

Exploring Digital Opportunities



**UNESCO REGIONAL OFFICE FOR
EASTERN AFRICA
ANNUAL REPORT**

2019

© UNESCO Regional Office for Eastern Africa, 2019, Nairobi, Kenya

Material in this publication may be freely quoted or reprinted.

Photo credits: UNESCO Nairobi



Table of Contents

Foreword.....	3
Introduction.....	5
Key of Achievement 2019.....	6
Education	6
Natural Sciences.....	6
IOC Africa.....	6
Social & Human Sciences.....	6
Culture	6
Communication & Information	7
a) Freedom of expression and safety of Journalists.....	7
b) Documentary Heritage	8
c) Media Pluralism and Diversity	8
d) Building Knowledge Societies	8
EDUCATION SECTOR.....	10
1.0 Development and Deployment of Digital Health Literacy content in Kenya	10
1.1 Education for People on the Move in South Sudan.....	11
1.2 The BEAR II Project.....	12
1.3 Establishment of UNESCO Chairs.....	12
1.4 Peace and Global Citizenship Education in IGAD.....	13
1.5 Regional Qualification Framework for IGAD.....	13
1.6 Digital Library Initiative	14
1.7 Monitoring, Evaluation and Reporting of progress of SDG4 and CESA.....	15
NATURAL SCIENCES SECTOR.....	17
2.0 Science, Technology and Innovation Policy	17
2.1 Groundwater Resources Map of Africa.....	18
2.2 Sandwatch addressing Climate Change.....	19
2.3 Geological Mapping and Mineral Exploration Advanced Training	20
2.4 UNESCO and Huawei collaborates in Artificial Intelligence	21
2.5 Rainwater harvesting and adaptation strategy for Africa	22
2.6 Scientific Camps of Excellence.....	23
IOC AFRICA.....	25
3.0 Raising awareness on Ocean issues	25
3.1 Capacity development for Ocean Sciences	26
3.2 Oceans and Climate Change.....	27

SOCIAL & HUMAN SCIENCES SECTOR	29
4.0 Management of Social Transformation Schools	29
4.1 South Sudan Youth Development Policy	30
4.2 General History of Africa.....	31
4.3 STEP 4 Youth.....	32
CULTURE SECTOR	34
5.0 Underwater Cultural Heritage Protection	34
5.1 Fighting Illicit Trafficking of Cultural Property	35
5.2 South Sudan aims for World Heritage status.....	36
5.3 Culture for Peace and Development in Somalia.....	37
5.4 Comoros safeguards its intangible cultural heritage	38
5.5 World Heritage Volunteers Campaign	39
COMMUNICATION & INFORMATION SECTOR	41
6.0 Memory Institutions on Preservation of Documentary Heritage	41
6.1 The Domestication of Ratified Marrakesh Treaty in Uganda.....	41
6.2 Validation of Media Information Literacy Curriculum in Teacher Education.....	42
6.3 Conflict Sensitive and Gender Responsive Reporting	42
REGULAR BUDGET 2019	44
2019 IN PICTURES	45

FOREWORD

Leave No One Behind!

UNESCO, through its Regional Office for Eastern Africa has been accelerating action to attain the principle of “leaving no one behind” which underpins the Sustainable Development Goals for growth of people and planet. Within the framework of UNESCO’s fields of competence, the Office is working in close collaboration with other UNESCO Offices in Africa and Institutes, United Nations Sister Agencies, African Union Commission, Regional Economic Communities, development and technology partners for the benefit of Member States’ in the areas of Education, Natural Sciences, Social and Human Sciences, Culture, Communication & Information.

In education, UNESCO has continued to deepen partnerships at various levels and with UN Sister Agencies notably, UNICEF and UNHCR, to facilitate the increased focus on marginalized populations such as refugees, IDPs, gender and rural populations, in the delivery of quality education, including the use of new technologies, to ensure no one is left behind.

Likewise, UNESCO continued its efforts to raise awareness among the national authorities in countries including Somalia, regarding the benefits of ratification of UNESCO Conventions in the field of Culture and the potential contribution of Culture to sustainable development through a variety of workshops, debates, publications and translations. Further support to countries in the region included capacity building of museum managers and promoting cultural industries. In the area of Science, key areas of focus included STI, Water Management and Promotion of STEM for girls.



While the key focus of the Communication and Information Section was on Freedom of Expression and Safety of Journalists, the Social and Human Sciences focused on Bioethics and the centrality of Youth Engagement for a culture of peace using new technologies. The Office has seized every opportunity to leverage the power of new technologies and the convening power of UNESCO to mobilize other actors to collaborate better for good success in serving the Member States in the region.

Nairobi Office in close collaboration with National Commissions for UNESCO of Eastern Africa continue to further the Agenda of UNESCO in the region in 2019. We use our convening power to bringing together the National Commission for UNESCO in the region with the support of the German Commission for UNESCO to share best transformation practices, build synergies and cooperation to demonstrate the relevance of UNESCO’s Agenda to Member States.

We acknowledge that more still needs to be done over the next ten years to leave no one behind. I invite you therefore, to join us and explore various areas of possible partnership by using this document as a guide to the work of UNESCO in the region. I pledge my commitment in my position as the Director, to continue UNESCO's commitment in strengthening Member States in our region to Leave No One Behind.



Ann Therese Ndong-Jatta
Director & Representative
UNESCO Regional Office for Eastern Africa

INTRODUCTION



UNESCO Regional Office for Eastern Africa, Chief of Education, Mr. Saïdou Sireh Jallow handing over a digital library to the principal of our Lady's Girls' Secondary School in Kaakuma during the launch of Digital Library in Kaakuma Refugee Camp ©UNESCO/C.Meru

Introduction

The advancement of information, Communication and Technology has brought about revolutionary change in the management and sharing of information and knowledge. Technology is all around us and a great way to accelerate UNESCO mandate of *constructing the defenses of peace in the minds of men and women*. UNESCO as a Knowledge Hub for research explores emerging opportunities and challenges in a changing global landscape.

Technology has revolutionized how UNESCO Field Offices deliver on UNESCO global Mandate, Sustainable Development Goals, Regional priorities and Country priorities. UNESCO Regional Office for Eastern Africa covers 13 countries namely: Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Tanzania and Uganda. Every year, UNESCO Regional Office for Eastern Africa produce a flagship publication report on its interventions in the Region. This report is a product, efforts, contribution and support of the entire sectors.

The theme for 2019 report is *"Exploring Digital Opportunities"*. This report will look at how sectors have leveraged technology in their delivery. Within the context of UNESCO strategic transformation and United Nations reform, UNESCO Regional Office for Eastern Africa is looking for innovative ways to deliver effectively and efficiently on its mandate for the greater benefit of the people and planet.

The future is bright, however, blurred with unprecedented challenges of diseases, climate change, food insecurity and terrorism. This calls for resilience and strategic partnerships to ensure that no one is left behind. UNESCO Regional Office for Eastern Africa will continue convening engagement forums with its stakeholder in the region in UNESCO fields of competence leveraging emerging digital opportunities to deliver for the people and the planet.

Key Achievements of 2019

Education

- UNESCO Nairobi facilitated the development and deployment of Digital Health Literacy content for grades 4 to 8 and the mobile application “RADA” on health and well-being of students in the institution of learning.
- UNESCO has been implementing a pastoralist livelihood and field schools project in South Sudan in cooperation with the FAO and funding from the European Union since September 2015. Phase 2 of the project was signed in 2019.
- The BEAR II Project is strengthening five Eastern Africa countries TVET sector by improving its relevance, quality, and perception for youth employment.
- UNESCO Nairobi promoted access to quality educational materials to refugee settlements and schools in Eastern Africa countries through Digital Libraries.
- UNESCO Nairobi promoted of Peace and Global Citizenship Education in crisis affected populations in Eastern Africa.
- UNESCO Nairobi facilitated the IGAD countries to develop a strategy for a regional qualifications framework.
- UNESCO Nairobi facilitated the establishment of Chairs: Research projects undertaken by UNESCO Chairs through national, regional and international collaboration through an integration of issues including, youth, health, gender, water, energy, food security and ICTs.
- UNESCO Nairobi strengthened the capacity of Member States in Sub-Saharan Africa in monitoring, evaluation and reporting of progress towards the targets of SDG4 and CESA.

