

Report of the Essential Climate Variable (ECV) Splinter Group



Definitions

Climate Data Record (CDR) is a time series of measurements of sufficient length, consistency, and continuity to determine climate variability and change. From U.S. National Academy of Sciences report.

ECV is the “measurement” (see above), but ECV and CDR seem to be used interchangeably.

Mark Dowell Provided Context!

ACRONYM soup

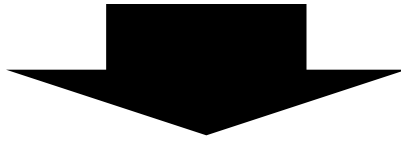
GCOS
CGMS
GFCS
GEOSS
IPCC
IOCCG
CEOS
WCRP
GEO
GOOS
OCR-VC

UN Suits



External Requirements
e.g. GCOS

IOCCG and OCR-VC Filter



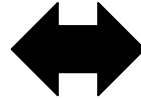
IOCCG Level 1 Requirements Report



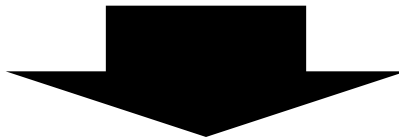
International Network for Sensor Inter-comparison and Uncertainty assessment (INSITU-OCR)



IOCCG Standing Task Team on ECV Assessment



Roadmap for sustained OCR-ECV production



OCR Climate Data Records

IOCCG Essential Climate Variable (ECV) Task Team

J. Yoder and N. Hoepffner- co chairs

*Members: S. Henson, H. Murakami, S. Maritorena, B. Franz,
M. Wang, E. Kwiatkowska, F. Melin, A. Mangin and H. Loisel*

*Charge to the Committee: How to produce basin to global
scale ECV/CDR time series of ocean color products (specifically
 nL_w (Rrs) and derived products) for climate-related studies.*



International Efforts to Produce Time Series

NASA-GSFC is producing L_w and Chl time series involving multiple sensors (SeaWiFS, Aqua, Terra and MERIS).

MEaSURES (NASA-funded) uses the GSM model to calculate inherent optical properties (IOPs) from SeaWiFS, Aqua and MERIS data.

GLOBColour is also using GCM model to produce a time series of merged data from SeaWiFS, Aqua and MERIS data at 4.6km resolution.

ESA's CCI program is producing a time series based on SeaWiFS, Aqua and MERIS data (F. Melin's talk).

Next Steps

Common scheme to map Longhurst provinces onto larger areas such as oligo, meso and eutrophic waters.

Groups will all compare Globcolour/MEASURES, CCI and NASA products. NASA will make all the data available to participants. Compare products from same sensor produced by different methods, as well as compare products from different sensors produced using the same methodology.

Standard metrics for comparisons include correlation (two units: reflectance and as well as mean difference) and Taylor diagrams to compare trend variability.

Use CCI method for band shift.

Interaction between ocean colour and biogeochemical modelling communities: What can we learn from each other?

Stephanie Dutkiewicz

(with input from John Dunne, Watson Gregg and
Stephanie Henson)



'How does the numerical modeling community use ocean colour?

1) What products are used?

- limited types of products

2) How are these products used?

A) end users:

- mostly evaluation Chl/PP

B) synthesis:

- combining ocean colour and models to "fill in" in space and time for missing data

C) feedback:

- models can help inform ocean colour requirements and limitations