The Data Management System for Working Group 35:

The Third North Pacific Ecosystem Status Report NPESR-3

A talk by
Peter Chandler and Jeanette Gann
presented at the TCODE workshop W3
Thursday, October 25, 2018

NPESR-3

PICES is producing the third in a series of North Pacific Ecosystem Status Reports (NPESR) to assess the status and trends in North Pacific marine ecosystems, and the vulnerability and resilience of ecosystems to changes in the climate and human activities.

NPESR- 1. *Perry, R.I. and McKinnell, S.M. [Eds.] 2004, 280 p.*

PICES SPECIAL PUBLICATION
Marine Ecosystems of the North Pacific

PICES SPECIAL PUBLICATION 4
Marine Ecosystems of the North Pacific Ocean 2003-2008

NPESR-2 *McKinnell, S.M. and Dagg, M.J. [Eds.] 2010, 393 p.*

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Due to the immense size of the Pacific Ocean and variability in the ecosystems one of the first steps in the NPESR process was to identify regions that could be assessed individually. These individual regional assessments can then be synthesized into an Ecosystem Status Report for the entire North Pacific.
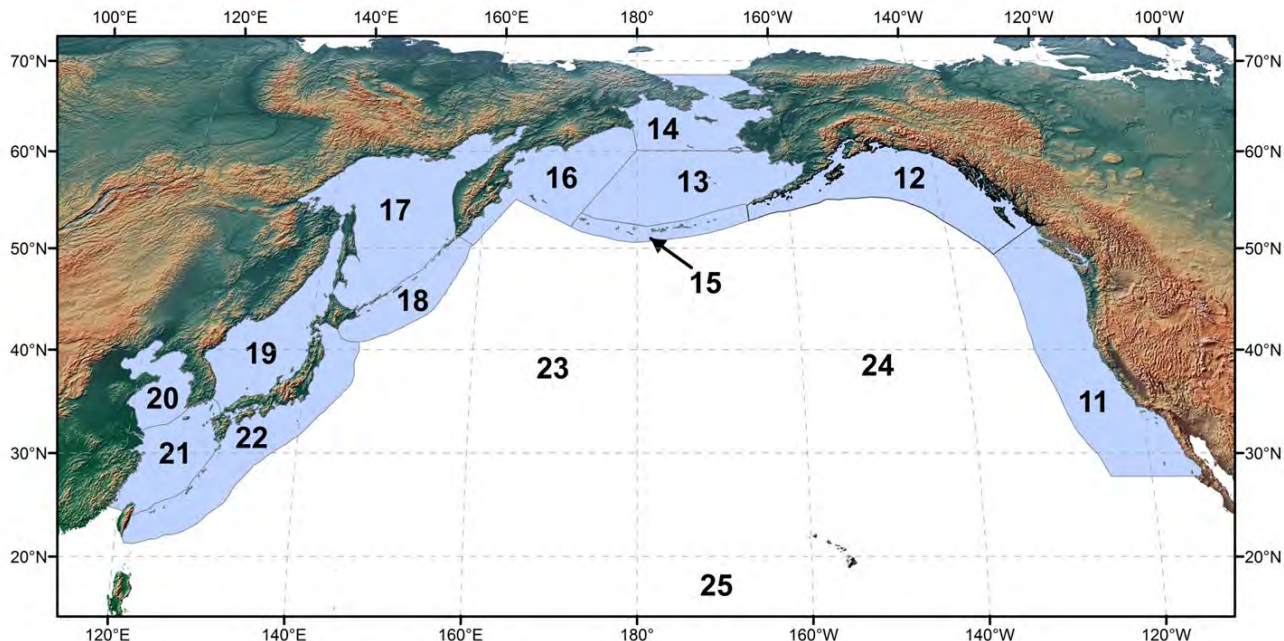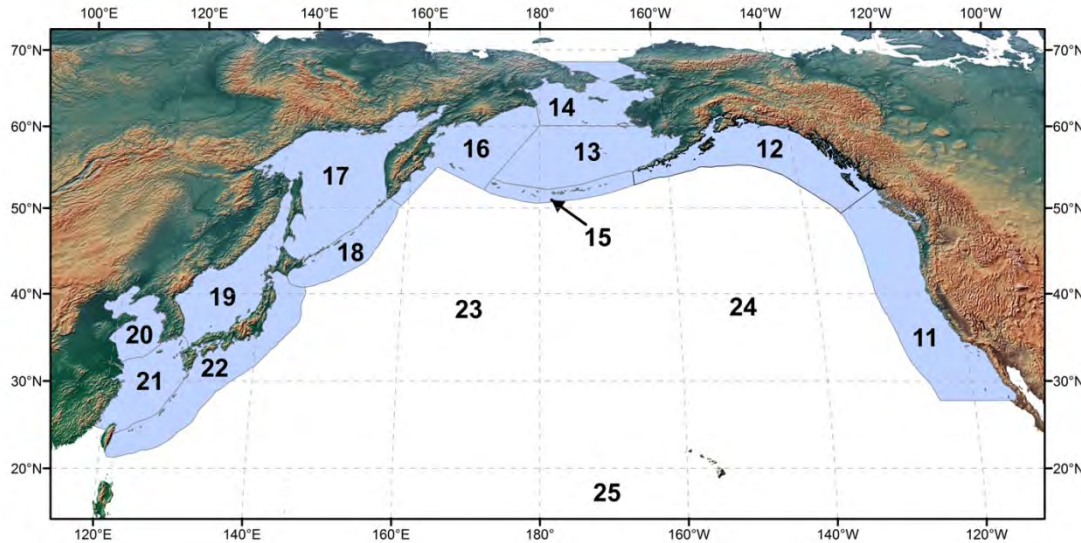
Because there was no existing regional classification system that met PICES needs a modified biogeographical classification system of 15 regions around the North Pacific has been adopted.