Natural Sciences

- Secondary school girls mentored in Kenya, Madagascar, Rwanda through UNESCO Scientific Camps of Excellence.
- UNESCO facilitated East Africa Member States to develop a Regional Science, Technology and Innovation Policy.
- UNESCO Worldwide Hydrogeological Mapping and Assessment Programme produced a groundwater map of Africa.
- UNESCO facilitated the development of sandwatch activities in Comoros, Madagascar, Mauritius, and Seychelles to address climate change for sustainable development.

- African young scientists trained on Geological mapping and Mineral exploration.
- UNESCO Collaborates with Huawei on Artificial Intelligence Training.
- UNESCO Nairobi launched Rainwater Harvesting Calculator in Africa.

IOC-Africa

- UNESCO Nairobi organized an Ocean Science essay competition and a sport activity to mark the World Oceans Day in 2019.
- IOC-Africa established three regional training centers Kenya, Mozambique and Senegal in the framework of the Ocean Teacher Global Academy project for Capacity Development for Ocean Sciences.
- UNESCO Nairobi supported the Indian Ocean Countries response to transboundary challenges and opportunities resulting from climate change.

Social and Human Sciences

- UNESCO Nairobi hosted the first Management of Social Transformation (MOST) School in the Eastern Africa Region.
- UNESCO Nairobi facilitated the reviewing and development of South Sudan Youth Development Policy.
- UNESCO Nairobi supported and facilitated Kenya to incorporate the General History of Africa into school curriculum.
- UNESCO Nairobi launched the “STEP 4 Youth” programme in Djibouti.

Culture

- UNESCO Nairobi supported Ethiopia, Mauritius, Tanzania and Uganda to launch a participatory culture policy monitoring process through four new projects.
- UNESCO Nairobi provided a platform to increase awareness of issues affecting artistic through freedom Create|2030.

- UNESCO Nairobi increased awareness and capacities of World Heritage site managers in Kenya and Ethiopia to develop Disaster Risk Management Plan.
- UNESCO Nairobi strengthened capacities of 26 professionals from 12 national museums to protect and promote museum collections in Madagascar.
- UNESCO Nairobi strengthened capacities for the Cultural and Creative industries sector in Rwanda.
- UNESCO Nairobi strengthened national capacities and awareness to use culture for sustainable development by supporting finalization of first National Culture Policy in Djibouti.
- UNESCO strengthened capacities for sustainable tourism development through EU project to support management and development of sustainable tourism at two World Heritage sites in Ethiopia (Lower Omo Valley and Lower Awat Valley).
- UNESCO Nairobi increased Eastern African access to key reference documents in the cultural and creative industries sector through translations into Kiswahili of the Summary of 2018 Global Report: Re|Shaping Cultural Policies, and 1980 Recommendation on the Status of the Artist
- UNESCO Nairobi Strengthened links between universities and UNESCO for the safeguarding of intangible cultural heritage through a Regional Study on ICH in Universities in Eastern Africa.
- UNESCO Nairobi strengthened capacities to utilize the World Heritage Convention to promote and protect cultural and natural heritage in Eastern Africa by supporting 11 East African World Heritage focal points with preparation of the Periodic Report on implementation of the World Heritage Convention in the Africa Region
- UNESCO Nairobi Increased capacities for protecting and promoting natural World Heritage through organization of Workshop “Enhancing capacities in the preparation of Nomination file of Natural World Heritage” in Gondar, Ethiopia and through expert mission to Abourma Rock Art site in Djibouti.
- UNESCO Nairobi increased access and awareness of tools and guidance for the protection of cultural heritage in times of armed conflict through translation of the 1954 Convention into Somali.
- UNESCO Nairobi raised awareness of the need to protect cultural property in times of armed conflict (1954 Hague Convention) as part of ICRC International Course for Humanitarian professionals and policy makers organized in Kenya.
- UNESCO Nairobi strengthened capacities to protect the cultural and creative industries sector in South Sudan through the national launch of EU/UNESCO funded project for the development of a national copyright policy.
- UNESCO Nairobi increased awareness of contribution of Culture to sustainable development through media training workshop on cultural pluralism and media diversity in Somalia.
- UNESCO Nairobi promoted Eastern African participation in 14th session of the intergovernmental committee meeting for the 2003 Convention on safeguarding of intangible cultural heritage.
- UNESCO Nairobi increased awareness of benefits of ratification by Kenya of the 2001 Convention on the Protection of Underwater Cultural Heritage by supporting national consultation meeting with key stakeholders.
- Seven volunteer projects in the Eastern Africa region were selected to be part of the 2019 World Heritage Volunteers (WHV) campaign under the theme: “Empowering Commitment to World Heritage”.

Communication and Information

a) Freedom of expression and safety of Journalists

- UNESCO Nairobi strengthened capacities of duty bearers and rights holders to monitor and report on SDG16.10.1 and 16.10.2 related to access to information and safety of journalists based in Kenya, Rwanda, Somalia, South Sudan, Tanzania and Uganda.
- UNESCO Nairobi strengthened capacities of journalists on gender responsive reporting and safety of female journalists based on the UNESCO Manual on Freedom of Expression and Public Order and UN-Plan of Action on Safety of Journalists in South Sudan.

- UNESCO Nairobi supported to Rwanda and Tanzania for the Voluntary National Reviews process and reporting at High Level Political Forum (HLPF) on issues related to Safety of Journalists and Access to Information (SDGs 16.10.1 &2).
- UNESCO Nairobi supported the validation of *the Safety Guide for Journalists: a handbook for male and female reporters*, by government and media stakeholders in Tanzania.

b) Documentary Heritage

- National Committees for Memory of the World (MoW) Programme set up and operationalized for efficient, effective, and ensured coordinated implementation of MoW interventions in Kenya, Seychelles and Uganda.
- UNESCO Nairobi strengthened capacities of national staff of memory institutions on identification, preservation and safeguarding of documentary heritage using UNESCO guidelines for the preservation of Digital Heritage in Kenya, Seychelles, Rwanda, Tanzania and Uganda.
- UNESCO Nairobi supported the digital retrieval and repatriation of Archival documents (573,103 copies) from Mauritius Archives to Seychelles National Archives.
- UNESCO Nairobi supported the digitation of 5406 pages from 33 print archives from between 1913 and 1960, and over 1000 hours of audio archives and the digital map was developed from the identification of liberation heritage sites in Tanzania.
- UNSECO Nairobi in cooperation and partnerships with the Norway Based-Nordic Institute for Africa, has facilitated the repatriation of over 900 documents related to Tanzania role in the liberation struggles of Southern Africa. The documents were shared with the Tanzania National Records and Archives.

c) Media Pluralism and Diversity

- UNESCO Nairobi provided support towards development of the first Media and Information Literacy Curriculum for Teachers, Media and Information Literacy Strategy and Policy Document for Kenya.

- UNESCO Nairobi sensitized Community radio practitioners on UNESCO Gender Sensitive Indicators for Media in content production, and in promoting a balanced presence of women as critical voices in addressing issues on early pregnancies, child marriages and Female Genital Mutilation in their communities in Kenya and Tanzania.
- UNESCO Nairobi conducted Media Assessment on the State of Community Radio to reinforce Media Pluralism for sustainable development and strengthen community Media Sustainability in Ethiopia.
- UNESCO Nairobi strengthened female journalists' technical capacities of on Gender Sensitive Programming and Reporting based on UNESCO Gender Sensitive Indicators for Media in Uganda.
- UNESCO Nairobi provided technical support to Africa Union Commission in the development of an Online Media Information Literacy course for Youth in Africa.
- UNESCO Nairobi strengthened technical capacities for journalists and security providers in Tanzania on media literacy for prevention of violent extremism.

d) Building Knowledge societies

- UNESCO Nairobi provided support for the representation of national experts at the Information for All Programme (IFAP) meeting to develop National Roadmaps for implementation in the Region.
- UNESCO Nairobi provided technical support towards development of the National ICT Policy, Accessible Procurements guidelines, and Accessible Publishing guidelines for promotion of rights of persons with disabilities in Uganda.
- UNESCO Nairobi provided support towards the development of Implementation Strategy Plan and Communication, Implementation Strategy Plan for operationalizing The Marrakesh Treaty (2013) and development of Editorial Guidelines and portal for ICT in Education Policy for Persons with disabilities in Uganda.



