

REPORT OF TECHNICAL COMMITTEE ON DATA EXCHANGE

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The meeting of the Technical Committee on Data Exchange was held from 14:30 - 18:30 hours on October 12, 2003. The Chairman, Dr. Igor I. Shevchenko, called the meeting to order and welcomed the participants (see *TCODE Endnote 1* for attendance). The Committee reviewed the draft agenda and it was adopted with modifications (*TCODE Endnote 2*).

Progress on items in the 2002/2003 TCODE Workplan (Agenda Item 3)

Joint WG 15/TCODE Workshop at PICES XII (WP item 10)

Several TCODE members reported on the successful joint WG 15/TCODE workshop on "Harmful algal blooms - harmonization of data" convened by Drs. Hee-Dong Jeong (Korea) and Vera Trainer (U.S.A.). There was an extensive discussion of the challenges of sharing HAB data in various PICES member countries. The group agreed to work together to adopt the IOC/ICES HAB Metadatabase (HAE-DAT) for a 1-year trial period to further explore the strengths and limitations of this approach.

TCODE-GLOBEC co-operation on data management (WP items 1-3)

No progress made on this item. Changes in staff in the GLOBEC International Programme Office (Plymouth, UK) have stalled this activity.

Expansion of the Bering Sea Metadatabase to cover the North Pacific (WP item 4)

Dr. Bernard A. Megrey and Mr. Allen Macklin reported on the transformation of the Bering Sea Metadatabase to the North Pacific Ecosystem Metadatabase (NPEM), and demonstrated the search capabilities of this database (<http://www.pmel.noaa.gov/np/mdb/index.html>). There was extensive discussion on how best to maintain the data inventory records and how to encourage both usage and additional contributions. The developers also described the potential of 'federated search' capabilities, which would allow one to search metadata records from

separate databases from a single application (e.g., NPEM). They will be attempting this with assistance from the Korean Oceanographic Data Center (KODC) as a demonstration, and requested names of key contacts in other PICES data management centers to expand this capability.

List of keywords for North Pacific Ecosystem Metadatabase (WP item 5)

Dr. Megrey and Mr. Macklin reported on their effort to assemble a suitable list of keywords for the North Pacific Ecosystem Metadatabase based on the extensive list from the Global Change Master Directory. Very little feedback was received from PICES members on the proposed list. The lack of a 'hierarchy' to the keyword list made it difficult for prospective users to comment on the list. The Committee recommended that the keyword list (as circulated) be implemented, recognizing that additional keyword could be added with little effort, if required.

E-Poster Session at PICES XII (WP item 6)

Dr. Megrey reported on the number and themes of the presentations at the E-Poster Session on "GIS/Geographic-based applications to marine sciences". A summary of the session is included elsewhere in this Annual Report and posted on the TCODE web site (<http://tcode.tinro.ru>).

Updating inventory of long-term data sources for the North Pacific (WP item 7)

Dr. Shevchenko and Mr. Robin M. Brown reported on the limited progress made on this item (<http://tcode.tinro.ru/invent.html>).

Updating TCODE web site (WP item 8)

Drs. Shevchenko and Thomas C. Royer reported that only limited progress was made on updating the TCODE web site for data management resources such as (i) links to real-time and quasi-real time data for the North Pacific; (ii) data visualization and analysis tools; and (iii) description of inter- and intra-data exchange

policies in PICES member countries. Dr. Shevchenko noted that much of this information could be extracted from annual reports from TCODE members, using the content model that he provided.

Review of TCODE Strategic Plan (WP item 9)

Mr. Brown and Dr. Shevchenko, the former and the current TCODE Chairmen, briefly reviewed the draft TCODE Strategic Plan. This draft was posted at the TCODE web site (<http://tcode.tinro.ru/sp.html>), and Committee members were asked to provide comments and feedback to the Chairman by the end of 2003.

Updates on data management activities in PICES member countries (Agenda Item 4)

Several presentations were made on activities in PICES nations.

