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Report from Australia to GHRSSST-XV

Helen Beggs¹, Ian Barton², Christopher Griffin³, Leon Majewski³ and Grant Smith³ and Atiur Siddique³

¹Centre for Australian Weather and Climate Research, Bureau of Meteorology, Melbourne, Australia

²Hobart, Australia

³Bureau of Meteorology, Melbourne, Australia

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GHRSSST Activities in 2013/2014

- IMOS: HRPT AVHRR SST processing system upgraded and reprocessing back to 1992 nearly complete
- BLUElink: New GHRSSST products ingested into Bureau's operational L4 SST analyses and ocean models
- COSPPac: Reynolds and MUR L4 products used in COSPPac Project
- BoM: Collaborating with NOAA/NESDIS on VIIRS L3U product



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Australian HRPT AVHRR Products

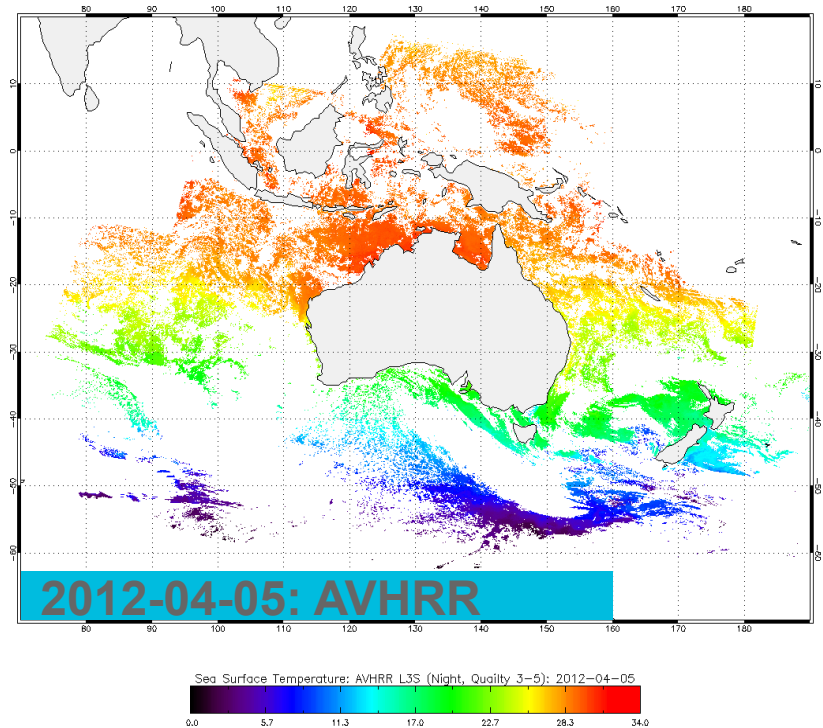


AIM: Reprocess HRPT AVHRR data back to 1992 from Australian and Antarctic ground stations to GDS2 L2P, L3U, L3C and L3S SSTskin and day+night L3S SSTfnd files

2013/2014 Highlights:

- Transitioned from BoM 2011 regression algorithms to new MCSST/NLSST-like algorithms (no analysis/background SST)
- Reprocessing from 1992 using new algorithms commenced (expect to complete July 2014).
- Added foundation SST day+night L3S products (1, 3, 6, 14 day and 1 month periods)
- Southern Ocean domain added in addition to Australian domain products

