

UN Global Working Group (GWG) on Big Data for Official Statistics

The Global Working Group (GWG) on Big Data for Official Statistics was created in 2014, as an outcome of the 45th meeting of the UN Statistical Commission. In accordance with its terms of reference, the UN GWG provides strategic vision, direction and coordination of a global programme on Big Data for official statistics, including for indicators of the 2030 agenda for sustainable development. It also promotes practical use of Big Data sources, while promoting capability building, training and sharing of experiences. Finally, UN GWG fosters communication and advocacy of use of Big Data for policy applications and offers advice in building public trust in the use of Big Data from the private sector.

The role of Big Data

The UNSC recognises that in our digital age, a wealth of digital information and 'Big Data' sources exist and could be utilised by NSOs, governments, companies and individuals.

Digital information is continuously generated through the widespread and constant use of telecommunications and other devices such as; Global Positioning System (GPS) devices, automated teller machines, scanning devices, sensors, mobile phones, satellites and social media.

The potential of Big Data sources lies in the timely availability of large amounts of data which are generated at a low cost. To access this potential, appropriate tools and methods for processing, storing and analysing Big Data are required. These tools and methods need to be established, tested and communicated across the statistical community in order to take advantage of Big Data sources from a global perspective.

The UN GWG views using Big Data for official statistics as an obligation of the statistical community, based on the Fundamental Principle to meet the expectation of society for enhanced products and improved and more efficient ways of working.

To achieve this goal, the UN GWG established task teams on the following topics; "Advocacy and Communication", "linking Big Data and the Sustainable Development Goals", "Access and Partnerships", "Training, Skills and Capacity building", "Cross-cutting issues", "Mobile phone data", "Satellite imagery" and "Social media data".

Since the creation of the UN GWG on Big Data in 2014, these have been further refined into 7 task teams total;

- Management
- Access and partnerships
- Sustainable Development Goals (SDGs)
- Training and Capability Building
- Satellite Imagery Data
- Mobile Communication Data
- Social Media Data

To further strengthen the collaboration across task teams, the pilot task teams (Satellite Imagery, Mobile Communication and Social Media) have designated one member to attend meetings of the SDGs team, one for the training team and one for the access team. That team member is responsible for informing their task teams about the activities of the pilot teams and vice versa.

Each of the task teams that contribute to the UN GWG on Big Data has clear deliverables.

The deliverables of the pilot task teams (on satellite imagery data, mobile phone data, and social media data) are:

- Guidelines on data production and access
- Guidelines on Methodology
- Guidelines on Quality
- Training materials
- Feedback on accessibility

Task Team on Satellite Imagery and Geo-Spatial Data

The Task Team on Satellite Imagery and Geo-Spatial Data is chaired Australia, by Siu-Ming Tam, General Manager of Methodology at ABS. This task team aims to provide strategic vision, direction and development of a global work plan on utilising satellite imagery and geo-spatial data for official statistics and indicators for post-2015 development goals.

Members of the task team Members of the Satellite Imagery Task Team include Australia, Colombia Mexico, international organisations, NGOs and private industry.

Members:

- Australian Bureau of Statistics- Australia
- National Administrative Department of Statistics- Colombia
Departamento Administrativo Nacional de Estadística (DANE)
- Commonwealth Scientific and Industrial Research Organisation (CSIRO) - Australia
- International Telecommunication Union (ITU)- Mexico
- United Nations Statistics Division (UNSD)
- Google
- Australian Research Council Centre of Excellence For Mathematical and Statistical Frontiers
- Queensland University of Technology (QUT) Australia
- Food and Agriculture Organization of the United Nations
- IBM research

Big Data Workshops

The GWG is considering hosting a workshop to be held in Japan in October 2016, and potentially in Latin America in December 2016. This opportunity will be promoted at the Third International Conference on Big Data for Official Statistics in Dublin in August 2016.

The workshop will include hands-on sessions where practitioners can work on training big data sets using the techniques and models explained in the course. The intention of the workshop is for the attendees to return to their home country with a practical set of skills which can be applied to their own data and requirements.

The content of the workshop aligns with the methodology content of the UNSC report currently being produced by the TT on satellite imagery, to be submitted in 2017.

Sustainable Development Goals (SDGs) and satellite imagery / earth observations

The 2030 Agenda for Sustainable Development provides a universal development agenda for all countries and stakeholders to use as a blueprint of action for people, the planet and prosperity. The agenda is anchored by 17 SDGs, associated targets and a global indicator framework. The 2030 Agenda specifically requires new data acquisition and integration approaches to support implementation of the development agenda at all levels.

The Satellite Imagery Task team is developing techniques and approaches which in future could assist with:

- Monitoring targets
- Planning
- Tracking progress
- Helping nations and other stakeholders make informed decision to assist with achieving SDGs

The investigate methods for utilising satellite imagery and geo-spatial data for official statistics, the Satellite Imagery Task Team has produced pilot studies.

The pilot studies are:

- Urban-Rural Functional Dependencies Through Georeferenced Tweets (INEGI) - Mexico
- Climate Scenarios (INEGI)- Mexico
- Using satellite images to calculate and use and land cover statistics (DANE)- Colombia
- Satellite Imagery, Remote Sensing and Geospatial Data – Investigative Report (ABS)- Australia

The ABS report includes data sources, preparation and exploration of training data for crop type classification, statistical methodology, and recommendations.

As part of the broader UN GWG on Big Data, it is intended the techniques and methodologies developed by the Satellite Imagery Task Team be applied to monitor the progress of SDGs.

The use of Satellite Imagery data, and Big Data more broadly to monitor SDGs is a key priority of the UN GWG. The SDGs Task Team is chaired by World Bank in New York.