

# UNESCO Basic Sciences Programme

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Section for Basic Science, Research, Innovation, and Engineering (RIE):

<https://www.unesco.org/en/basic-sciences-engineering/engineering>



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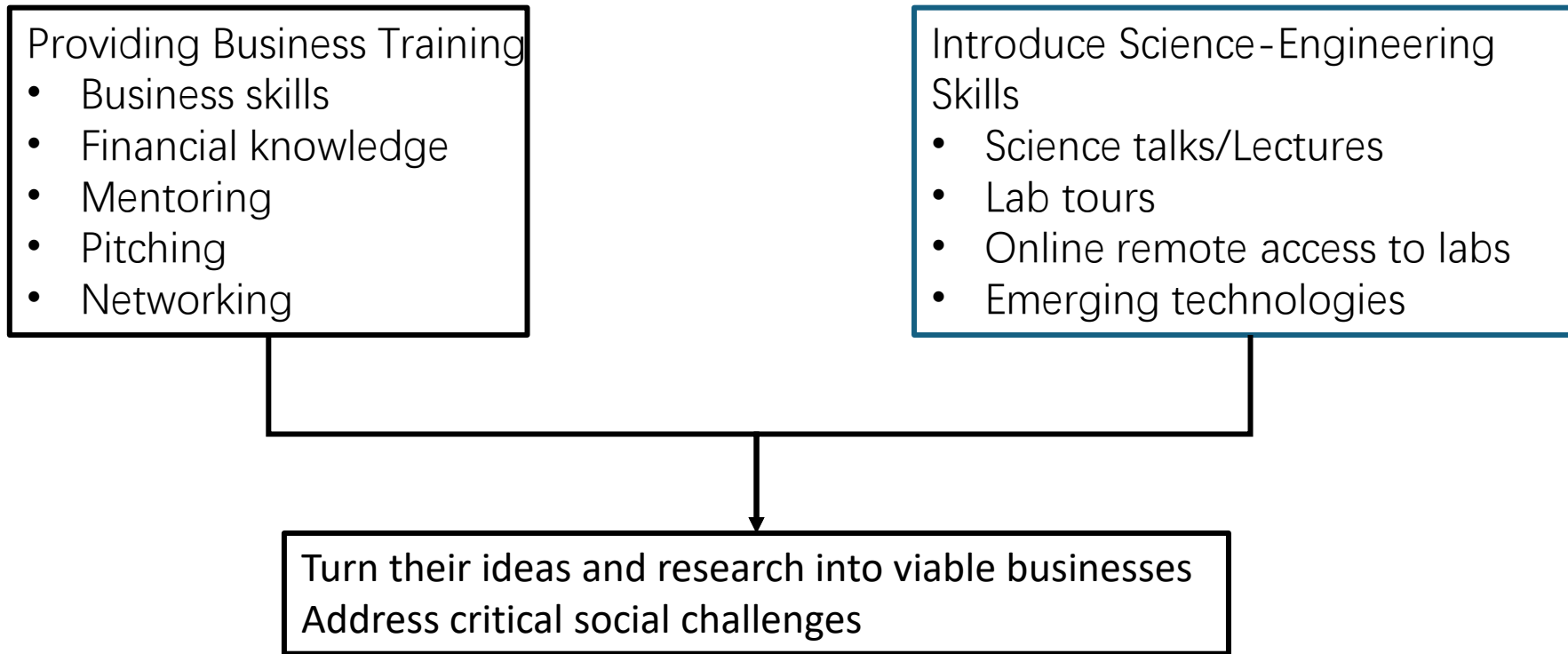
United Nations  
Educational, Scientific  
and Cultural Organization



## The programme supports national, regional and global programs in:

- Pure and Applied mathematics
- Physics
- Chemistry
- Biological sciences
- Interdisciplinary Sciences
- Science education (STEM)
- Science Communication - as one of the most important tools to disseminate the value of science

