

REPORT OF TECHNICAL COMMITTEE ON DATA EXCHANGE

(draft - Nov 8, 2005)

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The meeting of the Technical Committee on Data Exchange was held from 8:30-17:30 hours on October 7, 2005. The Chairman, Dr. Igor Shevchenko, called the meeting to order and welcomed the participants. The meeting was attended by 8 TCODE members and 3 observers representing all PICES member countries (*TCODE Endnote 1*). Robin Brown served as rapporteur.

The Committee reviewed the provisional agenda and adopted it as provided (*TCODE Endnote 2*).

Review progress on items in the 2004/2005 Workplan (TCODE Agenda Item 3)

- Arrange session on “Data Management and Data Delivery Systems to support Ecosystem Monitoring”

This session was the first scientific session organized by TCODE. Papers covered topics of real time data delivery between ships at sea and land based laboratories, marine data exchange protocol options and standards, merging and aggregating data sets and data streams from diverse sources, and metadata search and federation systems. Eleven papers were delivered. In addition five posters were presented. The session was received very well by PICES scientists and attendance was high. The session is demonstrated that TCODE can contribute to the scientific part of the annual meetings.

- Carry out "federated searching" test program

A paper devoted to the progress on this program was presented at the topic session. Dr. Bern Megrey provided a short review and demonstration including a query to the clearinghouse at <http://clearinghouse3.fgdc.gov/>. He noted that for metadata publishing with use of this technology (1) minimal hardware is required, (2) open source (free) software is available and (3) server is easily configured. All the work is in preparing the metadata records (including translation into English). The second planning meeting will be held in Pusan following the annual PICES meeting to work out the details (map DIF used by Korea to FGDC standard; translation of Korean metadata). Dr. Bern Megrey will provide a report on "Federated searching" test program including a manual for those who willing to federate (to be posted at <http://tcode.tinro.ru>). Dr. Anthony Isenor will provide a link to British parameter dictionary in order to try to standardize the vocabulary.

- Develop TCODE Action Plan to complement the PICES Strategic Plan and Capacity Building Plan

Dr. Igor Shevchenko and Robin Brown briefly reviewed the draft of the TCODE Action Plan that was designed to reflect activities of the Committee for the next 5 years. Those activities are suppose to meet the goals and objectives of the PICES Strategic and Capacity Building Plans.

- Update TCODE Web pages, including information on annual national reports, metadata languages, etc.

Dr. Igor Shevchenko described the current content of <http://tcode.tinro.ru> and asked for contributions.

- Assist HAB team with database activities and publicize HAB database activity

Robin Brown reviewed the progress in the HUB Section activities and recommended to continue the assistance.

- Coordinate TCODE activities with new MONITOR Technical Committee

Dr. Tom Royer reported on the activities of the Monitor Committee and its Action Plan.

- Develop improved understanding of the Ocean Biological Information Systems and other related projects

Dr. Igor Shevchenko posted links to relevant Internet resources at <http://tcode.tinro.ru>.

Annual reports (TCODE Agenda Item 4)

TCODE members (Robin Brown, Ruguang Yin, Tomowo Watanabe, Kyu Kui Jung, Georgiy Moiseenko, Bernard Megrey) presented national annual reports prepared mostly in accordance with the recommended template. This template includes key institutes and agencies, key persons/contacts, data and metadata sets, ocean observing systems, data and metadata formats and standards, information technologies for collecting, measuring and enumerating marine organisms, DM programs that underpin marine science programs, existing intra- and international data policies; software applicable in marine ecosystems studies and modeling, publications on marine DM issues, education materials, etc. All reports will be posted at <http://tcode.tinro.ru>.

Updates on data management activities in PICES member countries

and international organizations (TCODE Agenda Item 5)

Norio Baba (Japan) described ongoing data management programs of NOWPAP.