EDUCATION SECTOR

1.0 Development and Deployment of Digital Health Literacy content in Kenya

UNESCO Nairobi collaborated with the Kenya Institute of Curriculum Development (KICD) in partnership with development partners to develop digital health literacy content for basic education level and an online teachers' course on health literacy namely health education, gender and global citizenship. The multi-media elements of the digital health literacy content focuses on HIV and AIDS, drugs and substance abuse, self-awareness, communication, assertiveness, conflict resolution, problem solving, core values, self-esteem, gender equality, female genital mutilation, early pregnancy and child marriages.

The digital content for grades 4 to 8 has been successfully deployed in 34 selected schools for piloting. More than 10,000 learners are expected to be reached at the classroom level. To strengthen the capacity of teachers, a total of 215 teachers from piloted schools were trained on the digital health literacy content in Kilifi and Makueni Counties. The dream is for the content to be deployed nationally through KICD multi-media structures with support from partners. The partners in this undertaking were UNAIDS, KICD, Ministry of Education, Ministry of Health, Ministry of Public Services and Gender, National Agency for the Campaign against Drug Abuse, Teacher Service Commission and Faith Based Organizations.



In partnership with University of Nairobi, UNESCO Nairobi supported the development of an innovative android mobile application, dubbed RADA. “RADA” is a Kiswahili word for “Alert”. This application is aiming to promote the health and welling of young people in the institution of learning. In the spirit of leaving no one behind, the application has easy to use features such as text-to-speech, speech recognition, high-contrast themes and enlarged cursors that enables persons living with disability to access and navigate the application with ease. Young people can access safe information on sexual and reproductive health, HIV and AIDS, alcohol and drug abuse, mental health, general health, safety of campus students and career guidance on financial management and life after campus. UNESCO Nairobi has been able to reach students in various campuses through engagement forums, 4,369 were reached directly and an estimated 8,000 reached through campus radio.

1.1 Education for People on the Move in South Sudan



UNESCO has been implementing a pastoralist livelihood and field schools project in South Sudan in cooperation with the FAO and funding from the European Union. The project, which started in September 2015, is still ongoing as it was found to be a successful project as evaluated by an external evaluation team. Phase 2 of the project was signed in 2019. UNESCO has been implementing the education component while FAO handled the livelihood component.

For this project, UNESCO developed three sets of context-relevant textbooks for three groups of learners – children, youth and adults who reside in the cattle camps in rural South Sudan. UNESCO also runs teacher training sessions for literacy facilitators drawn from the pastoralist communities. The textbooks, learning materials and a monitoring tool was downloaded onto tablets distributed to facilitators. One innovative feature of the project is that the literacy, numeracy and livelihood classes follow the pastoralists during their seasonal movement in search of grazing and water for their animals. This has helped reduce dropouts who might otherwise have found it difficult to remain in the learning programme.

In addition, the project has shown a marked reduction in violence and cattle rustling in the project areas because of the alternative livelihood options created for the youth and adults in the cattle camps. They now produce vegetables, honey, and dairy products to augment their income. The health of the pastoralists and their cattle has also improved due to instructions in hygiene and nutrition given to them, and the veterinary services they get to their cattle through the project. The link to the project is provided for more details on the project. [Pastoralist Livelihood and Education Field School](#)

Photo ©FAO/Andreea Campeanu

1.2 The BEAR II Project

The Better Education for Africa's Rise (BEAR) II Project is being implemented in five Eastern Africa countries: Ethiopia, Kenya, Madagascar, Tanzania and Uganda, with the support of the Korean Government. The project is aligned with [UNESCO TVET strategy 2016-2021](#) and the [Continental Education Strategy for Africa 2016-2025](#). It focuses on three areas: increase the relevance of TVET to the needs of the economy, enhance the quality of TVET delivered to trainees, and improve the perception of TVET among young people and the community.

Despite diverse and challenging contexts of the beneficiary countries, the BEAR II project has begun to cover ground in order to achieve its objectives. Concerning the relevance of TVET programmes: mapping and harmonization of labour market analyses on the basis of existing labour market information systems were conducted in all five countries; occupational standards were developed and updated based on the above studies in Ethiopia, Kenya and Madagascar; curriculum development based on the results of the labour market analysis, has been initiated in Kenya and Uganda; in addition, training of 20 Directors and Integration & Guidance Advisors of Vocational Training Centres was conducted in Madagascar. The mid-term evaluation of the BEAR II project has been initiated and will be conducted within the first quarter of 2020.



The BEAR II Project is being implemented with the view to enhance public-private approach working in close partnership with national governments, local stakeholders and the private sector, and focusing on entrepreneurship and innovation. The project has strengthened close collaboration with the National Commissions for UNESCO, the United Nations Country Teams, technical and financial partners in each of the countries, and other donor coordination mechanisms in the field of education and training at the regional and international levels.



1.3 Establishment of UNESCO Chairs

As one of its mechanisms to support Member States, UNESCO establishes UNESCO Chairs on various areas. In this regard, the UNESCO Regional Office for Eastern Africa established the following UNESCO Chairs during the reporting period:

- UNESCO Chair on Enterprise Management and Sustainability at Moi University, Kenya.
- UNESCO Chair on Youth Leadership in Science, Health, Gender and Education at Aga Khan University, Kenya
- UNESCO Chair on Community Radio for Agricultural Education at Rongo University, Kenya
- UNESCO Chair on Ecohydrology and Transboundary Water Management at Sokoine University of Agriculture, Tanzania

1.4 Peace and Global Citizenship Education in IGAD

UNESCO Nairobi organized a regional forum targeting the technical officers of Ministry of Education in the respective IGAD Member States, to provide a platform to meet, exchange and build a common understanding of the Global Citizenship Education (GCED) and opportunities for the integration of GCED into the school curriculum and the communities in refugee settings. The forum focused on: mapping out challenges and opportunities for the integration and implementation of GCED in classroom and the community; brainstorming on strategies for the integration of GCED in the school curriculum; developing an action plan and roadmap for the integration and implementation of GCED in the classroom and community in refugee hosting areas; and in particular developing a teacher training strategy for implementation of Peace & GCED. Participants of each country represented were able to develop an action plan for their country that took into account their current stage and their constraints. The forum mobilized partners and was in collaboration with National Commissions for UNESCO (Eritrea, Djibouti, Kenya, Uganda) UNICEF, UNHCR, IGAD, Arigatou International and the Aga Khan Foundation.



1.5 Regional Qualification Framework for IGAD

The Djibouti Declaration and the Addis Ababa Call for Action both stipulate the need to include refugees, returnees and IDPs into national systems of education. Developing National Qualification Frameworks is one way to help out-of-school children in the aforementioned categories be placed into the academic level they qualify. The IGAD countries would like to move on to establishing a Regional Qualifications Framework (RQF) which would facilitate the integration of all students regardless of nationality and plight. In the view of the IGAD countries, the RQF would easily feed into the Africa Continental Qualifications Framework (ACQF) on which work has started.

UNESCO prepared grounds for the establishment of a strategy to develop a RQF for the eight IGAD countries. Once the draft strategy has been approved, it would be tabled at the experts meeting scheduled for July 2020. The strategy is expected to be published and presented for endorsement by the High Level Meeting of Ministers of Education from the eight IGAD countries in December 2020, in order to start the development of the RQF in January 2021. UNESCO is working in partnership with UNICEF, UNHCR, IGAD and GIZ (on behalf of the EU).

1.6 Digital Library Initiative

UNESCO Regional Office for Eastern Africa is implementing a Digital library initiative that aims to build a culture of reading and autonomous-learning through research. UNESCO is distributing Digital Library Units and ICT equipments to Primary schools, Secondary schools, Higher Education Institutions and Youth training centres, to curb the shortage of textbooks, curricula and other learning materials. A Digital Library Unit is a portable plug-and-play server with over 65 stored educational websites and learning materials in digital formats, and makes the content available over any local offline wireless connection. It has the ability to hold multiple users, gives institutions and users' ability to access resource materials simultaneously, without limitations in use. It has a storage capacity of 1 Terabyte, can handle up to 50 simultaneous users and has over 6 hours' battery life.



