

Report to CLIVAR SSG-18

Panel or Working Group: Pacific Panel

1. Contributions to developing CLIVAR science and fit, where appropriate, to the CLIVAR imperatives

Seasonal to Decadal Prediction:

- The PP organized an international workshop on “New strategies for evaluating ENSO processes in climate models” with the main objectives of (a) making an inventory of the existing approaches to evaluate ENSO processes in GCMs; compare, contrast and discuss the relative merits of these; (b) reviewing the potential of methods bridging ENSO theoretical frameworks and GCM modelling; (c) reviewing the observing system and available data for the evaluation of ENSO in GCMs; and, (d) proposing community recommendations and actions (including CMIP5 analysis)

Monsoons:

- PP is coordinating activities studying western boundary currents NPOCE, GAIA, INSTANT-II, OKMC, SPICE and PCCSP.
- NPOCE has been endorsed by CLIVAR and has already made the first of several long cruises on the Northwestern Pacific.
- PP is spearheading new activities to improve our understanding of the South Pacific Convergence Zone (SPCZ). Among these activities was the international workshop on the SPCZ, where the main objectives were to discuss (a) the structure and other properties of the SPCZ; (b) the impact of the SPCZ on the region; (c) the underlying physics of the SPCZ; (d) the variability and trends in SPCZ properties; (e) the ability to simulate the SPCZ using climate models; and, (f) the impact of global warming on the SPCZ to advance the understanding of the structure, physics, properties and impact of the SPCZ together with its simulation.

2. Cooperation with other WCRP projects, outside bodies (e.g IGBP) and links to applications

The panel has discussed at its last meeting a greater engagement with “green” programmes, particularly with PICES. Toshio Suga (PP member) made a brief presentation on the CLIVAR Pacific activities at the 2010 PICES Annual meeting, and proposed possible collaboration between the CLIVAR Pacific Panel and PICES at the POC (Physical Oceanography and Climate Scientific Committee) of PICES. The POC is very interested in co-sponsoring a session with the Pacific Panel possible in the PICES annual meeting in autumn, 2012, which will be held in Hiroshima, Japan. The Pacific Panel may contribute to the ICES-PICES-WCRP symposium during the ocean EXPO-2012, probably through SOC (CLIVAR SSG co-chair and ICPO director are CLIVAR’s representatives) of the symposium. An invitation for a PICES representative to the next panel meeting was also welcomed.

3. Workshops/meetings held

- Workshop on “The South Pacific Convergence Zone: dynamics, impacts and future

changes”, 24-26 Aug 2010, Samoa

- International workshop on North Pacific West Boundary Current dynamics, 31 May – 02 June 2010, Qingdao, China
- NPOCE inauguration meeting, 30 May 2010, Qingdao, China
- International Workshop on ENSO, Decadal Variability and Climate Change in South America, 12-14 October 2010 – Guayaquil, Ecuador.
- 6th Pacific Panel meeting, 15-16 October 2010 – Guayaquil, Ecuador.
- International Workshop: New strategies for evaluating ENSO processes in climate models, 17-19 November 2010, Paris, France

4. New activities being planned, including timeline

- Several review papers proposed/considered: South Pacific Convergence Zone (Scott Power), Pacific Regional climate change synthesis paper (Axel Timmerman), Western Boundary Currents and impact on climate (Lixin Wu, Bo Qiu, Alex Ganachaud, Billy Kessler, Janet Sprintall)

5. Workshops/meetings planned (see ANNEX B also)

- ITF Task Team meeting, early 2012, Indonesia
- 7th Pacific Panel meeting, 29 April – 01 May 2012 – Noumea, New Caledonia.
- NPOCE open science meeting, early 2012.