Igor Shevchenko was invited by the Organizing Committee to participate to the 2nd International Workshop for GODAR-WESTPAC. He presented a report on PICES TCODE activities. Representatives of member countries and several international organizations described different data management projects (IODE activities, Global Ocean Surface Underway Data (GOSUD) project, Australian Initiative for Oceanographic Data Management, SeaDataNet: Pan European Infrastructure for Ocean and Marine Data Management, Japan Fisheries Oceanography Database, etc.).

On behalf of PICES/TCODE Igor Shevchenko participated to the 3rd International Symposium on GIS/Spatial Analyses in Fishery and Aquatic Sciences. There were 86 participants from 21 countries and 5 international organizations. Three themes were chosen for this Symposium: (a) effective and affordable GIS for fishery and aquatic information especially for the people in the developing countries, (b) spatial fish stock assessment modeling and (c) spatial fisheries resource management. Most papers described applications of GIS technology, statistical methods and mathematical modeling to processing and understanding marine and fisheries data. Igor Shevchenko contacted members of Fishery-Aquatic GIS Research Group who were among organizers of the Symposium and invited them to participate in PICES/TCODE activities.

Discussion of the TCODE activities in relation to the PICES Strategic Plan and development of TCODE Action plan (TCODE Agenda Item 6)

The Committee reviewed and discussed the draft. Igor Shevchenko and Brown will update the draft of **TCODE Action plan** based on the discussion.

PICES Future Integrative Scientific Programs (TCODE Agenda Item 7)

Dr. Shevchenko reviewed the procedure and status of implementation of the future PICES Integrative Scientific Programs.

Topic session proposals for PICES XV (TCODE Agenda Item 8)

TCODE discussed the proposal from the Monitor Committee to convene a workshop on dense/real time data. TCODE supported the proposal and will look for one additional covenor from TCODE (if necessary).

PICES XVI theme (TCODE Agenda Item 9)

TCODE supported the Canadian proposal PICES XVI theme -- The Changing North Pacific: Previous patterns, Future Projections, and Ecosystem Impacts.

Relations with other international programs/organizations (TCODE Agenda Item 10)

No proposals on including any international programs/organizations into PICES Standing List were made.

Chairmanship of TCODE (election of Chairman & Vice-Chairman) (TCODE Agenda Item 11)

This was the third year of Dr. Shevchenko's chairmanship of TCODE. It was the intent of the Committee to elect a new Chairman. However, after serious discussion of the situation (including the issue of representation of different nations on Science Board), Dr. Igor Shevchenko was requested to continue as Chairman for one

more year, and he agreed to do so. The Committee decided to have Vice-Chairman position. Dr. Bern Megrey was nominated. He accepted the proposal only in principal, since he needs to consult head of the laboratory. The Committee will proceed with this matter by correspondence.

Summary of items with financial implications (TCODE Agenda Item 12)

TCODE requests support for the following activities:

- Travel support for an invited speaker to attend the joined MONITOR/TCODE workshop at PICES XV;
- Travel support for an TCODE member to attend a meeting of ICES WG on Marine Data Management;
- \$4K for supporting Phase II of TCODE Federated Searching (to add a node for JODC/MIRC) (see *TCODE Endnote 3*).

Discussion and adoption of the TCODE Workplan for 2005/2006 (TCODE Agenda Item 6)

Based on the discussion of all agenda items, the Committee adopted the following workplan:

- 1) Continue to support HAB-S work with HAEDAT database and required metadata (Robin Brown)
- 2) Arrange joint MONITOR/TCODE Workshop at PICES XVI on dense/real time data systems (Tom Royer)
- 3) Update NPEM and TCODE Inventory (Igor Shevchenko, ALL)
- 4) Establish dialogue with ICES workin groups involved into Data

- Management issues (Igor Shevchenko)
- 5) Prepare and post report on PICES Federated Searching program: Phase I (Bern Megrey)
 - 6) Continue with PICES Federated Searching program: Phase II (if approved by SB) (Bern Megrey)
 - 7) Update TCODE Action Plan (Robin Brown and Igor Shevchenko)
 - 8) Coordinate activities with Monitor Technical Committee (Tom Royer)

