

REPORT OF TECHNICAL COMMITTEE ON DATA EXCHANGE

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The meeting of the Technical Committee on Data Exchange (hereafter TCODE) was held from 14:00-18:00 October 28, 2009. The Chairman, Bernard A. Megrey and Co-chairman Kyu-Kui Jung, called the meeting to order and welcomed the participants. The meeting was attended by 10 TCODE members representing PICES member countries and international organizations (*TCODE Endnote 1*). Hernan Garcia served as the rapporteur. The Committee reviewed the provisional agenda and adopted it with minor changes and additions (*TCODE Endnote 2*).

Welcome and introduction of members (Agenda Item 1)

Before the formal TCODE meeting started, John Stein (PICES Science Board) presented a summary of the first meeting of the three FUTURE Advisory Panels (AICE-AP, COVE-AP, SOFE-AP). He announced the appointment of initial chairs for each panel and reviewed terms of reference, and initiated discussion. As a group, the panels discussed priorities and how to move forward within PICES. Each panel will operate individually advising the Science Board, thus they will be a part of the decision making process. Once permanent chairs are selected, each group will formulate terms of reference. The Science Board will review and adopt these terms of reference at the next Science Board meeting.

Introduction of TCODE members present from USA, Korea, Japan, China, Canada, Russia.

Adoption of agenda (opportunity to add agenda items under "New business") (Agenda Item 2)

Robin Brown suggested adding a discussion of the North Pacific Status Report (NPSR) under “New business”

Review progress on items in the 2008/2009 work plan (Agenda Item 3).

Support of the HAB-S Work (Agenda Item 3a)

Robin Brown headed the HAB-S meeting. HAB-S continues to add metadata to the ICES/PICES/IOC HAB-S database. The process is moving forward steadily. The contents are not open for public access as of yet. A software application side of the database is under development. Possible connections to the PICES metadata federation were discussed (B. Megrey placed this as an agenda item for next year’s TCODE meeting).

Cooperate with other data management groups outside PICES. Igor circulated the ICES metadata reports via email. (Agenda Item 3b)

ICES WG on Data and Information Management (Agenda Item 3bi)

A 2010 ICES Session Proposal “Data for the Masses: Recent advances in the application of Marine Data and Information Management” (Agenda Item 3bi1)

In Helsinki, Megrey met with Holdsworth (ICES) and others to discuss areas of cooperation. They then wrote a proposal for future collaborative work to hold a joint symposium at the next ICES meeting in Nante France convened by Bernard A. Megrey (PICES TCODE, USA), Neil Holdsworth (ICES Data Center, Denmark), and Edward Vanden Berghe (OBIS, USA). The ICES decision was made at the 2009 ICES meeting in Berlin. After the TCODE meeting it was announced that the proposal was not accepted for the Nante meeting. Megrey will work with the ICES convenors at the 2010 Nante meeting to resubmit the proposal for reconsideration at the next ICES venue. This item was added to next years TCODE work

plan.

Moiseenko will attend the next WGDIM meeting, May 2010 (Agenda Item 3bi2)

Report on ICES and WGDIM meetings (Agenda Item 3bi2a)

WGDIM terms of reference were discussed. Data user needs were discussed. Activities for next year include focus on QC flags of ICES data.

Moiseenko will attend the next WGDIM meeting at ICES HQ, May 2010. He will prepare and present a report at the 2010 PICES meeting in Portland. This item was added to next years TCODE work plan.

IODE-XX (Agenda Item 3bii)

Suzuki to attend IODE-XX, May 2009 (Agenda Item 3bii1)

Toru Suzuki presented an oral report for the IODE-XX meeting including the IODE ocean data portal implementation, capacity building and education, and Ocean Biogeographic Information System (OBIS) as an IODE/IOC program. Bernard Megrey has a copy of Toru's report which will be posted on the TCODE web site.