Multi-Sensor Night-only L3S





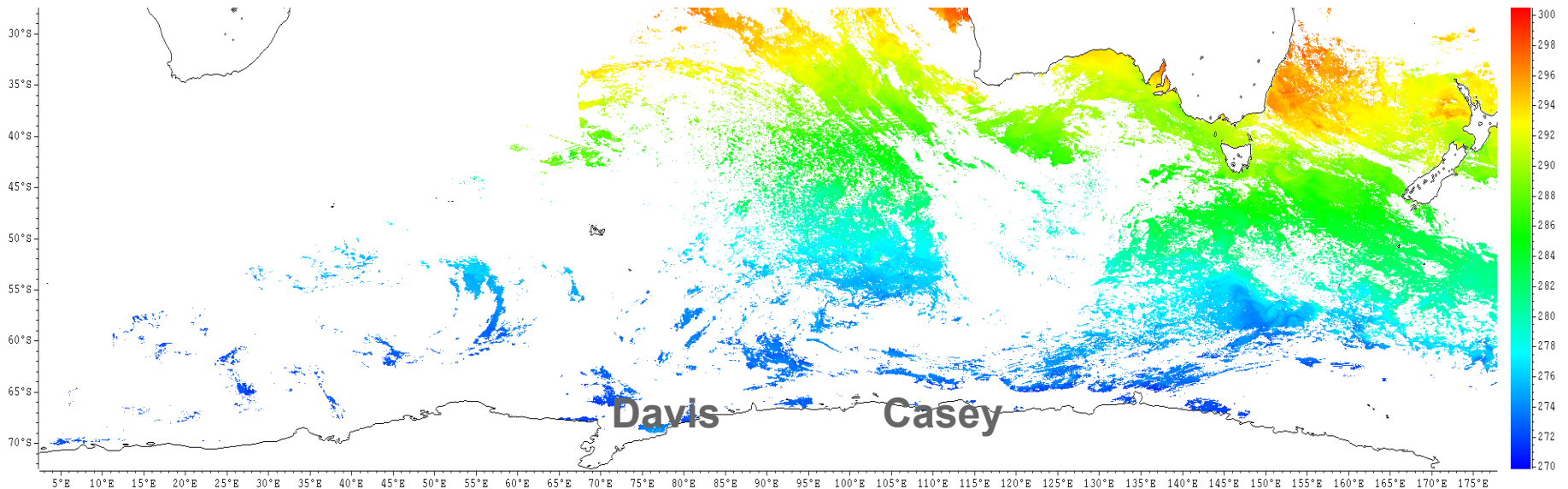
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Southern Ocean Domain AVHRR SST Products



- Date range: 1992 – 2014 (nearly finished reprocessing)
- Domain: 2.5°E to 202.5°E, 77.5°S to 27.5°S
- Products available:
 - L3U – Single orbit skin SST (at ~ 10 micron depth)
 - L3S-01day – day+night foundation SST from multiple satellites (updated daily)
 - L3S-1month – day+night foundation SST from multiple satellites (updated monthly)

