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**COSPAR:** The Purpose of the International Science Council Committee on Space Research (COSPAR) is “to promote at an international level scientific research in space, with emphasis on the exchange of results, information and opinions, and to provide a forum, open to all scientists, for the discussion of problems that may affect scientific space research. The objectives of COSPAR are to be achieved through the organization of scientific assemblies, publications, or any other means.” World’s leading organization for advancing space science. Dedicated to fostering international collaboration, COSPAR creates a dynamic platform for all space scientists worldwide to exchange knowledge, share goals, address challenges in space science, and collaborate without barriers.

**COSPAR Panel on Capacity Building (PCB)**

The actual terms of reference of this Panel include mainly:

- To advise COSPAR on Capacity Building
- To lead its Program of Capacity Building Workshops
- To manage the Capacity Building Fellowship Initiative
- To develop / expand the new Capacity Building Initiative with Small Satellites

<https://cosparhq.cnes.fr>

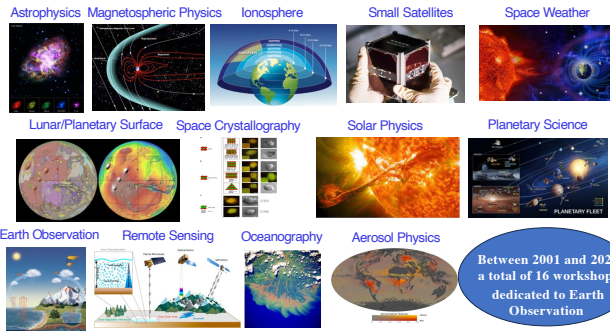
The COSPAR Capacity Building Programme started in 2001



encouraging scientists in developing countries to use scientific data from space missions

instructing practically students in the usage of archives and associated analysis software

promoting professional bonds between workshop participants and experienced international scientists, reducing isolation



Between 2001 and 2026 a total of 16 workshops dedicated to Earth Observation

**Scientific Commissions, Panels and Task Groups**

COSPAR works through 8 Scientific Commissions, each focusing on various fields of space science:

- Commission A: Space Studies of the Earth's Surface, Meteorology, and Climate
- Commission B: Space Studies of the Earth-Moon System, Planets, and Small Bodies of the Solar System
- Commission C: Space Studies of the Upper Atmospheres of the Earth and Planets Including Reference Atmosphere
- Commission D: Space Plasmas in the Solar System, Including Planetary Magnetospheres
- Commission E: Research in Astrophysics from Space
- Commission F: Life Sciences as Related to Space
- Commission G: Materials Sciences in Space
- Commission H: Fundamental Physics in Space

COSPAR Panels focus on more specialized areas:

- Panel on Innovative Solutions (PoIS)
- Panel on Technical Panel on Satellite Dynamics (PSD)
- Panel on Technical Problems Related to Scientific Ballooning (PSB)
- Panel on Potentially Environmentally Disturbant Activities in Space (PEDAS)
- Panel on Radiation Belt Environment Modelling (PSBEM)
- Panel on Space Weather (PSW)
- Panel on Planetary Protection (PPP)
- Panel on Capacity Building (PCB)
- Panel on Education (PE)
- Panel on Exploration (PEX)
- Panel on Interstellar Research (PIR)

- Panel on Social Sciences and Humanities (PSSH)
- Panel on IDEA (Inclusion, Diversity, Equity, and Accessibility) Initiative (PIDEA)
- Panel on Establishing a Constellation of Small Satellites (PCSS)
- Panel on Machine Learning and Data Science (PMLDS)

COSPAR Task Groups are:

- URSI/COSPAR Task Group on the International Reference Ionosphere (IRI)
- COSPAR/URSI Task Group on Reference Atmospheres, including ISO WG4 (CIRA)
- Task Group on Reference Atmospheres of Planets and Satellites (RASPS)
- Task Group on the GEO (TG GEO)
- Task Group on Establishing an International Geospace Systems Program (IGISPP)

- Capacity Building through practical workshops**
- 35-40 students and 10-13 full time lecturers / supervisors
  - brief (2 weeks) intensive workshops (50-60 h/week)
  - 1/3 lectures - 2/3 hands-on data analysis
  - projects carried out individually or in teams
  - ends with presentation by each participant on analysis & results

- Social aspects taken seriously into account**
- Common lodging and meals of lecturers and students
  - Excursion in the mid week-end
  - Theatre reading, music playing, dancing, karaoke



