



GROUP ON
EARTH OBSERVATIONS



A QUALITY ASSURANCE
FRAMEWORK FOR
EARTH OBSERVATION

QA4EO Workshop: Providing Harmonised Quality Information in Earth Observation Data by 2015

Tuesday 18th – Thursday 20th October 2011

Hosted by



Centre for Calibration of Satellite Instrumentation (CCSI)

Harwell Oxford, United Kingdom

Agenda

Version 1.0

The workshop will present and discuss data quality assurance implementation examples across a wide variety of societal benefit areas. In particular how quality information is derived, maintained and presented following the QA4EO principle that “all data and derived products must have associated with them a Quality Indicator (QI) based on documented quantitative assessment of its traceability to community agreed (ideally SI) absolute reference standards”.

Examples will be drawn from a broad cross-section of disciplines that span from global modelling and systems of distributed sensors to local environmental monitoring and small-scale field-based observations. Best practices within each community will be discussed with the ultimate aim of addressing any existing gap(s) and necessary improvements to achieve the implementation of QA4EO.

This event will establish a roadmap of key objectives to 2015 that will cover technical, coordination and governance aspects of QA4EO.

In order to steer the discussions and focus on finding answers, we would request that upon registering, participants identify key issues that they feel need to be discussed at the workshop.

The workshop will be chaired by GEO and hosted by RAL Space, Centre for Calibration of Satellite Instrumentation (CCSI).



Tuesday 18th October

Setting the scene

Session Chair: Yasukini Okubo – (GEO Secretariat)

Facilitator: Pascal Lecomte (ESA)

This session is to set the context of the workshop by providing a broader perspective on why QA4EO is essential and the current status of activities.

09:00 - Registration and Coffee

10:00 - Welcome and Introduction from RAL Space – Chris Mutlow (RAL)

10:20 – GEO and QA4EO – Yasukini Okubo – (GEO Secretariat)

10:50 - European Environment Agency Perspectives - Jaqueline McGlade –(EEA director)

11:20 – US Environment Protection Agency Perspectives – Gary Foley – (EPA)

11:50 – IEEE and QA4EO – Irwin Alber (IEEE)

12:30 - 13:30 Lunch

13:30 – Status of QA4EO activities – Nigel Fox – (NPL)

14:00 – QA4EO and Long-Term Data Preservation – Bojan Bojkov – (ESA)

14:30 – Metadata Model –Experience of Preserving Diverse Information as well as Data – Charlotte Pascoe – (CEDA UK)



Case Study 1 - Forest Carbon Tracking
Session Chair: Giovanni Rum (GEO)
Facilitator: Greg Stensaas (USGS)

15:00 - Tea

15:30 - Overview of requirements for FCT - Giovanni Rum (GEO)

16:00 – Shaun Quegan (Centre for Terrestrial Carbon Dynamics, University of Sheffield)

16:30 - Dynamic modelling of the carbon cycle in forests: Data needs and uncertainty quantification - Marcel van Oijen– (Centre for Ecology & Hydrology, Edinburgh)

17:00 - Led discussion of the key challenges in applying QA4EO to the Forest Carbon Tracking domain: where are the blockages, what are the specific needs in this domain, what is needed to move forward?

17:30 – 19:00 Poster Session 1



Wednesday 19th October

Case Study 2 – Atmosphere and Climate Change

**Session Chair: Albrecht von Barga (DLR Space
Administration)**

Facilitator: Greg Leptoukh (NASA)

09:00 – Introduction (Session Chair)

09:10 – Remote sensing Level 2+ data quality: NASA overview- Greg Leptoukh (NASA)

09:40 - Quality Indicators in GSICS Satellite Inter-Calibration Products – Jerome Lafeuille (WMO)

10:10 – Coffee

10:30 - QA4EO and the Remote Sensing of Atmospheric Composition– Jean Christopher Lambert (BIRA)

11:00 – Confronting Climate Models with Earth Observation Data – Peter Braesicke (University of Cambridge)

11:30 – Quality and the GMES Atmospheric Service – Anne De Rudder (BIRA)

12:00 - Lead discussion of the key challenges in applying QA4EO to the Atmosphere and Climate domain: where are the blockages, what are the specific needs in this domain, what is needed to move forward?

12:30 - 14:00 Lunch



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Case Study 3 – Biodiversity
Session Chair: Dan Cornford (Aston University)
Facilitator: Lucy Bastin (Aston University)

14:00 - Overview of Quality Requirements in Global Biodiversity Monitoring –
Samy Gaiji (GBIF)

14:30 – Land Cover Validation – Joanne Nightingale (NASA)

15:00 – Tea

15:30 – Impact of Uncertainty on the Digital Observatory of Protected Areas,
including eHabitat – Jon Olaf Skoien (JRC, ISPRA)

16:00 - Robustness of Systematic Conservation Planning Tools to Different
Types of Error and Especially to Multiple Interacting Uncertainties – Lucy Bastin
(University of Aston)

16:30 Lead discussion of the key challenges in applying QA4EO to the
Biodiversity domain: where are the blockages, what are the specific needs in
this domain, what is needed to move forward?

17:30 – 19:00 Poster Session

19:00 – 22:00 Dinner

Hosted by RAL Space



Thursday 20th October

Way Forwards 1 – Developing the Roadmap

Session Chair: Gary Foley (EPA)

Facilitators: Nigel Fox (NPL), Pascal Lecomte (ESA), Joanne Nightingale (NASA), Greg Stensaas (USGS)

This day's sessions will draw together the main issues that have been raised during the previous days and the inputs provided in the questionnaires. All attendees will have the possibility to add comments/suggestions on the Way Forward topics by using post-it notes available in the meeting room. The workshop will split into splinters to address specific issues.

09:00 – Presentation summarising the issues raised during previous day's presentations and posters

09:30 – Splinter sessions for key issues with the aim of identifying

- Technical goals

- Key deliverables – tools, infrastructure, procedures

- Identify maturity of existing tools, infrastructure, and procedures

- Identify activities needed to achieve goals

- Define timescales for achieving goals

11:00-11:40 – Reconvene - feedback from splinter groups

11:40 – 12:30 – General Discussion on roadmap(s)

12:30 – 14:00 Lunch



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Way Forwards 2 – Developing a Strategy

Session Chair: Francis Lindsay (NASA)

Facilitator: Jerome Lafeuille (WMO)

14:00 - 15:30 – General Discussion to identify key elements of strategy to implement the roadmap

Role of QA4EO in wider EO community

Leadership of QA4EO

Communication

15:30 Tea

16:00 Review Strategy

16:30 Action item review

17:00 Planning for future QA4EO workshops

17:30 Close