PICES will participate in IODE-XXI via their Japanese representative T. Suzuki, who is already an active member connecting IODE to TCODE. Suzuki will attend the IODE-XXI in May 2010 and present a report at the 2010 PICDES meeting in Portland. This item was added to next years TCODE work plan.

IODE GE-BICH (Group of Experts on Biological and Chemical Data Management and Exchange Practices) (Agenda Item 3biii)

Identify representatives from PICES to participate in a network of experts on biological and chemical data (Agenda Item 3biii1)

Report on cooperation with IODE GE-BICH (Agenda Item 3biii1a)

IODE GE-BICH overlaps with TCODE with respect to terms of reference. No formal connection exists between PICES and GE-BICH. Hernan Garcia stressed the importance of international cooperation in GE-BICH. Hernan Garcia nominated Toru Suzuki for membership as short term member of GE-BICH. TCODE should pursue further cooperation with IODE GE-BICH on behalf of PICES. This item was added to next years TCODE work plan.

Develop plan to harvest metadata from the NOWPAP server (Agenda Item 3biv)

It was reported that is difficult to harvest metadata from the NOWPAP server automatically since it offers limited machine to machine communication and searches. No common communication protocols exist. A possible potential connection to the IODE data portal was also discussed. This will be explored.

PICES Metadata Federation Project (Agenda Item 3c)

Renew Remote server contract and propose the Secretariat include the cost as line item in annual budget (Agenda Item 3ci)

For the past 2 years, PICES has paid for the cost of renting a server on a monthly basis. TCODE proposed to PICES Science Board to get an annual contract thereby reducing the cost by about 12% for the same server being used for the past 2 years. TCODE agrees that using an annual contract seems a more practical alternative and will be formally proposed to the PICES Science Board. This is an ongoing activity and it has been added to next years TCODE work plan.

Continue to administer AdHost server (Agenda Item 3cii)

Igor Shevchenko and Bernard Megrey administer the server. TCODE will continue this format. This item was added to next years TCODE work plan.

Run the AdHost server performance experiment on accessing metadata from different locations and multiple users (Agenda Item 3ciii)

This item is intended to be part of formal performance test of multiple searches on the Metadata server. No progress was made this year so this item was added to next years TCODE work plan. Megrey will coordinate with national representatives.

Report on metadata recording in Canada (Agenda Item 3civ)

No progress has been made adding FGDC compliant Canadian metadata records as part of the metadata federation. This item was added to next years PICES work plan.

Update and status of efforts to improve performance and functionality of the PICES GeoNetwork portal (Agenda Item 3cv)

This item is related to Agenda Item 3ciii above. Functional searches provide metadata records.

Report on status of PICES Digital Library migration and Ecosystem Status Report web pages (Agenda Item 3cvi)

One of the justifications for renting the PICES server was to provide a platform for distributing the large collection of digital items in the PICES Digital library. There has been lack of progress transferring large PDF's of presentations given at an annual PICES meeting to the server because the Secretariat is overly busy. PICES seems understaffed to help transfer the PDF's. Robin Brown suggested that TCODE present this as an issue to the Science Board. Igor Shevchenko suggested that TCODE solve this problem internally in his group by requesting the next PICES intern (Tatiana Semenova) be assigned this task early in her internship tenure. Bernard Megrey will follow up with Igor Shevchenko. This item was added to next years PICES work plan.

Japan, Korea and Canada move their metadata records to the AdHost server (Agenda Item 3cvii)

Robin Brown reported that no progress has been made on collecting Canadian metadata records. Bernard Megrey reported that, currently Japan and Korea's metadata records are also not on the rented server. Currently metadata from Russia, USA, and China are in the rented server. It was suggested that Japan and Korea move their metadata to the rented server. This item was added to next years TCODE work plan.

