles, as specified for SASEC in the IODP Memoranda and Principles of Scientific Investigation.
 - ▶ No mention of policy matters in current SASEC ToR or SPC ToR.
 - ▶ IODP Memoranda: "The Executive Authority is to formulate scientific and policy recommendations with respect to IODP planning and operations." Principles: "The executive authority of the IODP science advisory structure will be the lead policy-making body of IODP."

Proposal review process

- Current SPC mandate leads off with: “The SPC shall encourage the international community to develop and submit drilling proposals for the IODP.” But we need to be honest with proponent community about likelihood of scheduling before renewal, given both the large existing proposal pool and the new budgetary realities. Who is going to inform the community? How can we do it without discouraging the community?
- WG: Reducing proposal residence time has intrinsic merit and also should help with perceived issue of inconsistent reviews as panel memberships change. IODP-MI VP-SP and Science Coordinators should take a more proactive role in reminding new SSEP and SPC members of rationale behind past reviews, to guard against inconsistent reviews. The IODP-MI VP-SP and SPC chair should jointly review any potential cases.
- WG considered the implications of reducing SSEP and SPC to one meeting per year, tied to one annual proposal deadline. However, this is not recommended by the WG, as it would be counter-productive in terms of reducing proposal residence times and detrimental to engaging a critical mass of IODP scientists during a difficult time.
- WG: Should there be a limit at SSEP level on number of revisions before external review and forwarding to SPC or deactivation? Should there be limits at SPC level on number of times a low-ranked proposal not forwarded to OTF can be reconsidered at SPC? There was little support for either concept during SPC discussions.
- WG and SPC: Newly defined SSEP star rating should be entered into proposal records available to proponents, SAS, and IODP management.

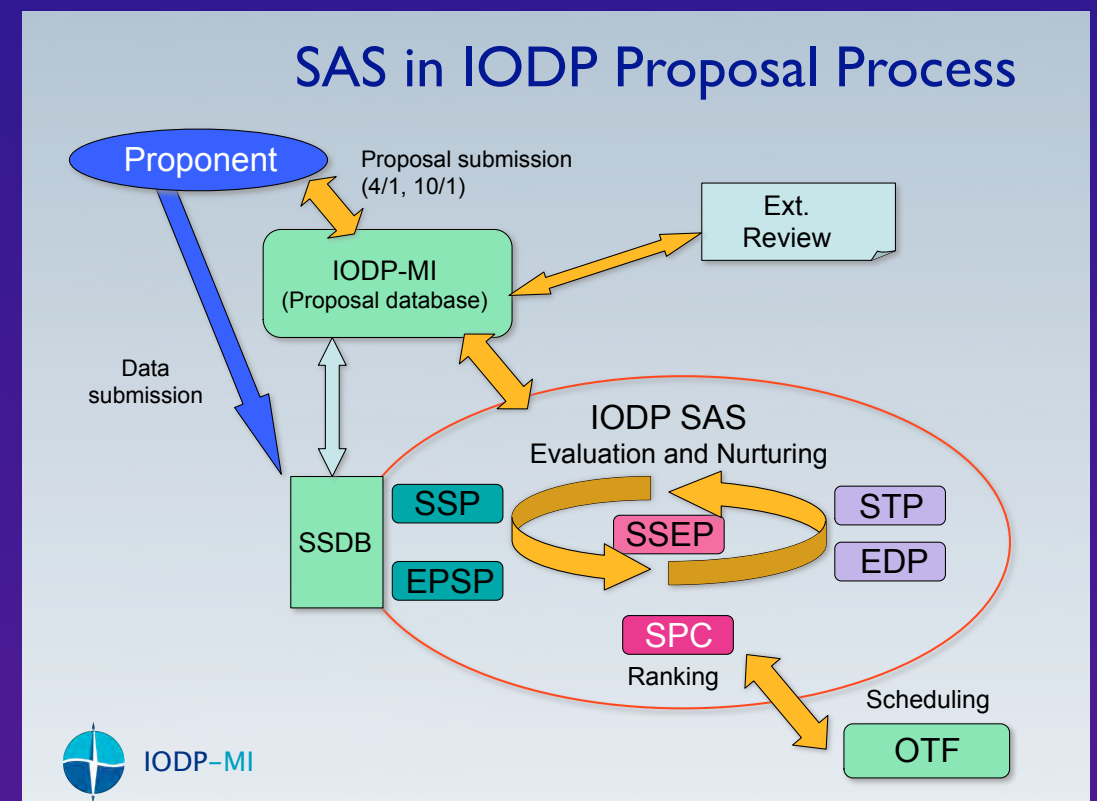
Concluding Remarks (1 of 2)

