

Final Draft
4/14/04

A Report of the
IODP EDUCATION AND OUTREACH
WORKSHOP

February 20-24, 2004
Austin, Texas

presented to

Integrated Ocean Drilling Program
Management International, Inc.
(IODP-MI)

Note: This final report is a summary of workshop information, input, and recommendations compiled by the workshop steering committee with input from the workshop participants.

EXECUTIVE SUMMARY

The Integrated Ocean Drilling Program (IODP) is an international research initiative that uses multiple drilling platforms to explore previously inaccessible regions of Earth and planetary processes that, even today, remain poorly understood. Scientific results offer new insight into the structure and formation of oceanic crust, mantle dynamics, earthquake genesis, environmental change over time, and the nature of life in extreme environments. These scientific results shall be shared with the scientific and educational community, government and industry, policy makers, and the taxpayers who support this research. IODP education and outreach (E&O) are thus essential components of the program, requiring careful attention and diligent planning. Indeed, IODP E&O is the mechanism by which the scientific results will be transformed into common intellectual property. The IODP E&O effort is responsible for ensuring that data from cores and boreholes, scientific discoveries, and engineering advances are translated into promotional and educational content and conveyed to a wide range of audiences through myriad channels.

The unique natures of education and outreach dictate that IODP-MI's role in facilitating or carrying out these activities will be different. In practice, IODP-MI will play the major role in developing and implementing the outreach functions for the international program, as IODP-MI is by definition the international face of IODP. Both content and delivery of international outreach materials and activities will be developed and/or facilitated at the IODP-MI level, in concert with the national/consortia entities and IOs. IODP-MI's role in educational activity will be to play a proactive role in integrating educational programs which, by necessity, are developed at national levels in order to conform with local school/university curricula, language, and cultural requirements. In summary, from the IODP-MI perspective, outreach will be handled in a top-down manner, while education will require a bottom up approach.

Table 1 outlines the following seven major education and outreach functions for IODP-MI as identified by the workshop participants (see Attachment 1 for List of Participants):

1. Coordination and promotion of integrated planning, execution, and evaluation.
2. Creation of identity materials to ensure a single IODP identity and message.
3. Compilation and maintenance of common content resources so that they are available to the IODP education and outreach community and target audiences.
4. Facilitation of international program activities.
5. Advancing education by engaging the international community.

6. Fostering of language and cultural awareness.
7. Development and production of broader scientific information.

Table 2 provides additional details concerning which IODP entity has responsibility for carrying out a particular E&O function. A recommended timetable covering the FY 04 time-frame (April 1–September 30, 2004), the remainder of calendar year 04 (October 1–December 31, 2004), the remainder of FY 05, and FY 06, is incorporated into Table 2.

SHORT-TERM RECOMMENDATIONS (FY 04)

Recommendation 1: FINANCIAL SUPPORT FOR IODP-MI E&O ACTIVITIES THROUGH DECEMBER 2004

There are short-term (i.e., within the next six months) opportunities for products, materials, and activities to support the inauguration of IODP operations, including an international public relations campaign to launch the new IODP as well as collaborative public relations activities in support of the first riserless vessel operations and the mission specific Arctic Coring Expedition. Because FY 05 IODP-MI resources will not be in place in time to carry out these program initiation activities crucial to the long-term identity of the program, we encourage all efforts to find funds for these purposes.

Recommendation 2: FORMATION OF AN E&O TASK FORCE AND CONDUCT INTERIM PLANNING

We recommend that IODP-MI establish a small, short-term task force (April through September 2004) to advise IODP-MI about the immediate E&O priorities, help to develop an interim E&O plan, to prepare guidelines and policies, and to establish the framework for a longer-term E&O advisory committee to IODP-MI.

Recommendation 3: FORMATION OF AN E&O TEAM AND INTERIM IMPLEMENTATION OF THE E&O PLAN

We recommend the formation of an IODP-wide operational E&O Team (April 2004) comprising the new Director of the Office of International Education, Outreach, and Communications at IODP-MI, an E&O representative from each of the IOs (JOI Alliance, CDEX, ESO) and national/consortia entities (USSSP/USSAC, J-DESC, ESSAC). The E&O Team will assist the new Director of International Education, Outreach, and Communications and subcontractors with implementation of the interim E&O plan and serve as a liaisons to the E&O Task Force.

Recommendation 4:**CREATE AND PROMOTE COHERENT IODP IDENTITY**

We recommend that IODP-MI immediately undertake the creation of a coherent IODP identity. This will involve the design of a logo and related graphic elements as well as a portal website (www.iodp.org) that serves as an easily navigable entry point to all IODP component websites. IODP-MI should also immediately establish an international media relations capability to publicize the launch of the new program and upcoming expeditions.

LONGER-TERM RECOMMENDATIONS (FY 05-06)

Recommendation 1:**PROCEDURES AND PROTOCOLS**

We recommend that IODP-MI, initially in collaboration with the E&O Task Force and subsequently with the E&O Advisory Committee, establish written guidelines and policies including descriptions of procedures and protocols for E&O to be used by IODP science, education, and outreach personnel when communicating with outside groups (e.g. media, government and private funding organizations, non-governmental organizations, professional organizations, etc.).

Recommendation 2:**COMPILE AND MAINTAIN COMMON CONTENT RESOURCES**

We recommend that IODP-MI compile and maintain a "home page" web portal, as well as libraries and archives of common content E&O resources, and encourage the use of the IODP common materials for a wide range of education and outreach purposes.

Recommendation 3:**FACILITATE INTERNATIONAL PROGRAM ACTIVITIES**

We recommend that IODP-MI facilitate the development and implementation of international activities designed to engage and educate various target audiences, including scientists, students, policymakers and government and funding agencies, non-governmental organizations, and the general public, for the purpose of transmitting an understanding of the nature of IODP research and its societal importance.

Recommendation 4:**FACILITATE INTERNATIONAL MEDIA RELATIONS:**

We recommend that IODP-MI work closely with the IOs and national/consortia entities to develop a strategy for ongoing program-wide international media relations to ensure that IODP is publicized to a broad international audience.

Recommendation 5:**ADVANCE IODP EDUCATION BY ENGAGING AND EMPOWERING THE INTERNATIONAL COMMUNITY**

We recommend that IODP-MI facilitate the integration of widely dispersed IODP educational resources by advancing initiatives that encourage collaboration among national/consortia entities, IOs, PIs, or other educational partners with common purposes and assist groups of collaborators in finding additional external support for the highest quality educational endeavors. IODP-MI can ensure that the IODP education legacy will be available to future generations. Therefore, it is recommended that the E&O Advisory Committee investigate the issue of collaborative education projects thoroughly in order to provide guidance to IODP-MI on how to develop a strong mechanism, either within the current IODP structure or via a new procedure, to deal with the E&O initiatives that are developed by individuals or groups of PIs.

Recommendation 6:**FOSTER LANGUAGE AND CULTURAL AWARENESS**

We recommend that from its initial establishment, IODP-MI operating philosophy must respect the multi-language and multi-cultural science community as well as set the standard for positive interaction for the broader international community. As the small but centrally integrative organization that oversees and coordinates program activities and develops and maintains IODP common resources, IODP-MI's E&O efforts shall help to promote exchange among individuals who do not share the same culture, ethnicity, or language. Activities to support these efforts will include providing cultural awareness materials, facilitating exchange of scientific and E&O materials among partners, and coordinating acquisition of translation services to IODP members.

Recommendation 7:**DEVELOP AND PRODUCE BROADER SCIENTIFIC PUBLICATIONS**

We recommend that IODP-MI undertake the development and production of broader scientific publications such as thematic syntheses (e.g. *AGU Monographs*) and expedition-based scientific summaries (e.g., *JOIDES Journal*).

Recommendation 8:**LEADERSHIP AND ORGANIZATIONAL STRUCTURE**

We recommend that the first six major functions outlined in the workshop report be carried out under the direction of a new Director of the Office of International Education, Outreach, and Communications based at the IODP-MI office in Washington, DC, USA.

The individual responsible for IODP scientific publications in the IODP-MI office in Sapporo, Japan, should, more appropriately, handle the development and production of broader scientific information outlined in Recommendation 7.

