AFRICA REPORT

Summary of ICTP Activities in Support of Science in Africa

Up to Dec. 2025

ICTP – Public Information Unit

The Abdus Salam International Centre for Theoretical Physics

Scientific Participants Overview

as of 2025

SINCE 1970:

24,685
visitors from

54
African countries

26%
were female
(since 2001)

IN 2025:

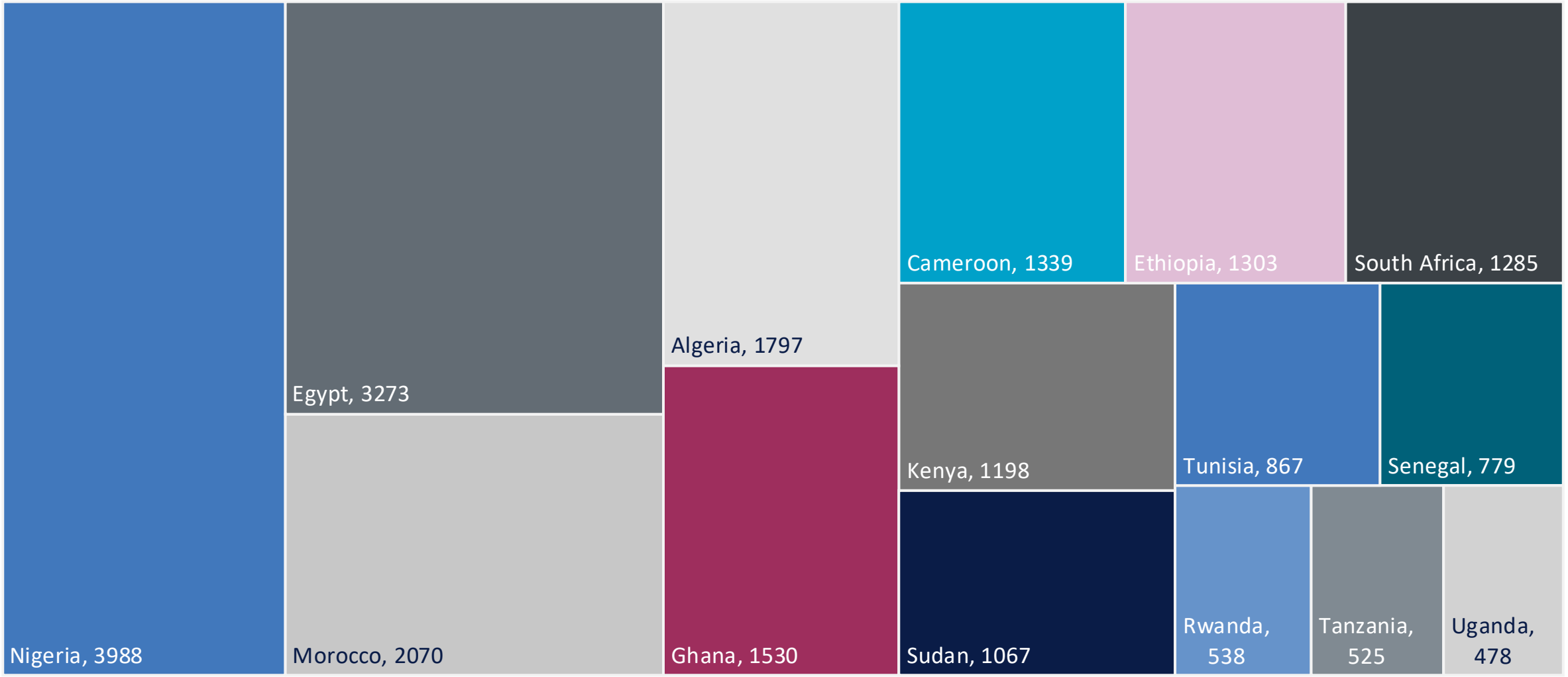
944
visitors from

41
African countries

33%
were female

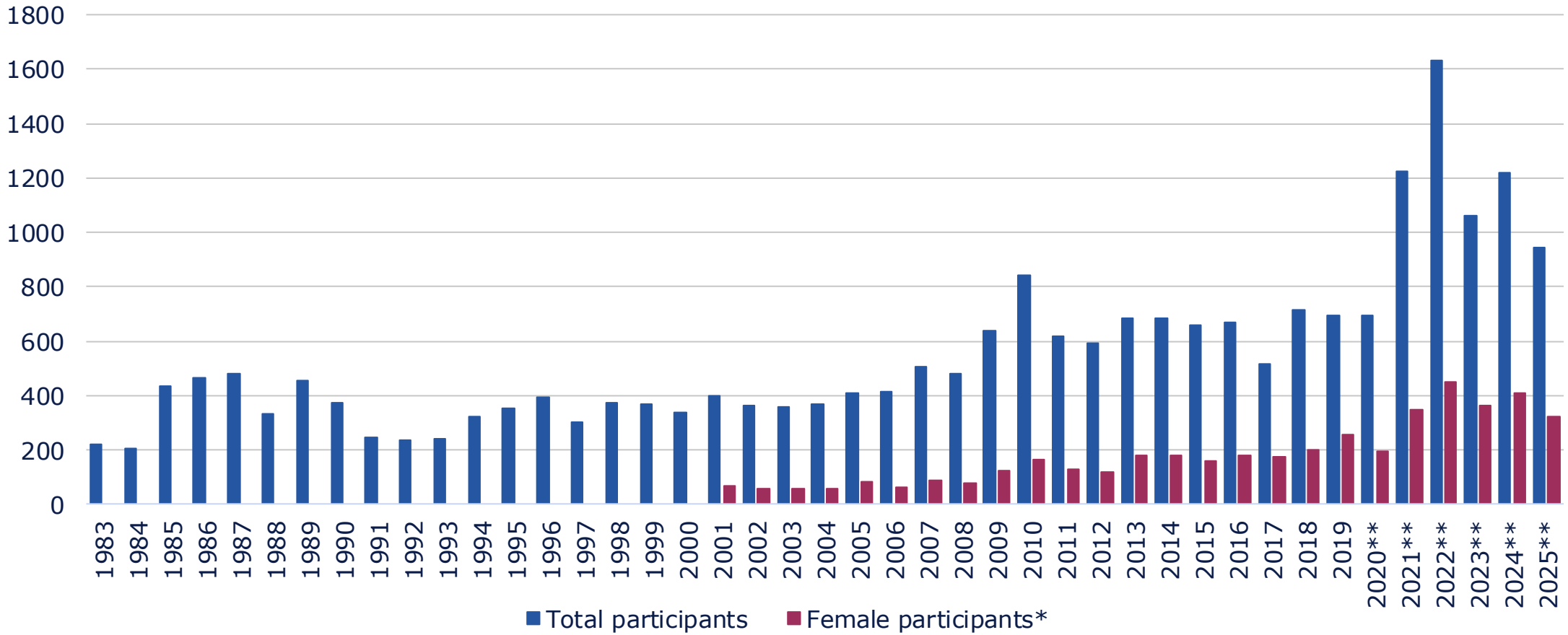


Top 15 African Countries by Number of Participants in ICTP Activities (1970-2025)



AFRICA AT ICTP

African Participants in ICTP Activities (1983-2025)



*Data on female participants available since 2001.
**Since 2020 numbers include online participants.

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Participation of African Scientists in ICTP Programmes

- **510** Postgraduate Diploma Students (130 female)
- **937** Associate Members (103 female)
- **306** Fellows in the Sandwich Training Education Programme - STEP (110 female)
- **316** Fellows in the Training and Research in Italian Laboratories (TRIL) Programme (67 female)
- **44** Elettra Fellows Visits (14 female)



African Students enrolled in ICTP Educational Programmes

❖ Joint ICTP/Univ. of Trieste Master of Advanced Studies in Medical Physics

- **110** African students (38 female)
- From **32** African countries: Algeria, Angola, Burkina Faso, Burundi, Cameroon, Chad, Congo, Cote d'Ivoire, Egypt, Ethiopia, Gabon, Ghana, Kenya, Lesotho, Libya, Madagascar, Malawi, Mali, Mauritius, Morocco, Mozambique, Namibia, Nigeria, Rwanda, Senegal, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia and Zimbabwe.