We are distributing the Digital Library Unit to improve the quality of education and promote inclusion of people in vulnerable situations such as in refugee camps and settlements and informal settlements. We intend to distribute the unit to refugee their host communities and internally displaced persons in Kenya, South Sudan and Uganda; and augment access to educational materials for research for higher education institutions in Madagascar and in Small Island Development States within Eastern Africa (Comoros and Seychelles). The digital library initiative was successfully launched in the University of Seychelles and had a great reception. In addition, lecturers and students were oriented and train on the use of the Digital Libraries.

1.7 Monitoring, Evaluation and Reporting of progress of SDG4 and CESA

UNESCO strengthened the capacity of Member States to monitor, evaluate and report on their progress towards the achievements of the SDG4 and the [Continental Education Strategy for Africa](#) (CESA) targets. Support was provided in the collection, analysis and reporting of educational data from countries in the region and collate them at regional and global levels. In order to achieve this, UNESCO, partnered with the African Union Commission and UNICEF, organized a regional workshop on monitoring, evaluation and reporting of SDG 4 and CESA in Nairobi, Kenya. The workshop brought together 27 countries from West Africa, Central Africa, and Eastern Africa. The participants comprised of high level technical ministry of education staff in charge of: planning and budgeting; and education management information system.

The main objectives of the workshop were twofold: i) to discuss a harmonized approach for country reporting of achievements on Agenda 2030 and 2063, and ii) to institutionalize the reporting mechanism in Member States aimed at promoting data utilization in the decision making process, strengthening consultations among data producers and users, and identifying areas where partners' support is required.

Countries that participated in the workshop recommended various follow up actions that are expected to be performed by UNESCO, AUC and the Member States:

- UNESCO and AUC to deepen awareness among country officials on the CESA framework and linkages with SDG 4; and provide support to strengthening the capacity of technical staff of countries in planning, monitoring, and reporting the implementation of SDG 4 and CESA.
- UNESCO and AUC to document innovative and sustainable funding mechanisms for the production of quality education data in Africa.
- Member States to improve response to the UNESCO Institute of Statistics (UIS) annual surveys in order to inform achievements on SDG4 and CESA targets, building on a joint monitoring mechanism to collect timely, comprehensive and credible data on SDG4 and CESA.
- Member States to collect and integrate data on marginalized, vulnerable populations; including forcibly displaced, refugees, IDPs & returnees to enhance quality and inclusive national Education systems to enhance inclusive service delivery.
- Member States to reinforce the involvement of the Central Statistical Office in the education data production processes organized by Ministries in charge of education and vice-versa, in order to leverage on the existing statistical law and other legal instruments.

Note: A letter was sent to the ministers in charge of education of all the countries in the West, Central and Eastern African regions supported by the UNESCO Regional Offices based in Dakar, Nairobi and Yaoundé.



United Nations
Educational, Scientific and
Cultural Organization



Sustainable
Development
Goals

NATURAL SCIENCES SECTOR

2.0 Science, Technology and Innovation Policy



The East Africa Community (EAC) recognizes the fundamental role of Science Technology and Innovation for the economic development of the region. Therefore, the 5th Extra-ordinary Summit of the EAC Heads of States established the East African Commission for Science Technology and Innovation (EASTEKO) on 18 June 2007 as an institution of the EAC. EASTEKO provides support mechanisms to facilitate the harnessing and application of STI at a regional level.

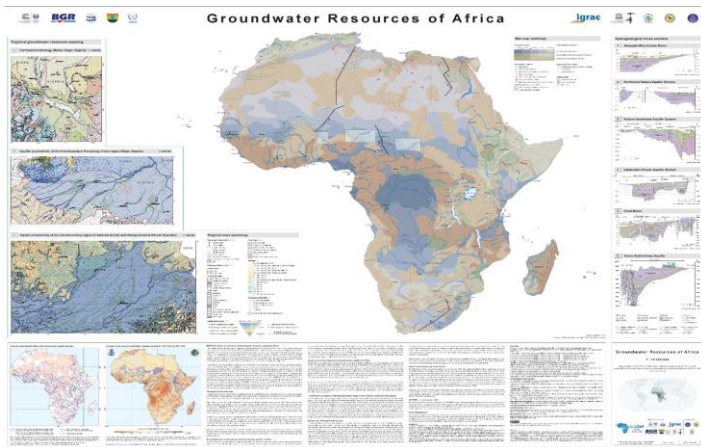
The development of a regional STI Policy falls within the mandate of the EASTEKO, for it to be aligned to the Sustainable Development Goals of United Nation Agenda 2030, the African Union Agenda 2063 and its [Science, Technology and Innovation Strategy for Africa 2024](#) (STISA), as well as the regional priorities of the EAC in its Vision 2050. For this exercise, UNESCO provided both financial and technical support to facilitate the process of developing a Regional Science Technology and Innovation Policy.

UNESCO sponsored the workshop organized by EASTEKO, to provide technical and financial support in the policy development of an East Africa Regional Science, Technology and Innovation Policy. UNESCO highlighted the importance of including more young girls and women in Science, Technology, Engineering and Mathematics (STEM), aligning it with the SDG 5 on Gender Equality. A key role needs to be played by Youth, as users of the Policy and innovators. The youth dividend-more than 50 % of young people live in Africa-must be harnessed for a vibrant STI sector for the region in the future. The participants underlined the need of including climate change in the policy as a critical issue.

Consensus was reached in the involvement of the academia, the private and public sector in the policy development. Other topics discussed included support for management of research on STI and the need for effective coordination of research, not just by research institutions, but also by Governments.

The East Africa Regional STI Policy will have to ensure that universities are enhanced to be centers for excellence for investments in education, technical competencies and training, particularly in science technology and education. Essential elements will be to update data on STI, policy making and strategic planning. UNESCO Institute for Statistics can provide statistics and gender disaggregated country specific statistics on STEM for the region.

UNESCO is planning to expand and pilot the Global Observatory Science Policy Network (GO-SPIN) at a regional level. GO-SPIN aims to fill this information gap by providing key information on STI governing bodies, legal frameworks, policy instruments and long-term series of indicators for evidence-based policy analysis, design and foresight studies. GO-SPIN is an online, open access platform for decision-makers, knowledge- brokers, specialists and general-public, with a complete set of various information on STI policies.



The map presented depicts the current status of WHYMAP groundwater resources mapping of Africa. It contains novel features, such as cross-sections and regional transboundary hydrogeological maps, bringing together generalized overview maps and regional hydrogeological studies, thereby adding additional value by including spatial information at a higher resolution in regions where ongoing German Geological Survey technical cooperation projects are taking place.

2.1 Groundwater Resources Map of Africa

The Worldwide Hydrogeological Mapping and Assessment Programme (WHYMAP), presented the Africa Groundwater Map during the 7th Africa Water Week convened by the African Ministers Council on Water (AMCOW) in conjunction with the African Union Commission and organized with other development partners in Libreville, Gabon. Its presentation at this forum represented political commitment at the highest level with over 1000 participants from governments, regional institutions, international partners, the private sector, the scientific community, civil society, and the media from all over the world, and in particular Africa. The meeting was to discuss and collectively seek solutions to Africa's water resources, and sanitation challenges. WHYMAP aim to contribute to the worldwide efforts to better understand, manage and protect aquifer resources, and to transfer this groundwater related information appropriately to groundwater experts as well as to non-experts and politicians.

WHYMAP consortium comprise of: UNESCO, IAEA, German Geological Survey (BGR), International Association of Hydrogeologists (IAH), International Groundwater Resources Assessment Centre and Commission for the Geological Map of the World (CGMW) is working with other development scientific partners: British Geological Survey (BGS) and French Geological Survey (BRGM) in order to update the map with all information available with different partners as well prepare country level and sub-regional level for Africa. This initiative is supported and fully integrated in to AMCOW Groundwater Programme. Currently, all the partners are working on a detailed groundwater map for ECOWAS region which will be officially launched at World Water Forum Dakar 2021 in Senegal.

2.2 Sandwatch addressing Climate Change

UNESCO has been developing and strengthening sandwatch activities since 2001 around the world using the proactive "measure, analyse, share and take action" to monitor the coastal regions and enhance knowledge to identify long term solutions. In the Eastern Africa region, Madagascar, Mauritius and Seychelles are active sandwatch countries. A training of trainers' workshop was organized in Madagascar with participants from Comoros.