Table 1 – MAJOR FUNCTIONS OF IODP-MI EDUCATION AND OUTREACH

| IODP-MI: MAJOR EDUCATION AND OUTREACH FUNCTIONS (INCLUDING PUBLIC RELATIONS/COMMUNICATIONS) | | | | | | |
|--|---|---|--|---|---|---|
| 1. COORDINATE AND PROMOTE INTEGRATED PLANNING, EXECUTION, AND EVALUATION | 2. CREATE PROGRAM IDENTITY AND MATERIALS | 3. COMPILE AND MAINTAIN COMMON CONTENT RESOURCES | 4. FACILITATE INTERNATIONAL PROGRAM ACTIVITIES | 5. ADVANCE EDUCATION BY ENGAGING THE INTERNATIONAL COMMUNITY | 6. FOSTER LANGUAGE AND CULTURAL AWARENESS | 7. DEVELOP AND PRODUCE BROADER SCIENTIFIC INFORMATION |
| E & O FY 04 (Apr 04) and FY 05-06 (Apr 04); 5-year and 10-year Plans (FY 05) | Logos (Print/Web) (Apr 04*) | Website Portal (Apr 04*) | International Media Relations (Jun 04*) | Collaboration of Educators and Scientists on Education Projects (FY 05) | Cultural Awareness and Exchange Resources (FY 05) | Thematic Science Synthesis Materials (e.g., AGU Monograph) (S) |
| E&O Task Force (Apr 04) and E&O Advisory Committee (Oct 04) | Letterhead/Press Release Templates (May 04*) | Experts List (riserless May 04*; Arctic Jul 04**;; other Dec 04***) | International Scientific Meeting/Event Booths (Dec 04****) | International Partnership Initiatives (FY 05) | Translation Resources (FY 05) | Expedition-based Scientific Summaries (e.g., JOIDES Journal) (S) |
| E&O Team (IO, National/Consortia, IODP-MI) (Apr 04) | PowerPoint™ Template (May 04*) | Master Program Information Exchange (Oct 04****) | International Science Lectures (FY 05) | International Funding Opportunities (FY 05) | | |
| E&O Guidelines and Policies (Apr 04) | Style Sheet/Graphics Manual (Aug 04**) | Glossary of Terminology/Acronyms (Oct 04****) | International Public Lectures (FY 05) | | | |
| | IODP Folder/Brochure and Template (Oct 04****) | News Clips Archive (FY 05) | Relationships with Science, Education, and Communications Professional Organizations (FY 05) | | | |
| | IODP Poster and Poster Template (Oct 04****) | Info about IODP Scientists (FY 05) | International Ship-board and Land-based E&O Experiences (FY 05) | | | |
| | Booth/Meeting Exhibit (Oct 04****) | Photo Archive (Apr 04) and Visual Library (FY 05) | International Funding Opportunities (FY 05) | | | |
| | Annual Report/Highlights and/or Thematic Info (FY 05) | | | | | |
| | Background Info/Briefs (FY 05) | | | | | |

*In time for first riserless vessel cruise in June.

**In time for Arctic Coring Expedition in August and end of first December. *Joides Resolution* expedition.

***In time for AGU Meeting in

****Establish framework at beginning of FY 05 to include Cruises, Education Activities, Outreach Activities, PR and Communication Activities, Educational Products and Information, Publications and Reports, IODP-Related Meetings, Other Relevant Scientific Meetings, Travel Schedules.

Note: All E&O functions to be directed from the IODP-MI office in Washington, DC except those indicated by an "S" to be directed from the IODP-MI office in Sapporo, Japan, to be implemented on a timeframe determined by the Publications function in Japan.

Table 2—FY 04 and FY 05-06 EDUCATION AND OUTREACH RESPONSIBILITIES AND TIMETABLE

| REMAINING FY 04 AND FY 05-06 IODP-MI EDUCATION AND OUTREACH FUNCTIONS (including Public Relations and Communications) | Responsibility | | | | | | | Timetable | | | | | | |
|---|--------------------------------|-------------------|----------------------|----------------|--------------------------------|------------------------|------------------------|--|------------|----------------|---------------------|-----------------------|------------------------|-----------------------------|
| | IODP E&O Workshop Participants | IODP-MI Office/US | IODP-MI Office/Japan | E&O Task Force | E&O Team and/or Individual IOs | E&O Advisory Committee | IODP Science Community | Subcontractor(s) or New In-House Staff | April 2004 | April-May 2004 | June-September 2004 | October-December 2004 | January-September 2005 | October 2005-September 2006 |
| 1. Coordinate and Promote Integrated Planning, Execution, and Evaluation | | | | | | | | | | | | | | |
| • E&O Remaining FY 04 Plan | ○ | ○ | ○ | ○ | ○ | | | ● | | | | | | |
| • E&O FY 05-06 Plan | | | | | | | | | | ● | | | | |
| • E&O 5- and 10-Year Plans | | | | | | ○ | | ▲ | | | ● | | | ● |
| • E&O Task Force | | | | | | | | ▲ | | ● | ● | | | |
| • E&O Advisory Committee | | | | | | | | ▲ | | | ● | ● | | |
| • E&O Team | | | | | | | | | | ● | ● | ● | ● | ● |
| • E&O Guidelines and Policies | | | | | | | | ▲ | | | ● | ● | ● | ● |
| 2. Create Program Identity and Materials | | | | | | | | | | | | | | |
| • Logo | | ○ | | | | | | ○ | | ● | ● | | | |
| • Letterhead and Powerpoint™ Templates | | ○ | | | | | | | | | | ● | | |
| • News Release Template | | ○ | | | | | | ○ | | | | ● | | |
| • Folder/Brochure Templates | | ○ | | | | | | ○ | | | | ● | | |
| • Style Sheet and Graphics Manual | | ○ | | | | | | ○ | | | ● | | | |
| • Booth/Display Poster and Poster Template | | ○ | | | | | | ○ | | | | ● | | |
| • IODP Booth and Meeting Exhibit | | ○ | ○ | | | | | ■ | | | | ● | ● | ● |
| • Annual Report/Highlights and/or Thematic Info | | ○ | ○ | | ○ | | | ■ | | | | ● | ● | ● |
| • Background Info/Briefs | | ○ | ○ | | ○ | | | ■ | | | | ● | ● | ● |
| 3. Compile and Maintain Common Content Resources | | | | | | | | | | | | | | |
| • Website Portal | | ○ | | | | | | ■ | | ● | ● | ● | + | + |
| • Experts List (JOIDES Resolution Expeditions) | | | | | ○ | | | ■ | | ● | | | + | |
| • Experts List (Arctic Coring Expedition) | | | | | ○ | | | ■ | | ● | | | + | |
| • Experts List (comprehensive) | | | | | ○ | | | ■ | | | ● | + | + | + |
| • Master Program Information Exchange | | ○ | | | ○ | | | ■ | | | ● | + | + | + |
| • Glossary of Terminology/Acronyms | | | | | ○ | | | ■ | | | ● | + | + | + |
| • News Clip Archive | | | | | ○ | | | ■ | | | ● | + | + | + |
| • Info about IODP Scientists | | ○ | | | ○ | | | ■ | | | ● | + | + | + |
| • Photo Archive | | ○ | | | ○ | | | ■ | | ● | ● | | + | + |
| • Visual Library | | ○ | | | ○ | | | ■ | | | ● | + | + | + |
| 4. Facilitate International Program Activities | | | | | | | | | | | | | | |
| • Media Relations in collaboration with JOI Alliance (US-Joides Resolution Initial Expeditions) | | ○ | | | ○ | | | ▶ | | ● | | | | |
| • Media Relations in collaboration with ESO (Europe-Arctic Coring Expedition) | | ○ | | | ○ | | | ▶ | | | ● | | | |
| • International Media Relations (AGU Public Announcement) | | ○ | ○ | | ○ | | | ▶ | | | | ● | | |
| • Media Relations in collaboration with JOI Alliance (US-Joides Resolution 2005 Expeditions) | | ○ | | | ○ | | | ▶ | | | | | | + |
| • Media Relations in collaboration with CDEX (Japan-Chikyū Open House) | | ○ | ○ | | ○ | | | ▶ | | | | | | + |
| • Media Relations in collaboration with ESO (Europe-Tahiti Expedition) | | ○ | | | ○ | | | ▶ | | | | | | + |
| • International Media Relations (2005 Activities, Operations, and Scientific Results) | | ○ | ○ | | ○ | | | ▶ | | | | | | + |
| • International Media Relations (2006 Activities, Operations, and Scientific Results) | | ○ | ○ | | ○ | | | ▶ | | | | | | + |
| • International Scientific Meeting/Events Booths | | ○ | ○ | | ○ | ○ | ○ | | | | | ● | + | + |
| • International Science Lecture Series | | ○ | ○ | | ○ | ○ | ○ | | | | | ● | + | + |
| • International Public Lecture Series | | ○ | ○ | | ○ | ○ | ○ | | | | | ● | + | + |
| • Relationships with Science, Education, and Communications Professional Organizations | | ○ | ○ | | ○ | ○ | ○ | | | | | ● | + | + |
| • International Ship-board and Land-based E&O Experiences | | ○ | ○ | | ○ | ○ | | | | | | ● | + | + |
| • International Funding Opportunities | | ○ | ○ | | ○ | ○ | | | | | | ● | + | + |
| 5. Advance Education by Engaging the International Community | | | | | | | | | | | | | | |
| • Collaboration of Educators and Scientists on Education Projects | | ○ | ○ | | ○ | ○ | | | | | | ● | + | + |
| • International Partnership Initiatives | | ○ | ○ | | ○ | ○ | | | | | | ● | + | + |
| • International Funding Opportunities | | ○ | ○ | | ○ | ○ | | | | | | ● | + | + |
| 6. Foster Language and Cultural Awareness | | | | | | | | | | | | | | |
| • Translation Resources | | ○ | ○ | | ○ | ○ | | | | | | ● | + | + |
| • Cultural Awareness and Exchange Resources | | ○ | ○ | | ○ | ○ | | | | | | ● | + | + |
| 7. Develop and Produce Broader Scientific Information | | | | | | | | | | | | | | |
| • Thematic Science Synthesis Materials | | | ○ | | ○ | ○ | | | | | | ● | + | + |
| • Expedition-based Scientific Summaries | | | ○ | | ○ | ○ | | | | | | ● | + | + |

Should these initial services be subcontracted, it may be efficient for a rep to serve as an ex officio member of the Task Force and Advisory Committee
 Timing and required expertise may suggest need for subcontractor for initial activities
 Once set-up and/or designed by subcontractor, may be maintained or carried out by Inhouse (IODP-MI) staff or by subcontract
 International media relations may be carried out with professional assistance of a subcontractor
 Continuing effort
 Continued information gathering and updating required

INTRODUCTION

IODP Management International Inc. (IODP-MI) is a small but centrally integrative organization that oversees and coordinates program activities and develops and maintains IODP common resources. This includes E&O cooperation among the three major international players—Japan, the United States, and the European consortium—in a manner that maximizes exchange among the participating countries with their various cultural backgrounds and languages. IODP-MI must consider and respect a multi-language and multi-cultural science community, represented by the three platform operators referred to as the Implementing Organizations (IOs)—JOI Alliance, ESO, and CDEX—and the national/consortia entities—USSAC, J-DESC and ESSAC). See Attachment 2 for List of Acronyms.