- SAS WG interim recommendations do not include profound structural changes to SAS required for full Phase II operations or incorporation of mission planning, or for the added impact of budget limits. The WG sees the SAS as a key mechanism for continuing IODP client or user community input that will be even more important when budget realities force difficult choices. We need to preserve that community input and involvement in order to justify renewal of IODP post 2013.
- Nevertheless, the WG has identified significant ways in which the SAS structure and process can be streamlined, for more effective performance under difficult financial conditions. The recommended changes to membership terms and meeting frequencies would result in ~20-25% savings within SAS. This savings would be to US and Japan; ECORD indicated an ability and interest to maintain current levels. There could be an added ~10-15% savings to the program if the recommended reduction in observers is honored.

Concluding Remarks (2 of 2)

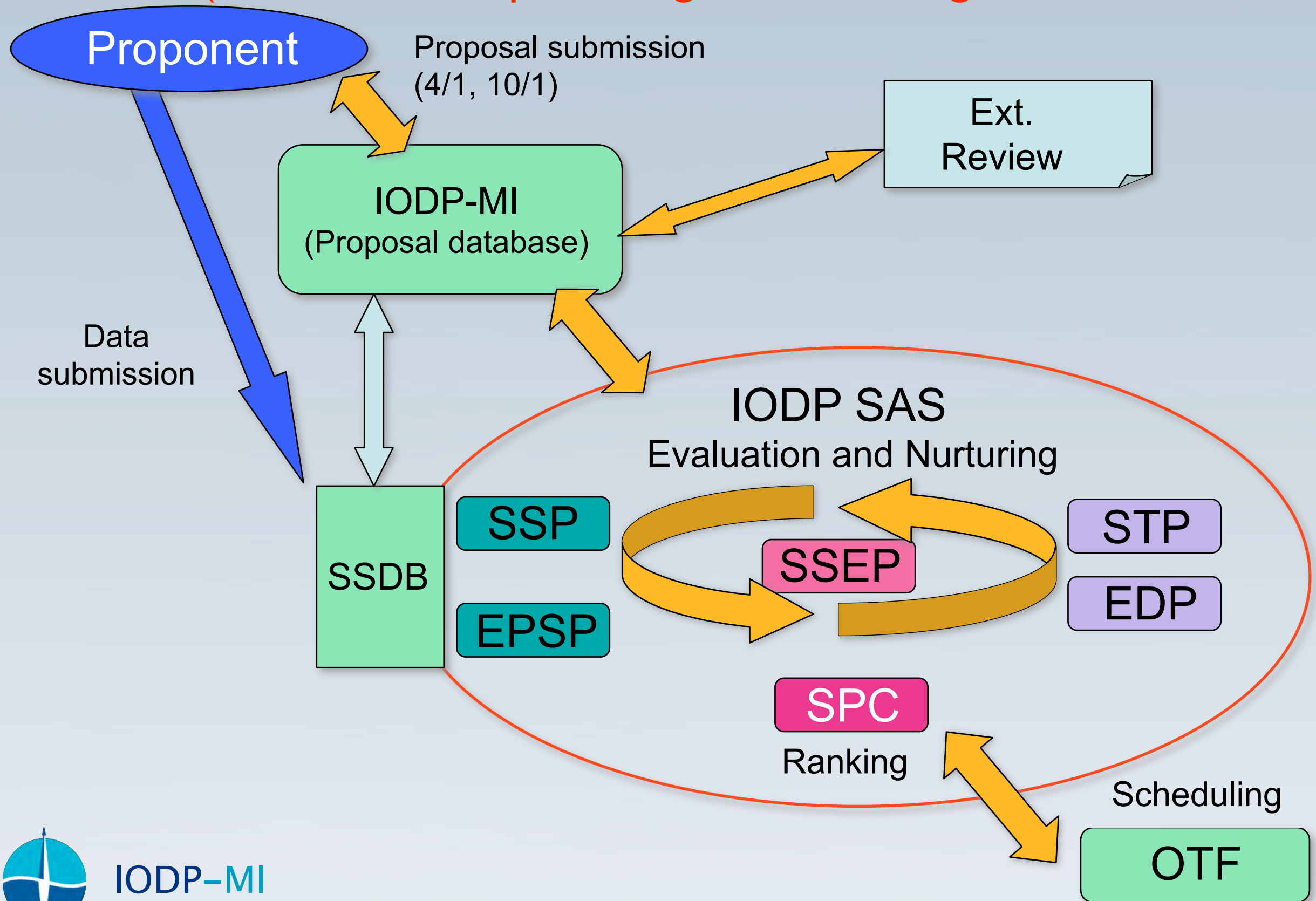
- Under the current SPC terms of reference, most of the recommended improvements (except changes to SASEC or SPC terms of reference or mandating limits on observers) can be made under SPC or PMO authority: “The SPC shall undertake detailed planning, and may initiate or terminate committees, panels, and working groups as needed in light of developments in science and technology.The SPC chair shall approve all meeting agendas, times, and locations for all SAS committees, panels, and groups reporting to it.” It is the PMO’s right to agree on the reduced US/Japan membership levels; the only aspect left is planning a transition, hopefully effective as FY08 begins.