❖ Joint ICTP/SISSA Master in High Performance Computing

- **7** African students (2 female)
- From **5** African countries: Algeria, Ghana, Kenya, Morocco and Zimbabwe.

African Students enrolled in ICTP Educational Programmes

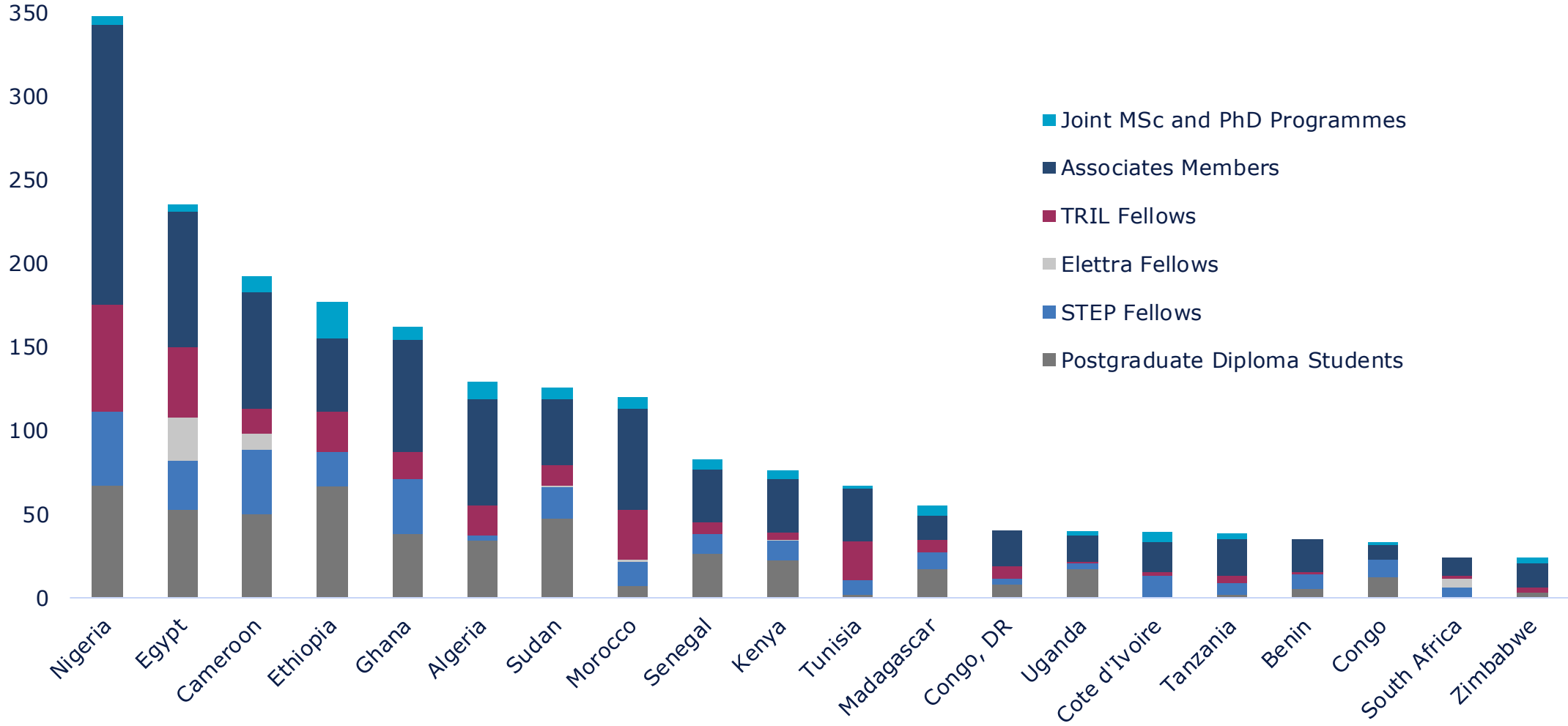
❖ Joint International ICTP/SISSA PhD Programme in Physics and Mathematics

- **22** African students (6 female)
- From **10** African countries: Algeria, Cameroon, Egypt, Ethiopia, Ghana, Morocco, Nigeria, Senegal, Sudan and Tunisia.