Multi-Sensor Day+Night 1-day L3S

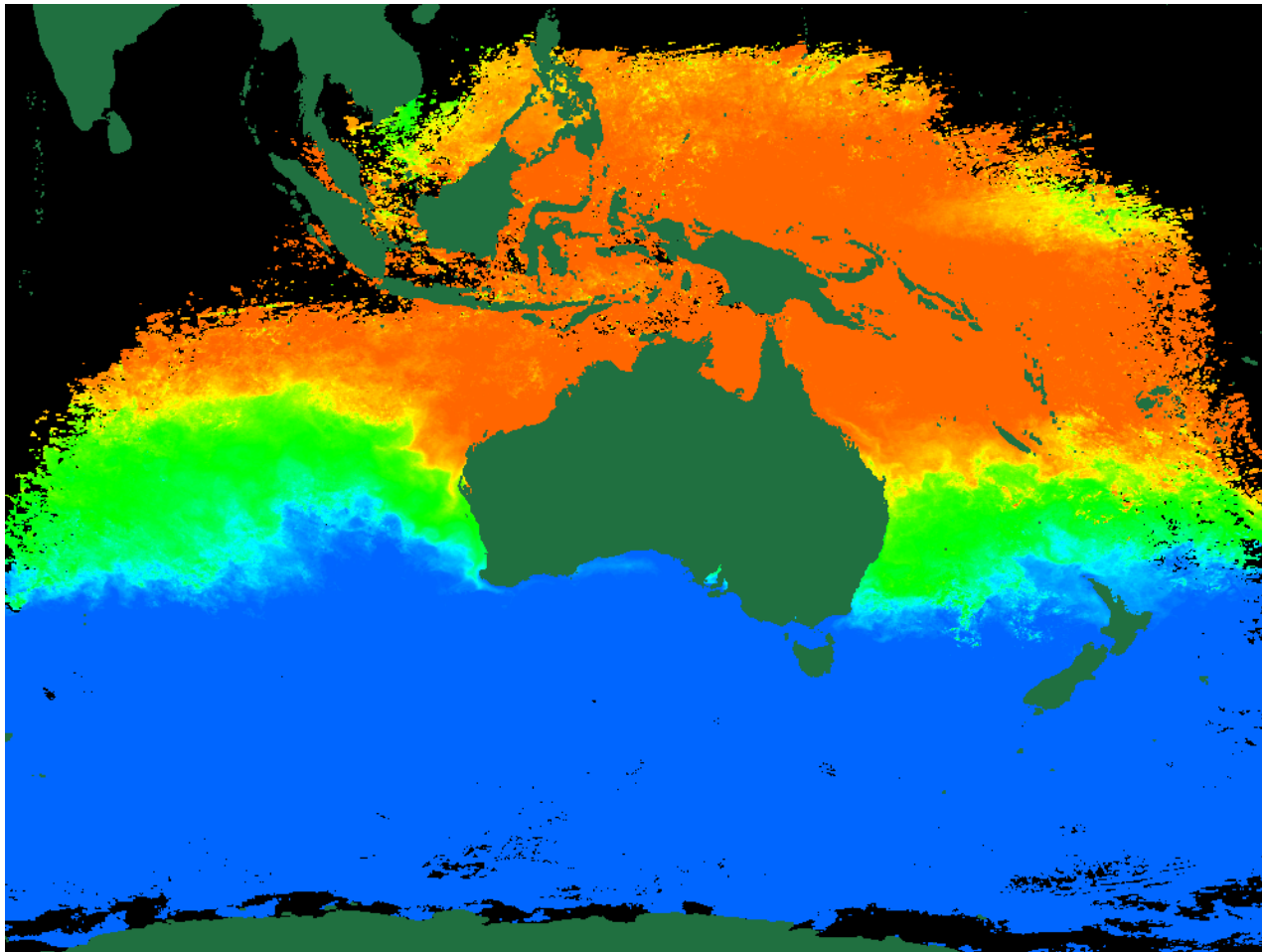




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Coverage – 1 month day+night L3S Australian domain (with Antarctic Data)