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For each of the 15 regional assessments information is required to describe the status of the ecosystem, and any trends over the period between 2009 and 2016.

Atmosphere

(temperature, pressure, river inputs)

Physical Ocean

(Currents, stratification, seasonal sea ice)

Chemical Ocean

(oxygen, nutrients, acidification)

Zooplankton

Microzooplankton
Mesozooplankton
Ichthyoplankton
Gelatinous zooplankton

Phytoplankton

Biomass
Productivity
Harmful algal blooms

Fishes and Invertebrates

Species Composition/Diversity
Catch and Biomass
Distribution
Recruitmen

Benthos

Marine Birds, Mammals

Pollutants/Contaminants

Human Dimensions catch value, Fisheries employment,

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An integral part of the process is the NPESR-3 Data Management System

1. To facilitate the **_submission_**, the **_organization_**, and the **_availability_** of scientific information for the production of NPESR-3.

2. To reduce the effort that was experienced by authors of NPESRs 1 and 2 to access the information needed to write the report.

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Structure of the Data Management System.

1. Web-based software *Submittables.com* with head offices in Montana, USA.

2. Use Amazon AWS servers; data capacity is unlimited and data are stored redundantly in multiple physical locations across the United States.

3. The website interface is customized to meet our requirements (PICES).

4. We term our submissions **Environmental Time Series Observations** (ETSOs).

5. Recently increased data security to HIPAA compliance certification.

6. All submissions are required to include metadata.

Peter Chandler (DFO) and Jeanette Gann (NOAA)

Title *

Enter a title for your submission

NPESR Geographic Location *

The geographic unit to which the invitation to submit data refers.
map

PICES Committee *

Nation *

Canada

Japan

China

Korea

Russia

U.S.A.

First and Last name of author to contact with questions.

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Body of Contribution

Choose Files

Upload a file containing the body of your contribution.

Select up to 8 files to attach. No files have been attached yet.

Figure(s) and/or Table(s) that illustrate the ETSO

Choose Files

Upload figures and tables as jpg, png, or pdf in highest resolution possible. Tables and figures are formatted for journal publication with axes suitably and legibly labeled.

Select up to 75 files to attach. No files have been attached yet.

Upload raw data/background data files in any format listed to the left. Select up to 20 files to attach.

Data and Metadata

Choose Files

Select up to 20 files to attach. No files have been attached yet.

Acceptable file types: pdf, doc, docx, txt, rtf, jpg, jpeg, gif, mp3, mp4, m4a, zip, tif, tiff, png, wpf, odt, wav, mov, xls, wpd, ppt, pptx, avi, mpg, xlsx, sib, mus, 3gp, flv, webm, psd, ai, mobi, epub, wmv, eps, key, ogg, aac, flac, aiff, wma, mkv, musx, ibooks, iba, tex, bbl, ltx, m4v, svg, fdx.

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Processing information using the Data Management System

1. PICES members recognize a suitable ETSO for NPESR-3, and a contributor willing to submit it.

2. The contributor, or a PICES ETSO coordinator, uses the internet to access the *Submittable* website (all that is needed is a free, personal *Submittable* account).

3. Following the instructions provided by the web-based software the ETSO is submitted. Work can be saved as a draft at any time in the process.

