

# CATALOGUE FOR THE 123 PORTAL (AUSTRALIAN OCEAN DATA NETWORK)

## IMOS - SRS - MODIS - 01 day - Net Primary Productivity (GSM model and Eppley-VGPM algorithm)

[Metadata](#) | [Metadata \(XML\)](#)  
|

Title	IMOS - SRS - MODIS - 01 day - Net Primary Productivity (GSM model and Eppley-VGPM algorithm)
Date	2014-11-04T00:00:00
Date type	Creation
Abstract	<p>The Aqua satellite platform carries a MODIS sensor that observes sunlight reflected from within the ocean surface layer at multiple wavelengths. These multi-spectral measurements are used to infer the concentration of chlorophyll-a (Chl-a), most typically due to phytoplankton, present in the water. Modelling is then used to compute an estimate of the Net Primary Productivity (NPP).</p> <p>The model used is based on the standard vertically generalised production model (VGPM). The VGPM is a "chlorophyll-based" model that estimates net primary production from chlorophyll using a temperature-dependent description of chlorophyll-specific photosynthetic efficiency. For the VGPM, net primary production is a function of chlorophyll, available light, and the photosynthetic efficiency. The only difference between the Standard VGPM and the Eppley-VGPM is the temperature-dependent description of photosynthetic efficiencies, with the Eppley approach using an exponential function to account for variation in photosynthetic efficiencies due to photoacclimation. The similarity between these models (VGPM vs E_VGPM) is described more extensively in a paper by Elena-Carr et al (2006.). VGPM is a Depth Integrated Model(DIM) described by Behrenfeld and Falkowski (1997), with modification due to Eppley (1972) as implemented by Antoine and Morel (1996).</p> <p>The data are produced from the same data stream as the MODIS Chla_oc3 and Chl_gsm data set (<a href="https://catalogue-imos.aodn.org.au/geonetwork/srv/en/metadata.show?uuid=d7a14921-8f3f-4522-9a54-e7d1df969c8a">https://catalogue-imos.aodn.org.au/geonetwork/srv/en/metadata.show?uuid=d7a14921-8f3f-4522-9a54-e7d1df969c8a</a> and <a href="https://catalogue-imos.aodn.org.au/geonetwork/srv/en/metadata.show?uuid=f73daf07-eb81-4995-a72a-ca903834509f">https://catalogue-imos.aodn.org.au/geonetwork/srv/en/metadata.show?uuid=f73daf07-eb81-4995-a72a-ca903834509f</a>). The data have been remapped from satellite projection into a geographic (Latitude/Longitude axes) projection and are presented as a sequence of daily mosaics covering the region (80 &lt;= Longitude &lt;= 180, -60 &lt;= Latitude &lt;= +10) formatted as CF-compliant netCDF files. It should be noted that the data are not processed until the definitive spacecraft ephemeris becomes available, usually 12-24 hours after the overpass. This means that the geolocation should be of a uniformly high standard. Calibration and reprocessing caveats outlined in the description of the Chl_gsm product apply equally to these data.</p> <p>There are multiple retrieval algorithms for estimating Chl-a. These data (eppley_npp_chl_gsm) use the Garver-Siegel-Maritorena (GSM) method implemented in the SeaDAS processing software l2gen and described in “Chapter 11, and references therein, of IOCCG Report 5, 2006, (<a href="http://ioccg.org/wp-content/uploads/2015/10/ioccg-report-05.pdf">http://ioccg.org/wp-content/uploads/2015/10/ioccg-report-05.pdf</a>). This product is recommended for use in the VGPM model. The product Eppley_NPP_chl_oc3 is experimental and was created for comparison purposes. It should only be used with full understanding of the algorithms. If you do not know which product to use, then go with Eppley_NPP_chl_gsm.</p>

Metadata language	eng
Character set	UTF8
Hierarchy level	Dataset

### OnLine resource

Linkage	<a href="https://catalogue-imos.aodn.org.au:443/geonetwork/srv/en/metadata.show?uuid=27cc65c0-d453-4ba3-a0d6-55e4449fee8c">https://catalogue-imos.aodn.org.au:443/geonetwork/srv/en/metadata.show?uuid=27cc65c0-d453-4ba3-a0d6-55e4449fee8c</a>
Protocol	WWW:LINK-1.0-http--metadata-URL
Linkage	<a href="http://thredds.aodn.org.au/thredds/catalog/IMOS/SRS/OC/gridded/aqua/P1D/catalog.html">http://thredds.aodn.org.au/thredds/catalog/IMOS/SRS/OC/gridded/aqua/P1D/catalog.html</a>

Protocol	WWW:LINK-1.0-http--link
Linkage	http://imos.org.au/srs.html
Protocol	WWW:LINK-1.0-http--link
Linkage	https://portal.aodn.org.au/search?uuid=27cc65c0-d453-4ba3-a0d6-55e4449fee8c
Protocol	WWW:LINK-1.0-http--link
Linkage	http://geoserver-123.aodn.org.au/geoserver/ncwms
Protocol	IMOS:NCWMS--proto
Linkage	https://processes.aodn.org.au/wps
Protocol	OGC:WPS--gogoduck
Linkage	https://help.aodn.org.au/web-services/gogoduck-aggregator/
Protocol	WWW:LINK-1.0-http--link

Point of contact

Individual name	King, Edward
Organisation name	CSIRO Oceans and Atmosphere - Hobart
Position name	Facility Leader
Role	Resource provider
Topic category	Oceans