February 2008



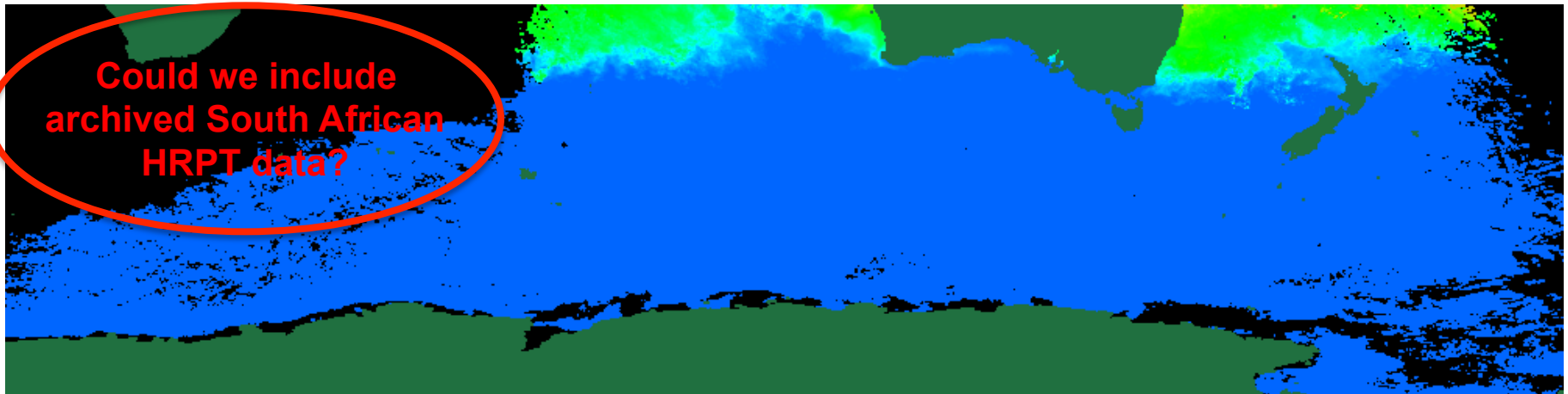


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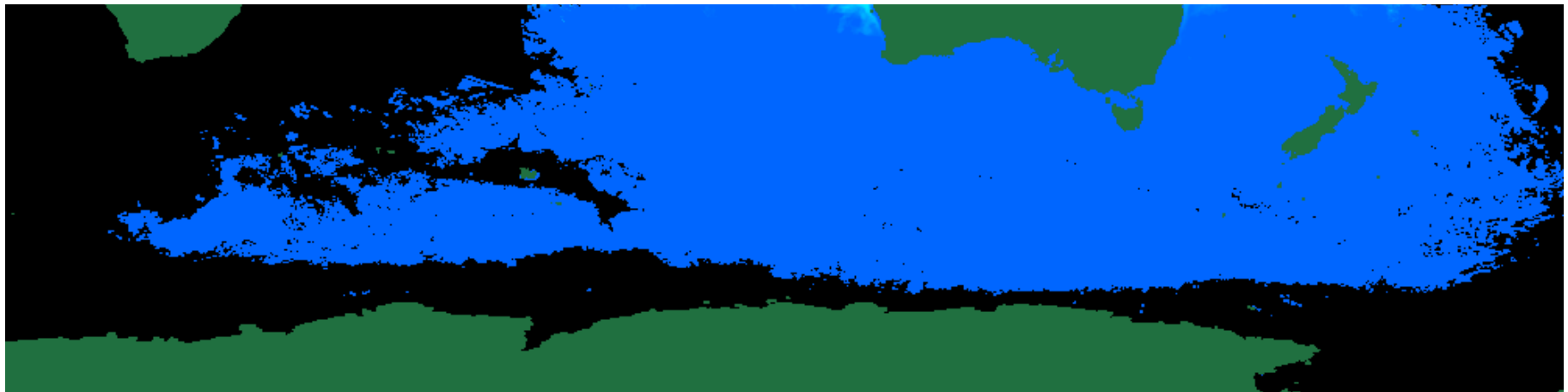
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Coverage – 1 month day+night L3S Southern Ocean Domain

February 2008



August 2008





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Access to Australian domain data:

<ftp://aodaac2-cbr.act.csiro.au/imos/GHRSST>

Access to pre-release Antarctic domain data:

Contact h.beggs@bom.gov.au or ghrsst@bom.gov.au

Happy to get Beta users and feedback!

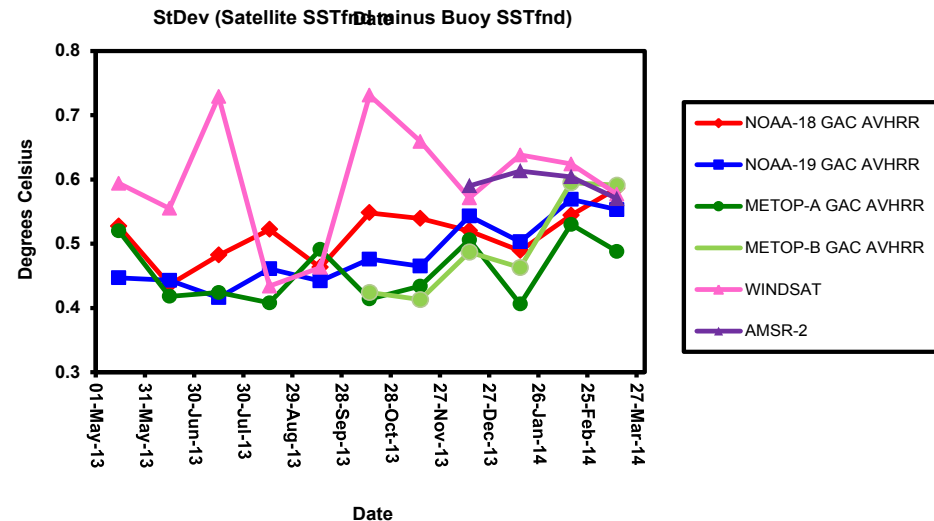
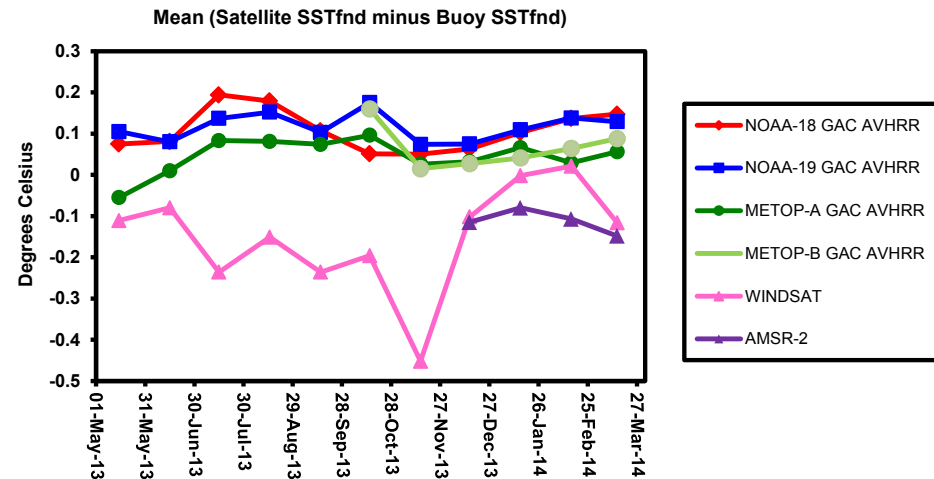
Further information:

<http://imos.org.au/sstproducts.html>



Addition of new GHRSSST data streams into operational systems

- NAVOCEANO's GAC AVHRR L2P data from METOP-B added to SST analyses (RAMSSA and GAMSSA) and ocean model (OceanMAPS)
- Currently testing ingestion of JAXA's near real-time AMSR-2 L2P files in addition to REMSS WindSat L2P_gridded SST





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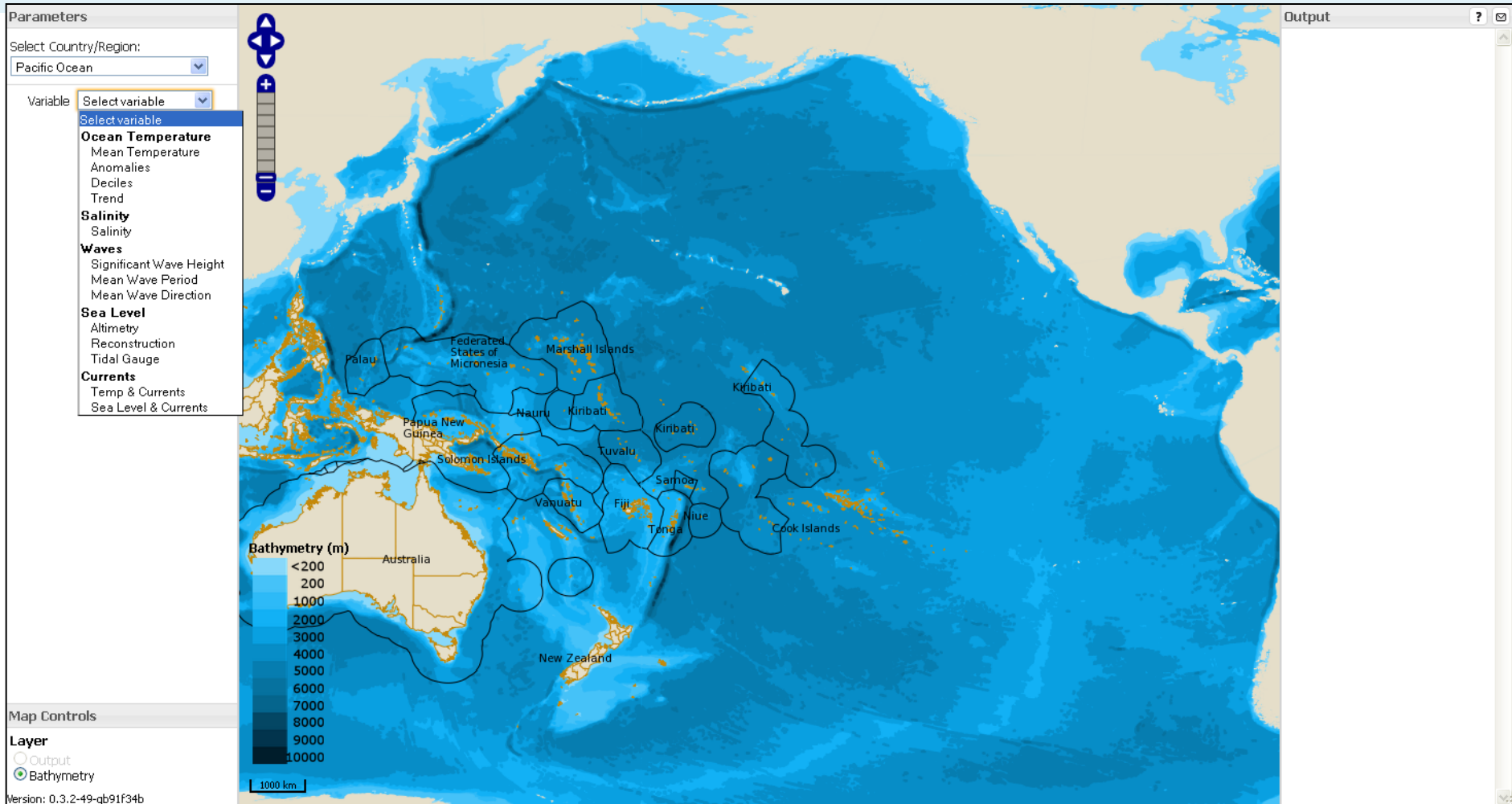
Climate and Oceans Support Program in the Pacific (COSPPac) Project