WG is ready to finalize report taking into account SASEC comments. WG also intends to revise and simplify SAS Terms of Reference, for SASEC approval along with the formal WG report at the June SASEC meeting. WG will also produce a simple two-page summary of SAS panel functions, along with a technical advice flow diagram to complement the current proposal-flow diagram.



SAS in IODP Proposal Process

(WG: need companion figure illustrating technical advice flow)



Appendix 3

Joint IODP - ICDP Proposal Evaluation

“quite similar, but completely separate, scientific proposal evaluation”

“need for at least some coordination of proposal evaluation because of several ‘amphibious’ proposals”

“ to think truly global and design drilling experiments regardless of ‘drilling platform’ might require a more profound integration of scientific proposal evaluation process”

- **Co-ordinated and partly joint meetings** leading to common recommendations
- **Set-up of a new, integrated review group**, which deals with all proposals to ICDP and IODP.



Joint IODP-ICDP Core Storage and Curation

“ICDP lacks a central core management and core metadata dissemination that exists in IODP”

“joint collaboration (core storage and data) will provide a global database unparalleled in Earth Sciences.”

“logical that new cores from ICDP should be archived in the nearest regional IODP core facility”

“metadata for the cores cross-listed between ICDP and IODP, and IODP sampling policies and procedures followed wherever possible.”

“joint IODP-ICDP Core Committee should be established and discuss ICDP legacy cores (e.g., Hawaii Drilling Project, Unzen, others).”



Appendix 4

Site Survey Data Policy

“Data objects submitted to the SSDB are flagged, at the discretion of the submitter, as either non-proprietary or proprietary. The metadata (data that describe an object) of all data objects held in the SSDB, whether of a proprietary nature or not, are publicly available for viewing and downloading.”

“The data listed in the Scientific Prospectus (SP), including any proprietary data, can be viewed and downloaded by members of the Science Party when the SP is published. At the end of the expedition moratorium period, all data listed in the Scientific Prospectus become publicly available for viewing and downloading.”

Added by SPC:

“Exceptions to the latter can be made on a case by case basis for proprietary data provided by an industry for-profit organization.”



Sample and Data Obligations Policy

Two Changes

Program accept of temporary publication moratorium in connection with fast tracking publication of expedition findings in high impact journals like Nature and Science.