Update AdHost server to monitor MDB use (Agenda Item 3cviii)

Olga Vasik (TINRO, Russia) was not present but Igor Shevchenko reported that she has prepared scripts to monitor MDB use. Current usage statistics reveal relatively low use of metadata records. When

discussing the status of the PICES TCODE GeoNetwork Portal, Bernard Megrey suggested that the PICES community is not generally aware of this resource. The PICES web page does not prominently advertise the availability of the metadata federation server. Different options were discussed. The group suggested that a viable option would be to add to the side bar on the PICES web page a link to the metadata federation server (e.g., a visible access point). The NPEM and KODC servers need to be removed from the NSDI clearinghouse site. Megrey will undertake this. This item was added to next years TCODE work plan.

Promote the GeoNetwork Portal (Agenda Item 3cix).

Request GeoNetwork resource be advertised at PICES Summer in Seoul (June 2010) and Winter school in Vladivostok (Feb 2010) (Agenda Item 3cix1)

Megrey proposed adding short sessions at future PICES summer school to alert or make students aware of TCODE efforts. Unfortunately this was not possible in 2009. Thus it is proposed to do this task before summer 2010. Megrey will propose that at every summer session, participants should be made aware of TCODE activities perhaps in the form of a slide or power point presentation. To accomplish this task, Megrey will prepare a short PowerPoint presentation which will be given at various PICES venues. This item was added to next years TCODE work plan. To accomplish this task Megrey will prepare a short PowerPoint presentation which is to be given at various PICES venues.

Request GeoNetwork resource be reported at next years opening session as part of PICES activities (Agenda Item 3cix2)

Bernard Megrey will speak to the Science Board chairman to make sure the PICES GeoNetwork resource will be reported at the beginning of next years opening session. This item was added to next years TCODE work plan.

Plans to have a short presentation on the GeoNetwork resource be given at MONITOR committee meetings or other committee meetings (Agenda Item 3cix3)

TCODE will make this request next year and the beginning of each committee meeting and will delay the start of the TCODE meeting. Robin Brown suggested that we prepare a short PowerPoint presentation about what is it and what we do in TCODE. This item was added to next years TCODE work plan.

Update PICES project pages on PICES home page (Agenda Item 3cix4)

This agenda item was successfully completed.

Explore GeoNetwork Portal backup options (Agenda Item 3cx)

Igor Shevchenko reports that backups are done by Olga Vasik. This item was added to next years TCODE work plan

Update the Technical report to reflect GeoNetwork (Agenda Item 3cxi)

No progress was made this year. This item was added to next years TCODE work plan.

Maintain TCODE web pages (Agenda Item 4)

TCODE recognizes Igor Shevchenko's efforts in maintaining and updating the TCODE page. This is an ongoing activity and this item was added to next years TCODE work plan.

Update of WG22 iron database and proposed collaboration with IODE/IOC (Agenda Item 5)

Robin Brown reported that there has not been a major update. Participation was not possible at the last WG22 meeting but he hopes to attend the upcoming meeting. This item was added to next years TCODE work plan.

Participate in FUTUE and FISP activities (Agenda Item 6)

Robin Brown and Bernard Megrey report successful completion of this item. TCODE has members on all new PICES advisory panels. Creation of a standardized power point presentation of TCODE was suggested as a way to alert the new FUTRUE Advisory panels of the existence of the TCODE metadata GeoNetwork Portal. See **Agenda Item 3ix3**. This item was added to next years TCODE work plan.

Update TCODE Action Plan (see TCODE Endnote 3) (Agenda Item 7)

Bernard Megrey has a list of pending actions for next years TCODE action plan. New items suggested include (1) adding ex-officio members as needed (Megrey); (2) adding visibility to the metadata federation (Garcia). The group discussed recognizing metadata contributions via a small prize (e.g., t-shirt) or some sort of PICES recognition.

Robin Brown proposed adding to the action plan an activity that would report on the performance by means of the metadata records in the North Pacific Ecosystem Status Report (NPSR) so as to identify availability (cataloguing) of metadata, identify metadata gaps, access needs, and most importantly, presence or absence of these metadata in the metadata federation. For instance, data time series by country (data available online, data products, etc?). Then report results to PICES via an advisory panel. Time commitment and level of effort required to accomplish this task is difficult to assess. Bernard Megrey suggested that perhaps a scaled down approach at a regional level. Action item: Bernard Megrey and Robin Brown will talk to Skip McKinnel? This item was added to next years TCODE work plan.