6. Issues for the SSG

Annex B

Proforma for CLIVAR Panel and Working Group requests for SSG approval for meetings

Requests should be made through D/ICPO (Robert.Molinari@noc.soton.ac.uk) against the following headings:

1. Panel or Working Group: **Pacific Panel**
2. Title of meeting or workshop: **7th Pacific Panel meeting**
3. Proposed venue: Noumea, New Caledonia (in association with the 10th International Conference on Southern Hemisphere Meteorology and Oceanography)
4. Proposed dates: 29 April – 01 May 2012
5. Proposed attendees, including likely number: Panel members + 5 invitees
6. Rationale, motivation and justification, including: relevance to CLIVAR themes & JSC cross cutting topics and any cross-panel/working group links and interactions involved:

Rapid development in the panel science portfolio requires logistic and science coordination. The meeting is relevant/linked to the ITF task force, the monsoon panel, and the IO panel.

7. Specific objectives and key agenda items
 - Advances in understanding of the SPCZ dynamics
 - Coordination of new observation programme (an expansion of NPOCE to include western Pacific, MIXET)
 - ENSO and its response to climate change in CMIP5
 - Pacific climate change science and adaptation programme
 - Coordination of Pacific observations and activities on the ITF
8. Anticipated outcomes (deliverables): Panel report
9. Format: 2.5 days
10. Science Organising Committee (if relevant): Wenju Cai and Alex Ganachaud (panel co-chairs)
11. Local Organising Committee (if relevant): Alex Ganachaud (local panel member), Nico Caltabiano (ICPO)
12. Proposed funding sources and anticipated funding requested from WCRP: US\$ 15K

Annex B

Proforma for CLIVAR Panel and Working Group requests for SSG approval for meetings

Requests should be made through D/ICPO (Robert.Molinari@noc.soton.ac.uk), against the following headings:

1. **Panel or Working Group:** Pacific Panel and Indian Ocean Panels
2. **Title of meeting or workshop:** Indonesian Throughflow Workshop
3. **Proposed venue:** Indonesia
4. **Proposed dates:** early 2012
5. **Proposed attendees, including likely number:**
 - ITF Task Team members
6. **Rationale, motivation and justification, including: relevance to CLIVAR themes & JSC cross cutting topics and any cross-panel/working group links and interactions involved:**

Sustained observational and modeling efforts are needed in the ITF region to provide insight into the long-term behavior and to elucidate the climatic impacts of this complex system in response to future climate change. As the ITF has multiple streams and undergoes significant modification in its stratification en route through the Indonesian seas, a cost-effective, long term monitoring system is no easy matter to design. The ITF research community proposes that an ITF Task Team be established to consider the specifics to evolve such a cost-effective plan. The overarching objective of the ITF Task Team is to identify the scientific gaps in our knowledge of the ITF and develop an integrated strategy towards an internationally sustained ITF observing system.

Development of an ITF plan would benefit from coordination under the auspices of CLIVAR. Despite the importance of the ITF to the earth climate system, in the past issues related to the climate variation within the Indonesian seas have largely been assessed in a fragmented way by the individual CLIVAR Indian and Pacific Panels and the Asian-Australian Monsoon Panel. This is possibly related to the geographical location of the Indonesian archipelago that bridges the Indo-Pacific region, while having a significant impact on the mean and variable circulation within both ocean basins. Coordination of the ITF Task Team under CLIVAR will provide a more formal linkage to these individual panels, and will help emphasize the societal benefits of ITF observations through a better understanding of the connection between the ITF variability with the IOD, ENSO and the monsoon systems.

7. **Specific objectives and key agenda items:**
 - Facilitate international collaboration between observational and modeling efforts, in order to target the urgent gaps towards understanding the ITF variability and maximize the scientific outcome.

8. Anticipated outcomes (deliverables):

A workshop report will be written that outlines the justification and main elements identified as necessary for developing an internationally coordinated sustained monitoring of the ITF.

9. **Format:** 2 and half days meeting.

10. Science Organising Committee (if relevant)

Janet Sprintall, Yukio Masumoto, Wenju Cai

11. Local Organising Committee (if relevant)

Nico Caltabiano (ICPO)

12. Proposed funding sources and anticipated funding requested from WCRP:

US\$ 10K