Madagascar is highly vulnerable to climate change impacts on coastal resources and ecosystems such as coastal erosion, coral bleaching and mangroves degradation. Insufficient long-term data and monitoring in the coastal region is precluding in depth studies to enhance knowledge to identify long term solutions.



The workshop took place at an appropriate moment, as the Malagasy Ministry of National Education is currently reviewing and updating its education curriculum. The workshop therefore, provided a good opportunity to enhance the knowledge of education planners of the National Education Ministry and the Ministry of Environment, Ecology and Forests on original and innovative ideas that could be considered to be integrated in the new curriculum.

The approach for the training was a mix of inside and outside the classroom activities. Participants were motivated to participate actively in the training, share knowledge about local context, discuss problems encountered in their regions and propose solutions. Additional information from many experts among the participants in fields relevant to coastal issues and climate change helped to consolidate knowledge.

On the last day, an action plan, for implementing Sandwatch activities in Madagascar for the next three years, was finalized. The UNESCO Antenna in Madagascar, will be responsible for promoting and developing sandwatch activities. In the immediate, a consultative meeting, coordinated by the National Ministry of Education (MEN), would be organized with the participation of all Ministries and institutions concerned, to discuss how to integrate sandwatch activities in the school curriculum and implement Sandwatch at national level.

At the end of the 3 years, it is expected that several schools and communities located on the coastal region would be well advanced in the implementation of sandwatch and a system for sharing of data and information at national and regional levels established to create a strong networking and encourage harmonization and standardization.

Further, the workshop generated adequate interest and enthusiasm to develop the Sandwatch programme in Madagascar and Comoros. Therefore, it provided opportunities to expand the networking with other countries in the Indian Ocean and outside the region to contribute to adapting to climate change and educating for sustainable development.

The Comoros participants also proposed that a Sandwatch training workshop be organized in their country. UNESCO and Comorian stakeholders are already planning a follow-up action.

2.3 Geological Mapping and Mineral Exploration Advanced Training

UNESCO launched Earth Sciences Initiative in Africa to support the development of the next generation of Earth scientists who are equipped with the necessary tools, networks and perspectives to apply sound science to solving and benefiting from the challenges and opportunities of sustainable development. A Capacity building training for African youth on Geological Mapping and Mineral Exploration was held in Korea, under the auspices of UNESCO and United Nations Economic Commission for Africa - African Minerals Development Centre (UNECA-AMDC) to enhance their competence. The specific objective and outcome was to strengthen the knowledge and skills in Africa's mining sector and specifically of young scientists from African Network of Earth Science Institutions (ANESI), to make them able to contribute – in their respective countries – with their expertise and data to informed decision-making and good governance as well as sustainable use of mineral resources and reinforcing the capacity of earth sciences institutions.



The 12-day training course provided participants an interdisciplinary approach to explore the academic knowledge and practical skills on the expertise of the subject matter. The contents of this course comprised a general overview on principles and genetic concepts of geological mapping technique and geophysical methods into mineral exploration. Participants gave presentation on their own countries' current geological mapping and/or mineral exploration status. Each of the participants delivered in-depth SWOT and Gap analyses. They also suggested solutions and estimated expected outcomes in terms of economy, technology and society, and environment. They worked on a future roadmap for implementing the Africa Mining Vision.

Testimonies from the participants showed the training raised the level of skills of Young African Scientists working in the field of geological mapping. Therefore, making the course successful and also meeting the participants' expectations. It was recommended that the international network of UNESCO, UNECA-AMDC and KIGAM be maintained and developed for further collaborative activities beyond the border.

2.4 UNESCO and Huawei collaborates in Artificial Intelligence

Huawei reached out to UNESCO to collaborate in offering cutting edge ICT training in areas of AI and cloud computing in Nairobi, Kenya. The training programme targets university lecturers and academics who are Certified AI Academy Instructors with the aim of building their capacities. Participation in the training program is subject to nomination by university and passing an entry examination.

As a global leader in Science, Technology and Innovation, UNESCO recognizes the critical roles that emerging technologies such as AI could play in reorienting key sectors (education, health, agriculture, finance) of the economies of African countries for sustainable development. As a convergence of a widening spectrum of frontier technologies, AI has garnered the potential to bring new possibilities for global development and societal change. However, education systems will need to adapt quickly, and new frameworks need to be created for workers and citizens to develop the skills they need to thrive.

Ms. Ann Therese Ndong-Jatta, Director of UNESCO Regional Office for Eastern Africa announced the partnership during her speech at the Summit, “Huawei Connect”, in Shanghai, China. She emphasized the importance for building digital skills in Africa and the tremendous opportunities for technology to improve education quality and accessibility: “I commend Huawei’s TECH4ALL initiative for focusing on technology to benefit people, and launching this initiative to make sure No One is Left Behind, especially those in the most remote areas. UNESCO East Africa is excited to work with Huawei together on this initiative.”

Mr. Tao Jingwen, Board Member and Chairman of the Corporate Sustainable Development Committee at Huawei, expressed their strong commitment to TECH4ALL stating: “Huawei is not only fully committed to this initiative but recognizes the importance of collaboration with partners in order to implement this ambitious program and achieve wide-scale and sustainable impact. UNESCO is an excellent partner for us, not only in expanding digital skills to those in remote areas but also in the use of technology to improve education where they have extensive experience and expertise. We are delighted to be working with them and hope to expand the relationship in the future.”

Under this collaboration, the first training for University Lecturers in Kenya on AI has already taken place. The lecturers are expected to begin offering certified AI training courses to their students through the Huawei ICT Academy program. The training covered the following HCIA-Artificial Intelligence Course Curriculum:

- Overview of AI
- Python Programming language
- Mathematics basics (linear algebra, probability theory and information theory)
- Tensor flow
- Propaedeutic of deep learning
- Huawei Cloud Enterprise Intelligence

UNESCO and Huawei are also partnering on “DigiTruck”, an initiative enabling teachers to use technology in their teaching, youth to learn and gain employment online, and those who have never used the internet or smartphones before to gain digital literacy skills

2.5 Rainwater harvesting and adaptation strategy for Africa

UNESCO developed a smart phone application for Rainwater Harvesting in Africa in partnership with AMCOW, UN Environment, UN Economic Commission for Africa (UNECA), GWP Tanzania and UNESCO Category II centres: Regional Centre on Groundwater Education, Training and Research, Nairobi, Kenya; Integrated River Basin Management, Kaduna, Nigeria; and Regional Centre on Capacity Development and Research on Water Harvesting, Khartoum, Sudan.

Climate change is one of the main threat that increased pressure on already stressed hydrological systems and water resources. At the same time, development by a growing population will affect our ecosystems as we increase our demands for services, including reliable and clean water. Rainwater harvesting will continue to be an adaptation strategy for people living with high rainfall variability, both for domestic supply and to enhance crop, livestock and other forms of agriculture.

African countries are also facing water shortages because of climate change and have a massive potential in rainwater harvesting to meet the needs of their current populations. Overall, the quantity of rain falling across the continent is equivalent to the needs of 9 billion people, one and half times the current global population.

What African countries can do to adapt to climate change is using rainwater harvesting as a technology and a management approach, to provide water resources at the community level. From the socio-economic point of view, Africa still faces cycles of poverty and underdevelopment. Water has a vital role to play in responding to the socio-economic crisis facing Africa. Although several economic instruments are being deployed to address this crisis, the success of these efforts will depend heavily on the availability of sustainable water resources.

To address this, the African Water Vision for 2025 is set to develop the full potential of Africa water resources for sustainable growth in the region's economic and social development, of which rainwater harvesting and storage forms a major component. Among others, the Vision calls for "improving water wisdom", which is to be achieved by establishing an elaborate system of data collection, management, dissemination, including standardization and harmonization of data and information.

This application is available for android and iOS version mobile users. There is also a dedicated website for it. This smartphone application is available in three languages English, French and Kiswahili. This application contains rainwater calculator, where anyone can calculate how much water they can harvest in the given geographical location in an interactive mode by providing necessary details. This application has more than 3500 rainfall records from all countries in African continent. Moreover, UNESCO has produced advocacy videos on 14 different topics in animation format. One can easily use the calculator offline however; to watch the videos you need internet connectivity.

The main aims of the smartphone application and website are twofold: to create awareness about the importance of rainwater harvesting especially in the event of climate change, and provide evidence to the people to calculate the quality of the rainwater they could harvest in a particular location by "do it yourself" interactive session.

yourself" interactive session.