In defining the initial operating plan for IODP-MI's E&O efforts, the workshop participants acknowledged relevant Program Evaluation Committee report recommendations, incorporated the need for cultural awareness considerations, and summarized the different perspectives of the IODP partners that were presented at the workshop.

CHARGE AND WORKSHOP GOALS

IODP-MI charged participants (see Attachment 3 for Workshop Agenda) of the February 20-24, 2004 IODP E&O Workshop in Austin, Texas, with identifying the major functions that IODP-MI must undertake in carrying out its E&O responsibilities (see IODP-MI Major Functions, Table 1).

To carry out our charge, the workshop steering committee established four goals for the workshop:

- 1) Define education, outreach, educational outreach, and public relations in the context of IODP-MI. (The participants were asked to treat education and outreach as two distinct activities in accordance with a recommendation of the sixth Ocean Drilling Program Performance and Evaluation Committee—PEC VI).
- 2) Identify the program-wide, common IODP E&O components, which are distinct from national/consortia or IO activities. These common components may include, but are not limited to, resources, products, and activities related to IODP E&O.
- 3) Define those E&O functions that should be performed by IODP-MI.
- 4) Identify or propose specific E&O activities and products, a management structure, staffing needs, a timetable, and budget for carrying out IODP-MI's E&O responsibilities using Science Operational Costs (SOCs).

PEC REPORT

The following PEC VI Recommendation 16: Education, public relations and outreach was addressed by the workshop participants:

IODP management should establish significantly more effective and sophisticated approaches to education and outreach. These endeavors, although traditionally linked to each other, have different goals and should be decoupled. Each requires substantive resources and its own strategic implementation plan. In addition, although education and outreach activities are being planned independently in the member countries, they should follow an overarching IODP strategic implementation plan.

The E&O workshop steering committee and participants discussed these issues at length, and our report reflects these recommendations. The statement—“These endeavors (education and outreach), although traditionally linked to each other, have different goals and should be decoupled”—required particular attention and clarification.

OPERATIONAL DEFINITION OF EDUCATION AND OUTREACH FOR IODP

To facilitate discussion and planning, workshop participants developed operational definitions of education and outreach and applied them to the description of IODP-MI's tasks and responsibilities outlined in this document. Education refers to all content-based activities or products related to IODP science or technology designed for “educational” audiences. Outreach encompasses all activities or products that identify, describe, or promote the international IODP. Public relations and communications activities are included in the definition of outreach. We have interpreted the decoupling of education and outreach to reflect the general approach with which each is administered—outreach with primarily a “top down” approach, and education with a “bottom-up” (IO, principal investigator, or collaborator/partnership-driven) approach.

The audience for IODP education and outreach constitutes those associated with IODP and a range of audiences external to the program. The IODP entities, nations/consortia involved in IODP, and communities associated with the program including governmental funding agencies (such as NSF, MEXT, and EMA on behalf of European ministries and councils), IODP-MI, IOs, the SAS, national programs, such as the US Science Advisory Committee (USSAC), the Japanese Drilling Earth Science Consortium (JDESC), and the ECORD Science Support Advisory Committee (ESSAC), and the scientific community closely associated with scientific ocean drilling, such as members of SAS, drilling proposal propo-

nents, DSDP and ODP scientific party members, and users of DSDP and ODP data and samples.

External audiences or constituencies include: the international scientific community and academia beyond those directly involved in scientific ocean drilling, politicians, the media, scientific organizations, non-governmental organizations, educational communities (e.g., teachers and K-20 students), and the general public (taxpayers).

According to our operational definitions of education and outreach, the broad-based IODP activities and products that we have identified lend themselves to integration or coordination in a straightforward manner by IODP-MI. IODP outreach activities and common resources that benefit the international IODP community will be produced and delivered by the IODP-MI, with content input from the IOs and the national/consortia entities. In contrast, IODP educational projects and materials will be produced principally at the national or local level for delivery to very specific target audiences, primarily schools or universities. Thus, the bulk of IODP education will be carried out in a distributed fashion by the IOs, partner countries, consortia, and other collaborators (i.e., individual or groups of principal investigators, professional educational organizations, and professional Earth and ocean science societies with education mandates) in order to meet the specific needs (language, culture, educational standards and pedagogical approaches) of an IODP partner country or a region.

Education and outreach are equally important activities in IODP. Education most directly serves the IODP scientific (university) community and the schools that will produce future IODP scientists. Outreach is primarily directed at the non-IODP community, providing common content resources to support the IODP community and their E&O endeavors.

CULTURAL ASPECTS

Understanding cultural differences is a key element for the success of any international program. Differences may include social customs, psychological background, communication style and language. These types of issues were not formally addressed in ODP. As we interact with each other in the course of conducting IODP business, science, and E&O, it is important to respect these differences and to be receptive to feedback from the community. As the small but centrally integrative organization that oversees and coordinates program activities and develops and maintains IODP common resources, IODP-MI must respect the multi-language and multi-cultural science community as well as set the standard for positive interaction for the broader international community.

The IODP Science Steering and Evaluation Panels (SSEPs) provided an excellent example of cultural sensitivity during their November 2003 meeting by scheduling a special session on cross-cultural communication led by an expert cultural facilitator. We followed their example and included a short presentation on cross-cultural communication in our E&O workshop agenda.

PERSPECTIVES ON EDUCATION AND OUTREACH FROM THE IODP PARTNERS

Each of the national/consortia entities and IOs presented a summary of their E&O outreach program activities and plans. The U.S., Japanese, and European E&O programs and activities are developing from different cultural/language perspectives, operational considerations, and levels of experience.

The U.S. program has the advantage of continuity. USSAC and the JOI Alliance have detailed experience with the E&O program developed for ODP, and much of the infrastructure for the continuation of their E&O activities is already in place. New efforts will build upon ODP successes. Staff time and effort are being invested in new programs, new content, a new web site, and materials will be developed for audiences that were never a priority to reach during ODP. Since the JOIDES *Resolution* will be the U.S. drilling platform at the initiation of IODP activities, a great deal of E&O content about the platform is available for immediate use. All of the previously developed E&O products were produced in English, the official language of IODP.

The Japanese E&O program planning has been exhaustively developed in concert with the construction of the riser drilling platform *Chikyu*. E&O material about both the *Chikyu* and IODP science in both English and Japanese are available on Japanese websites for CDEX, JAMSTEC and J-DESC. Many public outreach and school educational activities in Japan are already underway.

The European E&O efforts are more complicated than the U.S. and Japanese programs due to the diversity of languages and cultures in the consortia countries, changing drilling platforms, and a limited budget for these efforts. Many European countries have well developed geoscience E&O programs which can easily be used to transmit IODP material once it is developed. European workshops on IODP E&O and teacher training can schedule these activities in advance of the initiation of drilling operations for IODP.

MAJOR EDUCATION AND OUTREACH FUNCTIONS (INCLUDING PUBLIC RELATIONS AND COMMUNICATIONS) FOR IODP-MI

Note: Dates in parentheses following specific activities indicate timeframe during which activity must be initiated.

1. COORDINATE AND PROMOTE INTEGRATED PLANNING, EXECUTION, AND EVALUATION

IODP-MI must promote and coordinate integrated program planning, execution, and evaluation efforts. These activities are intended to ensure successful international E&O program plan development and execution in support of leading a collaborative E&O effort for IODP.

A. E&O Plans—FY 04 (Apr 04); FY 05-06 (Apr-May 04); 5-Year and 10-Year Plans (FY 05)

IODP-MI E&O plans and timetables will address interim FY 04, FY 05 and 06 and 5- and 10- year needs. The Interim Plan (covering the period April 1 through September 30, 2004) is addressed directly in this document and is the result of a consensus on immediate action items generated by the participants involved in the IODP E&O Workshop held in Austin, Texas from February 20-24, 2004.