4. Jeanette Gann holds the highest administrative privileges and assigns the submission to a reviewer (typically the lead author of the NPESR-3 region most relevant to the ETSO).

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Processing information using the Data Management System

5. There may be an exchange between the submitter and the reviewer to discuss the meaning or application of the ETSO to NPESR-3, and to confirm the attribution of the data.

6. The reviewer can view, comment and rate submissions assigned to them. A recommendation is then made to accept and complete the submission so that it becomes part of the NPESR-3 database.

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Given the cloud-based structure of the system ETSOs can be submitted asynchronously and there is no limit on how many are submitted.
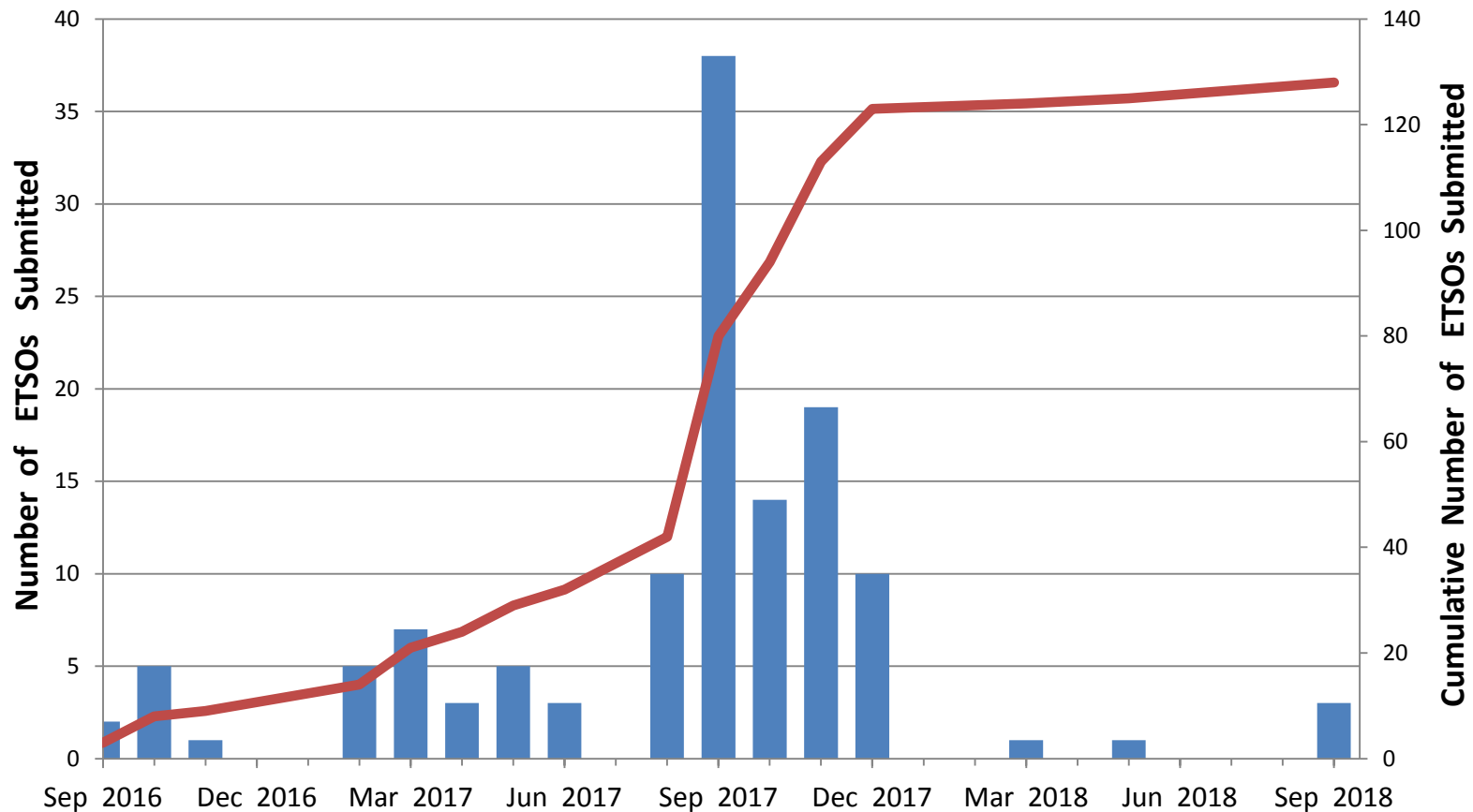
Web access provides an overview of submissions and status of ETSOs.