Additional links

[Website:](#) [App in Android Play Store:](#) [App in IOS:](#)

2.6 Scientific Camps of Excellence

UNESCO supported secondary school girls in Kenya, Rwanda and Madagascar through the STEM mentorship programme. The girls were mainly from senior 1, 2 and 3 secondary school levels. Achieving the 2030 Agenda and its sustainable Development Goals calls for transformative thinking and action. STEM fields are critical in making improvements in many aspects of life, such as health and well-being, infrastructure, agriculture, sustainable energy production and many others. Both the Agenda 2063 of African Union and Agenda 2030 of the United Nations do recognize the importance of science, technology, research and innovation in stimulating socio-economic development.



The participation of women and girls in STEM fields has continued to dwindle with many female scientists falling through the cracks of the leaky pipeline, thus creating a big gender gap in STEM work force. To address the gender gap UNESCO together with its partners of the Ministry of Education in the three Eastern African countries has been running a STEM Mentorship programme through scientific camps of excellence with the aim of inspiring and nurturing secondary school girls to embrace STEM and see science subjects as an important component of their daily lives. Such camps were organized for secondary school girls: in Kenya 600 girls were mentored; in Rwanda 170 senior 1 and 2 secondary school girls were mentored; while in Madagascar, mentorship activities were organized for secondary school girls and college female students through talks and exhibitions on a one-day basis in each of the participating three regions of Ansiranana, Itasy and Boeny. The mentorship camps also provided them with the opportunity to visit universities and industries to assist them in making informed career choices when making selections of courses for their university admission. At the end of the mentorship activities, science was demystified for the girls and they also had the opportunity of gaining knowledge on coding and robotics as important elements of technology.

The mentored students are expected to mentor their fellow students and ensure a culture of STEM in their schools through the establishment of STEM Clubs where they can have the opportunity to discuss matters related to STEM subjects and careers. The teachers who also accompanied the students to the STEM Mentorship camps are expected to not only support in sustaining the interest created in STEM among the students, but also to sensitize fellow teachers on gender responsive pedagogy and the importance of using technology to enhance a more interesting and interactive teaching and learning of their subjects. The UNESCO initiated STEM Mentorship programme was implemented in partnership with the Ministry of Education in each of the participating countries, FAWE Regional Office as well as the National Chapters, Microsoft iEARN, the National Commission for UNESCO in each of the countries, AIMS and Rwanda Women in Science and Engineering for the case of Rwanda.



United Nations
Educational, Scientific and
Cultural Organization



Intergovernmental
Oceanographic
Commission



3.0 Raising awareness on Ocean issues

The importance of coastal and marine resources and environments in Africa is increasing, with the rapidly increasing coastal populations and the establishment and strengthening of ocean-based industries such as fisheries, energy extraction and tourism. The African Union in its Agenda 2063 recognizes the Blue Economy as a major contributor to continental transformation and growth, advancing knowledge on aquatic and marine biotechnology, the growth of an African-wide shipping industry, the development of sea, river and lake transport and fishing, and the exploitation of and beneficiation from deep sea mineral and other resources. However, ocean literacy, the understanding of the ocean's influence on people, and their influence on the ocean, is limited in the region. In order to address this, UNESCO Intergovernmental Oceanographic Commission, Social and Human Sciences Sector and Priority Africa and External Relations Sector at the Regional Office of Eastern Africa organized an Ocean Science essays competition, and activities to mark the World Oceans Day 2019.

The theme for the 2019 World Oceans day was Gender and the Ocean. UNESCO partnered with the Kenya National Commission for UNESCO, the Kenya Marine and Fisheries Research Institute, and the Technical University of Mombasa and organized events in Mombasa to: sensitize ocean adjacent communities on blue economy, raise awareness of the vital importance of our oceans and the role they play in sustaining a healthy planet promoting values, understanding and eliciting action; establish and bolster collaborations and partnerships in support of ocean conservation; and highlight the role of gender in ocean ecosystem conservation, sustainable utilization and management.

Science Association also mobilized its network of Women in Marine Sciences in the Western Indian Ocean (WIMS) to participate in the events.

These included:

- one-day symposium on Gender and Oceans, attended by more than 100 participants representing 20 organizations, including researchers, university students, resource managers, conservationists, representatives of private sectors and civil society.
- Beach clean-up exercise at Jomo Kenyatta Public as a practical measure to address ocean pollution. This was presided over by Prof Micheni Ntiba, the Principal Secretary, State Department for Fisheries, Aquaculture and the Blue Economy.
- An exhibition was organized at the beach by the State Department of Fisheries, Aquaculture and Blue Economy; the Kenya Marine and Fisheries Research Institute and the Beach Management Unit. This included relevant ocean research and conservation initiatives, as well as fish cooking and tasting.
- UNESCO, the Kenya National Commission for UNESCO and local universities organized beach sports, including football, volleyball and rugby after the beach clean-up.
- UNESCO has been using the power of sport to educate people on ocean literacy as well as advocate for action amongst the community in protecting the oceans that are increasingly endangered due to man-made issues including pollution, waste and growing consumption.

The recognition of sport as a tool for development has increased rapidly, with an improved public profile and greater credibility. Some of the issues highlighted during the discussions were that though women are still disadvantaged in the ocean sciences, they are making good progress in bridging the gender divide, with higher enrolment in oceans sciences than men in undergraduate programmes in some of the local universities. Women are the majority in the fisheries value chain, increasingly owning boats and financing fishing trips. They also control the fish trade and small scale processing. However, men still dominate in management. Domestic responsibilities also impact on the rise of women to higher positions.

The African Union Commission assisted in the mobilization of participants from the Association of Women in Maritime in Africa (WIMA) and the network of Women in Maritime Sector in Eastern and Southern Africa (WOMESA). The Western Indian Ocean Marine

3.1 Capacity development for Ocean Sciences

Capacity development continues to be a key area of focus for the Sub Commission. In the framework of the Ocean Teacher Global Academy (OTGA) three regional training centres were established in Africa: Kenya Marine and Fisheries Research Institute - KMFRI, Mombasa, Kenya (for training in English); Universidade Eduardo Mondlane - Escola Superior de Ciências Costeiras e Marinhas – ESCCM, Maputo, Mozambique (for training in Portuguese); and Centre de Recherches Océanographiques de Dakar-Thiaroye -CRODT-ISRA, Dakar, Senegal (for training in French). The use of these facilities and expertise in the region significantly reduced travel costs and allowed for easy follow-up and support for the students. Training courses were organized on the following topics:

- Tidal and Spectral Analysis and Applications was held at the Universidade Eduardo Mondlane, Centro de Informática in Maputo, Mozambique. The course provided a comprehensive knowledge on tides (elevation and currents) and their importance for coastal ecology and coastal development, fisheries operations, port management, marine sports and other maritime services and natural energy generation. The course comprised theoretical basis of tides and tide generating forces, the constituents, instruments used for tide measurement, data acquisition, processing, analysis and interpretation for different applications.
- Discovery and Use of Operational Ocean Data Products and Services was held simultaneously at the Kenya Marine and Fisheries Research Institute in Mombasa, Kenya and the Eduardo Mondlane University in Maputo, Mozambique with joint sessions streamed online. The course was attended by 25 trainees from Egypt, Ethiopia, Kenya, Mozambique, Nigeria, Tanzania, Brazil, Portugal and Spain, provided knowledge and hands-on experience for the data, satellites and instrumentation, access and formats, tools and software for operational activities.
- Marine GIS Applications held at the Kenya Marine and Fisheries Research Institute in Mombasa, Kenya provided an introduction to GIS for marine applications, utilization of open source spatial data, and hands on GIS applications for marine environment. The training course highlighted the technologies used to measure sea surface temperature and phytoplankton proxy data, as well as the main applications of these data such as primary production, fronts and time series variations.

In addition to the training courses organized, UNESCO/IOC provided fellowships to four postgraduate students from Madagascar to participate in conferences in Seychelles, Egypt and Spain, and present the results of the work undertaken for their dissertations.