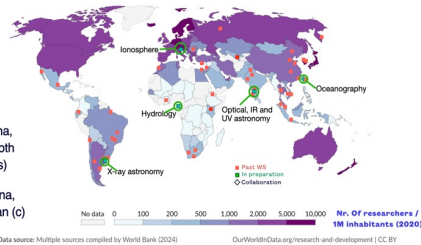
**Until 2025: 24 years**

47 highly practical workshops in 24 developing countries

More than 1400 researchers from more than 72 countries + 87 fellowships

4 in 2024 - Thailand, China, Uzbekistan and Kenya (both adding to list of countries)

5 in 2025: India, Argentina, Cameroon, Italy (c), Taiwan (c)



List of COSPAR CB Workshops

Year	Country	Topic	Lead
2001	India	Earth Observation	...
2002	...	...	...
2003	...	...	...
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2018	...	...	...
2019	...	...	...
2020	...	...	...
2021	...	...	...
2022	...	...	...
2023	...	...	...
2024	Thailand, China, Uzbekistan, Kenya	...	...
2025	India, Argentina, Cameroon, Italy, Taiwan	...	...

**COSPAR Capacity Building Fellowship Programme**

Launched in 2009

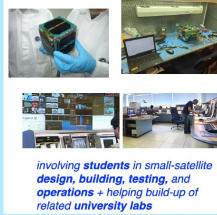
To build further on skills gained in a workshop, through a visit (~ 2-6 weeks) to carry on joint research in a collaborating lab

Not for training purposes, but intended to foster research collaborations

So far 75 short internships in scientific centres of excellence - ending in many cases with publication in main journal



**New Programme launched in 2024 - CB with Small Satellites**



involving students in small-satellite design, building, testing, and operations + helping build-up of related university labs

- CB at project team level instead of individual researchers - (5-6 students + 1 supervisor per selected unit)
- Large involvement of universities in developing countries
- Labs development in those universities - long-term commitment
- Collaboration with Small Sats running projects in one or several areas - long-term
- CB across campuses and nations

Capacity building is essential to ensuring that both calibration/validation (cal/val) efforts and operational uptake of satellite missions are effectively translated into scientific research and societal benefits. The Committee on Space Research (COSPAR) has been advancing towards this objective through a series of international capacity-building workshops that strengthen regional expertise, foster partnerships, and expand the practical use of data and analysis tools related to virtually all space sciences. This is also true in the particular area of Earth observation (EO) data, where special emphasis has been placed on supporting missions such as Copernicus Sentinel-3, which provides continuous measurements of ocean and land variables relevant to climate and environmental monitoring.

**AfrHySpace**  
African Space Hydrology Capacity Building Workshop

The African Space Hydrology Capacity Building Workshop (AfrHySpace 2025), held in Kribi, Cameroon from 17 to 28 November 2025, exemplifies this approach by equipping participants with the skills to apply Sentinel 3 and other satellite data in hydrological contexts. Through a University of Douala, CNES and COSPAR led organisation involving national and international space and hydrology institutions, AfrHySpace engaged researchers, doctoral students, and early career professionals in both theoretical and practical training in space hydrology. The program combined classroom instruction on remote sensing fundamentals with hands on exercises in data processing, analysis, and hydrological modelling. Integrated field sessions enabled participants to compare in situ observations with satellite products, reinforcing the importance of calibration and validation in producing reliable hydrological information. The workshop thereby directly promoted the value of Sentinel 3 data—particularly its altimetry and optical sensors—for monitoring water resources, while fostering a community of African scientists capable of contributing to cal/val and downstream applications.



The next capacity building initiative, Geodesy for a Resilient Africa: Empowering Solutions for Floods, Droughts, Sea-Level Rise, Water Scarcity, and Fisheries Sustainability, further complement these efforts by focusing on geodetic analysis, reference frame applications, and satellite data processing essential for earth system science. By exposing African participants to advanced geodetic and remote sensing techniques, the summer school enhances the analytical foundation required to interpret Sentinel 3 products in the context of environmental change and climate resilience with an integrated satellite and in situ measurement approach.

Also, the CRTS-PORSEC-COSPAR capacity building workshop on Satellite Data for Assessing Climate Change Impacts on Marine and Coastal Environments, to be convened at the Centre Royal de Télé-détection Spatiale (CRTS) in Rabat, Morocco, will extend this capacity building into coastal and marine applications. This workshop aims to bridge EO data with coastal climate impact assessment, creating synergies across cal/val, coastal monitoring, and climate science communities.

Collectively, these COSPAR sponsored capacity building activities promote uptake of Sentinel 3 by enhancing data literacy, building regional networks, and integrating cal/val into applied research workflows. By situating satellite data within local scientific and policy contexts, from oceanography to hydrology to geodesy and coastal climate assessment, COSPAR's workshops are catalysing broader use of Sentinel 3 products for sustainable development and climate action across Africa and beyond.

