**CEOS WGCapD Historical Timeline**

**1999:**

In 1999, the CEOS Working Group on Education, Training, and Capacity Building (WGEdu) was formed to support the enhancement of data access to organizations throughout developing countries and develop capacity in under-resourced regions of the world. WGEdu set out to assess needs in developing countries, work through capacity building networks, assess technology trends, make recommendations for national programs, and convene CEOS members and working groups contributing to EO education efforts. WGEdu was the first group within CEOS to tackle this issue.

**2000-2003:**

In 2002**,** CEOS focused on supporting ad hoc Working Groups to develop and refine the recommended application of satellite data to select hazards. CEOS also began to focus on sustainable development by playing a key role at the August/September 2002 World Summit on Sustainable Development (WSSD) in Johannesburg and by inaugurating a CEOS WSSD Follow-Up Programme and ad-hoc WSSD Follow-Up Team. CEOS organized a September 2003 Capacity Building Workshop in Stellenbosch, South Africa, and at its 2003 Plenary formally added Capacity Building to the remit of WGEdu. In 2003, Plenary adopted a set of CEOS WSSD Follow-up Programme Capacity Building Principles and also adopted a set of CEOS Utilization Principles and Recommendations following a one-year study by a CEOS Data Utilization Team.

**2005-2006:**

In 2005, the WGEdu conducted the 6th annual meeting in Paris, from 18-19 May 2005 at the Headquarters of the United Nations Educational, Scientific and Cultural Organization (UNESCO). On 20 May, the WGEdu and the CEOS WSSD Follow-up Programme held a joint meeting to discuss coordination of common objectives and actions. The meeting heard presentations on progress made in education and capacity building programs and activities of ESA, EUMETSAT, NOAA, UNESCO, UNESCO-IOC, UN-OOSA and USGS and discussed ways of making these resources more widely available to developing countries. The meeting emphasized the need for capacity building in order for developing countries to benefit from the use of EO data. In this context, participants considered a document submitted by the African Advisory Group, “African concerns: priorities and needs by African Advisory Group”. The meeting also reviewed the list of action items on the 2005 work plan of the WGEdu to establish the status of their implementation and to determine how to carry out outstanding actions in time for the 19th CEOS Plenary.

**2006-2007:**

The draft Terms of Reference (ToRs) of WGEdu were presented for endorsement at the CEOS Plenary in 2006. The proposed ToRs took into consideration the new focus of CEOS and reflect the intention of WGEdu to participate in and contribute to the GEOSS ten-year Implementation Plan. In 2007, Sergio Camacho proposed that Yolanda Berenguer (UNESCO) step up as Chair of the WGEdu and that Renee LeducClarke (NOAA) and Maurizio Fea (ESA) be appointed as Vice-Chairs. The 19th CEOS Plenary participants endorsed the proposal and the CEOS Chair thanked Sergio Camacho for his service as Chair of WGEdu.

**2008-2009:**

WGEdu does not have much in the records for 2008 and 2009, which provides an opportunity for increased investigation in the future.

**2010-2011:**

In 2010, the Working Group choose a new group of Co–Chairs, consisting of Birgit Stromsholm (NSC), George Jungbluth (NOAA), and Tania Maria Sausen (INPE). This allowed the group to be even more active in integrating training and capacity building activities into CEOS operations as well as integrate satellite contributions into GEO efforts in the capacity building realm, for example, by integrating CEOS activities into the use of the GEONETCast Training Channel, maintained on the GEONETCast system worldwide. The group continued to support remote sensing workshops starting in Brazil March 29–31, devoted to geospatial technologies for natural disasters monitoring. Data Democracy, another ongoing CEOS priority, became a key element of the work for the WGEdu. The WGEdu resolved to implement a new work strategy devoted to supporting Data Democracy. First steps, in addition to focusing the yearly EduFlow activity on Data Democracy, included improving the WGEdu webpage to make it more accessible to users of all levels to access free software and data. The WGEdu worked together with Data Democracy task leads within CNES and GISTDA to align ongoing efforts in training and open–source software.

**2012-2013:**

In 2012, WGEdu formally transitioned into the CEOS Working Group on Capacity Building & Data Democracy (WGCapD) with the aim to build upon the CEOS Data Democracy principles in an effort to increase the capacity of institutions in less developed countries for effective use of Earth Observation data for the benefit of society and to achieve sustainable development. Hilcea Ferriera of INPE was the first Chair of the newly-formed WGCapD and served 2012-2013 with Jacob Sutherlun of NOAA serving as Vice-Chair. The WGCapD had their 1st meeting in Ilhabela, Brazil, 29 February to March 02, 2012 and their 2nd meeting was held in Frascati, Italy, from March 04-06, 2013. The event included 16 participants: INPE, NOAA, CONAE, CMA, DLR, ISRO, ESA, SANSA, GEO Sec, Secure World Foundation, USGS, CEOS CEO and 6 virtual attendees: NASA, UNOOSA and WMO. In 2012, the WGCapD also focused efforts on capacity development such as DEM workshops. The target of the workshop was focused in Africa; Nigeria, Kenya and South Africa. The workshop focused on Introduction, History and International Support; Principles of Remote Sensing, Sensors and Platforms; Data and Tools; Remote Sensing Applications + Project development. Moreover, WGCapD focused on building capacity for the effective use of EO data as well as providing wider and easier access to those data.