# Series of Science-Engineering Entrepreneurship Bootcamps



## Objectives:

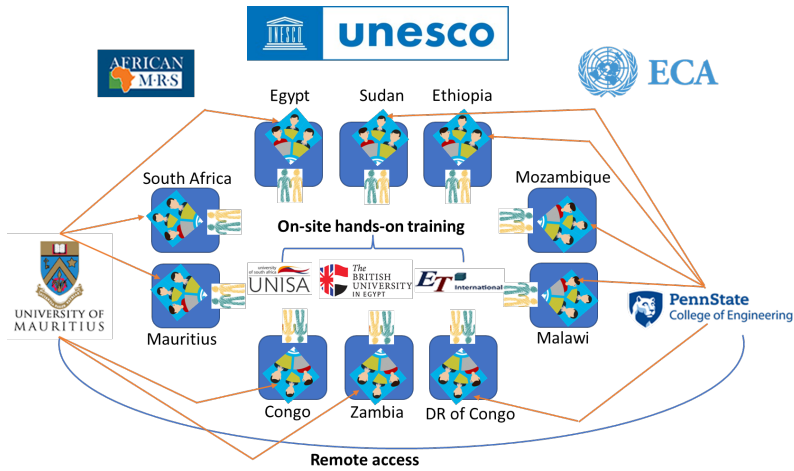
- Enhancing capacities of young early-career scientists and engineers (50 per cent women) to take their re-search, which address critical global challenges, from the lab to the market (L2M)
- Fostering entrepreneurship and innovation in target countries
- Build a network of scientists, engineers, entrepreneurs, and investors
- Contribute to the development of a more sustainable and inclusive economy



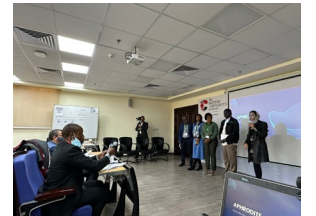
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# 1<sup>st</sup> Bootcamp in January 2023, Cairo, Egypt



- Region: Africa
- Date and Time: A 5-day training bootcamp, 29 January to 2 February.
- Fields: Nanotechnology and entrepreneurship
- Covered countries: 10 African countries (Egypt, Sudan, Ethiopia, South Africa, Mauritius, Malawi, Congo, DR Congo, Zambia and Mozambique).
- Number of participants: 71 scientists were trained, including 37 women.





# 2nd Bootcamp in September 2023, Panama

- Region: Latin America and the Caribbean:
- Time and Date: 4-day workshop from 11 to 15 September 2023 in Panama.
- Number of Participants: 35 early-career researchers, scientists, engineers, inventors and STEM students
- Partners:  
ET Cube International and the Institute of Electrical and Electronics Engineers (IEEE),  
Secretaría Nacional de Ciencia, Tecnología e Innovación (SENACYT).



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# 3<sup>rd</sup> Bootcamp in April 2024 Mongolia

- National Event in Mongolia
- Time and Date: 5-day workshop from 1 to 5 April 2024.
- Number of Participants: 30 early-career researchers, scientists, engineers, inventors and STEM students, specialists in science and innovation
- Partners:  
ET Cube International, Ministry of Education and Science, National University of Mongolia