Coordination with Carbon and Climate Section (Agenda Item 8)

Toru Suzuki reported on the last CC-S meeting. An ocean carbon data set is being developed for the North Pacific as part of CDIAC. Hernan Garcia is also a member of Carbon and Climate Section. This is an ongoing activity and this item was added to next years TCODE work plan.

Coordination of Activities with MONITOR (Agenda Item 9)

Monitor TC Action Plan (Agenda Item 9a)

Tom Royer was not present at the meeting nor did he send in a report. This is an ongoing activity and this item was added to next years TCODE work plan.

Annual National Reports (Agenda Item 10)

Bernard Megrey suggested that, in the interest of time, all national reports should be sent to him by email so that these can be posted at the TCODE web page. He will follow up with email.

Topic session proposals for PICES 19 (Agenda Item 11)

The floor was open for suggestions for session proposals for the next PICES annual meeting in Portland, OR. Robin Brown suggested an electronic poster session on “ocean observing systems for coastal and continental shelf ecosystems”. Possible conveners (minimum two) included one from Russia (Oleg Kopelerich, Institute of Oceanology, Russian Academy of Sciences – to be confirmed) and (temporarily) Bernard Megrey from the USA. Possible conveners from the USA may include Jonathan Phinney - PACOOS or Molly McCammon from AOOS. After the TCODE meeting, it was discovered that the suggested Russian convenor could not attend the meeting. Megrey will follow up with Phinney and McCammon. This item was added to next years TCODE work plan.

Relations with other international programs/organizations (Agenda Item 12)

In order to expand cooperation, PICES decided to allow experts for non PICES country members or international organizations to participate in PICES committees as “ex-officio members” pending approval by the Science Board. This opens opportunities to TCODE to interact with other groups. TCODE members will send their suggestions to Bernard Megrey.

Edward Vanden Berghe (OBIS, USA) was identified as a potential ex-officio member to TCODE. Action Item: Bernard Megrey to send this recommendation to the PICES Science Board and this has been added to next years TCODE work plan

PICES Ocean Monitoring Service Award Nominations for 2010 (Agenda Item 13)

TCODE has two pending nominations (Station P which remained from last year’s nomination and a new nomination for the Calcofi program. Robin Brown suggested, that next year, a new POMA nomination should be considered for an Asian candidate but not limited to the A-line (Hernan Garcia), the network of hydrographic time series lines around South Korea (Robin Brown). **Does this mean Hernan and Robin will draft nominations for the A-line and the South Korean efforts???** One nomination could be for Korea (NFRDI) prepared by Robin Brown and Kyu-Kui Jung (NFRDI) for the PICES Science Board to consider perhaps before the inter-session meeting (April 23-24, 2010). The nomination will be circulated to TCODE members for comment. This item has been added to next years TCODE work plan.

Summary of items with financial implications (Agenda Item 14)

Proposed inter-session meetings for 2010 and beyond (Agenda Item 14a)

There were no specific suggestions

Proposed publications for 2010 and beyond (Agenda Item 14b)

There were no specific suggestions

Travel support requests (Agenda Item 14c)

Bernard Megrey will attend the annual ICES Working Group on Data and Information Management in Nante France. No support requests were made. (See Agenda Item 3bi)

Proposal to continue rented server for another year (Agenda Item 14d)

This item has been added to next years TCODE work plan.

Other items (Agenda Item 14e)

Awarding prizes for metadata submissions was discussed. All will work on ideas to encourage metadata submissions and this item has been added to next years TCODE work plan. To impose documentation of PICES research, there was discussion about whether to recommend to the Science Board to require metadata submission with annual science meeting PICES abstracts.

