

SERREAD

Scientific Educational Resources and Experience Associated with the Deployment of Argo Drifting Floats in the South Pacific Ocean

An organisation supported by:

- ✧ NOAA
- ✧ ARGO (Scripps Institute of Technology)
- ✧ IOC/IOC Perth
- ✧ IOI
- ✧ NASA
- ✧ NIWA
- ✧ POGO
- ✧ SOPAC
- ✧ SPREP/PI GOOS



Goal

To generate substantial knowledge, awareness and discussion among Pacific Island students, teachers and communities of the global ocean observing systems, climate change, sea level rise, global warming and the local impacts of these dynamics.

Objectives

- ❖ *Provide a teaching resource that compliments the current teaching curriculum and demonstrates the value of scientific knowledge through realistic and locally relevant applications.*
- ❖ *Up skill teachers in science knowledge and teaching practices*
- ❖ *Teach students the fundamental measurements that describe the physical state of the ocean (temperature, salinity, ocean current), and the exchanges between the ocean and atmosphere of heat, water, and momentum.*
- ❖ *Develop teaching resources that use data gathered by the Argo program.*
- ❖ *Facilitate the interactions involving scientists with students and teachers.*

The Key Tenants:

Develop teacher's knowledge of climate change science and the role of the ocean.



Use workshops that provide opportunities for teacher exploration and discussion

Focus on how children learn.



Build capacity of SEREAD
support people in the
country.



Give teachers the opportunity to try a variety
of learning experiences that will work in their
classrooms.

Provide teachers with
practical accessible
materials to use in their
classrooms and knowledge
of how to use it.



Building Capacity

- ❖ *Training Pacific Island workshop facilitators*
- ❖ *Improving teaching practice*
- ❖ *Use of SEREAD material in larger country based programmes (Fiji, Tonga, Samoa, Vanuatu, Kiribati).*



Resource Material

❖ What is Weather?

Lower Primary School - Years 3 - 6

❖ What is Climate?

Upper Primary School - Years 6 – 10

❖ Oceans Rising? (Under revision)

Lower Secondary School - Years 9 – 11

❖ Teaching and Learning Strategies

Years 3- 13

Teacher Training Workshops

- ❖ ***Rarotonga*** *2002, 2003, 2007*
- ❖ ***Samoa*** *2004, 2005, 2006, 2008,
2009, 2010, 2011, 2012*
- ❖ ***Tonga*** *2009, 2010*
- ❖ ***Tuvalu*** *2012*
- ❖ ***Plans*** *Kiribati, Vanuatu*

The Feedback

“Activities for students and doing the activities for myself.”

“Activities that were challenging and fun.”

“Working together as a team in strengthening sustainability on climate change”

“Great activities not specialised for science. Easy to read/understand.”



“Learning how to really form the basis of teaching a unit in a progressive sequence.”

“The causes of climate change because I understand more about El Nino and La Nina. The cold water experiment which actually illustrates how cold water travels.....”

“Helpful for literacy – able to familiarise in vocabulary and useful information.”

“Good demonstrations and discussion which helped understanding.”

“Language understandable”

“Greater understanding teaching these concepts to children.”



“I learnt more about climate change and cyclones”

“Learnt a lot about a topic I had not enjoyed teaching because I did not understand...”

“I didn't know the sea had bumps.....”

“The materials were useable in schools, light and readily obtainable”

“I am very happy that I learnt the skills and knowledge of how to write a unit and activities of climate change that I will integrate it to other subjects so the children will love to learn.”



“Relevant and effects us all.”