- One aim is the continued development of seasonal prediction capacity in Pacific Island National Meteorological Services
- Includes development of ocean climate products and services for specific applications such as Coral Reef Management and Fisheries Management, provided via an Ocean Maps Portal at <http://www.bom.gov.au/cosppac/comp/ocean-portal/index.shtml>
- Currently use archived and real-time NCDC Reynolds L4 SST but also investigating using JPL MUR L4 SST analyses for fisheries applications



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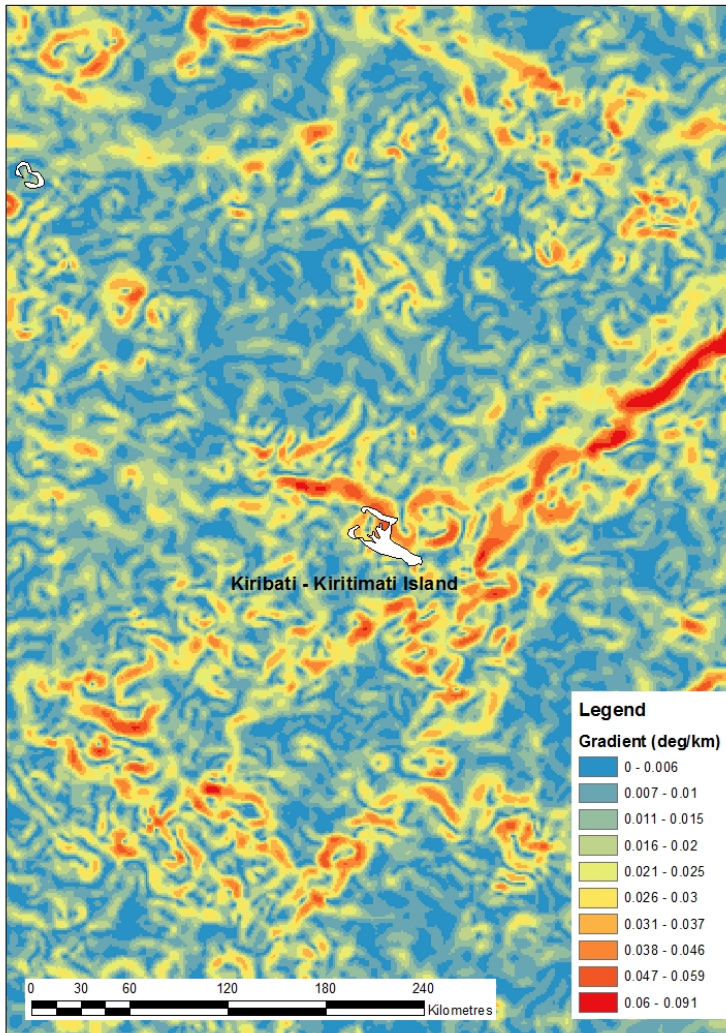
COSPPac Ocean Maps Portal – Provides Ocean RT and Climate Data