+/-	SUBMISSION ↑	SUBMITTER	FORM	DATE	STATUS	ASSIGNED
☐	Spatial assessment of microplastic pollution in the marine-coastal region of British Columbia, Canada [11] [WG31] [CANADA]	Juan Jose Alava	North Pacific Ecosystem Status Report – 9/7/2017 Ecosystem Time Series Observations		In-Progress	William Sydeman
☐	Steller sea lion pup production in the Aleutian Islands, 1978-2016 [15] [BIO] [U.S.A.]	Lowell Fritz	North Pacific Ecosystem Status Report – 9/29/2017 Ecosystem Time Series Observations		In-Progress	Ivonne Ortiz
☐	Stock Compositions of Chinook Salmon Bycatch in Gulf of Alaska Trawl Fisheries [12] [FIS] [U.S.A.]	Jordan Watson	North Pacific Ecosystem Status Report – 10/13/2017 Ecosystem Time Series Observations		In-Progress	Multiple Team Members
☐	Surface silicate as a potential indicator of nutrient availability during summer/early fall in the eastern Bering Sea; implications for age-0 walleye pollock (Gadus chalcogrammus) condition. [EAST BERING SEA] [BIO - BIOLOGICAL OCEANOGR] [U.S.A.]	Jeanette Gann	North Pacific Ecosystem Status Report – 10/31/2016 Ecosystem Time Series Observations		Accepted	Peter Chandler

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Search filters are used to identify sub-datasets of the ETSO archive.

Reports can be generated by exporting filtered data to .csv file.

Export Your Data

Export: Submissions ▼

From: Current Filters ▼
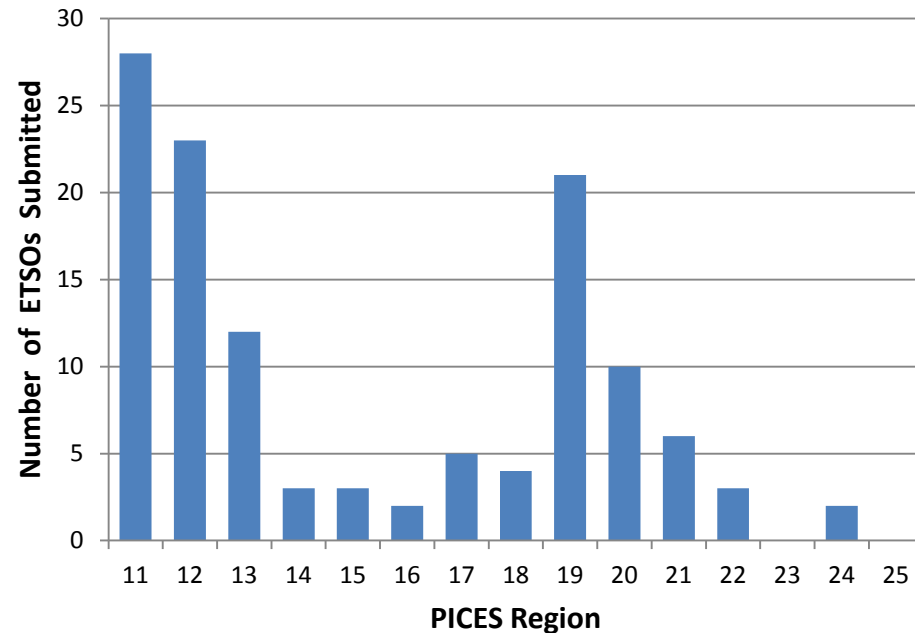
117 submissions (filtered)

Include: Submission Data (.csv) ▼

Your selected data will be sent via email.

Delimiter: Comma (,) ▼

Export Notes: No ▼

Need more specific data? Try our new reports.

Export Data

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Level 5 (Highest/Administrator) can fully manage team members, submissions, response templates, submission forms and the organization profile.

Level 4 can do everything Level 5 can do except manage the profile and view income reports.

Level 3 can fully administer submissions assigned to them (view all ratings/reviews, accept, decline, interact with submitter). Cannot view reports or private notes of other users. Cannot access settings pages (team, response templates, etc.).

Level 2 can only view, comment, rate and reassign submissions assigned to them. Cannot accept or decline.

Level 1 can only view, comment and rate submissions assigned to them. Cannot accept, decline or reassign submissions or interact with submitter.

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Summary of benefits:

1. A simple system not expected to change much over the next five years.

2. After the assignment and review of ETSOs there are minimal custodial requirements.

3. The submission forms can be customized to accommodate changing PICES priorities.

4. Access to the data is controlled by PICES using permission levels.

5. *Submittables* provides system security upgrades as required.

6. An unlimited number of ETSOs can be submitted and stored in the database.

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Thank you