❖ Joint ICTP/Univ. of Trieste PhD Programme in Earth Science and Fluid Mechanics

- **5** African students (2 female)
- From **4** African countries: Algeria, Ethiopia, Ghana and Madagascar.

African Scientists in ICTP Programmes by Country



AFRICA AT ICTP

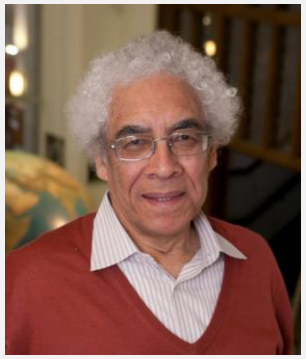
ICTP Scientific Council Members



- **Aissa Wade (Senegal)**
  - ICTP Scientifi Council Member since 2022.



- **Dr. Francis K.S. Allotey (Ghana)**
  - ICTP Scientific Council Member between 1996-2017.



- **George H. Philander (South Africa)**
  - ICTP Scientific Council member between 1996-2014

Scientific Activities Supported by ICTP in Africa

114 activities carried out in Africa

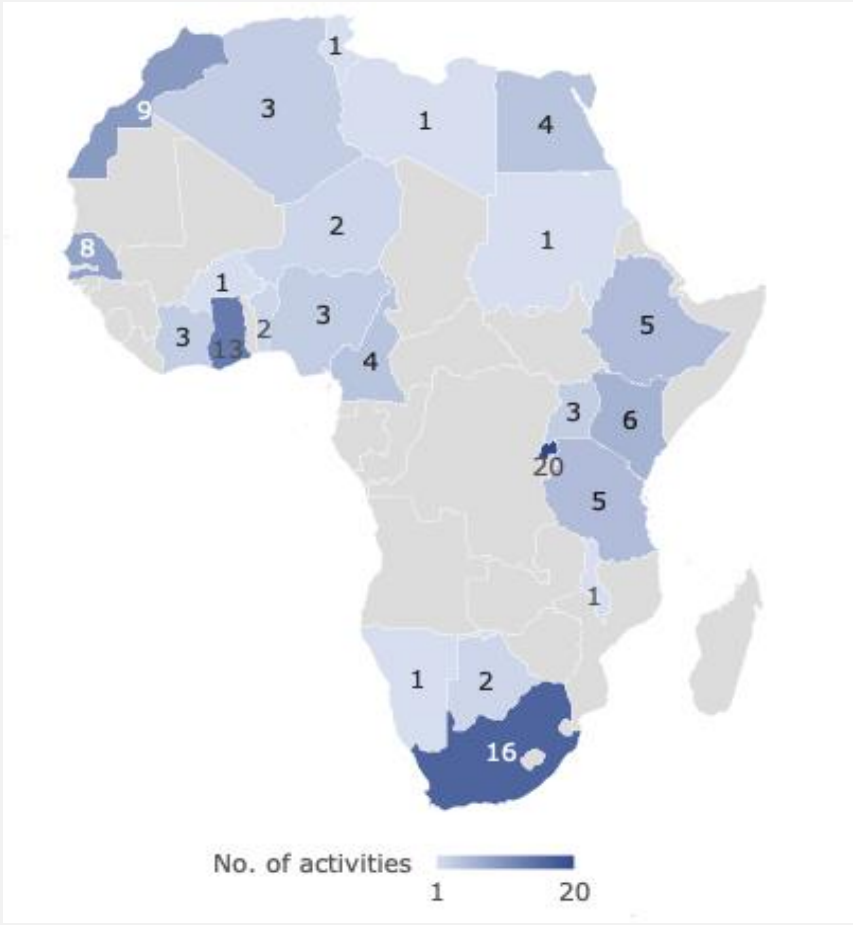
(1985-2025)



with more than

5800

participants



Historical support by ICTP's External Activities Unit

AFFILIATED CENTRES	STUDENTS IN AFFILIATED CENTRES	NETWORKS	SCIENTIFIC MEETINGS	SCHOLARS/ CONSULTANTS
19 Affiliated Centres in Africa (1 active)	**65** African students in Affiliated Centres (3 current + 62 past)	**14** Scientific Networks involving African countries (1 active)	**684** Meetings held in African countries	**120** Scholars and consultants visited African Institutes