**2014-2015:**

In 2014, Jacob Sutherlun, NOAA took over as the new chair of the WGCapD but was replaced in the same year by Eric Wood, USGS when he had to step down for personal reasons. Jane Olwoch of SANSA served as Vice-Chair. Throughout 2013 and 2014, the WGCapD focused on growing the trainings, workshops, and data collections. The WGCapD had their 3rd meeting in Dehradun, India, from April 23-25. 2014. The focus was on restructuring delivery of capacity building activities such as the types of courses (length and forma). They also provided remote sensing intro courses, GIS and GPS trainings, and a combination of subjects including remote sensing applications, tools, data access, etc. An increase focus on awareness building saw the inclusion in the CEOS Capacity Building Newsletter, building a CEOS WGCapD listserv, and more proactive use of the WGCapD webpage in the new CEOS Website. The WGCapD also partnered with other working groups, USGS, and SERVIR to further develop an AfriGEOSS side event at the GEO Plenary focused on opportunities for and stimulation of the private sector in geospatial tech in Africa. The sessions focused on open source data use in the focus areas of ecosystems, oil, forestry, and agriculture. Another project supported by SERVIR focused on the creation of a continental 30 meter SRTM-2 DEM to provide newly released datasets and associated materials on physical storage device (e.g. hard drive). The program held its 4th annual meeting in Pretoria, South Africa in 2015.

**2016-2017:**

In 2016, Jane Olwoch, SANSA served as Chair of WGCapD and Senthil Kumar of ISRO was endorsed as Vice Chair. WGCapD supported development of the GeoCaB portal as well as projects focused on enhancing geospatial support to the Kenya Cube and capacity building in SAR. In 2016, WGCapD worked to build awareness and demonstrate value of EO applications to teachers, students, and practitioners at major conferences such as the Living Planet Symposium and ISRSE. WGCapD also provided e-Learning courses on relevant EO applications, conducted a survey of CEOS capacity building activities, gathered best practices for capacity building, and held workshops focused on SAR and SRTM. It also contributed its support to the GeoCab Portal. Some new strategic initiatives focused on capacity building in support of the UN Sustainable Development Goals, data cubes, GEOGLAM, deeper engagement with GEO, and support to AmeriGEOSS and AfriGEOSS. Phila Sibanze, SANSA, took over the Chair role when Jane Olwoch left SANSA. The 5th annual meeting was held in Hampton, VA in the US and the 6th annual meeting was held in Oberpfaffenhofen, Germany in 2017.

**2018-2019:**

In 2018, Senthil Kumar, ISRO served as the Chair with Nancy Searby, NASA serving as Vice Chair. In 2019, Prakash Chauhan took over as Chair upon Senthil Kumar’s retirement. WGCapD supported the CEOS Data Cube Initiative to develop and apply open source tools to minimize barriers to EO data use and leverage new technologies. During this time WGCapD began to contribute a greater number of deliverables to the CEOS work plan. In 2018, WGCapD collaborated with the CEOS SDG-AHT to identify SDG-related training and capacity building opportunities related to space-based EO to meet the 2030 Agenda for Sustainable Development. The WGCapD expanded their outreach with an upgrade to the website and began exploration of options for portal-based access to WGCapD capacity building and training resources. WGCapD contributed support to the AmeriGEOSS and AfriGEOSS initiatives and supported training on the CEOS Visualization Environment (COVE). The 7th annual meeting in Sao Jose dos Campos, Brazil was held in 2018 and the 8th annual meeting was held in Dehradun, India in 2019.

**2020-2021:**

In 2020, Nancy Searby, NASA served as the Chair and Pham Thy, VNSC the Vice Chair. WGCapD expanded its deliverable contributions to the CEOS work plan and was set to host its 9th annual meeting in San Francisco, CA in the US when the COVID-19 pandemic halted travel and WGCapD transitioned the meeting to virtual. Throughout 2020, a major focus of WGCapD has been the virtualization of in-person activities, collection of best practices, and enhanced documentation. WGCapD has expanded its web presence with new resources and the development of a capacity building resource portal. WGCapD championed the creation of a CEOS Webinar Toolkit which offers WGCapD experience to the rest of CEOS for effective webinar creation, as well as established the Earth Observation Training, Education, and Capacity Development Network (EOTEC DevNet), a network of capacity building organizations and networks focused on coordination of activities in support of the sustainable development agenda.