IOGOOS9 Report

IOGOOS Pilot Project: Modeling for Ocean Forecasting and Process Studies (MOFPS)

Nick D’Adamo Pilot Project Leader
IOGOOS MOFPS

Ocean Forecasting

From Ocean Observation → to Large Scale Modelling → to Small Scale Modelling → to Societal Applications
IOGOOS MOFPS

History

IOGOOS-5, 2007 – ocean forecasting talk given (given by Dr David Griffin of CSIRO) on BLUElink Australia.

Advance notice was provided that BLUElink was to extend its 10 x 10 km resolution to ‘global’ in BLUElink ‘Phase 3’.

(....Phase 3 has begun.)
FORECASTING THE ‘UNDERWATER’ WEATHER

Just one example under GODAE OceanView, BLUELlink
Click on the region of interest
Obtain instant 7-day forecast of T, S, Currents, Sea Level anomaly
BLUElink extended to global its 10 km x 10 km resolution grid

This includes coverage of the GOOS Regional Alliance regions of IOGOOS, SEAGOOS, PIGOOS, WAGOOS, + IMOS + SOOS + PacIOOS
IOGOOS response at IOGOOS-5 Phuket
Initiation of IOGOOS Pilot Project: Modeling for Ocean Forecasting and Process Studies

Members wanted pure ocean forecasts at 10x10km

Members also wanted to use the ocean forecast output to ‘drive’ finer scale models (e.g. 1km x 1km and even finer) in their own areas of specific interest:

- coastal lagoons,
- island waters,
- fishing zones,
- upwelling areas,
- high conservation zones (MPAs),
- oceanic aquaculture areas,
- oil/gas exploration/production areas,
- etc
OCEAN SCALE
Compare models against models
A vital aspect to determine model believability and assist in development
(GODAE OceanView to lead)
(IOGOOS and SEAGOOS projects overlap at this scale)

**North IO**
Iran (NW) + India (overall & central) + BOBLME (NE)
(India overall leadership)

**South West IO**
(Mauritius lead)

**North East IO**
(WAGOOS lead)
Series of meetings, discussions, workshops during 2008-2012, including:

• Phuket IOGOOS-5 2007
• IOC Paris, SEAGOOS / IOC WESTPAC liaison + opportunistic meetings 2007-11
• Hyderabad IOGOOS-6 2008
• Perth GOOS SSC meeting workshop 2009 (included SEAGOOS project reps)
• Phuket SEAGOOS workshop 2009
• Perth (x2) IOGOOS-7 2010 (incl. SEAGOOS project reps)

• Washington GEF meeting (Nick Dadamo) 2010

• Tehran IOGOOS-8 2011 (Draft project plan developed, discussed and revised Feb 2011)

• Perth WAGOOS meeting 2011

• Perth MOFPS workshop (+ neighbouring GRAs and ROOSs) March 2012

• GEF International Waters Division Science Conference Bangkok 24-26 Sep 2012 (introduction of the MOFPS philosophy and concept as a plausible GEF pursuit) Led to invitation to submit a 2-page concept doc to GEF IW

IOC Perth Office continuing to provide sponsorship and facilitation of the development of a project plan
MOFPS Perth March 2012, included
• Sth Africa
• Kenya
• Mauritius
• I.R. Iran
• Malaysia (SEAGOOS)
• India
• Thailand (BOBLME)
• Samoa (PIGOOS)
• Australia (IOC, BoM, CSIRO, IMOS, SOS)
Project Report Jan 2011

Distributed

March 2012 MOFPS workshop (Perth) report

In prep
Most recent project report Jan 2011

Includes specification of specific objectives for each demo area ...

These vary widely depending on the state of readiness in respect to capacity of members and state of observing systems and modelling capacities in each locality.

Also included an first estimate of funds needed for each demo area ...

~$5 million USD per demo area

Provided input to AusAID ‘ocean forecasting / modelling CB application’ (ref Andreas Schiller, morning talk, IOGOOS9, 19-10-12)
For consideration.

• We have under IOGOOS IOP, SIBER, IRF, Rem Sens CB projects defined....

• Shall we move the IOGOOS Pilot Project: MOFPS to ‘project’ status?

• Should IOGOOS write to GEF, IOR-ARC to raise awareness about this this concept of CB in the area of MOFPS ..... Emphasising how important IOGOS communities believe it is for societal benefit?

• NB related AusAID application ... Andreas to provide information now....
Workshop on *Capacity Building to Progress, Validate and Apply Indian Ocean Forecasting Systems (all IOR-ARC countries)*

**Audience:** Indian Ocean Rim Association for Regional Cooperation (IOR-ARC)

*Builds on and is linked to IOGOOS/IOC Pilot Project: Modelling for Ocean Forecasting and Process Studies (MOFPS)*
Implementation Partners:

(1) CSIRO, contact: Dr Andreas Schiller
(2) UNESCO (IOC); contact: Dr Nick D’Adamo, Perth
(3) Bureau of Meteorology, Centre for Australian Weather and Climate Research, contact: Dr Gary Brassington
(4) GODAE OceanView (www.godae-oceanview.org)

Counterpart Organisations:

(1) Indian National Centre for Ocean Information Services (INCOIS), Indian Ministry of Earth Sciences, Hyderabad, contact: Dr Satheesh Shenoi, Director INCOIS
(2) South African Weather Services, Cape Town, contact: Dr Johan Stander, Regional Manager, Co-President JCOMM
Key Objectives

- Identify the leading societal needs/drivers for each country that could be met through the proposed development in Indian Ocean forecasting, data analysis and modelling capacity.

- Guide the development of a detailed work plan and proposal for a major effort in support of marine capacity building within IOR-ARC countries.
thank you