ICTP Outreach Programme:
Physics Without Frontiers

41 activities carried out from 2013-2025

in Algeria, Burkina Faso, Cameroon, Egypt, Eswatini, Ghana, Ivory Coast, Kenya, Lesotho, Malawi, Mali, Morocco, Namibia, Nigeria, Rwanda, Senegal, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda and Zimbabwe



1600+ participants

ACCLIMATISE Project

- Wellcome Trust-funded research project led by ICTP (2025-2027)
- **Goal:** Assess how long-term climate change has helped or hindered malaria control and elimination efforts in Africa
- **Focus countries:** Ethiopia, Kenya & Senegal
- **Approach:** Integrates high-resolution climate data, epidemiological data, intervention coverage, multi-model & AI-based methods
- **Outcome:** Practical tools to evaluate past interventions and design more effective, climate-resilient malaria strategies

IPCC Chapter Scientists Support Programme

- ICTP + IAP + Wellcome: Programme to **strength the participation of early-career scientists from developing countries** in the Intergovernmental Panel on Climate Change (**IPCC**) 7th Assessment Report (**AR7**).
- Sellection of 57 Chapter Scientists from 28 countries, including **16 African scientists**
- Selected from **5,000+ applications** through a highly competitive process
- Chapter scientists provide **research, technical and coordination support** to IPCC chapter teams
- Strategic investment in **long-term scientific capacity building and leadership**

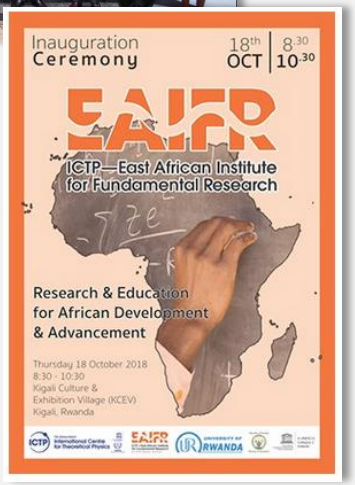
IPCC Working Group II Collaborative Research Assistance Grant

- ICTP-IAP-IPCC: will support Coordinating Lead Authors (CLAs) from the Global South contributing to the **IPCC AR7**.
- Resources to recruit research assistants, synthesize evidence, and evaluate climate change risks.
- Support to **7 African CLAs,** helping ensure that the perspectives, evidence and experiences of the Global South are adequately reflected in the global assessment of climate change impacts, adaptation and risk.

ICTP Partner Institute in Rwanda: East African Institute for Fundamental Research (EAIFR)

- Created in October 2018, in partnership with the Rwandan government
- Challenge of Scalability of Existing Programs – need for larger regional impact in Africa
- Created as a hub for Research in Fundamental Physical Sciences
- UNESCO Category 2 Institute
- Located at the University of Rwanda in Kigali





Active Cooperative Agreements with African countries

❖ African Union

- To foster strategic partnerships and alliances between the African Union countries and ICTP in advancing the works of Education, Scienc and Technology towards the realization of aspirations of AU Agenda 2063 on inclusive growth and sustainable development.

❖ Algeria: National Higher School of Mathematics (NHSM)

- To colaborate on curiculum development; to share experience and good practices in teaching and learning; to conduct colloquium, lectures, seminars and science projects; to seek opportunities to conduct scientific research.

❖ South Africa: National Institute for Theoretical and Computational Sciences (NITheCS)

- To develop joint research, education and visiting opportunities as well as collaboration with ICTP's partner institute in Rwanda, EAIFR.