

To: Advisory Panel on North Pacific Coastal Ocean Observing Systems (AP-NPCOOS)

From: Jack Barth (U.S.A., barth@coas.oregonstate.edu) and Sung Yong Kim (Republic of Korea, syongkim@kaist.ac.kr), Co-Chairs

Subject: Preparations for our meeting during the PICES 25th Annual Meeting to be held on October 4, 2016, in San Diego, California, USA.

Action: Please email the Co-Chairs by October 14, 2016, confirming your attendance

Date: October 6, 2016

Greetings fellow PICES Advisory Panel on North Pacific Coastal Ocean Observing Systems (AP-NPCOOS) members! For more about our Advisory Panel and PICES, see

http://pices.int/members/advisory_panels/AP-NPCOOS.aspx

We have listed the AP-NPCOOS Terms of Reference and Membership list below.

We are pleased that you are willing to help us accomplish the goals of the Advisory Panel. We'd like to prepare for a successful business meeting of AP-NPCOOS during the PICES Annual Meeting this November, 2016, in San Diego, California, USA.

Our **AP-NPCOOS meeting** will be held prior to the main PICES Annual Meeting and is scheduled for **0900 to 1800 on Friday, November 4, 2016**. It will be preceded by our NPCOOS workshop W7 "Delivering quality multi-parameter data from the coastal ocean" (see Appendix 1). The **W7 Workshop** is scheduled for **0855 to 1800 on Thursday, November 3, 2016**.

Action Item → Please kindly let us know via email by October 14, 2016, if you are planning to attend the AP-NPCOOS business meeting and/or the W7 Workshop during the 2016 PICES Annual Meeting in San Diego, USA. This will help us plan these events.

We have prepared an agenda for our AP-NPCOOS meeting (see below). We are pleased to schedule tours of the nearby Southern California Coastal Ocean Observing System and CalCOFI, both located near the Scripps Institution of Oceanography in La Jolla. In preparation for the meeting, we'd like to you to 1) think about answer to the set of questions below, 2) send us some materials related to coastal ocean observing in your own country, and 3) review the enclosed "Handbook of Best Practices" by the European FixO3 project. **Submitted materials should be delivered to the AP-NPCOOS Co-Chairs via e-mail no later than October 28, 2016**. For those countries that have multiple members on the AP-NPCOOS, please coordinate your responses to provide one set of materials for your country.

During the meeting, we would like to have a presentation about coastal ocean observing in each of the PICES member countries, so please come prepared to make a presentation. Your presentation should include material related to points 1 and 2 below.

We look forward to seeing you in San Diego and an exciting discussion!

Jack Barth
Oregon State University, U.S.A.

Sung Yong Kim
Korea Advanced Institute of Science and
Technology, Republic of Korea

Advisory Panel on North Pacific Coastal Ocean Observing Systems (AP-NPCOOS)
Agenda
November 4, 2016
San Diego, California, U.S.A.

0900	Introduction of AP-NPCOOS (Co-Chairs Barth and Kim)
0910	Introduction of AP-NPCOOS members (members)
0915	Discussion of how to fulfill AP-NPCOOS Terms of Reference
0935	Report from FUTURE SSC (Lobanov)
0945-1030	Coastal Ocean Observing Systems in PICES member countries (members); 15-minute presentation by each of 3 member nations
1030	coffee break
1045-1130	Coastal Ocean Observing Systems in PICES member countries (members); 15-minute presentation by each of 3 member nations (continued)
1130-1200	Discussion of AP-NPCOOS issues, questions (below), the “Handbook of Best Practices” from the European FixO3 project, and next steps
1200-1330	Lunch
1330-1400	Transit to Scripps Institution of Oceanography (SIO) and NOAA Southwest Fisheries Science Center (SWFSC) (transportation provided)
1400-1700	Tour Southern California Coastal Ocean Observing System (SIO, SCCOOS) and CalCOFI (SWFSC)
1700	Transit back to hotel
1800	End

1) Questions to consider for our AP-NPCOOS Annual Meeting

- What are “best practices” for coastal ocean observing platforms, sensors and sensor calibration, data quality control, user interfaces to data and information products, data delivery to users, data archiving? (Term of Reference #1)
- How can AP-NPCOOS advise/assist FUTURE? (Term of Reference #3) FUTURE is the PICES Scientific Program “Forecasting and Understanding Trends, Uncertainty and Responses of North Pacific Marine Ecosystems”
(http://pices.int/members/scientific_programs/FUTURE/FUTURE-main.aspx)
- What is relationship of AP-NPCOOS and CREAMS? And MONITOR? And TCODE?