Canada

Mr. Brown presented a short report outlining agencies and data centres with holdings of oceanographic, fisheries and meteorological data. He also described new initiatives in cabled ocean observatories (VENUS and NEPTUNE) that will require advanced data management and archival systems.

Japan

Dr. Muneharu Tokimura reported on the restructuring of the Japanese Fisheries Research Agency and implications of this process for data management and archival. Several initiatives in the assembly of fisheries and biological data, with plans for creating open databases with Internet access were reviewed.

Korea

Mr. Hae Seok Kang reported on the activities and responsibilities of KODC.

Russia

Dr. Shevchenko reported on data management activities and agencies in Russia.

U.S.A.

Dr. Royer reported on activities of the EVOS/GEM and the North Pacific Research Board in establishing ocean observing systems.

All reports will be posted on the TCODE web site.

Discussion of *North Pacific Ecosystem Status Report* (Agenda Item 5)

Dr. R. Ian Perry, Science Board Chairman, summarized the progress of the North Pacific Ecosystem Status Report. The Committee had a short discussion on this issue and reiterated its strong support for this project. Comments and feedback to Science Board are due on November 30, 2003.

Discussions of report from Study Group on *PICES Strategic Issues* (Agenda Item 6)

The Committee had a short discussion on this issue. Comments and feedback to Science Board are due on November 30, 2003.

Discussions of report from Study Group on *PICES Capacity Building* (Agenda Item 7)

The Committee had a short discussion on this issue. Comments to Science Board are due on November 30, 2003.

Discussion of steps towards next major PICES scientific program(s) (Agenda Item 8)

Dr. Perry provided a background for this topic. The Committee had a short discussion but no particular proposals were made.

Topic Session proposals for PICES XIII (Agenda Item 9)

In keeping with the PICES XIII theme of open ocean processes, TCODE proposes to conduct an electronic poster session entitled "Data visualization of open ocean processes in the North Pacific". This session will provide an opportunity to present techniques that animate remotely sensed data such as TOPEX/Poseidon/Jason altimetry, SeaWiFS and MODIS ocean color, and sea surface temperature measurements. Techniques of data retrieval and archiving are also welcome. Integration of remotely sensed physical, biological and/or chemical data are solicited,

especially with regard to oceanic “hot spots” of biological activity. Recommended co-convenors: Dr. Thomas C. Royer (U.S.A.) and a local Hawaiian representative (to be identified).

PICES XIV theme (Agenda Item 10)

This item was discussed but there were no recommendations forwarded to Science Board.

Items with financial implications (Agenda Item 11)

TCODE requests travel funds for a PICES Data Management expert (Dr. Georgiy Moiseenko, VNIRO) to attend a meeting of the ICES-IOC Study Group on *Development of marine data exchange systems using XML*, to be held in Brussels, Belgium. ICES is considering XML as a standard for data exchange, and Dr. Moiseenko will report back to TCODE on the findings of this Study Group.

New business - items added at the meeting (Agenda Item 12)

New PICES web page

Ms. Julia Yazvenko (PICES Secretariat) presented an outline of the new PICES web site and invited comments. The Committee nominated Dr. Shevchenko to be responsible for linking the TCODE web site and the PICES web site.

WG 17 activities

Mr. Brown reported on activities of the PICES Working Group 17 on *Biogeochemical data integration and synthesis*. This group has their own web site (<http://wg17.pices.jp>) with links to the PICNIC (**PICES Carbon Dioxide Related Data Integration for the North Pacific**) inventory (<http://picnic.pices.jp>) developed by the Marine Information Research Center (MIRC, Japan) in association with WG 17 and TCODE.

Joint WG 15/TCODE Workshop on HAB

Dr. Vera Trainer summarized the results from the joint WG 15/TCODE workshop on “Harmful algal blooms - harmonization of data” at PICES XII, and outlined plans for a follow-up workshop on “Developing a North Pacific HAB

data resource” to be held at PICES XIII (October 2004, Honolulu, U.S.A.).