TCODE Endnote 1

Participation List

Members in attendance:

Canada
Robin Brown

China
Ruguang Yin

Japan
Tomowo Watanabe

Korea
Kyu Kui Jung

Russia
Georgiy Moiseenko
Igor Shevchenko

U.S.A
Bernard Megrey
Thomas Royer

Observers:

Canada
Anthony Isenor

China
Dengwen Xia

Japan
Norio Baba

TCODE Meeting Agenda, October 7, 2005, 8:30-17:30

Chairman: Igor Shevchenko (Russia)

1. Welcome and introduction of members
2. Adoption of agenda (opportunity to add agenda items under "New business")
3. Review progress on items in the 2004/2005 Workplan
 - Arrange session on "Data Management and Data Delivery Systems to support Ecosystem Monitoring" (S. Allen Macklin & Bernard A. Megrey)
 - Carry out "federated searching" test program (Hee-Dong Jeong, Hae-Seok Kang, S. Allen Macklin, Bernard A. Megrey)
 - Develop TCODE Action Plan to complement the PICES Strategic Plan and Capacity Building Plan (Igor Shevchenko & Robin Brown)
 - Update TCODE Web pages, including information on annual national reports, metadata languages, etc. (Igor Shevchenko)
 - Assist HAB team with database activities and publicize HAB database activity (Robin Brown)
 - Coordinate TCODE activities with new MONITOR Technical Committee (Igor Shevchenko)
 - Develop improved understanding of the Ocean Biological Information Systems and other related projects - All
4. Annual reports (Canada, Japan, People's Republic of China, Republic of Korea, Russian Federation, United States of America)
5. Updates on data management activities in PICES member countries and international organizations
6. Discussion of the TCODE activities in relation to the PICES Strategic Plan and development of TCODE action plan
7. PICES Future Integrative Scientific Programs
8. Topic session proposals for PICES XV
9. PICES XVI theme
10. Relations with other international programs/organizations
11. Chairmanship of TCODE (election of Chairman & Vice-Chairman)
12. Summary of items with financial implications:
 - Proposed inter-sessional meetings for 2006 and beyond
 - Proposed publications for 2006 and beyond
 - Travel support requests
 - Other items
13. New business (additional items added at the meeting)
14. Discussion and adoption of the TCODE Workplan for 2005/2006

TCODE Endnote 3

**PICES TCODE Data-Sharing Project to Federate Metadata on North Pacific Ecosystems:
Phase II**

Toru Susuki (JODC/ MIRC, Japan)
S. Allen Macklin (NOAA PMEL, USA)
Bernard A. Megrey (NOAA AFSC, USA)

Significant progress has been made over the past year to connect PICES member nations' metadatabase systems into one integrated resource. With this new scientific resource, a user of any one metadata inventory will have the ability to search for data catalogued by any and all other participating system with a single search request. Using modern data management techniques to cross-search separate metadatabases provides the advantages of shared metadata without compromising national ownership, data integrity, or security of national metadata products.

TCODE adopted a pilot KODC-NPEM federation as part of its 2005 work plan and the first PICES node (PICES-NPEM, PICES North Pacific Ecosystem Metadatabase) has been registered with the National Spatial Data Infrastructure clearinghouse and a node for KODC (PICES-KODC) will soon be on line. The status of the PICES nodes can be found at <http://registry.fgdc.gov/serverstatus/> and the nodes can be searched by going to <http://clearinghouse3.fgdc.gov/>. Over the past year two successful planning meetings took place that discussed required technical details and technical hurdles and the means to address and solve problems associated with federating with KODC. Success with this project means efforts with other PICES countries will easily scale up with a nominal investment of time and planning.

We propose, as Phase II, to federate with JODC and MIRC and ask PICES to continue to support this project at the same level as last year, conditional on confirmation by JODC and MIRC that they are willing to federate at this time.

Budget: Two ~2-day meetings, 2 people to travel to Japan or USA at \$US 2,000/person/trip. Meeting dates and locations will be determined at a later date.

Total cost: \$US 4,000