B. E&O Task Force (Apr 04) and E&O Advisory Committee (Oct 04)

To address initiating IODP-MI's E&O functions in a timely fashion, we recommend that IODP-MI immediately form a small, short-term E&O Task Force to advise IODP-MI about the interim E&O priorities (April-September 2004) identified in this report and establish a framework for a longer-term E&O Advisory Committee to IODP-MI to be appointed in October 2004 (see Proposed Management Structure, page 11). This E&O Task Force will develop the FY 05 and FY 06 IODP-MI E&O Plans in collaboration with the E&O Team (see 1C below). The 5- and 10-year E&O plans for IODP-MI will be developed by IODP-MI in collaboration with the E&O Advisory Committee. These plans will establish goals and benchmarks for IODP-MI E&O program progress and success and evaluation by the E&O Advisory Committee.

C. E&O Team (IO, National/Consortia, IODP-MI) (Apr 04)

IODP-MI shall establish a team of education, outreach, and communications representatives from the IOs and the national consortia (representing JOI Alliance/USSAC, ESO/ESSAC, and CDEX/J-DESC) as an informal, opera-

tional implementation group. The team will act as liaisons between the different programs and IODP-MI, coordinating strategies and sharing resources. IODP-MI will facilitate the ongoing communication between E&O Team members and respond to their feedback, ideas, and concerns.

D. E&O Guidelines and Policies (Apr 04)

We recommend that IODP-MI, initially in collaboration with the E&O Task Force and subsequently with the E&O Advisory Committee, establish written guidelines and policies that include descriptions of procedures and protocols for E&O to be used by IODP science, education, and outreach personnel when communicating with outside groups (e.g. media, government and private funding organizations, professional organizations, etc.). The guidelines should include appropriate terminology and common content language to be used in such communications as well as sample language highlighting the international integrative aspects of IODP. These policies shall also outline mechanisms for ensuring that IODP-MI is aware of, and where appropriate, directly involved in the approaches to be made to the outside group. Procedures for documenting and reporting these approaches should also be developed.

2. CREATE PROGRAM IDENTITY AND MATERIALS

An IODP identity is necessary for the recognition of the IODP by international and national audiences with different language and cultural backgrounds. A logo, letterhead, and a consistent presentation of written messages and materials will convey an overarching IODP program identity and integrate the programs many different components. International use of common IODP identity materials by the IODP community will raise the profile of the program and promote the key program concept of integration.

A. Logos (Print/Web) (Apr 04)

Logos are intended as an immediate visual identifier. To ensure consistency of program identity and logo use in a large-scale effort such as IODP, IODP-MI will be responsible for producing an IODP logo that will look virtually the same, regardless of use or medium. The suite of IODP logo-related elements will include:

- Precise specifications for the use of the IODP logo in print documents.
- High-resolution black and white and color specifications, utilizing international color specification conventions.
- Typefaces, styles, and size ranges, including an explanation of the relationship between the logo and companion type.
- Examples of non-English type standards, including foreign (non-Roman) typefaces (e.g., hiragana/katakana).

•Acceptable/unacceptable variations of logo and typeface. The IODP logo used in print format versions of the identity elements must be converted to internationally acceptable web formats. Web-based identity elements that may be easily shared throughout the IODP network will include banner heads, web page templates, web color specifications, and other miscellaneous graphic elements (e.g. backgrounds).

All logos must be made available in easily downloadable, electronic file formats compatible with various computer platforms (PC and Mac), both foreign and domestic, to those individuals and entities entitled to their use.

B. Letterhead/Press Release Templates (May 04)

The IODP logos and standard typefaces will be incorporated into letterhead and press release templates for use throughout the IODP community. Both templates will be constructed to accommodate standard U.S. and international paper sizes and may be tailored by each partner for their particular need or use.

C. PowerPoint™ Template (May 04)

Most IODP researchers and associated personnel use PowerPoint™ presentations as a primary means of communicating information and results to a variety of audiences. To ensure the consistency of the IODP "identity," IODP-MI must provide an easily downloadable PowerPoint™ template into which presentation materials may be placed. As with the web-based graphic identity elements, IODP-MI will specify suggested PowerPoint™ logos, banner heads, page templates, colors, and other miscellaneous graphic elements such as backgrounds.

D. IODP Folder/Brochure and Template (Oct 04)

A descriptive folder for IODP will be designed to serve two functions: (1) to provide a quick written and visual overview of IODP's international scope, and (2) to serve as an attractive folder for holding additional information about a particular IODP project or activity, depending upon the individual needs of the IODP community for communication to their particular targeted audiences. A standard IODP brochure will also be produced. Printed versions of these folders and brochures will be in English for distribution by IODP-MI to the IOs and national/consortia as needed, but shall also be made available in a standard desktop publishing format compatible with both U.S. and international paper sizes. IODP-MI will also produce a complementary desktop publishing template for an IODP brochure. Both the folder and the brochure templates may be edited, translated, printed, and utilized by the IOs and national/consortia entities at their discretion.

E. Style Sheet/Graphics Manual (Oct 04)

IODP-MI shall produce a straightforward and simple down-

loadable manual that explains the graphic identity standards. In addition, IODP-MI will produce an approved style sheet incorporating standard uses of IODP terms and spellings for use by IODP community. Individual IOs may translate and distribute these documents as needed.

F. IODP Poster and Poster Template (Oct 04)

IODP-MI shall design an electronic poster to reflect the science themes and international scope of IODP for use by the IODP community for producing IODP displays and booth materials. A recommended poster template will also be developed for use by members of the IODP community to present their scientific results and project information in a cohesive format.

G. Booth/Meeting Exhibit (Oct 04)

IODP-MI shall be responsible for the design and acquisition of an IODP display suitable for use in scientific and education meeting booths and at special events. Uniform display units (physical structures upon which graphic panels are placed) will be provided to each IO and IODP-MI (four units in all) so that only the graphics produced by IODP-MI and used on the panels must be updated and shipped to meeting and event venues.

H. Annual Report/Highlights and/or Thematic Info (FY 05)

IODP-MI shall produce annual reports/highlights and/or thematic information materials suitable for broad audiences to promote recent scientific achievements from all platforms.

I. Background Info/Briefs (FY 05)

General information about the IODP platforms, operations, scientific goals, organization, and activities must be provided by IODP-MI as background briefs/highlights to be made available electronically and in printed form as necessary.

3. COMPILE AND MAINTAIN COMMON CONTENT RESOURCES

To encourage the use of IODP relevant material for a wide range of education and outreach purposes, IODP-MI must compile and maintain a "home page" web portal which provides direct access to libraries and archives of common content resources and IODP activities in addition to other program-wide links.

A. Website Portal (Apr 04)

A single portal website (www.iodp.org) shall be immediately updated and revamped to serve as the primary entry point for general IODP descriptions and information. It must include easy access to international education, outreach, and com-

munications information as well as digital libraries and archives of use to the IODP community and target audiences. The "single page" entry portal should be constructed to facilitate easy access directly to the websites of the IOs and national/consortia entities as well as IODP's distributed science, administration, and scientific database and information websites. It will include an "IODP Media Resources" section, including an area for background information and breaking or embargoed news.

The portal should also include a gated "IODP Info" section for access by the IOs and national/consortia entities, where graphic identity elements, templates, and other informational materials can be accessed and easily downloaded.

B. Experts List (Riserless May 04; Arctic Jul 04; others Dec 04)

Working with the IOs, IODP-MI must compile an initial experts lists associated with the riserless expeditions beginning in June 2004 and the Arctic Coring Expedition (ACEX) in August 2004 to complement expedition-specific media relations. Prior to the AGU meeting in December 2004, a more comprehensive international IODP experts list, categorized by geographical regions visited by the drillships, thematic areas being studied by IODP researchers around the globe, and home country and spoken language(s) of experts must be developed. The list will be posted on the Media Resources section of the IODP Portal website. It will also be made available as a downloadable list for use by the international media as well as members of the IODP community.

C. Master Program Information Exchange (Oct 04)

To better plan for a range of E&O activities (both at the IODP-MI level and the IO and national/consortia levels), and keep all groups up-to-date on all E&O activities, IODP-MI must compile and maintain a simple, sortable master information exchange spreadsheet beginning in FY 05. Components of the spreadsheet will include cruise schedules; E&O activities conducted by IODP-MI, IOs, national/consortia entities, and collaborators; E&O products and data packages produced throughout the IODP community; public relations and communications activities; relevant publications and reports; IODP-related meetings; other relevant scientific, technical, and education meetings; and international travel schedules of potential IODP lecturers or spokespersons.

D. Glossary of Terminology/Acronyms (Oct 04)

A master glossary of IODP terminology and acronyms must be compiled from existing listings and updated as necessary. The glossary will be linked to directly from the IODP entry portal.

E. News Clips Archive (FY 05)

A comprehensive archive of IODP-related news stories, magazine articles, and television and radio broadcasts must be maintained by IODP-MI in a simple sortable spreadsheet format linked to associated PDF files of the actual clips. Due to copyright issues associated with the PDF documents, the actual PDFs will remain in an archive for informational purposes not accessible to the public.