This change was recommended by the the Expedition Science Communication Task Force. This TF also recommended implementation guidelines (in Agenda book, Policies and Procedures)

More clear definition of non-performers in relation to post-moratorium sample requests and consistent with verbiage used for expedition participants. These changes were recommended by the Curatorial Advisory Board (task force). Changes in Agenda book, Policies and Procedures.



Appendix 5

Appendix 6. Discussions on Financial Projections and Implications for Modifications to IODP

Comments from Tokyo, Japan

(1) Reduced Drilling Time

- Implementation plans of expeditions should be considered and provided from OTF solely based on scientific merits.
- SAS should not rank proposals taking costs into account.
- We are happy with the US's proposition on establishing the new entry for external proposals during ship-down.

(2) Reduce annual budgets

- The estimates for cost reduction should be first presented.
- IODP-MI should provide the effort plan for reducing the A&M cost.
- We always have to consider to maximize efficiency and to reduce costs for SAS activity, but fewer and smaller panels may not help saving costs a lot.

Comments from Cambridge, UK

If SOC funding is severely reduced, where should budget cuts be applied?

Given the **reduced drilling time** available in the coming fiscal years:

- How should IODP address the breadth of expedition costs when planning operations?

Need to consider value for money

- Should drilling be aimed at a few spectacular and generally expensive targets, rather than a larger number of less expensive targets, aimed at keeping the drill ships busy for a longer period with the same funding?

Science and cost efficiency require significant number of less expensive targets.

- What should the balance be between projects with societal impact, and projects of only spectacular scientific merit?

Good science includes projects with societal relevance (but we need to sell this). If it's not good science should be paid for out of a different budget.

- Will changes in the proposal process be necessary? For example, should drilling proposals originate only from individual scientists without any restriction as to topic, or should they be submitted within a framework decided by SPC and/or SASEC? Do we need to shorten the proposal residence time within SAS?

No - if not responsive will die.

- If *some* drilling projects *are* to be supported by funding from other sources, what is the process by which SAS decides whether modifications to the current IODP protocols will be needed?

Given the need **to reduce annual budgets** in the future:

- Should reduced budget targets be addressed by (i) decreasing the number of operations, (ii) reducing/removing program services, or (iii) some combination of both?

Need costs of operations, and program services to make sensible decisions on this.

- If program services must be reduced, what services are available for reduction (e.g., shipboard/shore based measurements, publications, etc), and what is the overall programmatic priority of each service?

Need to know costs – must be careful not compromise results by cuts that lead to inefficiencies – but making savings would be politically wise.

- Should we restructure SAS with fewer and smaller panels?

Doubt there are significant savings to be made here. Only marginally – maybe SSEPS to 30 and reduction in service panels but cost saving probably not significant – most of SAS real cost is outside IODP (salaries).

- Should IODP move towards becoming a strongly integrated program where the infrastructure among the CMO, SAS, and IOs is designed to maximize efficiency and reduce costs. Or should integration continue at the present level?

Not possible.

Where should we look for additional funding and what accommodations to the IODP model would be necessary?

It's our major programs that might raise special funding – Nantroseize, Mohole, deep biosphere, arctic, Chixculub. Either because they are of major societal importance or catch the public imagination or both.

What role does SAS want to play in raising additional funds?

Write and lobby for the proposals?

- Is it desirable to get funding from other entities (e.g. industry, other countries) to support IODP programs?

Yes within reason. Limited such collaboration is likely to be beneficial to both.

- What accommodations to IODP programs might have to be made to obtain such funding?

Protocols, application process, data availability?

- What role should the SAS play in raising new funds?

As above

Comments from Washington, DC, USA

If SOC funding is severely reduced, where should budget cuts be applied?

- How should IODP address the breadth of expedition costs when planning operations?
- Should drilling be aimed at a few spectacular and generally expensive targets, rather than a larger number of less expensive targets, aimed at keeping the drill ships busy for a longer period with the same funding?
- What should the balance be between projects with societal impact, and projects of only spectacular scientific merit?

