

GHG-CCI QSR April-June 2017

1. Overall progress

During the reporting period the project proceeded as planned. No major issues have been identified. The main part of the project ended successfully and as planned in March 2017 with the delivery of the last data sets (“CRDP4”) and its documentation (see previous report and Sect. 2). Ongoing are some work packages related to specific aspects (e.g., finalizing technotes on preparing for S5p XCH₄ retrieval, on an update of the estimation of the European carbon sink using the last data set, etc.). These workpackages will end in December 2017.

As already explained in the previous report, some GHG-CCI team members are since 1st of November 2016 part of C3S (<https://climate.copernicus.eu/>) via project “Production of Essential Climate Variable Datasets based on Earth Observations: Greenhouse Gases (carbon dioxide and methane) (C3S_312a_Lot6)” led by Univ. of Bremen. This C3S project is essentially the operational continuation of GHG-CCI and the GHG-CCI data set will be extended in time via this C3S project. Not covered are R&D aspects, which will hopefully be covered in the future via CCI+.

2. Final results including Climate Assessment Report (CAR)

The final results are documented in two major documents which are publicly available via the GHG-CCI website:

- Product Validation and Intercomparison Report (PVIR) for CRDP4 (PVIR5, 9-Feb-2017, 253 pages, http://www.esa-ghg-cci.org/?q=webfm_send/352)
- Climate Assessment Report (CAR) for CRDP4 (CARv4, 28-Mar-2017, 96 pages, http://www.esa-ghg-cci.org/?q=webfm_send/385)

Peer-reviewed publications: The publication list is also given on the GHG-CCI website: <http://www.esa-ghg-cci.org/> -> Publications (publications using GHG-CCI data sets are marked with (*)).

3. Outreach to the scientific community

Primarily via peer-reviewed publications (see Sect. 2. and 4.1) and conference and workshop participation (e.g., EGU Vienna, IWGGMS-13 Helsinki, European GEO Workshop Helsinki).

4. Technical information

4.1 Publications since last QSR:

Buchwitz, M., Schneising, O., Reuter, M., Heymann, J., Krautwurst, S., Bovensmann, H., Burrows, J. P., Boesch, H., Parker, R. J., Somkuti, P., Detmers, R. G., Hasekamp, O. P., Aben, I., Butz, A., Frankenberg, C., Turner, A. J., Satellite-derived methane hotspot emission estimates using a fast data-driven method, *Amos. Chem. Phys.*, 17, 5751-5774, doi:10.5194/acp-17-5751-2017, 2017.

Reuter, M., M. Buchwitz, M. Hilker, J. Heymann, H. Bovensmann, J. Burrows, S. Houweling, Y. Liu, R. Nassar, F. Chevallier, P. Ciais, J. Marshall, and M. Reichstein, 2016: How much CO₂ is taken up by the European terrestrial biosphere?, *Bull. Amer. Meteor. Soc. (BAMS)*, doi:10.1175/BAMS-D-15-00310.1, 24 April 2017, 665-671, 2017.

4.2 Number of users

Number of users (mid 2011 to 30-June-2017): 615 (54 during reporting period).

*** End of Report ***