MINISTRY OF  
EDUCATION AND  
SCIENCE

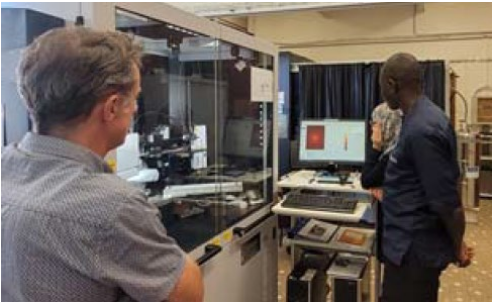
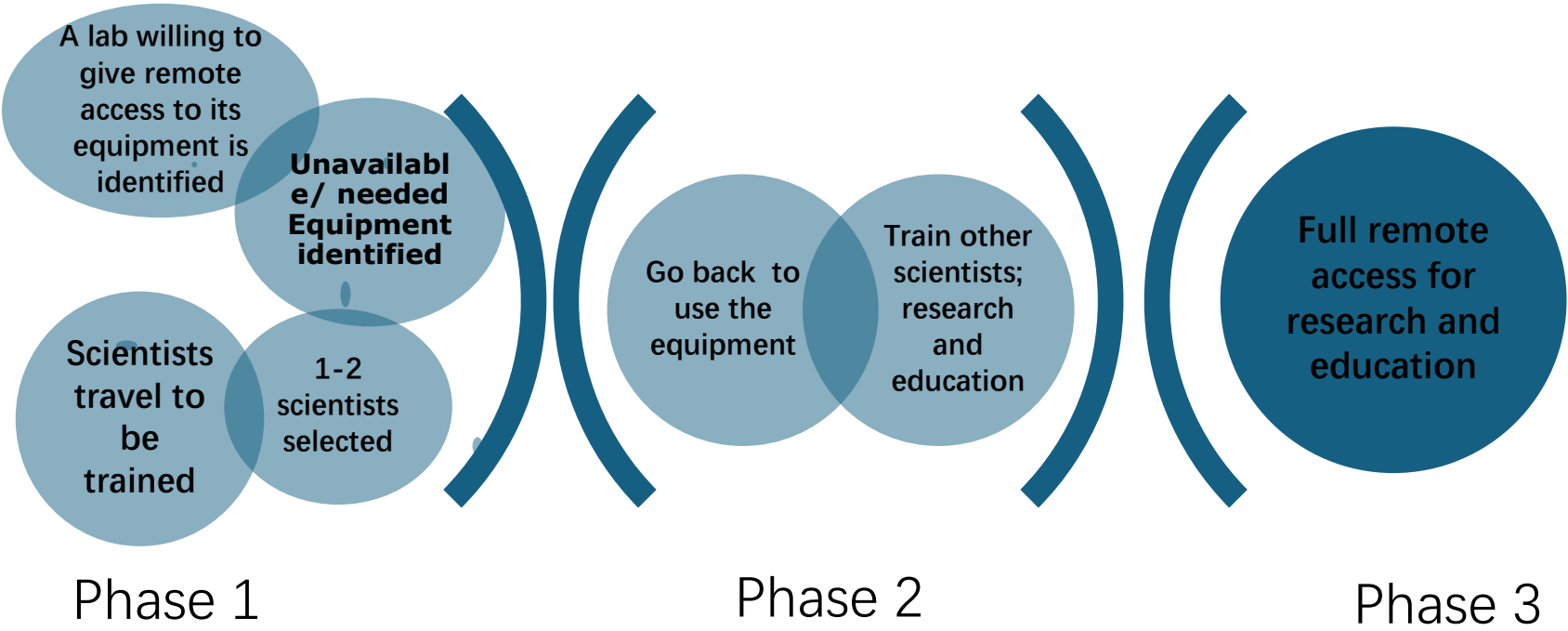


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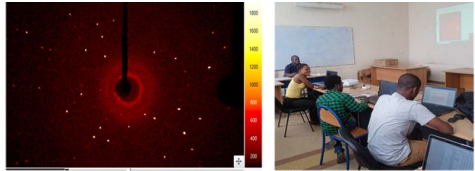
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# Remote Access Initiative

Empowering African scientists and build capacity in Africa by making research labs and equipment available for early-career African Scientists with remote access



Hands-on training abroad for institutional focal points



Remote participation by researchers at home institute



Obtaining data, analysis, interpretation, significant contribution to publications, knowledge transfer etc.

Côte d'Ivoire





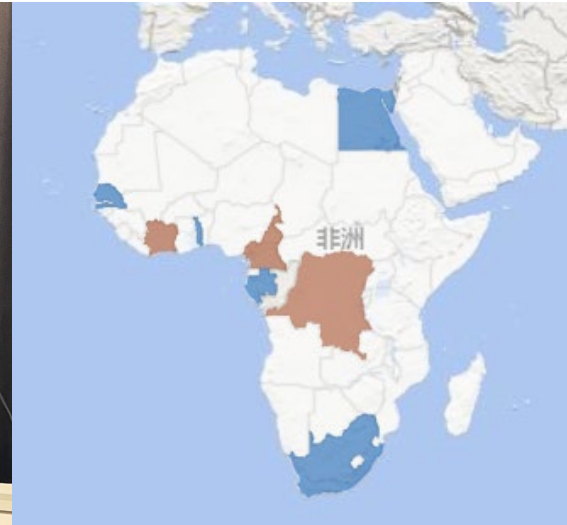
# Remote Access Initiative

In partnership with



Remote Access to  
Single Crystal X-Ray Diffractometer

Only few exist  
in Africa....!