F. Photo Archive (Apr 04) and Visual Library (FY 05)

To support the riserless and Arctic drilling operations scheduled to begin in June and August 2004 respectively, the IOs must begin to immediately develop an appropriate photo archive from existing photos. Once new operations begin, a broader visual library, containing photos, images, videos, animations, graphics, and simple visualization tools that can be used by educators, communicators, and the media should be developed and maintained under the direction of IODP-MI beginning in FY 05.

G. Info about IODP Scientists (FY 05)

To place a more human face on IODP, IODP-MI shall prepare biographical profiles on selected international IODP scientists to be made available to media as well as others in the education community wishing to highlight IODP scientists as role models.

4. FACILITATE INTERNATIONAL PROGRAM ACTIVITIES

IODP-MI must facilitate the development and implementation of international activities designed to engage and educate target audiences, including scientists, students, policymakers and government, funding agencies, taxpayers, and the general public, for the purpose of gaining an understanding of the nature of IODP research and its societal value.

A. International Media Relations (Jun 04)

IODP-MI must work closely with the IOs and national/consortia entities to develop a strategy for program-wide international media relations to ensure that IODP is publicized internationally to the broadest audiences possible. This two-phase strategy must be carefully orchestrated and implemented:

Phase 1—Immediate Needs (using funds secured during FY 04 and FY 05 funds):

- a. To coincide with three riserless vessel expeditions between June and December 04 and the US IO announcement of its first JOIDES *Resolution* expeditions.
- b. To coincide with the Arctic expedition in August 04 and the European IO announcement of its first mission-specific platform expedition.

c. To coincide with the AGU meeting in San Francisco, CA in December 04 and the international public announcement of IODP. This announcement should include initial results from the first US and European expeditions as well as IODP's 10-year global scientific mission and research themes.

Phase 2—Longer-term Strategy (using FY 05-06 funds)

To be conducted in support of other activities in FY 05 and beyond including additional riserless vessel expeditions, a possible mission-specific expedition to Tahiti, and a major open house on the *Chikyu* in May 05.

B. International Scientific and Education Meeting/Event Booths (Dec 04)

Using the ODP–International Working Group (IWG) Support Office model, IODP-MI must be responsible for communicating appropriate IODP messages through organizing booths for conferences, preparing displays and informational materials, and arranging for staffing of booths at relevant meetings or events. The first use of the new IODP display will be at the AGU meeting in December 04 in San Francisco, California USA.

C. International Science Lectures (FY 05)

Using the ODP USSSP national model (Distinguished Lecture Series), IODP-MI and the E&O Team shall facilitate the availability of speakers who are already traveling to various institutions on IODP funds, scheduling, and promotional materials to support international science lectures aimed at expanding the reach and impact of IODP as well as enhancing the knowledge and understanding of IODP by scientists and higher education students already involved in the program.

D. International Public Lectures (FY 05)

IODP-MI and the E&O Team shall facilitate availability of speakers who are already traveling on IODP funds, scheduling, and promotional materials to support international public lectures aimed at providing an overview of IODP's scientific achievements in venues such as professional conferences for educators or journalists, science museums/aquaria, etc.

E. Relationships with Science, Education, and Communications Professional Organizations (FY 05)

IODP-MI shall proactively cultivate relationships with international organizations that will be vehicles and opportunities for broader dissemination of IODP information and results beyond the IODP scientific community.

F. International Ship-board and Land-based E&O Experiences (FY 05)

IODP-MI should facilitate international collaboration among the IOs to provide intern-type opportunities for undergraduate

students, teachers, or journalists to engage in shipboard or land-based educational experiences. The goal is for participants to gain an understanding of IODP research and technologies to encourage further academic or journalistic pursuits related to the science of the program.

G. International Funding Opportunities (FY 05)

IODP-MI must facilitate and actively assist in the establishment of partnerships to enhance IODP international programs, advocating on the part of the program for the purpose of leveraging outside funding sources.

5. ADVANCE IODP EDUCATION BY ENGAGING AND EMPOWERING THE INTERNATIONAL COMMUNITY

IODP education will be carried out in a distributed fashion by the IOs, national/consortia entities, and other collaborators to meet the specific needs of an IODP partner country or a region. For this reason, it is imperative that IODP-MI facilitate the integration of widely dispersed IODP educational resources by advancing initiatives that encourage collaboration among IOs, national/consortia entities, PIs, or other educational partners with common purposes and help groups of collaborators find additional external support for the highest quality educational endeavors. IODP-MI can must work to ensure that the IODP education legacy will be available to future generations. Therefore, it is recommended that the E&O Advisory Committee investigate the issue of collaborative education projects thoroughly with the goal of developing a strong mechanism, either within the current IODP structure or via a new procedure, to deal with these E&O initiatives that are developed by individuals or groups of PIs.

A. Collaboration of Educators and Scientists on Education Projects (FY 05)

Most IODP scientists will be focused on research, using data provided by the expeditions, and may have little expertise, and insufficient time to construct value-added materials useful for educational purposes. Collaborators who are capable of bridging the gap between scientists and educators can help distill IODP science into valuable and needed resources. They can work with scientists to recast scientific questions into forms with broader applicability and relevance and to create high quality educational products. At the same time, they can assist the education community in using these educational products effectively, and, encourage and facilitate educational and learning communities to become connected to the IODP. To achieve this objective, IODP-MI must work closely with the IOs, national/consortia entities and their primary funding agencies—NSF, MEXT, and EMA—to develop incentives to encourage collaboration between scientists and educators.

B. International Partnership Initiatives (FY 05)

Distributed education initiatives include those conducted by the IOs, national/consortia entities, and other collaborators including individuals or groups of scientists and educators, and organizations. IODP-MI shall develop incentives that promote collaboration among these entities. In addition, IODP-MI must facilitate and actively assist in establishing partnerships with existing outreach and science education programs and geoscience initiatives with overlapping science and education goals (examples include, but are not limited to, InterRidge, EGU, and AGU) to enhance the IODP's international E&O programs. Partnerships will allow IODP to use existing resources, networks, and expertise to build dynamic and long-term education programs that will serve as an important legacy of the program.

C. International Funding Opportunities (FY 05)

We anticipate that the majority of the funding for the distributed education efforts will be secured primarily through PI-driven proposals submitted directly to appropriate funding agencies in partner countries rather than channeled through the IODP-MI. We urge IODP-MI to provide encouragement to groups of proponents who, in partnership with the IOs or national/consortia entities, capitalize on opportunities for funding external to IODP-MI for support of education or outreach projects that utilize IODP science, technology and data. Furthermore, we recommend that IODP-MI advocate on the part of the program for the purpose of leveraging outside funding sources to obtain matching funds for the types of collaborative education and outreach projects that fulfill the international, integrative nature of the IODP.

6. Foster Language and Cultural Awareness

IODP-MI E&O efforts shall help to promote exchange among individuals involved in the program who do not share the same culture, ethnicity, or language. Activities to support these efforts will include providing cultural awareness materials, facilitating exchange of scientific and E&O materials among partners, and coordinating acquisition of translation services to IODP members.

A. Cultural Awareness and Exchange Resources (FY 05)

IODP-MI must ensure sensitivity to other cultures and appropriate business etiquette. It should collect and distribute appropriate materials and identify individuals within the IODP community who can assist with illustrating cultural distinctions and improving understanding among cultures.

B. Translation Resources (FY 05)

IODP-MI shall serve as a resource for sharing of information about the availability of translation services and resources that may be required by the IODP community at all levels. To support this effort, IODP-MI will develop and maintain an internal database of IODP members with the ability to translate IODP materials into different languages.

7. DEVELOP AND PRODUCE BROADER SCIENTIFIC PUBLICATIONS

While the E&O Workshop participants defined functions 1-6 above as specific outreach tasks to be carried out under the direction of a new Director of the Office of International Education, Outreach, and Communications and staff based at the IODP-MI offices in Washington, DC, USA, we felt that the development and production of broader scientific information, such as thematic syntheses and expedition-based scientific summaries, would be better handled by the individual responsible for IODP scientific publications in the Sapporo, Japan, IODP-MI office. The responsibilities of these IODP-MI individuals are described in detail in the next section (Proposed Management Structure).