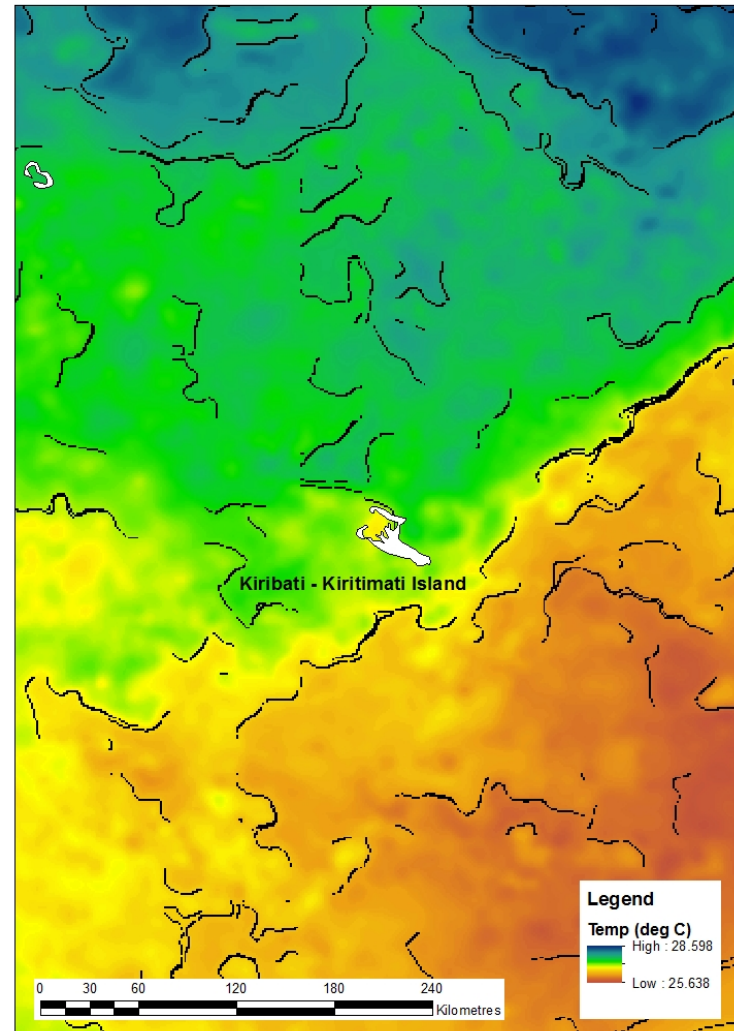


Investigating best use of GHRSSST L4 products for real-time fisheries applications

MUR SST Gradients -13th December 2013



MUR SST -13th December 2013
(With Edge Detection Cayula & Cornillon, 1992)





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Collaboration with NOAA/NESDIS on VIIRS L3U

- **Motivation:** Enable ACSPO VIIRS GHRSSST products to be more easily accessed by agencies outside the U.S.
- BoM/IMOS L2P → L3U code modified to convert ACSPO VIIRS GDS2 L2P files to 0.01° or 0.02° gridded GDS2 L3U files to reduce data volumes
- Code provided to NOAA/ACSPO staff for testing
- Aim is for operational ACSPO VIIRS L3U product by end of 2014



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Plans for 2014/2015

- Install ISAR SST radiometer on RV Investigator and develop new IMOS SSTskin data stream
- Ingest AMSR-2 and VIIRS GHRSSST products into BoM operational SST analyses and ocean models
- Produce IMOS direct broadcast GHRSSST products from METOP-B and VIIRS