



External Review of the Joint Institute for the Study of the Atmosphere and Ocean (JISAO)

A Presentation to the
NOAA Science Advisory Board

Jeremy B.C. Jackson
Review Panel Chair

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Science Review Panel

Jeremy B. C. Jackson, Ph. D., Review Panel Chair
Smithsonian Institution

Selina Heppell, Ph.D.
Oregon State University

Arthur J. Miller, Ph.D.
Scripps Institution of Oceanography

Peter Lamb, Ph.D., Ex Officio, Cooperative Institute
Representative
University of Oklahoma



JISAO

- **Began in 1977; Review period since 2010**
- Single University Cooperative Institute at the University of Washington, but involves several departments:
 - the Department of Atmospheric Sciences;
 - the School of Aquatic and Fishery Sciences;
 - the School of Oceanography;
 - Washington Sea Grant and Friday Harbor Laboratories within the University's College of the Environment;
 - and several other academic departments and research units



JISAO NOAA Collaborators



- Pacific Marine Environmental Laboratory (PMEL)
- Northwest Fisheries Science Center (NWFSC)
- Alaska Fisheries Science Center (AFSC)



JISAO Research Themes



- climate research and impacts
- environmental chemistry
- marine ecosystems
- ocean and coastal observations
- protection and restoration of marine resources
- seafloor processes
- tsunami observations and modeling



Findings and Recommendations: Strategic Plan



JISAO has a well-developed strategic plan and strong research portfolio.

JISAO is highly productive and influential in some but not all seven research themes.

Too rigid adherence to the original structure of the themes appears to reduce flexibility and opportunities.

Partnerships between JISAO and NOAA labs vary and should be evaluated.

NOAA should encourage JISAO to review its research themes and consider amalgamating or reducing them.

JISAO should track productivity within themes for reevaluation of comparative strengths.

JISAO should capture more discretionary funds to exploit new opportunities and developments.



Findings and Recommendations: Science Review



JISAO research is excellent, productive and collaborative, particularly in the areas of tsunami modelling, regional ecosystem forecasting, black carbon production, and dynamics of Arctic ice.

JISAO excels in sustained, long-term measurements of environmental parameters that are essential for basic understanding of process.

The quality of postdoctoral and research scientists is uniformly high.

Theme leaders and JISAO science administrators should expand, consolidate, or phase out efforts in less productive themes.

JISAO and NOAA need to maintain, enhance, and ensure the continuation of long-term observational capabilities.



Findings and Recommendations: Education/Outreach



JISAO provides a strongly supportive and nurturing environment for young scientists (postdoctoral fellows, research opportunities for undergraduates).

JISAO has a strong commitment to diversity.

Public outreach is remarkably impressive, although underfunded and dependent upon opportunism and volunteer participation.

JISAO needs to reach out more to people based at PMEL and bring them to the university campus to facilitate interactions for collaborations.

JISAO needs to continue to press for more Task I funding from NOAA.



Findings and Recommendations: Science Management



Partnership between JISAO and PMEL is strong, stable, and productive, but this was less apparent with the two fisheries laboratories (NWFSC and AFSC).

Regular JISAO Council meetings are valuable and improve communications among stakeholders. The Council includes members from UW School of Oceanography, UW School of Aquatic and Fishery Sciences, PMEL, and others.

JISAO fosters a lively and enthusiastic intellectual environment with good use of returned overhead.

JISAO programs suffer from a lack of discretionary funds to support new projects and proposals.

JISAO should further encourage and enable partnerships and side projects among postdocs and researchers.

JISAO needs to improve its relationships with the Fisheries Centers (NWFSC and AFSC) to identify opportunities.



Comments and Recommendations for NOAA



- NOAA should provide reviewers with a concise document outlining NOAA's vision of the role of the CI within NOAA's research program in advance of the on-site meeting.
- The strict formats of the review reports inhibit the CI Director from providing information in ways that would be valuable to the review process. In essence, the present review format discourages input for adaptive management.
- Task I funding for education and outreach is absurdly underfunded.



Overall Rating

OUTSTANDING



Questions?