MONITOR Task Team activities

Dr. Sei-ichi Saitoh presented a brief report on activities of the MONITOR Task Team. This group identified important datasets on high seas distributions of fish and plankton that are held by Hokkaido University. These datasets will be digitized and produced on CD-ROM. TCODE assistance is sought to aid in the distribution of these data and to ensure that they are listed in the appropriate data inventories. MONITOR agreed to assist in the identification of important long-term datasets for the TCODE inventory.

Best Presentation Award

Ms. Kimberly Bahl (U.S.A.) won the Best Presentation Award for her E-Poster entitled “North Pacific Ecosystem Theme Page and Metadatabase: A collaborative research tool for fisheries-oceanography and ecosystem investigations”, co-authored by B. Megrey and A. Macklin.

TCODE Workplan for 2003/2004 (Agenda Item 13)

- TCODE members to work with WG 15 (MEQ HAB Section) members to complete entries for harmful algal bloom events in PICES member countries into the ICES-IOC HAB Metadatabase (HAE-DAT) for a single year. In addition, TCODE will add entries to the TCODE Inventory that describe HAB data sources in PICES member countries and ensure that appropriate HAB data sources are identified in the North Pacific Ecosystem Metadatabase. [Action - Shevchenko and Brown]
- TCODE Chairman to contact new Data Manager at the GLOBEC International Project Office and re-establish plans for creating an inventory of PICES-GLOBEC data. [Action - Shevchenko]
- North Pacific Ecosystem Metadatabase
 - a. Prepare an article for PICES Press [Action - Megrey and Macklin]
 - b. Implement metadata keyword list [Action - Megrey and Macklin]

- c. Link NPEM web site and TCODE web site [Action - Shevchenko]
- d. Update existing records and add new records [Action - all TCODE members with assistance of the MONITOR Task Team]
- e. Identify key contacts for 'federated search' [Action - all TCODE members]
- Update TCODE web site by adding real-time data sources, data visualization and analysis tools and data exchange policies of PICES member countries. [Action - Shevchenko to update web site; all TCODE members to provide input]
- Organize E-Poster Session at PICES XIII (October 2004, Honolulu). [Action - Royer]
- Work with the PICES Secretariat to link TCODE web site to the new PICES web site [Action - Shevchenko and Yazvenko].

TCODE Endnote 1

Participation List

Members

Robin M. Brown (Canada)
 Hae-Seok Kang (Korea)
 Bernard A. Megrey (U.S.A.)
 Georgiy Moiseenko (Russia)
 Thomas C. Royer (U.S.A.)
 Igor I. Shevchenko (Russia, Chairman)
 Muneharu Tokimura (Japan)

Observers

Hee-Dong Jeong (Korea)
 Sung-Dae Kim (Korea)
 Allen Macklin (U.S.A.)
 Yutaka Nagata (Japan)
 R. Ian Perry (PICES)
 Toru Suzuki (Japan)

TCODE Endnote 2

TCODE Meeting Agenda

1. Welcome and introduction of members
2. Adoption of agenda
3. Review progress on items in the 2002/2003 Workplan (WP)
 - a. WG 15/TCODE workshop on *Harmful algal blooms - harmonization of data*
 - b. TCODE-GLOBEC cooperation on data management
 - c. Expansion of the Bering Sea Metadata base to cover the North Pacific
 - d. Metadata keywords list
 - e. Electronic Poster Session for PICES XII
 - f. Updating inventory of real-time data sources for the North Pacific
 - g. Updating TCODE web site
 - h. TCODE Strategic Plan
4. Updates on data management activities in PICES member countries
5. Discussion of *North Pacific Ecosystem Status Report*
6. Discussion of report from Study Group on *PICES Strategic Issues*
7. Discussion of report from Study Group on *PICES Capacity Building*
8. Discussion of steps towards next major PICES scientific program(s)
9. Topic session proposals for PICES XIII
10. PICES XIV theme
11. Items with financial implications
12. New business (items added at the meeting)
13. Discussion and adoption of the TCODE Workplan for 2003/2004.