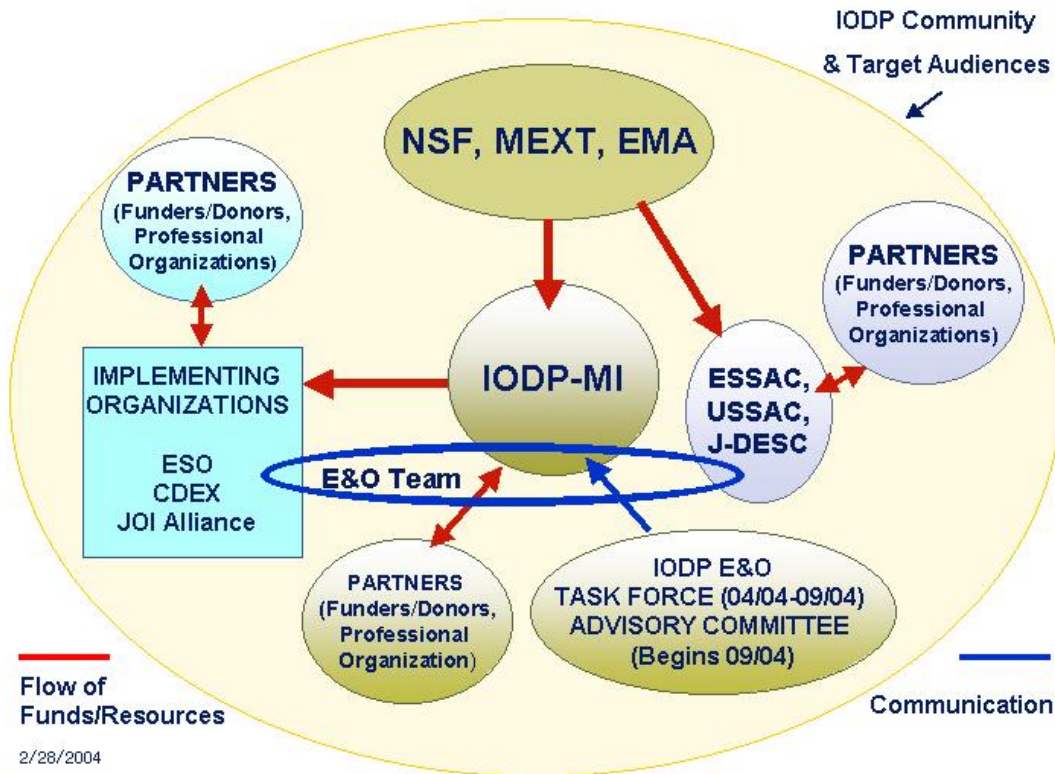
A. Thematic Science Synthesis Materials

IODP-MI shall develop a format and mechanism for producing thematic scientific publications (on par with AGU Monographs or J Soc London Special Publications) for broad dissemination. This is envisioned as an integrative product designed to serve the entire program.

B. Expedition-based Scientific Summaries

IODP-MI shall develop a format and mechanism for producing a JOIDES-type publication for broad dissemination among the scientific community.

Figure 1 –IODP E&O COMMUNICATION AND FLOW OF FUNDS/RESOURCES



PROPOSED MANAGEMENT STRUCTURE

E&O TEAM

Figure 1 is a representation of E&O-related communication and flow of funds/resources within the IODP program.

DIRECTOR OF THE OFFICE OF INTERNATIONAL EDUCATION, OUTREACH, AND COMMUNICATIONS

There was a consensus among the E&O Workshop participants that IODP-MI hire a full-time E&O administrator with the title "Director, Office of International Education, Outreach, and Communications" based at the IODP-MI office in Washington, DC, USA, who will oversee implementation of the IODP-E&O plans. He or she will report to the President of IODP-MI. Responsibilities include oversight of IODP-MI E&O staff and subcontractors with individuals or entities responsible for the seven major functions outlined in Table 1.

DIRECTOR OF PUBLICATIONS

The Director of Publications will be based in the Sapporo, Japan IODP-MI office. He or she will report to the Vice President for Science and be responsible for IODP scientific publications. With guidance from Director of the Office of International Education, Outreach, and Communications, they would also oversee the development and production of broader scientific information such as thematic syntheses and expedition-based scientific summaries.

We envision an E&O Team that functions as an operational, implementing group comprised of the IODP-MI Director of the Office of International Education, Outreach, and Communications, the Director of Publications, and a representative from each of the three Implementing Organizations (JOI Alliance, CDEX, ESO) and the three National/Consortia (J-DESC, USSSP/USSAC, ESSAC). The E&O team must maintain ongoing communication, share resources as appropriate, and coordinate strategies to ensure that IODP education and outreach are delivered/conducted/implemented in a coherent fashion to achieve an integrated IODP-MI E&O program. IODP-MI should facilitate the communication between team members and respond to their recommendations and concerns.

We have modeled the E&O Team after the JOI Alliance JREPORT group which functions in this way at the U.S. IO level. Members of the E&O Team shall maintain liaison relationships with geosciences initiatives and professional organizations with similar goals (active in areas of importance to IODP education and outreach) as appropriate. Examples include professional Earth and ocean science organizations, educational organizations, radio and television organizations, museums and aquaria, and digital libraries.

E&O TASK FORCE

We recommend that the IODP-MI President establish a small short-term E&O Task Force to advise IODP-MI about the immediate E&O priorities and to establish the framework for longer-term E&O Advisory Committee to IODP-MI. This Task Force shall comprise six to nine members selected by the President of IODP-MI. We recommend that the Task Force be comprised of a subset of participants from the IODP Education and Outreach Workshop held in Austin, Texas, with the expectation that it will be able to gear up quickly through email exchange and telephone conferences. Task Force members should be comprised of professionals in education, communications, and public relations as well as representatives of the scientific community. Working closely with the E&O Team, it will also assist the IODP-MI, and any new staff or subcontractors, with the significant amount of work that needs to begin immediately.

E&O ADVISORY COMMITTEE

The Task Force shall evolve into an E&O Advisory Committee by the start of FY 05 that will work with the IODP-MI to provide advice and guidance on priorities, identify and develop funding and partnership opportunities for international E&O endeavors. In addition, the Advisory Committee will assist IODP-MI in developing suitable policies, guidelines and protocols for conducting these activities. The membership of the Advisory Committee shall embody expertise in E&O program evaluation, cultural awareness, public relations, IODP science, communications, fundraising, and education/pedagogy. We recommend eight to ten members, with an additional three ex-officio members representing each of the three IOs.

This Advisory Committee shall also serve as a consultative body to encourage cooperation and collaboration between individuals or groups of PIs wishing to create and disseminate new education and outreach content resources and IODP scientists conducting the science around which the content will be based. This will be especially important in order to engage the broad and dispersed international education community. The Advisory Committee will welcome ongoing dialogue regarding new ideas for educational initiatives for producing integrated IODP educational activities from the broad community. Where appropriate, the Advisory Committee and IODP-MI will actively work together toward identifying avenues for support.

PERSONNEL AND BUDGETARY CONSIDERATIONS

The Director of the International Office of Education, Outreach, and Communications shall report directly to the President of IODP-MI and be based at the IODP-MI office in Washington, DC. This individual must be an excellent project manager, capable of grasping the international breadth and scope of a project like IODP. The Director should have outstanding communication and personnel skills, be a motivator of people, and have a well-grounded understanding of education and outreach as well as public relations and communications strategies. The Director should bring a track record of managing complex outreach programs and securing financial support for outreach and education initiatives. In addition, the preferred candidate should also have a science background.

The Director will be responsible for overseeing the implementation of all international aspects of the IODP-MI E&O effort. Duties will include recruiting and directly supervising office staff as needs dictate. In addition, the Director will issue and administer subcontracts for E&O services that are best handled on a contractual basis, especially during the start-up phase. The Director will coordinate the communication between the E&O Task Force and IODP-MI and organize the participation and input of the E&O Task Force that will evolve into an E&O Advisory Committee.

The initial IODP-MI staffing plan shall include the hiring of the Director (one FTE) and an Administrative Assistant (one FTE). Depending on the degree of activity that is subcontracted and the timing of those subcontracts, additional staff, including an Information Manager (one FTE) and a Program Associate (one FTE), may eventually be brought onboard in the Washington, DC office. The Program Associate, Administrative Assistant, and Information Manager could be employees shared with the IODP-MI President and/or Vice President of Operations. Should it be determined that all expertise required for Functions 1-6 as outlined report be covered in-house in the Washington office, a graphic designer, web specialist(s), science content specialist(s), and professional public relations specialists would also be required. A Science Writer (one FTE), hired either as an employee or a subcontractor, will also be required to support the Director of Publications in the Sapporo, Japan office, overseeing production of the thematic syntheses or expedition-based summaries as recommended under Function 7 of this report. An Administrative Assistant may also be required to assist with this effort.

To provide IODP-MI with the program identity and content resources important for the initial IODP-MI E&O activities and develop and deliver them in a timely manner, consideration should be given to hiring a subcontractor immediately to handle the tasks outlined in Functions 1 through 4 on Table 1. This action would complement the hiring of the Director and Administrative Assistant in the Washington, DC office. Key elements of such a subcontract for the period April 1 through December 31, 2004 would include:

- Effective and frequent communication with the IODP President and/or Director, Office of International Education, Outreach, and Communications, the IODP E&O Task Force, and the IODP E&O Team.
- Design of an IODP logo and associated print, web, and PowerPoint™ templates.
- Acquisition of images and graphics to support production of common resources.
- Design of an IODP folder and brochure.
- Design and printing of initial run of IODP-MI letterhead and business cards.
- Design and printing of initial run of an IODP folder and brochure.
- Design, development, and launching of a "Single Web Portal Entry" for IODP.
- Design of an IODP poster and display materials to fit a standard "booth" setup.
- Purchase of four standard display units to be delivered to each IO and IODP-MI.
- Fabrication of two sets of IODP display materials for standard display units.
- Development and implementation of an initial international media relations strategy (in close collaboration with the E&O Team) to capitalize on the first three JOIDES *Resolution* expeditions and the Arctic Coring Expedition plus the public announcement of the international IODP (in conjunction with either the Arctic expedition or the December 2004 AGU meeting in San Francisco).
- Design of information systems for managing a compilation of experts lists, photo archives, glossaries and other materials to support a successful international media relations campaign and serve as an ongoing resource for the IODP-MI management and IODP E&O Team.