Discussion of the TCODE Work Plan for 2009/2010 (Agenda Item 15)

The new Work Plan will be adopted via email. Bernard Megrey will condense the work plan and circulate it for comment to TCODE members.

New business (additional items added at the meeting) (Agenda Item 16)

The NPSR was discussed earlier per the suggestion of Robin Brown. There was a discussion about the merits of using a Wiki page to collect and distribute TCODE documents such as Google Sites, which was suggested by Hernan Garcia. Further consideration of this idea was added to next years TCODE work plan.

TCODE Endnote 1

Participation list

Members

Robin Brown (Canada)
Igor Shevchenko (Russia)
Georgiy Moiseenko (Russia)
Tomowo Watanabe (Japan)
Toru Suzuki (Japan)
Kyu-Kui Jung (Korea, Vice-Chairman)
Bernard A. Megrey (U.S.A., Chairman)
Nignsheng Yang (CAFS China for Ling Tong)
Hernan Garcia (U.S.A.)

Members

Sang-Hwa Choi (Korea)

Regrets: Tom Royer (U.S.A.), Ruguang Yin (China), Ling Tong (China), John Holmes (Canada).

**TCODE Meeting Agenda
PICES XVIII, Jeju Korea
Wed. Oct. 28, 2009 14:00-18:00**

Chairman: Bernard A. Megrey (USA)

Co-Chairman: Kyu-Kui Jung (Republic of Korea)

- 1) Welcome and introduction of members
- 2) Adoption of agenda (opportunity to add agenda items under "New business")
- 3) Review progress on the items from the 2008/2009 Work Plan
[TCODE 2008/2009 Work Plan](#)
 - a) Continue to support HAB-S work
Responsibility - R. Brown
 - i) [Harmful Algal Blooms Section](#)
 - b) Cooperate with other data management groups outside PICES
 - i) ICES WG on Data and Information Management [ICES 2008 WGDIM Report, ICES 2009 WGDIM Report](#)
Responsibility - B. Megrey, G. Moiseenko
 - (1) 2010 ICES Session Proposal: Data for the Masses: Recent advances in the application of Marine Data and Information Management
Convenors: Bernard Megrey (PICES TCODE, USA), Neil Holdsworth (ICES DC, Denmark), Edward Vanden Berghe (OBIS, USA)
Responsibility – B. Megrey
[\[List of 2010 Theme Session Proposals\]](#)
 - (2) Moiseenko to attend ICES Annual Science Conference, September 2009 and the next WGDIM meeting, May 2009
 - (a) Report on ICES and WGDIM meetings
Responsibility – G. Moiseenko
 - ii) IODE-XX
Responsibility - B. Megrey, T. Suzuki
 - (1) Suzuki to attend IODE-XX, May 2009
[IODE-XX, Beijing China 4-8 May 2009](#)
 - (a) Report on PICES representation at the IODE-XX
Responsibility – T. Suzuki
 - iii) IODE GE-BICH (Group of Experts on Biological and Chemical Data Management and Exchange Practices)
Responsibility - B. Megrey, H. Garcia
 - (1) Identify representatives from PICES to participate in a network of experts on biological and chemical data
[IODE GE-BICH](#)

