Earth Syst. Sci. Data Discuss., author comment AC4
https://doi.org/10.5194/essd-2022-159-AC4, 2022

Reply on RC5

André Valente et al.

Author comment on "A compilation of global bio-optical in situ data for ocean colour satellite applications – version three" by André Valente et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2022-159-AC4, 2022

Comment 1

The paper describes a compilation of bio-optical in situ data with global coverage, which spans from 1997, now to 2021 (i.e. extended from 2018 to 2021). As this period corresponds to a period of a continuous satellite ocean-colour data record, this is a valuable contribution for validation of satellite data from various missions, including the new ESA's Sentinel-3 OLCI and NOAA-20 VIIRS. The work is an update to data originally published in Valente et al., 2019.

Measurements of the following variables were considered: remote sensing reflectance, chlorophyll-a concentration, algal pigment absorption coefficient, detrital and coloured dissolved organic matter absorption coefficient, particle backscattering coefficient, diffuse attenuation coefficient for downward irradiance and total suspended matter.

As one of the largest data set collections of chlorophyll-a concentrations ever made public, it becomes a reference for the climate and biological scientific communities concerned with Ocean Colour. The primary objective is thus to make the measurements easily accessible by the broader scientific community.

Response

Thank you for the comment

Comment 2

As mentioned by another reviewer, the data set could benefit from being available in NETCDF format, these days accessable to wider audience.

Response

The original CSV text tables were converted to the NETCDF format and supplied as auxiliary files. The data files in netCDF format are now available from PANGAEA.

Comment 3

In addition, this reviewer suggest to make use of modern document file tools to generate

a map with the measurement values available by interactive cursor pointing (over the map). Alternatively, the authors could consider making the data set available in tools such as “NASA WORLDVIEW” and/or the European “Ocean Virtual Laboratory”. This would make a nice addition to the publication.

Response

We were unable to provide a bespoke visualisation due to completion of this part of the project; however, by providing NETCDFs researchers may perform what the reviewer suggests by ingesting the data into a visualisation system of their choice, using subsets where appropriate, relevant to their own applications.