3.2 Oceans and Climate Change

The implementation of the project on “Enhancing oceanography capacities in Canary Current Large Marine Ecosystem (CCLME) in Western Africa countries” continued with a focus on improving the existing knowledge on the effects of climate change on the Canary Current. The project brings to the table the need to further study the dynamics of eastern boundary upwelling systems (EBUS) and the effects of climate change upon them. The EBUS are the most productive ecosystems in the world in terms of fisheries production. In Western African countries in particular, the proportion of animal protein obtained from fish is very high. Changes in the productivity of the CCLME would have a direct impact on their national economies and food security, as they largely depend on fisheries resources. Among the main objectives was the identification through a holistic approach of knowledge gaps to address possible changes in the primary productivity of the CCLME, and capacity development needs in the region. Ongoing work include the setting up of a specific regional productivity model for the CCLME and cross validation of the existing upwelling indices including: data gathering and provisional access; coordination of new research efforts; and data analysis and modelling.

In the Western Indian Ocean, the preparation of a regional framework for Supporting Indian Ocean Countries Response to transboundary challenges and opportunities resulting from climate change continued with a technical meeting organized by UNESCO attended by 9 UN sister agencies, (UNDDR, UN Environment, UN Women, UN HABITAT, UNV, WFP, FAO, UNFPA, UNICEF) providing useful input for improvement of the framework. The revised document was presented to the United Nation Country Team retreat for Mauritius and Seychelles held in Mahe, Seychelles, which was also attended by the UN Resident Coordinator for Comoros and Madagascar. UNESCO is working with the UN Resident Coordinator for Mauritius and Seychelles, to finalize the framework document, which will be presented to stakeholders, including Member States from the region and UN agencies in early 2020. The framework will build on the competences, and the results of relevant initiatives implemented by partners, to develop specific actions aimed at generating and producing scientific knowledge, strengthening education systems at different levels including higher and vocational education, while also promoting peer learning through exchange programmes between and among countries.

Little is known when it comes to monitoring of ocean acidification in the Western Indian Ocean region. UNESCO/IOC in partnership with the Western Indian Ocean Marine Science Association, the IAEA Ocean Acidification International Coordination Centre (OA-ICC) and the Global Ocean Acidification Observing Network (GOA-ON), together with country partners are implementing ocean acidification monitoring projects in the region. The main objective of the projects is to establish baseline data for the carbonate system in the Western Indian Ocean and to document the ongoing ocean acidification along the coast in an effort to support Sustainable Development Goals in particular SDG 14.3 to minimize and address the impact of ocean acidification.





United Nations
Educational, Scientific and
Cultural Organization



Sustainable
Development
Goals



SOCIAL AND HUMAN SCIENCES SECTOR

4.0 Management of Social Transformation Schools

The first Management of Social Transformation (MOST) School in the Eastern Africa Region under the theme “Youth, Peace and Security in the Horn of Africa” took place on the campus of Makerere University in Kampala, Uganda. The “School” in Uganda was organized by UNESCO, in partnership with the Uganda National Commission for UNESCO and Makerere University. It also benefited from the strategic partnership of the African Peace building Network (APN) of the Social Sciences Research Council (SSRC), and the Intergovernmental Authority on Development (IGAD) and drew participants from Uganda, Kenya, South Sudan, South Africa, Djibouti, Gambia, Somalia and Ethiopia.

UNESCO explores innovative ways to engage youth in their societies, in particular, in policy development, by promoting their active intellectual engagement and participation in the process, in line with the Organization’s Operational Strategy on Youth (2014-2021). The key aim of the MOST School was to enlarge the pool of qualified young professionals from different backgrounds (academia, government and civil society, etc.) who may assist in strengthening the research-policy interface in the context of the challenges of implementation of the Agenda 2063 of the African Union and Agenda 2030 of the United Nations. In line with the principles underscored in the MOST Strategy, the MOST School in Kampala was tailored to meet the specific challenges of the IGAD region. It applied rigorous tools of social science analyses, including various approaches of research methodologies, combined with case study analyses, to build the capacity of participants, majority of who were young and early to mid-level career researchers, policy makers/analysts and civic and political activists. It also aimed to provide the foundation for a steady multi-stakeholder dialogue on youth, peace and security in the region.

UNESCO is working with institutional partners to develop a short policy brief specifically targeting select policymaking institutions and stakeholders working on the thematic area of youth, peace and security in the IGAD countries as well as identification of selected research proposals and ideas by participants, for further research, development and publication.

4.1 South Sudan Youth Development Policy

UNESCO and UNFPA have been collaborating in reviewing the South Sudan Youth Development Policy, with the support of the Ministry of Youth, Culture and Sports, the South Sudan Parliamentary Committee on Youth, Culture and Sports as well as Okay Africa Foundation. The review process has been extensively participatory with the youth as key stakeholders being at the center stage. The draft policy document as well as its roll out plan was submitted to the relevant authorities for legislation before its enactment.

Young men and women are driving change and claiming respect for fundamental freedoms and rights to improved conditions for them and their communities; and opportunities to learn, work and participate in decisions that affect them. More than ever, it is now time to improve investment in research, policies and programmes to create an enabling and rights-based environment where youth prosper, exercise rights, regain hope and a sense of community, and engage as responsible social actors and innovators. Many countries have established youth policies, using the World Programme of Action for Youth (WPAY) to the Year 2000 and Beyond as a guide. In this process, WPAY mentions that governments and youth organizations should promote an active and visible policy of mainstreaming a gender perspective in all policies and programmes.

In the process of formulating any youth policy, specifically a national plan, governments and other stakeholders are guided by principles such as participation, need analysis, inclusivity, partnerships etc. Given the unique situation in South Sudan as a post conflict country, the Youth Development Policy, will ensure the active involvement of young people in national development, demonstrating the distinctive and complementary roles of all Government Ministries, the Non-Government Sector and Youth Groups in youth development by providing a framework with common goals for development and promoting a spirit of co-operation and co-ordination.

The youth are instruments of transformation and can also be agents of peace and reconciliation, and a force for development. UNESCO will continue working in youth development programmes, services, facilities and activities they undertake to achieve the goals and objectives of the Policy.

4.2 General History of Africa

UNESCO has been providing support to Kenya to incorporate common pedagogical materials developed by UNESCO on the General History of Africa (GHA) into the school curriculum. Matrices developed for grades 4 to 6 (ages 10-12), were successfully used to incorporate UNESCO materials in the country's revised national curriculum. Consultations are underway with other countries in the region desiring of same continued during the reporting period. Outreach work designed to popularize the GHA, using BBC documentary on same continued. This included facilitation of work by the BBC to document a second series of the GHA film, with a focus on Eastern Africa. The second documentary has now been released by the BBC. UNESCO also took advantage of high profile event, the International Publishers' Association and the Kenya Publishers' Association Seminar, themed, "Africa Rising" to highlight GHA.

GHA is a collection of 9 Volumes of scientific work which tell of the origins of mankind and Africa contributions to mankind over the centuries. Three pedagogical guides targeting ages 10 – 12, 13 – 16 and 17 – 18 have been developed to guide integration of GHA in school curricula. In October 2017, a decision of African Union Ministers of Education, agreed that the GHA pedagogical materials be adopted for schools across Africa.

The pedagogical materials will contribute to the renovation of teaching history in Africa and to promote regional integration. In addition, GHA will provide a constructive and enriching learning platform on the continent's contribution to humanity.



The works of the General History of Africa was launched in 1964 as a response to the need for Africa to tell her Story from an Afro-centric perspective, thus decolonizing and owning the narrative and global perspectives on Africa. This re-appropriation of Africa history and culture was in support of the importance of highlighting and celebrating our common heritage. This was to foster the rapprochement of culture and reinforce Pan-African solidarity.



The programme seeks to expand to Madagascar to address the entrepreneurial skill set gap among the youth through action oriented entrepreneurship training and increase job creation and productivity. This programme will contextualize entrepreneurship training for Madagascar by leveraging the success outcomes of Student training for entrepreneurial Promotion (STEP4Youth) program that is currently running in Kenya and the recently implemented in Djibouti for TVET students. The project will be customized to suit Madagascar's context with the goal of transforming the minds of the TVET students from job seekers to job creators.

4.3 STEP 4 Youth

UNESCO supported the expansion of entrepreneurship skill development in Djibouti, targeting Training of Trainers as well as youth, through Student Training for Entrepreneurship Programme for Youth, STEP4Y. The programme seeks to address the challenges of unemployment through action oriented entrepreneurship training to increase job creation and productivity among the youth. This programme leveraged on the success outcomes the programme achieved in Kenya and has a goal of transforming the minds of young people from job seekers to job creators.