- How might AP-NPCOOS advise/assist PICES in preparation of the North Pacific Ecosystem Status Report (<http://pices.int/projects/npesr/default.aspx>)? (Term of Reference #3)
- How might AP-NPCOOS relate to global programs like GOOS, Argo, Pogo, etc? It might be helpful to visit the GOOS page (<http://www.ioc-goos.org/>). (Term of Reference #3)
- What are the motivations and applications for your country’s coastal ocean observing (e.g., fisheries, shipping, aquaculture, etc.)?
- What is unique to AP-NPCOOS that is not being covered elsewhere in PICES or internationally? For example, AP-NPCOOS is definitely “coastal,” but what about other unique aspects?
- What open-ocean observing assets are most relevant to your coastal issues and how are they linked into your coastal ocean observing systems? If they are not lined in efficiently, how might that be done?

2) Request for materials in advance of AP-NPCOOS meeting. Due to Co-Chairs by October 28, 2016.

- Please provide a map and list of updated coastal ocean observing assets for your country. This might include moorings, shore stations, ship-based measurements (especially cross-shelf sections), autonomous vehicles, cabled observatories, etc. Please include the list of sensors and variables that are being measured, and how frequently they are observed. We know this is a big effort, but ask that you do the best you can to provide an overview and as many details as possible. We can build on these maps and lists over time.
- Please provide a list, either from your country or ones you know of internationally, of “best practices” documents. These might include documents on sensor maintenance, calibration, quality control, data delivery, etc. Examples include the “PICES Special Publication 3: Guide to best practices for ocean CO2 measurements” (http://cdiac.ornl.gov/oceans/Handbook_2007.html) or the documents produce by the US NOAA-IOOS Quality Assurance of Real Time Oceanographic Data project (<https://ioos.noaa.gov/project/qartod/>).
- Please provide a list of technical groups, meetings, workshops in each country that deal with coastal ocean observing and provide their contact information.

Appendix 1

AP-NPCOOS Workshop W7 “Delivering quality multi-parameter data from the coastal ocean”

Co-sponsor: Ocean Networks Canada

Co-Convenors:

Akash Sastri (Canada)

Chuanxi Xing (China)

Thursday, November 3, 2016: 0900 to 1800

Invited Speakers:

Rich Pawlowicz (University of British Columbia, Canada)

Zhifeng Zhang (National Marine Environmental Monitoring Center – NMEMC, SOA, PR China)

This workshop is a priority for the PICES Advisory Panel on North Pacific Coastal Ocean Observing Systems (AP-NPCOOS). We propose a 1-day workshop of talks and discussion toward the goal of developing ‘best practices’ for ensuring high-quality sensor observations in coastal marine ecosystems in the North Pacific. The coastal ocean is a region with important fisheries and other ecosystem benefits, while at the same time being subject to human pressures. In order to assess coastal marine ecosystem status and changes, including any long-term trends, high-quality observations of a variety of physical, chemical and biological variables must be made and sustained. Sensor-based observations are critical to coastal observation programs and are used as part of ship-based sampling programs, fixed-point platforms (i.e. long-term mooring and cabled deployments), mobile platforms (i.e. gliders, ferries), and are necessary to ground-truth remote sensing observations (i.e. turbidity, chlorophyll and CDOM). The quality of these observations depends on sensor choice, pre-deployment sensor preparation and calibration, platform and sensor deployment, post-deployment sensor calibration and data processing and dissemination. We invite contributions that deal with all aspects of delivering high-quality data from the coastal ocean, in particular techniques for measuring biogeochemical parameters (oxygen, nutrients, chlorophyll) and mitigating biofouling and sensor drift.

Appendix 2

AP-NPCOOS Terms of Reference

1. Develop and advise about best practices for coastal ocean observing systems (examples of topics to be considered include: observing platforms, sensors and sensor calibration, data quality control, user interfaces to data and information products, data delivery to users, data archiving);
2. Convene workshops/sessions to engage those involved in coastal ocean observing systems from around the North Pacific;
3. Advise on linkages between coastal ocean observing systems and both PICES activities (e.g., FUTURE Science Program, North Pacific Ecosystem Status Report) and open-ocean observatories (e.g., Argo).

Appendix 3

AP-NPCOOS Membership as of October 2016

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