- *Retain priorities defined in the ISP. Balance challenging projects with others having high societal benefit.*
- *Some specific objectives:*
 - (i) *Whatever it takes to make Nankai a success*
 - (ii) *1-2 carefully chosen deep-biosphere legs*
 - (iii) *Socially relevant science (climate, hazards, etc.)*
 - (iv) *Begin a Mission.*
- *Expect to demonstrate benefits of integration.*
- Will changes in the proposal process be necessary? For example, should drilling proposals originate only from individual scientists without any restriction as to topic, or should they be submitted within a framework decided by SPC and/or SASEC? Do we need to shorten the proposal residence time within SAS?
- *Drilling proposals should originate from individuals or groups without restriction of topics or themes.*
- *Change proposal-submission process:*
 - (i) *Proposals initially submitted in preliminary form at one deadline each year. A subset chosen for submission as full proposals.*
 - (ii) *Full proposals submitted at one deadline each year. Only one round of revision permitted (to Proposal XXX-Full 2) before SSEP either rejects or sends proposal for review.*
- If drilling projects have to be supported by funding from other sources, what is the process by which SAS decides whether modifications to the current IODP protocols will be needed?
- *Proposals funded by external sources that will use the ships during down-time (hence*

saving the program money) will require a different entry path into SAS and a modified and streamlined review process.

- *Complementary-Project process suggested by Keir Becker (sent by e-mail). Proposals have a single-pass review by SSEP and SPC for a positive or negative decision. If approved, forwarded to OTF for scheduling.*
- *If IODP funds are required to augment those from the external source, the proposal will go through the normal prioritization process.*

Reduced Annual Budgets

- Should reduced budget targets be addressed by (i) decreasing the number of operations, (ii) reducing/removing program services, or (iii) some combination of both?
- *It is desirable not to decrease the number of ship-operating days, but it is likely that both operating days and program services will have to be reduced.*
- If program services must be reduced, what services are available for reduction (e.g., shipboard/shore based measurements, publications, etc), and what is the overall programmatic priority of each service?

Shipboard measurements

- *If possible, reduce size of shipboard science parties. Do more on shore. Particularly eliminate analyses that are commonly repeated on shore.*
- *Reduce technical staffing levels by increasing engagement of scientists in analysis and data collection.*
- *Apply this same philosophy across all platforms.*
- *Stagger expeditions on Chikyu and SODV to the extent possible. Use common technical staff and minimize size of permanent, seagoing technical staff.*

Data Management

- *Unify data-management systems.*

IODP-MI

- *Consider merging offices. Location? Rotate between countries?*
- *What would the role of IODP-MI be if SOC funds were provided directly to the IOs?*
- *Should we restructure SAS with fewer and smaller panels?*
- *Reduce the sizes of panels as suggested by the SAS WG.*
- *Eliminate SASEC and create an Executive Committee of SPC that conducts business in association with SPC meeting.*
- *Should IODP move towards becoming a strongly integrated program where the infrastructure among the CMO, SAS, and IOs is designed to maximize efficiency and reduce costs. Or should integration continue at the present level?*
- *The structure of IODP should be integrated as fully as possible (data management; sharing engineering and technical staff, etc.). This will take time but should reduce administrative and management costs. Is present, multiply paralleled structure necessary for national-identity reasons?*

Appendix 6

Thoughts on Potential IODP “Complementary Project Proposals”

K. Becker, original draft March 13, 2007, revised March 29, 2007, following discussions at March 2007 SASEC and Management Forum meetings, minor editing June 5, 2007.

This proposition expands the existing APL (Ancillary Project Letter) and third-party funding concepts to provide a framework for SAS evaluation of proposals for “hybrid” IODP projects with significant support from a non-IODP entity such as industry, governments of countries not formally IODP members, or additional agencies from IODP member countries. It is based partly on the 2004-2005 SPC experience in dealing with an APL to the Tahiti Sea Level program of great industry interest in terms of adding casing to the holes and conducting detailed cross-hole geophysical imaging of the reef formations. (See summary appended below of that experience and relevant SPC consensus statements from its meetings of June and October 2004 and March 2005.) Basically this experience set up a precedent that an APL for an MSP operation probably had to provide its own additional funding for the necessary platform time. This model could be expanded to apply to the IODP drillships if future POC/SOC funding does not provide for year-round IODP operations.

