

## **Report on PICES conference**

By Natalie Ban

I gratefully thank SOLAS for providing travel support to enable me to attend the PICES meeting in Hiroshima, Japan. As requested in the email from Emilie Breviere (dated 5 October 2012), I hereby provide a couple of paragraphs about the sessions I attended.

Working Group 28 of PICES, which focuses on “Development of Ecosystem Indicators to Characterize Ecosystem Responses to Multiple Stressors” invited me to speak at two of their events during the PICES conference in Hiroshima, Japan. First, I presented my research and related work at workshop 1. The focus of my presentation was on different methods of combining information about multiple stressors, and I drew on my experiences in Canada’s Pacific waters and Australia’s Great Barrier Reef. The focus of the workshop was “Identifying critical multiple stressors of North Pacific marine ecosystems and indicators to assess their impacts”.

Second, I also presented my research – though with a different focus from the first presentation – at Session S10. My presentation focused on my efforts to map cumulative effects in Canada’s Pacific waters. The session’s focus was on “Ecosystem responses to multiple stressors in the North Pacific”.

The working group organized these sessions because multiple natural and human stressors on marine ecosystems are common throughout the North Pacific, and may act synergistically to change ecosystem structure, function and dynamics in unexpected ways that can differ from responses to single stressors. Further, these stressors can be expected to vary by region, and over time. The purpose of the workshop was thus to work towards understanding responses of various marine ecosystems to multiple stressors, and to identify and characterize critical stressors in PICES regional ecosystems including appropriate indicators of their impacts. The ultimate goal is to help determine how ecosystems might change in the future and to identify ecosystems that may be vulnerable to the combine impacts of natural and anthropogenic forcing.

In addition, I participated at the working group meeting and attended sessions throughout the conference. The working group meeting was particularly interesting because it included discussions of activities the countries are undertaking that is relevant to the study of multiple stressors.

Here is a picture of participants of workshop 1. I am the woman in the front row.



As requested, I thanked SOLAS in my acknowledgement slide, pasted below. At the end of my presentations, I also advertised the SOLAS Summer School 2013.

Ban, N. C., H. M. Alidina, and J. A. Ardron. 2010. Cumulative impact mapping: Advances, relevance and limitations to marine management and conservation, using Canada's Pacific waters as a case study. *Marine Policy* 34:876-886.

# Thank you

Travel support:



Research support:



**Australian Government**  
**Australian Research Council**



**ARC Centre of Excellence**  
**Coral Reef Studies**



**Australian Government**  
**Great Barrier Reef**  
**Marine Park Authority**