**NOW:**  
8 countries  
received  
training

**3 countries have  
remote access**



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Seeking partners to expand the initiative (include more African States & more regions)

Include more technical fields

Microscopy

Imaging Analysis tools

Computational methods

Metabolomic analysis Platforms

Match beneficiaries and donors



Launch the Remote access webpage

Announce new calls

Provide information

Share success stories

Subscription to declare interest



Facilitating donation of small equipment

# Category 2 Centres and Chairs

**A global network of institutions of excellence in the UNESCO's domains of competence that contribute to the implementation of UNESCO's priorities, programmes, and global development agendas**

C2Cs

23 in Basic Sciences and Engineering

37 in Natural Sciences Sector

129 in UNESCO

**The UNITWIN/UNESCO Chairs Programme mobilizes expertise of higher education and research institutions to address the interdependent challenges of today's increasingly complex world**

Chairs

62 in Basic Sciences and Engineering

988 in UNESCO

**International and regional cooperation, research, knowledge production  
Policy advice, capacity enhancement.**



# International Years and Days - Science Advocacy



## International Year of Basic Sciences for Sustainable Development (2022-2023)

- Proclaimed at the 77<sup>th</sup> UN General Assembly
- Opening Ceremony at July 8<sup>th</sup> 2022 at HQ, 6 Minister and 3 Nobel Laureates attended, over 220k views online
- Continental Event: Europe ( Serbia, September 2022), Asia (Viet Nam, September 2022), Africa (Rwanda, June 2023)
- Closing Ceremony in CERN, Switzerland (October 2023)
- Discussion on the preparation of the Decade of Sciences for Sustainability

## International Day of Mathematics (March 14)

On 14 March 2023, a webinar on the topic “Industrial Mathematics: Applications and Challenges” was organized with over 250 online participants from 60 countries worldwide.

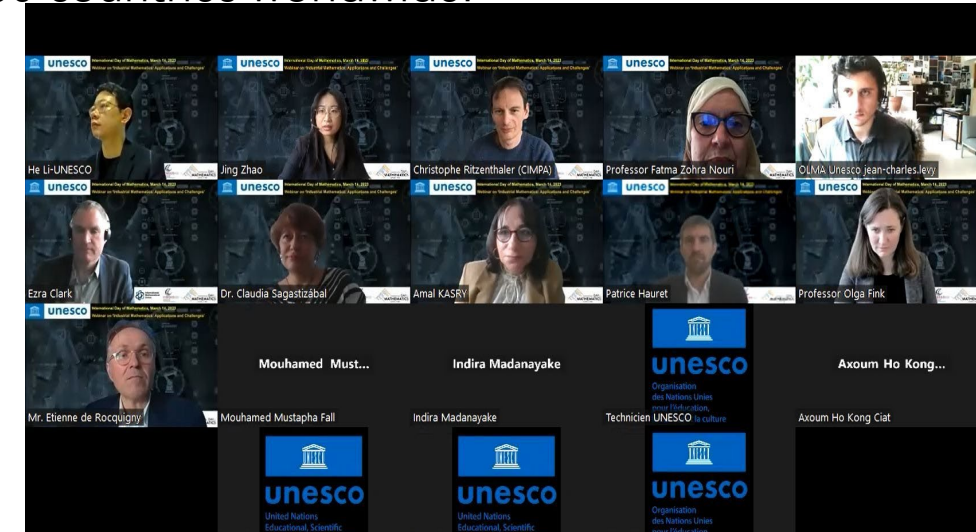


## International Day of Light (May 16)

## World Metrology Day

## COP27 Side Event “the Role of Basic Sciences in Climate Change Mitigation” (10 November 2022)

This side event aimed at unifying efforts to show how imperative it is to raise awareness of the importance of basic science in addressing and finding solutions for pressing climate change issues.



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# Thank you!



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