- (a) Report on cooperation with IODE GE-BICH
Responsibility – H. Garcia
- iv) Develop plan to harvest metadata from the NOWPAP server (I. Shevchenko to organize with national representatives)
- c) PICES Metadata Federation Project
 - i) Renew Remote server contract and propose the Secretariat include the cost as line item in annual budget (B. Megrey to organize with national representatives)
 - ii) Continue to administer AdHost server (Megrey and Shevchenko)
 - iii) Run the AdHost server performance experiment on accessing metadata from different locations and multiple users (B. Megrey to organize with national representatives)
 - iv) Report on metadata recording in Canada (R. Brown/J. Holmes)
 - v) Update and status of efforts to improve performance and functionality of the PICES GeoNetwork portal (I. Shevchenko)
[PICES TCODE GeoNetwork Portal](#)
 - vi) Report on status of PICES Digital Library migration and Ecosystem Status Report web pages (Megrey)
 - vii) Japan, Korea and Canada move their metadata records to the AdHost server (T. Suzuki, K.K. Jung, J. Holmes, I. Shevchenko)
 - viii) Update AdHost server to monitor MDB use (O. Vasik)
 - ix) Promote the GeoNetwork Portal.
 - (1) Request GeoNetwork resource be advertised at PICES Summer in Seoul (June 09) and Winter school in Vladivostok (Feb 09). (B. Megrey and I. Shevchenko)
 - (2) Request GeoNetwork resource be reported at next years opening session as part of PICES activities (B. Megrey)
 - (3) Plan to have a short presentation on the GeoNetwork resource be given at committee MONITOR meetings other committee's? (request at front of the agenda and delay start of TCODE) (B. Megrey, I. Shevchenko, R. Brown)
 - (4) Update PICES project pages on PICES home page (A. Macklin)
 - x) Explore GeoNetwork Portal backup options (I. Shevchenko)
 - xi) Update the Technical report to reflect GeoNetwork (I. Shevchenko and B. Megrey)
- 4) Maintain TCODE web pages (I. Shevchenko)
- 5) Update of WG22 iron database and proposed collaboration with IODE/IOC
Responsibility - R. Brown
- 6) Participate in FUTUE and FISP activities
Responsibility – R. Brown and B. Megrey
- 7) Update TCODE Action Plan
Responsibility - B. Megrey, K.K. Jung
- 8) Coordination with Carbon and Climate Section (T. Suzuki and R. Brown)
- 9) Coordination of Activities with MONITOR
Responsibility – T. Royer
 - a) [Monitor TC Action Plan](#)

- 10) Annual National Reports
- 11) Topic session proposals for PICES XIX
- 12) Relations with other international programs/organizations
 - a) [ICES](#), [IODE](#), [NOWPAP](#), [OBIS](#)
- 13) PICES Ocean Monitoring Service Award Nominations for 2010
- 14) Summary of items with financial implications:
 - a) Proposed inter-sessional meetings for 2010 and beyond
 - b) Proposed publications for 2010 and beyond
 - c) Travel support requests
 - d) Proposal to continue rented server for another year
 - e) Other items
- 15) Discussion and adoption of the TCODE Work Plan for 2009/2010
Responsibility - [B. Megrey](#), [K.K. Jung](#)
- 16) New business (additional items added at the meeting)

TCODE Endnote 3

TCODE Work Plan for 2010/2011

1. Continue to support HAB-S work
Responsibility - R. Brown
 - a. [Harmful Algal Blooms Section](#)-evaluate how PICES can contribute to this effort and which national repository claims the ownership.
2. Cooperate with other data management groups outside PICES
 - a. Megrey to follow up on the unsuccessful ICES proposal at the next WGDIM meeting in Nante France.
Responsibility - B. Megrey
 - b. ICES WG on Data and Information Management
Moiseenko to attend the next WGDIM meeting at ICES HQ, May 2010. He will present a report at the 2010 PICES meeting in Portland.
Responsibility - B. Megrey, G. Moiseenko
 - c. IODE-XXI
PICES will participate in IODE-XXI via their Japanese representative T. Suzuki, who is already an active member connecting IODE to TCODE. Suzuki will attend the IODE-XXI in May 2010 and present a report at the 2010 PICDES meeting in Portland.
Responsibility - T. Suzuki
 - d. IODE GE-BICH (Group of Experts on Biological and Chemical Data Management and Exchange Practices)
Identify representatives from PICES to participate in a network of experts on biological and chemical data
[IODE GE-BICH](#)
Responsibility - H. Garcia and T. Suzuki
3. PICES Metadata Federation Project
 - a. Renew Remote server contract (B. Megrey and Shevchenko to organize with national representatives)
 - b. Continue to administer AdHost server
Responsibility – B. Megrey and I. Shevchenko
 - c. Run the AdHost server performance experiment on accessing metadata from different locations and multiple users
Responsibility - B. Megrey to organize with national representatives
 - d. Brown and Holmes will gather some Canadian metadata records to establish a Canadian presence on the PICES Metadata server. Report on progress at next years TCODE meeting.
Responsibility - R. Brown/J. Holmes
 - e. Request SB suggest to GC that next PICES intern (Tatiana Semenova) assist with the transfer of the PICES Digital Library to the rented server. Report on status of PICES Digital Library migration and Ecosystem Status Report web pages
Responsibility – B. Megrey and I. Shevchenko
 - f. Japan, Korea and Canada move their metadata records to the AdHost server
Responsibility – T. Suzuki, K-K. Jung, R. Brown/J. Holmes, I. Shevchenko)
 - g. Remove NPEM and KODC servers from the NSDI clearinghouse site
Responsibility – B. Megrey
 - h. Update AdHost server to monitor MDB use
Responsibility - Olga Vasik

