

# Third Ecosystem Status Report Implementation Plan, IP-NPESR

Study Group on North Pacific Ecosystem Status Report, SG-NPESR  
North Pacific Marine Science Organization, PICES  
Qingdao, China  
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## Background

The Study Group on North Pacific Ecosystem Status Report, SG-NPESR, was initiated following PICES 2014 (Yeosu) to continue work initiated under FUTURE SOFE at PICES 2011 (Khabarovsk). The advice provided by SOFE in 2011 was reviewed and revised at the FUTURE workshop held in conjunction with ISB 2012 (Busan), and also at ISB 2013 (St Petersburg). A formal proposal for the third NPESR was presented to the Standing Committees and SB 2013 (Nanaimo). At SB 2013 the retirement of SOFE in the reorganization of FUTURE led to the establishment of SG-NPESR in early 2015 to move the NPESR proposal forward.

## Purpose

The IP-NPESR presents the schedule of tasks and the estimated budget necessary to build the foundation of ecosystem time series observations (ETSOs), for the third NPESR. The work of the study group will be presented at PICES 2016, and provide guidance for producing subsequent NPESRs. It is understood although tasks are identified, the detail of how the tasks will be accomplished can be modified based on available resources.

## Outline of Tasks and Responsibilities with Target Dates

- |  |                    |
|--|--------------------|
| a. Final IP-NPESR Committee Discussion Draft | Oct 17, 2015       |
| b. Present IP-NPESR to Committees            | Oct. 18 & 20, 2015 |
| c. Final IP-NPESR                            | Oct. 22, 2015      |
| d. Present IP-NPESR to SB                    | Oct. 23, 2015      |

Please refer to Table 1 for a visualization of the schedule for the following tasks.

Table 1 follows.

Table 1. Schedule of tasks and responsibilities for producing NPESR. US NOAA Alaska Fisheries Science Center, Resource Ecology and Ecosystem Modeling Program (AFSC REEM)

Task		2015	2016												2017													
		N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	
1. ETSO System Development	AFSC REEM																											
2. ETSO Maintenance	AFSC REEM																											
3. ETSO Nominations	BIO_FIS_MEQ_POC_TCODE_MONITOR																											
4. ETSO Submissions	Authors																											
5. Interim Workshop on NPESR Time Series	SG-NPESR et al.																											
6. Review & Addition of Nominations	NPESR Editorial Board																											
7. Establish NPESR Synthesis Working Group	Governing Council																											
8. Invitations & Confirmations to Authors	NPESR Editorial Board																											
9. Present selections to PICES 2016	SG-NPESR																											
10. Synthesis	NPESR SWG																											
11. North Pacific Synthesis Workshop	NPESR SWG et al.																											
12. Editing	NPESR SWG, NPESR Editorial Board																											
13. Formatting NPESR	AFSC REEM																											
14. Review and Adoption NPESR	NPESR Editorial Board																											

## Budget

In order to minimize cost, we will adapt an existing program, the US NOAA Alaska Fisheries Science Center, Resource Ecology and Ecosystem Modeling Program (AFSC REEM) (Table 2). This program produces an ecosystem status report for the eastern Bering Sea, Aleutian Islands, Gulf of Alaska. A postdoctoral fellow would be hired to adapt REEM resources to the needs of generating the next generation NPESR. It should be noted that substantial resources have already been committed for these purposes by all PICES' member nations, and by PICES. For example PICES already supports a server devoted to metadata and data exchange (PICES TCODE GeoNetwork).

Table 2. Budget for producing third edition of NPESR. Ecosystem Time Series Observation, ETSO.

NPESR Production Budget			
Activity	2015	2016	2017
1. ETSO System Development	\$18,000	\$27,000	
2. ETSO Maintenance		\$28,000	\$28,000
3. ETSO Nominations			
4. ETSO Submissions			
5. Interim Workshop on NPESR Time Series		\$20,000	
6. Review & Addition of Nominations			
7. Establish NPESR Synthesis Working Group			
8. Invitations & Confirmations to Authors			
9. Present selections to PICES 2016			
10. Synthesis			
11. North Pacific Synthesis Workshop			\$20,000
12. Editing			
13. Formatting NPESR			\$28,000
14. Review and Adoption NPESR			
	\$18,000	\$75,000	\$76,000

## Definitions

### 1. ETSO System Development Feb '16 - Jul '16

Develop web based data entry and data management tools to automate data submission and basic report preparation for ecosystem time series observations, ETSOs. The US NOAA Alaska Fisheries Science Center, Resource Ecology and Ecosystem Modeling Program (AFSC REEM) would hire a postdoctoral fellow to adapt REEM resources to the needs of generating the next generation NPESR.

### 2. ETSO Maintenance Aug '16 - forward

The US NOAA Alaska Fisheries Science Center, Resource Ecology and Ecosystem Modeling Program (AFSC REEM) would hire a postdoctoral fellow to maintain the web based system for generating the third and future editions of NPESR.

### 3. ETSO Nominations Nov '15 - Jan '16

Each of the six standing committees will nominate six or more time series (ideally at least one from each member nation) that are deemed representative of ecosystem status and human dimensions. Note that not all observations that describe ecosystem status are necessarily continuous time series. In some cases observations in a locality may be separated by multiple years. The ability to compare observations from one time frame to another is essential. Please see the most recently published [NPESR](#) and the [PICES Scientific Report No. 28](#) for examples of time series.