To successfully carry out the above tasks, the IODP-MI office will have to engage the expertise of inhouse or subcontracted education and outreach professionals to support the elements included in this endeavor. These include administrative and fiscal management, science content development, graphic design, web development, international public relations, and networking and information systems. The estimated cost of these tasks would be in the range of \$400,000-\$450,000 including overhead (for completion of primary tasks prior to the AGU meeting in early December 2004).

Specific anticipated expenses through December 2004 that are not covered in the elements outlined above include, but may not be limited to, the following:

- Recruitment costs for hiring the Director, Office of International Education, Outreach, and Communications and Administrative Assistant.
- Director and Administrative Assistant salaries and fringe benefits (Washington, DC IODP-MI office).
- Set-up, travel, and operating costs associated with the E&O staff (Washington, DC IODP-MI office).
- All costs associated with hiring and paying salary, travel, and operating costs associated with the Science Editor position (Japan IODP-MI office).
- All costs associated with hiring and paying salary and operating costs associated with the Information Manager and Program Assistant positions (Washington, DC IODP-MI office).
- Staff time required to oversee and coordinate the E&O Task Force and to establish E&O Advisory Committee
- Travel and meeting costs for the E&O Task Force (if required).
- Travel for meeting costs for the E&O Advisory Committee (if required).
- Travel for more than three one-day meetings of subcontractor staff in Washington, DC.
- Travel for, and staffing of the AGU booth in December 2004.
- Personnel, travel, or operating costs associated with arranging shipboard or satellite media coverage (i.e. helicopter transport, hotel accommodations, etc. for Arctic Coring Expedition or the JOIDES *Resolution* expeditions.
- All costs associated with dealing with non-governmental organizations, protests, state department issues, or other unforeseen issues related to the Arctic Coring Expedition or the JOIDES *Resolution* expeditions.
- Travel, personnel, and operating expenses for more than one E&O person (IODP-MI staff or subcontractor) to Norway for the Arctic Coring Expedition and to ports of call associated JOIDES *Resolution* expeditions.
- Any IO or national/consortia entity event-related costs associated with port calls.
- Any other expenses related to IO/platform E&O activities associated with the first three JOIDES *Resolution* or the Arctic Coring Expedition.
- Printing of multiple copies of the IODP Poster or other educational or outreach materials not specifically identified above.
- Any other expenses related to other E&O activities outside the outlined plan.

**Attachment 1—
IODP E & O WORKSHOP STEERING
COMMITTEE, PARTICIPANTS, AND GUESTS**

STEERING COMMITTEE

Eve Arnold, Kathy Ellins, Sara Hickox, and Sanny Saito

PARTICIPANTS

IODP MI

Jamie Austin • Interim IODP Director, University of Texas Institute of Geophysics

Manik Talwani • President, IODP-MI

U.S.

Cindy Clark • *Communications Director, Scripps Institution of Oceanography*

Kathy Ellins • *Co-Convenor, Program Manager, The University of Texas at Austin Institute for Geophysics*

Sara Hickox • *Co-Convenor, Director, Office of Marine Programs, University of Rhode Island Graduate School of Oceanography*

Ann Klaus • *Deputy Director of Data Services, U.S. Implementing Organization, Representing the JOI Alliance*

Jill Whitman • *Professor, Pacific Lutheran University, Representing USSAC*

Henny Groeschel • *Editor, JOIDES Journal, Rosenstiel School of Marine and Atmospheric Science, University of Miami*

EUROPE

Eve Arnold • *Lecturer, Stockholm University, ESSAC Delegate*

Martin Cepek • *Research Scientist, Research Center for Ocean Margins, Bremen*

Andy Kingdon • *External Communications Officer, Representing the ESO*

Carlo Laj • *Senior Research Scientist, National Center for Scientific Research, Chairman of the European Geophysical Union Education Committee*

Catherine Mevel • *ECORD Managing Agency, Paris*

Jeroen Kenter • *Professor, Free University, Amsterdam, Chairman of ESSAC*

JAPAN

Kihachi Hasebe • *Senior Staff of Public Relations and Outreach, CDEX, JAMSTEC, Representing CDEX*

Shin'ichi Kuramoto • *Manager of Science Services, CDEX, JAMSTEC, Representing CDEX*

Sanny Saito • *IODP Secretary, JDESC*

Yoshi Tatsumi • *Executive Committee, JDESC*

INVITED GUEST

Michael Marder • *Director of the UTeach Program, The University of Texas at Austin*

**Attachment 2—
IODP ABBREVIATIONS AND ACRONYMS**

Central Management Office

IODP-MI • *IODP Management International, Inc.*

Nations/Consortia Involved in IODP

Europe • *ECORD—European Consortium for Ocean Research Drilling*

Japan • *Japan*

U.S. • *United States*

Funding Organizations

EMA • *ECORD Management Agency (Europe)*

MEXT • *Ministry of Education, Culture, Sports, Science, and Technology (Japan)*

NSF • *National Science Foundation (U.S.)*

Implementing Organizations—IOs

CDEX • *Center for Deep Earth Exploration—for riser vessel (Japan)*

ESO • *ECORD Science Operator—for mission-specific platforms (Europe)*

JOI Alliance • *Joint Oceanographic Institutions Alliance (Joint Oceanographic Institutions, Inc., Texas A&M University and Lamont-Doherty Earth Observatory)—for riserless vessel (U.S.)*

Partner Advisory Organizations

ESSAC • *ECORD Science Support and Advisory Committee*

J-DESC • *Japan Drilling Earth Science Consortium*

USSAC • *U.S. Science Advisory Committee*

Other Abbreviations and Acronyms

ACEX • *Arctic Coring Expedition*

AGU • *American Geophysical Union*

CNRS • *Center for National Research and Science (EMA is assigned to this organization in Europe)*

DSDP • *Deep Sea Drilling Project*

EGU • *European Geophysical Union*

FTE • *Full Time Equivalent*

IO • *IODP Implementing Organization*

IODP SAS • *IODP Science Advisory Structure (International)*

IWG • *International Working Group*

JAMSTEC • *Japan Marine Science and Technology Center (Japan)*

JOI • *Joint Oceanographic Institutions, Inc. (U.S.)*

MSP • *Mission Specific Platform*

PEC VI • *ODP Performance and Evaluation Committee VI*

PI • *Principal Investigator*

POC • *Platform Operating Costs*

ODP • *Ocean Drilling Program*

OOI/ORION • *Ocean Observatory Initiative/Ocean Research Interactive Observatory Network (U.S.)*

SAS • *Science Advisory Structure*

SOC • *Science Operating Costs*

SPPOC • *Science Planning and Policy Oversight Committee (International)*

USSSP • *U.S. Science Support Program (U.S.)*

Attachment 3—IODP E&O WORKSHOP AGENDA

IODP EDUCATION AND OUTREACH WORKSHOP February 20-24, Austin, Texas

AGENDA

THURSDAY February 19

Arrival of Workshop Participants and Steering Committee in Austin, Texas

Steering Committee Meeting and Dinner (Staybridge Suites) 6:00 pm
-TBA

Dinner—on your own (refer to list of restaurants in your welcome package) 6:30 pm

FRIDAY February 20 8:30 am

Breakfast (on your own). Depart Staybridge Suites for PRC Commons 8:00 am

1.0 Welcome and Introduction 8:30-10:00 am

1.1. Welcome (Paul Stoffa, Director of the Institute for Geophysics) 8:35 am

1.2. Logistics and Workshop Schedule (Kathy Ellins) 8:45 am

1.3. Introduction of Steering Committee and Workshop Participants 9:00 am

(Ellins) *Each person will tell a bit about their background and their interest/expertise in education and outreach*

1.4 Cross-Cultural Communications (Sanny Saito) 9:30-10:00 am

Note: Communication styles and cultural differences/perspectives relating to the needs and expectations of education/outreach activities by the different member countries extend through all agenda items. We encourage participants to consider and comment on these as appropriate throughout the discussions.

Coffee Break 10:00 -10:15 am

2.0 General Overview of IODP Education and Outreach 10:15 – 12:15 pm

2.1 Goals and Objectives: Charge to IODP Education and Outreach Workshop
Participants (Austin) 10:15 am

2.2 PEC VI Recommendations Relevant to Education and Outreach (Austin) 10:30 am

Explanatory Note: JOI, Inc. convened a committee of six scientists to carry out the sixth Performance Evaluation of the Ocean Drilling Program during 2003. This committee, the PEC VI, returned several recommendations that are relevant to education and outreach.

- PEC VI Recommendation 16: Education, Public Relations and Outreach
- PEC VI Recommendation 3: Public Relations and Outreach Materials
- PEC VI Recommendation 15: Program Evaluation

Discussion led by Eve Arnold and Kathy Ellins

Discussion Questions:

- Workshop participants are asked to consider and comment on these PEC recommendations.
- What activities constitute education? Educational outreach? Outreach? Public relations? Who are the customers/consumers?
- What are the outlets for these activities?