- i. Promote the GeoNetwork Portal.
 - i. Prepare short PowerPoint presentation on GeoNetwork portal
Responsibility - Megrey.
 - ii. Request GeoNetwork resource be advertised at PICES Summer in Seoul (June 2010) and Winter school in Vladivostok (Feb 2010).
Responsibility – B. Megrey and I. Shevchenko)
 - iii. Request GeoNetwork resource be reported at next years opening session as part of PICES activities
Responsibility – B. Megrey
 - iv. Plan to have a short presentation on the GeoNetwork resource be given at the MONITOR meetings other committee's? (request at front of the agenda and delay start of TCODE). Prepare a presentation for SOFE, COVE and AICE.
Responsibility – B. Megrey, I. Shevchenko, R. Brown
 - v. Add the MDB server link on the sidebar of the PICES web page
Responsibility – B. Megrey
 - j. Explore GeoNetwork Portal backup options
Responsibility – I. Shevchenko
 - k. Update the Technical report to reflect GeoNetwork
Responsibility – I. Shevchenko and B. Megrey
4. Maintain TCODE web pages
Responsibility – I. Shevchenko
 5. Participate in FUTUE and FISP activities. Work to facilitate preparation of the NPESR. Approach McKinnell to see what data was used to support the report, what data are accessible, what data are accompanied by metadata, what are the data characteristics and is the data discoverable and searchable. A simple analysis should be revealing. Focus on about 50-100 records as a place to start. Present report to SB and SOFE.
Responsibility – R. Brown, B. Megrey
 6. Update of WG22 iron database and proposed collaboration with IODE/IOC
Responsibility - R. Brown
 7. Update TCODE Action Plan
Responsibility - B. Megrey, K.-K. Jung
 - a. Use preparation of NPESR to examine participation of metadata reporting. Megrey and Brown will talk to McKinnell to discuss the possibility of carrying out this exercise.
Responsibility – B. Megrey and R. Brown
 8. Coordination with Carbon and Climate Section
Responsibility – T. Suzuki and R. Brown
 9. Coordination of Activities with MONITOR
[Monitor TC Action Plan](#)
Responsibility - Tom Royer
 10. 2010 and 2011 Session Proposals
Responsibility – All
 11. Relationships with other international organizations
TCODE will request the Science Board instruct the PICES Secretariat to invite Edward Vanden Berghe (OBIS, USA) to join TCODE as an ex-officio member.
Responsibility - B. Megrey
 12. PMOA Nomination
Nominations will be prepared for the A-line (Hernan Garcia) and the time series around South Korea (K.-K. Jung and R. Brown)

13. Prepare proposal to renew rented server for another year
Responsibility – B. Megrey
14. Develop strategy to award and encourage metadata submission
Responsibility - All
15. Add TCODE web site to collect and distribute TCODE documents
Responsibility – H. Garcia