### 4. ETSO Submission Dec '15 - Jul '16

Nominated individual authors are responsible for submissions. See Table 3. Authors may use Word document (doc, docx), jpg, png, pdf and Excel (xls,xlsx) format to submit directly to [stephani.zador@noaa.gov](mailto:stephani.zador@noaa.gov) until the web based data entry and data management utilities are available online.

### 5. Interim Workshop on NPESR Time Series June '16

The Workshop on Time Series for Detecting Changes in Ecosystem Status in a Changing Climate will bring together experts to consider the questions surrounding how to define a collection of physical and biological time series observations that are suited to characterize ecosystem status for PICES North Pacific Ecosystem Status Report. The nominated time series will be critically reviewed and syntheses may be attempted. Time series from physics, chemistry and biology that have been contributed by PICES member nations to characterize ecosystem status will serve as the starting point on which to develop practical advice that may form the basis for a scholarly paper on criteria for selecting the time series that form the foundation for understanding and detecting ecosystem status during climate change. The workshop could use funding for travel and a venue in close proximity to ISB 2016.

### 6. Editorial Board Review & Addition of Nominations Dec '15 - May '16

The chairs of standing committees sitting as the NPESR Editorial Board, chaired by the Deputy Executive Secretary of PICES, will coordinate the selection of ETSOs. As outstanding or

particularly appropriate sets of observations are discovered, the Editorial Board may invite additional authors to submit. The Editorial Board may enlist the services of peer reviewers when necessary to determine the suitability of the nominated time series for the purposes of NPESR, or to recommend alternatives or additional time series.

#### 7. Establish NPESR Synthesis Working Group Apr or May '16

A working group to conduct the synthesis of the foundational ETSOs is to be established as soon as practicable, but no later than ISB 2016. The working group will coordinate and communicate with the SG-NPESR to effect an orderly transition of duties as the SG is concluded.

#### 8. Invitations & Confirmations to Authors Jun '16

As vetted by the interim workshop and as confirmed by the Editorial Board in consultation with the NPESR SWG, authors to be included in the synthesis will be informed by the secretariat.

#### 9. Present selections to PICES 2016 Nov '16

The SG-NPESR will present a summary of the successful nominees in plenary at PICES 2016. This will be the concluding task for the SG-NPESR.

#### 10. Synthesis Jun '16 - Apr '17

As led by the NPESR SWG, the authors of the NPESR will analyze and make inferences regarding trends in properties of the individual North Pacific ecosystems.

#### 11. North Pacific Synthesis Workshop Apr or May '17

The NPESR SWG and the authors will come together to develop an overarching synthesis of North Pacific Ecosystems.

#### 12. Editing Aug '16 - Aug '17

The NPESR SWG and the Editorial Board (or its designees) will edit sections of the NPESR as they are produced.

#### 13. Formatting NPESR Aug '16 - Sep '17

The AFSC REEM will format tables and graphics and lay them out with corresponding text suitable for printing or web publication.

#### 14. Review and Adoption NPESR Sep '17 - Oct '17

The Editorial Board will conduct a final review prior to accepting the NPESR on behalf of PICES.

### Table 3. Guidelines for Authors of NPESR Time Series

[Adapted from Guidelines for Ecosystems Considerations Contributions by Stephani Zador, [stephani.zador@noaa.gov](mailto:stephani.zador@noaa.gov)]

**Contribution content follow the following outline and definitions:**

1. Title: In title case (nouns, verbs capitalized; articles lowercase)
2. Contributed by: Authors of contribution
3. Contact author: Name of author to contact with questions
4. Any authors interested in involvement in synthesis report (optional)
5. Contact information: Affiliation, mailing address, email address
6. Last updated: Month, Year
7. Body of contribution: 1 page of text and 1 or 2 figures and/or tables. If possible, the text of the contribution should incorporate the following
  - **Description of time series observation (ETSO):** a description of the ETSO including reference to methods, locating coordinates or polygon (decimal), and how the ETSO is useful for understanding climate change or its impacts. Describe length of time series and expected future status. Indicate level of quality control (preliminary or final).
  - **Status and trends:** the historical trends and current status of the ETSO
  - **Factors influencing observed trends:** potential causes for observed trends and current status
  - **Implications:** Briefly answer these questions: What are the implications or impacts of the observed trends on the ecosystem or ecosystem components? What do the trends mean? Why are they important? How can this information be used to inform policy makers' decisions?
8. Figure(s) and/or Table(s) that illustrate the index (indices). 1 or 2 figures and/or tables.
  - **Figures and Tables:** Send figures and tables as separate jpg, png, or pdf. You may also include them in the doc with the text, but they should also be sent separately in highest resolution possible. Format them as for journal publication; keep the final size in mind when considering readability of axis labels.
9. Literature Cited

Each reference cited in text must be listed in the Citations section and vice versa. Double-check for spelling, dates, and other publication details.

#### 10. Data contributions

You are requested to submit the data illustrated in the figures and tables, while also providing the metadata that allows another scientist to reproduce your results. If it is not possible to submit the data, please provide a statement explaining why it is not possible to do so.



## Heuristic Web Links

[Ecosystem Considerations Report 2014](#)

[Alaska Marine Ecosystem Considerations](#)

[Alaska Marine Ecosystem Considerations Data Access](#)

[Report of the PICES Study Group](#) on “Fisheries and Ecosystem Response to Recent Regime Shift”