

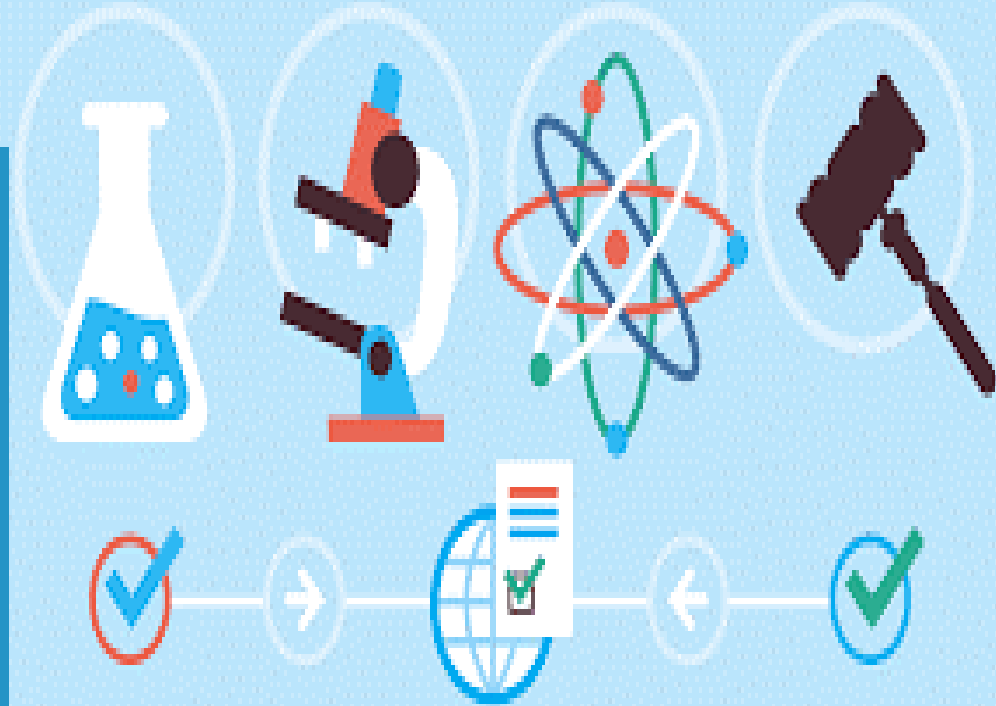


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UNESCO

Science for
Sustainable
Development in Africa



Natural Science Sector



UNESCO

Natural Science Sector,
UNESCO Regional Office Abuja

July, 2022



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Mission



**Natural
Sciences**

The Natural Sciences (SC) Sector of UNESCO Abuja Office works to advance natural sciences to support peace building, sustainable development, human security and well-being.



Thematic Areas

**STI and Open
Science**

STEM

**Basic Science
and
Engineering**

Water Science and Hydrology

Ecology and Earth Science



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STI and Open Science

- ❑ UNESCO provides countries with guidance in developing or revising their **national STI policies**, with an emphasis on Africa
- ❑ Every five years, the **UNESCO Science Report** monitors the status of the support system for STI around the world and analyses emerging trends.
- ❑ UNESCO's **Global Observatory of Science, Technology and Innovation Policy Instruments (GO→SPIN)** is publishing a series of country profiles as a precursor to the establishment of an international, open access database that will enable countries to monitor and evaluate their innovation 'ecosystems' and compare best practices.
- ❑ UNESCO promotes the development of **science governance** structures and mechanisms. These mechanisms include scientific advisors, offices of science and technology policy and parliamentary scientific committees.



STI and Open Science

- ❑ UNESCO is fostering closer linkages between universities and industry within its longstanding University–Industry Partnerships programme.
- ❑ it is also encouraging countries to develop innovation hubs in the form of **science and technology parks**.
- ❑ Mainstream Women in STI
- ❑ UNESCO Strategy on Open Access to Scientific Information and Research
 - ❑ At the **40th session of UNESCO's General Conference (2019)**, 193 Member States tasked the Organization with the development of an international standard-setting instrument on Open Science in the form of a UNESCO Recommendation on Open Science to be adopted by Member States in 2021.



STEM

- ❑ **UNESCO** supports national capacities to deliver gender-responsive **STEM** education
 - ❑ UNESCO produced a cutting-edge global report entitled **Cracking the Code: Girls' and women's education in science, technology, engineering and mathematics (STEM)**, mapping the status of girls and women in STEM education and identifying the factors hindering and promoting their participation, achievement and continuation in STEM fields.
 - ❑ UNESCO promotes and facilitates policy dialogue and experience-sharing among countries
 - ❑ UNESCO supports national capacities to deliver gender-responsive STEM education.
 - ❑ Promote Role models and mentoring (L'Oréal, WomEng , STEM clinic etc.)



Basic Science and Engineering

- ❑ UNESCO supports building capacity to carry out scientific research
- ❑ Support excellent science education at all levels, effective engineering education in universities and research centres.
- ❑ Scientific capacity and know-how whether resulting from local and national research or imported through technology transfer
- ❑ Build capacity to develop and choose appropriate solutions to today's multiple sustainable development challenges.
- ❑ Effective and Gender sensitive Basic Science education, through promotion of robotics/AI, 3-d and other relevant techniques (Microscience kits, etc



Water Science and Hydrology

- ❑ UNESCO works through the Intergovernmental Hydrology Programme (IHP) to address national, regional, and global water challenges, by supporting the development of sustainable and resilient societies.
- ❑ UNESCO IHP Expand a holistic understanding of water, improving technical capabilities, and enhancing human and institutional capacities

- ❑ Water information Network Systems (WINS)
- ❑ Water related Disasters
- ❑ Groundwater
- ❑ Water Scarcity and quality
- ❑ Water for Human settlements
- ❑ Ecohydrology
- ❑ Water Education



Ecology and Earth Sciences

❑ Man and Biosphere (MAB)

It combines the natural and social sciences with a view to improving human livelihoods and safeguarding natural and managed ecosystems, thus promoting innovative approaches to economic development that are socially and culturally appropriate and environmentally sustainable. It has the **World Network of Biosphere Reserves** currently counts **738 sites** in **134 countries** all over the world, including **22 transboundary sites**.



❑ UNESCO Global Geoparks (UGGp)

Sites and landscapes of international geological significance are managed with a holistic concept of protection, education and sustainable development. UGGp combine conservation with sustainable development while involving local communities is becoming increasingly popular. At present, there are 177 UNESCO Global Geoparks in 46 countries



Ecology and Earth Sciences

❑ **Local and Indigenous Knowledge systems (LINKS)**

UNESCO's Local and Indigenous Knowledge Systems programme (LINKS) promotes local and indigenous knowledge and its inclusion in global climate science and policy processes.

LINKS has been influential in ensuring that local and indigenous knowledge holders and their knowledge are included in contemporary science-policy-society fora on issues such as biodiversity assessment and management (CBD, IPBES), climate change assessment and adaptation (IPCC, UNFCCC), natural disaster preparedness (ISDR) and sustainable development (Rio+20, Future Earth).





Thank you for your attention.



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