2.3 Review of Goals and Objectives (Steering Committee) 11:00-11:15 am

3.0 Japanese, European, and U.S. Perspectives on IODP-Related Education and Outreach Activities 11:15 am – 2:45 pm

Note: Although our charge is to consider the E&O functions that are best undertaken by IODP-MI, it is necessary to briefly review and discuss the E&O functions that the IOs and IODP partner advisory organizations plan to undertake.

Partner Advisory Organizations

3.1 J-DESC (Sanny Saito) 1:15-11:45 am
3.2 ESSAC (Eve Arnold) 11:45-12:15 pm

Lunch (provided) 12:15 - 1:00 pm

3.3 USSAC (Jill Whitman) 1:00-1:30 pm

Note: Presenters should limit their presentations to 20 minutes with 10 minutes for questions and discussion. Presenters are asked to address the following: Who is your education community? Target audiences? How do you engage the media in your country (countries)?

Implementing Organizations

3.4 IODP Riserless Drillship (Ann Klaus) 1:30-2:00 pm
3.5 Mission Specific Platforms (TBA) 2:00-2:30 pm
3.6 IODP Riser Drillship (Shin'ichi Kuramoto) 2:30-3:00 pm

Note: IO Presenters should limit their presentations to 20 minutes with 10 minutes for questions and discussion. IO Presenters should share their plans for education and outreach, address the same questions as the partner advisory organizations (see above) and identify the limits of what they can do within the context of their role as operators.

Discussion between presentations led by Sara Hickox.

Break 3:00–3:15 pm

4.0 Examples of Other Education, Outreach, and Partnership

Opportunities and Activities

3:15-5:15 pm

Discussion led by Sanny Saito. Each presentation will be about 15 min with five minutes for questions.

- 4.2 Educational Partnerships—Michael Marder
- 4.3 Research Initiative Partnerships (OOI/ORION)—Henny Groeschel
- 4.4 Scientific Organization Partnerships—Carlo Laj, EGU
- 4.5 Research Facility Partnerships (JAMSTEC)—Yoshi Tatsumi
- 4.6 Informal Educational Partnerships (i.e. Science Museums)—Sara Hickox and Ann Klaus (10 minutes)
- 4.7 Corporate and Foundations Partnerships—Kathy Ellins (10 minutes)

Discussion led by Eve Arnold

5:00 – 5:30 pm

Discussion Questions:

- How can IODP-MI engage the education communities in the different partner countries and encourage them to take a leadership role in IODP activities in order to advance pedagogy in science education?
- What strategies or partnerships best foster communication and collaboration between IODP scientists/researchers and K-20 science and mathematics educators on an international scale? In respective partners' countries?
- What are the kinds of relations that we might be able to foster between IODP-MI and other organizations? How might we do this?

Homework:

Please work in groups comprising (more or less) one U.S., one European, and one Japanese participant as well as one representative from either a partner advisory organization or an IO.

Assignment 1. Review the ODP educational CD ROMS, *Mountains to Monsoons* and *Gateways to Glaciations*. Are these products useful? For which audiences are they most appropriate? Are there opportunities to improve these CDs and/or expand their use different arenas?

Assignment 2. Consider and discuss the education and outreach activities underway or planned by the different Partner Advisory Organizations and the IOs. What are the common elements? Differences? How are they complementary?

Dinner

NXNW

6:30 pm

| SATURDAY | | February 21 | 8:30 am |
|--|---|--------------------|-----------------------|
| Breakfast (on your own). Depart Staybridge Suites for PRC Commons | | | 8:00 am |
| 5.0 | IODP: An International Research Program (Manik Talwani) | | 8:30-9:00 am |
| 6.0 | Presentation of Examples of Broad-Based E & O Programs | | 9:00-10:30 am |
| 6.1 | EarthScope (Kathy Ellins) | | 9:00-9:15 am |
| 6.2 | International Continental Drilling Program (Sanny Saito) | | 9:15-9:30 am |
| 6.2 | Census of Marine Life (Sara Hickox) | | 9:30-9:45 am |
| Discussion led by Eve Arnold | | | 9:45-10:15 am |
| <u>Discussion Question:</u> | | | |
| <ul style="list-style-type: none"> Pitfalls and Opportunities—What are the successes and shortcomings of these programs? What can IODP learn from them? | | | |
| Coffee Break | | | 10:15-10:30 am |
| 7.0 | Homework Reports | | 10:30-11:00 am |
| 8.0 | What E&O Functions should IODP-MI undertake? | | 10:30-Noon |
| Which functions belong to IODP-MI, and which are best coordinated or undertaken by the IOs, partner advisory organizations, individual principal investigators (PIs) or groups of PIs? | | | |
| <u>Note:</u> Based on what we have learned from the Friday's presentations and discussions, we will create a matrix that groups IODP E&O functions into two categories: (1) IODP-MI and (2) Other (IOs, partner advisory organizations, individual principal investigators (PIs) or groups of PIs) | | | |
| Discussion led by the Steering Committee | | | |
| <u>Discussion Questions:</u> | | | |
| <ul style="list-style-type: none"> What are the appropriate means by which IODP-MI can support and manage these activities? What materials/tools/products must be developed and maintained by IODP-MI in support of IODP education and outreach? What strategies are best suited to the broad dissemination of IODP-based materials to IODP scientists, other scientists, the media (and others) and educators? What technologies must be standardized, implemented, and supported by IODP-MI to support distributed dissemination of content, learning resources, and data in support of IODP outreach and education efforts? | | | |
| Lunch | | | Noon-1:00 pm |

9.0 How can IODP-MI coordinate the E&O Activities of the IOs, IODP SAS, Partner Advisory Organizations, and PIs to Deliver a Unified E&O Program for IODP? **1:00-3:00 pm**

Discussion led by the Steering Committee **2:10-3:00 pm**

Discussion Questions:

- What role should IODP-MI play in promoting IODP expeditions (i.e., the upcoming Arctic Armada)?
- What are the different cultural perspectives, styles of communication, and educational systems that must be considered?
- How can IODP-MI use education and outreach to promote exchange among individuals who do not share the same culture, ethnicity, or language?
- What liaison relationships with other geoscience organizations and geoscience initiatives are appropriate? Which should be maintained by IODP-MI? Which by the Partners and/or IODP SAS panel members?

Note: Liaison relationships will help promote partnerships with other entities with similar goals, result in the sharing of resources and expertise, and help avoid the duplication of products. Should this be a natural extension of relationships maintained by IODP SAS panel members? In the latter case, liaison relationships would likely change over time as the membership of the SAS committees change.

Break **3:00–3:15 pm**

10.0 How should the evaluation of the education and outreach activities of an international program with international, national and local impact be carried out? **3:15-3:45 pm**

Discussion led by Steering Committee

11:0 Summary Session for Saturday’s Discussions **3:45–5:00 pm**

Reception (catered by Curra’s Grill—Tex-Mex cuisine) and Discussion **6:30 pm**

SUNDAY **February 22** **8:30 am**

Breakfast (on your own). Depart Staybridge Suites for PRC Commons **8:00 am**

12.0 Options for Advisory and Management Structures to Support Education and Outreach **8:30–10:15 am**

Discussion led by Kathy Ellins and Sanny Saito

Discussion Questions:

- Should IODP-MI oversee collaboration within the IODP education and outreach community? Or should there be an IODP education and outreach panel as part of the SAS?
- Should each expedition have an E&O component? Should this be an integral part of the proposal process?

- Should some “educational” components of IODP be evaluated be selected through a proposal-driven, competitive process? If so, how will PI-based IODP educational projects be evaluated, funded, coordinated?

Coffee Break **10:15-10:30 am**

13.0 Mechanisms and Opportunities for Funding E & O (IODP MI-based functions as well as programmatic activities of the IOs, Partner Advisory Organizations, and PIs) **10:30–11:30 am**

- Partnerships
- Foundations
- National Science Agencies

Discussion led by Steering Committee

Discussion Questions:

- Who should be tasked with identifying funding and partnership opportunities?

Note: Should some partnerships occur at the highest level (IODP-MI) in order to tap into the full range of resources potentially available and reap the full benefits of such an alliance—The Jason Project, AGU are two U.S. examples? Should this require a formal agreement between the President of IMI and the partner? Other partnerships can occur at the partner, country or local level with more locally or regionally focused partners/funding agencies.

Lunch **Noon-1:00 pm**

14:0 Summary Session **1:00–2:15 pm**

15.0 Writing Assignments **2:15–2:30 pm**
 We will organize participants into four working groups, choose group leaders and assign responsibility for compiling summaries of our discussions.

Break **2:30-2:45 pm**

Writing Session (groups) 2:45 – 5:00 Pm

Working Dinner (groups of about five at restaurant of choice) **6:30 pm**

Monday **February 23** **8:30 am**

Breakfast (on your own). Depart Staybridge Suites for PRC Commons 8:00 am

16.0 Closing Session **8:30–11:00 am**
 Summary presentations by leaders of writing groups