



## **2009 QA4EO Workshop on Facilitating Implementation**

### **Executive summary**

A Workshop on Facilitating Implementation of the Quality Assurance Framework for Earth Observation (QA4EO), chaired by the Group on Earth Observations (GEO) and hosted by TÜBİTAK UZAY (TÜBİTAK Space Technologies Research Institute), was held from September 29<sup>th</sup> to October 1<sup>st</sup>, 2009 in Antalya, Turkey. Aslı Aytaç, Vice Director at TÜBİTAK UZAY welcomed the participants and thanked GEO for making the workshop possible. Presentations and discussions throughout the three-day workshop spanned a cross-section of EO disciplines as the participants considered how best to take QA4EO forwards and encourage its rapid uptake by the full GEOSS (Global Earth Observation System of Systems) community.

The GEOSS community represents a wide variety of disciplines, which utilise a multitude of monitoring methodologies and procedures that require an association of a quality metric to their outputs to enable them to be reliably integrated into the various systems and services, supporting the Earth Observation (EO) needs of Society. The fundamental principle of QA4EO - “that all EO data and derived products has associated with it a documented and fully traceable quality indicator (QI)”, addresses this core requirement and is universally applicable to all disciplines. This principle is not in itself novel and is already being practised by many. QA4EO seeks to ensure it is implemented in a harmonious and consistent manner throughout all EO communities to the benefit of all stakeholders. The end-user, “customer” is the driver for any specific quality requirements and will assess if any supplied information, as characterised by its associated QI, are “fit for purpose”.

The workshop participants agreed to a series of steps to facilitate implementation of QA4EO into the GEOSS community.

- The current QA4EO task team will be augmented to reflect the cross-cutting nature and importance of this task at the GEO level. In the longer-term this body should include representatives from other GEO tasks and all Societal Benefit Areas (SBAs). The augmented team will not regulate but will provide a coordination role, monitor progress and provide a guidance, harmonisation and capacity building function.
- A high-level implementation and action plan will be drafted to facilitate the expansion and where necessary the applicability of QA4EO to the wider EO community and to engage data providers and users. This will include the identification of key target communities and individuals together with the resources needed to support this process.
- A one-page summary describing the key principle of QA4EO will be drafted and become the primary reference. This document will contain all pre-requisite information against which compliance can be assessed and will constitute QA4EO. To aid its implementation across all GEO communities the framework document containing a set of guidelines based on best practises will be evolved to provide guidance through templates and where appropriate exemplars to facilitate the translation of the principle within the various GEO communities.



A QUALITY ASSURANCE  
FRAMEWORK FOR  
EARTH OBSERVATION

The GEO QA4EO process should initially be established as a self-declaring process.

- Where organisations already have well established and documented quality management systems and processes, e.g. WMO, this process will be relatively simple and transparent.
- In other cases a questionnaire/template will be drafted to enable data providers to make visible the evidence that supports any declared quality information for users to assess its adequacy. The questionnaire will make clear the requirements needed for QA4EO compliance and thus also be educational.
- The GEO dataset registration will be adapted to encourage the association of a Quality Indicator to each dataset, which will be linked to the "quality questionnaire" (previous bullet). When users access these datasets, the GEOSS infrastructure will allow access to this quality information and should preserve its association to each dataset.

It has also been decided to develop a 'communication toolbox' – presentations, posters, brochures, etc. – to summarise the scope and benefits of QA4EO and to provide material for use in outreach throughout the EO community via the QA4EO website (<http://qa4eo.org/>).

To review the status of the QA4EO implementation, measure its impact on the Earth Observation community and coordinate future activities, a new workshop is tentatively proposed in 9 to 12 months from now (summer 2010).