In this expanded model, an IODP “Complementary Project Proposal” (CPP) could allow for requests of IODP platform time for projects deemed to be (1) a high priority to an outside entity that offers resources to the program, (2) of interest to the respective IO and the IODP Agencies, (3) in compliance with IODP data/sample access policies, (4) of scientific interest to IODP as determined by SAS (even if not necessarily top-ranked IODP scientific priority), and (5) of minimal negative impact to other high-priority IODP projects as determined by IODP-MI and SAS.

With respect to evaluation of a CPP within SAS: if the initial CPP presentation were strong, a single-pass SSEP/SPC review cycle (as for an APL or any really good IODP full proposal) could be sufficient for a SAS judgment of relevance or interest to IODP. Likelihood of scheduling would depend on the SSEP/SPC evaluation of this interest or relevance to IODP balanced against the benefits of accepting the proffered resources in exchange for keeping the relevant IODP platform(s) operating when IODP budgets don’t allow full-time operation. At SPC, the CPP review would lead not to inclusion in the regular SPC annual proposal ranking on scientific grounds, but to a separate yes-or-no decision to forward to OTF for potential scheduling, much as SPC handles APL’s.

Obviously, the perceived benefit at SPC will depend to large degree on the IODP budget situation, such that projects that bring full or major POC/SOC funding will have greater likelihood of gaining endorsement when IODP budgets are inadequate for full-time operation. In practice, when SPC is evaluating schedule options from OTF, complementary projects that require full or major POC/SOC funding from IODP will probably not fare well against highly-rated regular proposals that are also competing for the same POC/SOC funding. Thus, proponents who cannot provide for a significant contribution of POC/SOC funding should probably apply via the regular IODP proposal process in which the decision is based on evaluation of scientific merit as for all regular IODP proposals.

Summary of SPC experience with Tahiti APL-650

In brief, SPC was quite supportive of the objectives and industry interest, but wanted an assessment from OPCOM as to the logistical and financial implications with respect to conducting the work already approved in the highly-rated main proposal. The proponent was initially confident of industry third-party support for the geophysical experiments, but the EMA POC funding could not cover the additional platform time (~5 days) for the proposed experiment. Thus, the PI was also asked to seek industry funding for the necessary additional platform time, in order not to negatively impact the highly-rated program already scheduled. In the end, the industry funding could not be obtained and the APL was withdrawn from consideration, but it almost certainly would have been scheduled if the industry funding had been obtained.

SPC Consensus 0406-9: The SPC applauds the initiative represented by Proposal 650-APL and in particular the potential for a productive interaction among the proponents, the scientific party of the Tahiti component of Proposal 519-Full2 (the expected FY2005 MSP project), and industry. However, the committee cannot yet fully assess the operational, environmental, and fiscal impacts of operations associated with the proposed imaging experiments, and in particular the need to install and remove PVC liners from a subset of the holes proposed for the TAH-02A transect. The SPC therefore requests that OPCOM consider Proposal 650-APL at its September 2004 meeting, with input from the proponents and the ECORD Science Operator as appropriate, and provide a report and a recommendation at the October 2004 SPC meeting.

SPC Consensus 0410-33: The SPC reaffirms SPC Consensus 0406-9. The committee applauds the initiative represented by Proposal 650-APL and in particular the potential for a productive interaction among the proponents, the scientific party of the Tahiti component of Proposal 519-Full2 (the FY2005 MSP project), and industry. However, the committee cannot yet fully assess the operational, environmental, and fiscal impacts of operations associated with the proposed imaging experiments, and in particular the need to install and remove PVC liners from a subset of the holes proposed for the TAH-02A transect. The SPC therefore requests that OPCOM consider Proposal 650-APL at its earliest convenience, with input from the proponents and the ECORD Science Operator as appropriate.

SPC Consensus 0503-18: The SPC recognizes Proposal 650-APL Tahiti Reef Imaging as a potentially excellent and exciting added value to the impending IODP Expedition 310 Tahiti Sea Level. The committee remains supportive of and recommends conducting the proposed ancillary project, as long as it does not impact the highly ranked science of the scheduled drilling expedition.