Keyword

Keyword	Oceans   Ocean Optics   Ocean Color
Keyword	Oceans   Ocean Chemistry   Chlorophyll
Type	Theme
Keyword	Ocean Colour Sub-Facility, Integrated Marine Observing System (IMOS)
Type	Discipline
Keyword	Global / Oceans   Indian Ocean
Keyword	Global / Oceans   Southern Ocean
Keyword	Global / Oceans   Pacific Ocean
Keyword	Marine Features (Australia)   Great Australian Bight, SA/WA
Keyword	Marine Features (Australia)   Bass Strait, TAS/VIC
Keyword	Regional Seas   Tasman Sea
Keyword	Regional Seas   Coral Sea
Keyword	Regional Seas   Solomon Sea
Keyword	Regional Seas   Arafura Sea
Keyword	Regional Seas   Timor Sea
Keyword	Regional Seas   Banda Sea
Keyword	Regional Seas   Java Sea
Keyword	Regional Seas   Philippine Sea
Keyword	Regional Seas   Celebes Sea
Keyword	Regional Seas   South China Sea
Keyword	Marine Features   Strait of Malacca
Keyword	Regional Seas   Gulf of Thailand
Keyword	Regional Seas   Andaman Sea

Type	Place
Keyword	Countries   Australia
Keyword	Countries   New Zealand
Keyword	States, Territories (Australia)   Western Australia
Keyword	States, Territories (Australia)   South Australia
Keyword	States, Territories (Australia)   Victoria
Keyword	States, Territories (Australia)   Tasmania
Keyword	States, Territories (Australia)   New South Wales
Keyword	States, Territories (Australia)   Queensland
Keyword	States, Territories (Australia)   Northern Territory
Keyword	Countries   Papua New Guinea
Keyword	Countries   Indonesia
Keyword	Countries   Timor-Leste
Keyword	Countries   Singapore
Keyword	Countries   Malaysia
Keyword	Countries   New Caledonia
Keyword	Countries   Fiji
Keyword	Countries   Vanuatu
Keyword	Countries   Philippines
Keyword	Countries   Vietnam
Keyword	Countries   Thailand
Type	Place

## Extent

### Geographic bounding box

West bound	75
East bound	179.9
South bound	-70
North bound	10

## Lineage

Statement	<p>The filenames are of the form Ayyyymmdd.L2OC_BASE.aust.npp_vgpm_eppley_gsm.nc4, where 'A' denotes MODIS/Aqua, 'yyyymmdd' is the UTC date of the mosaic, 'L2OC_BASE' indicates the processing tree branch, 'aust' indicates a whole of Australia mosaic and the 'nc4' suffix is for netCDF4 format data files. The NPP product based on chl_oc3 differs only in that 'npp_vgpm_eppley_gsm' is replaced in the filename by 'npp_vgpm_eppley_oc3'.</p> <p>****NETCDF FILENAMING CONVENTION FOR AQUA FILES****</p> <p>The filenaming scheme puts a lot of useful metadata into the filename with the aim of making it easy to parse by machine and eye.</p> <p>Folder D-20120802.G-0720.P-aqua.C-20120802082919.T-d263047n000000.S-m.E-definitive.Z-ok.R-20120802185051/ --</p> <p>Folder D-20120802.G-0715.P-aqua.C-20120802111359.T-d549724n000000.S-mn.E-definitive.Z-ok.R-20120802185343/ --</p> <p>Folder D-20120802.G-0710.P-aqua.C-20120802111224.T-d549724n000000.S-mn.E-definitive.Z-ok.R-20120802185344/ --</p> <p>Folder D-20120802.G-0545.P-aqua.C-20120802101905.T-d549724n000000.S-na.E-definitive.Z-ok.R-20120802185437/ --</p>
-----------	---

	Folder D-20120802.G-0540.P-aqua.C-20120802101900.T-d549724n000000.S-cmna.E-definitive.Z-ok.R-20120802185314/ -- Folder D-20120802.G-0535.P-aqua.C-20120802101855.T-d549724n000000.S-cmna.E-definitive.Z-ok.R-20120802185436/ -- Folder D-20120802.G-0405.P-aqua.C-20120802084036.T-d549724n000000.S-qna.E-definitive.Z-ok.R-20120802185313/ -- Folder D-20120802.G-0400.P-aqua.C-20120802084028.T-d549724n000000.S-cqna.E-definitive.Z-ok.R-20120802185314/
	Split the names on '.', and then you have NAME-VALUE pairs where  D = GMT Date G = GMT Acquisition P = Platform C = Creation date/time (yyyymmddhhmmss) T = number of modis packet types (d=day packets, n=night packets) S = contributing reception stations (a=Alice Springs, c=Crib Pt, m=Murdoch, q=AIMS, n=NASA DAAC) E = Ephemeris (predicted or definitive) Z = L1B processing status (should always be ok for these data) R = date/time of processing of L2 Chl granule (but I forget what R stands for)

Resource constraints

Use limitation	Data, products and services from IMOS are provided "as is" without any warranty as to fitness for a particular purpose.
File identifier	27cc65c0-d453-4ba3-a0d6-55e4449fee8c
Metadata language	eng
Character set	UTF8

Metadata author

Organisation name	Integrated Marine Observing System (IMOS)
Role	Distributor
Date stamp	2019-01-08T13:47:38