Djibouti has the opportunity to shift from being a country with a limited economy to being a global trade and commerce hub. However, many job seekers, mostly youth, do not have the required skills to enter the workforce or succeed in the business market and emerging sectors. Djibouti has a high national unemployment rate, particularly among the youth, hence placing further economic pressure on the country. Work opportunities and prospects of local integration are also limited, which has implications on their livelihood opportunities. Being a host to about 21,000 refugees and given its geographic location and environmental conditions, as well as the socio-economic and security situation in the region, Djibouti has also increasingly become a transit country for mixed migratory movements especially among the youth, to other countries such as Yemen. STEP4Y programme has trained trainer of trainers as well as youth to promote innovation, competitiveness and economic growth through fostering entrepreneurial skills that supports the creation of new jobs. The skills also provide benefits regardless of whether a person sees their future as starting a business. Based on an evaluation that was conducted thereafter, STEP4Y in Djibouti was major success and the beneficiaries had gotten in to entrepreneurship through creating their own enterprises. In addition, they acquired skills on how to run a successful business and also work with a team of people.



United Nations
Educational, Scientific and
Cultural Organization



Sustainable
Development
Goals



CULTURE SECTOR

5.0 Underwater Cultural Heritage Protection

UNESCO and the Kenyan Ministry of Sports, Culture and Heritage together with the National Museums of Kenya and the Kenya National Commission for UNESCO mobilized 75 stakeholders to participate in UNESCO Regional Conference to raise awareness on the Protection of Underwater Cultural Heritage for Sustainable Tourism Development in Eastern Africa and the adjacent Indian Ocean Islands.

Shipwrecks and underwater ruins have become increasingly accessible along the Indian Ocean coastline. While professional equipment and a high level of training remain necessary to undertake excavations, submerged archaeological sites are no longer beyond the reach of treasure hunters. Thus, many undersea archaeological sites are pillaged without recourse to scientific and archaeological exploration methods. Similarly, the fishing industry, the laying of pipelines, and other ocean floor activities can damage or destroy underwater cultural heritage. Once this fragile heritage is destroyed or removed, countries lose the opportunity to undertake research and to develop sustainable tourism linked to the sites, which could take the form of dive tourism or the representation of underwater cultural heritage in museum collections.

The following Recommendations were adopted by the participating ministers:

- To ratify and implement the UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage;
- To take measures to raise awareness of underwater cultural heritage, foster its representation in museums, and develop its potential for sustainable tourism in the region;
- To mobilize the appropriate authorities of our States to elaborate inventories and to integrate the provisions of the 2001 Convention into domestic law;
- To create appropriate capacity building programmes in our schools and universities, and within our competent authorities to educate and train underwater archaeologists to protect underwater cultural heritage in collaboration with African countries that have made substantial progress in this field as well as UNESCO Category II Centres, the University Twinning and Networking (UNITWIN) and UNESCO Chairs Programme related to Underwater Archaeology;
- To foster the cooperation among stakeholders in our countries concerned with underwater cultural heritage and related types of heritage, and promote scientific research and cooperation in this area, including for shipwrecks related to the UNESCO Slave Route project;
- To identify partners to finance protection and research of underwater cultural heritage, including the prevention and prohibition of looting and commercial exploitation of underwater cultural heritage;
- To work with our UNESCO National Commissions to follow up on the commitments made by the Ministers and their representatives at the 11 March 2019 Malindi, Kenya conference regarding ratification and implementation of the 2001 Convention and to report the progress at the meeting on Underwater Cultural Heritage in France.

5.1 Fighting Illicit Trafficking of Cultural Property



UNESCO supported two national workshops to strengthen capacities to fight against illicit trafficking of cultural objects in the framework of the UNESCO 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property. The first workshop took place in Seychelles with 35 key national stakeholders including representatives of the Ministry of Youth, Sports and Culture, the Ministry of Foreign Affairs, the Ministry of Trade and other relevant ministries, the Attorney General’s Office, museum and heritage professionals, and law enforcement officers (police and customs). The second workshop took place in Djibouti in collaboration with the UNESCO Doha Office and included five senior staff members from the Djibouti Ministry of Muslim Affairs, Culture and Waqf Assets alongside ten staff members from the Yemeni Ministry of Culture and associated entities.

Both workshops were led by international experts from UNESCO, the International Institute for the Unification of Private Law, the International Criminal Police Organization, the World Customs Organization, and the International Council of Museums as well as high level national experts.

The participants learned about the implementation procedures, tools and resources of the 1970 Convention, which was adopted by UNESCO as a means to combat the looting of archaeological sites and illicit trafficking of museum collections around the world, and works hand in hand with the 1995 UNIDROIT Convention on Stolen or Illegally Exported Cultural Objects to offer strong legal protection against illicit trafficking of cultural property. The Djibouti workshop participants also prepared guidelines for the establishment of a specialized unit within their respective Ministries on preventing the illicit trafficking of cultural objects.

As a follow-up to these workshops, UNESCO Regional Office for Eastern Africa is planning to organize the first Eastern Africa Regional training on the Prevention of Illicit Trafficking of Cultural Heritage (PITCH) in collaboration with the World Customs Organization (WCO) in 2020-2021. [More information](#)



UNESCO also supported research for Deim Zubeir – Slave route site, which is also on South Sudan’s Tentative List alongside the Sudd Wetlands. UNESCO supported essential research and documentation on the potential “outstanding universal values” of the slave route site of Deim Zubeir. International and national experts were engaged to study the site and its potential criteria for World Heritage listing, and to consult with local community members to raise awareness of the World Heritage Convention as well as the responsibilities and opportunities linked with World Heritage status.

An International Assistance request was submitted to the World Heritage Centre for the 2020 cycle to support the preparation of the nomination file for Boma-Badingilo Migratory Landscape.

5.2 South Sudan aims for World Heritage status

South Sudan is stepping up its efforts to nominate a World Heritage site. Following the country’s ratification of the UNESCO 1972 World Heritage Convention in 2016, the creation of their Tentative List of potential World Heritage sites in 2017, and the adoption of a National Action Plan in 2018 to nominate their first World Heritage site, the Ministry of Culture, Youth and Sports together with the Ministry of Wildlife Conservation and Tourism are working with the UNESCO Office in Juba as well as key development partners such as the Wildlife Conservation Society (WCS) and Advisory Bodies to the World Heritage Convention (ICOMOS, IUCN and ICCROM) to begin the development of a nomination dossier for Boma-Badingilo Migratory Landscape.

In July 2019, UNESCO supported the State Party with the development of a capacity building and implementation strategy for the World Heritage Convention in South Sudan with support from the World Heritage Advisory Bodies and the UNESCO World Heritage Fund.

In October 2019, South Sudan finalized the management plan for Boma-Badingilo Migratory Landscape following support from both Netherlands Funds in Trust to UNESCO and WCS.

5.3 Culture for Peace and Development in Somalia

Somali national authorities developed a task force to promote ratification of UNESCO Conventions in the field of Culture following a UNESCO awareness-raising workshop carried out for high-level Somali national authorities from key ministries in Mogadishu. The meeting highlighted the benefits of ratification of UNESCO Conventions in the field of Culture and the resources available through the UNESCO Culture Programme to support Somalia's efforts to harness the potential of culture for sustainable development.

The workshop was organized as part of UNESCO's on-going advocacy efforts for ratification of UNESCO Culture Conventions by Somalia, and also as part of EU-funded Project, that UNESCO is supporting with the International Committee for the Development of the People (CISP) Regional Office for East Africa entitled "Promoting a Culture of Inclusion in Somalia". Participants included representatives of the Ministry of Education, Culture and Higher Education, the Ministry of Information, Tourism and Culture, the Ministry of the Interior, the Prime Minister's Office, the Office of the President and the Somali Academy of Science and Arts, as well as the Banadir Region Municipality.

UNESCO presentation provided an overview of the portfolio of UNESCO Culture Conventions and programme activities with a specific focus on: the 1954 Convention for the Protection of Cultural Property in the Event of Armed Conflict and its First (1954) and Second (1999) Protocols; the 1972 Convention concerning the Protection of the World Cultural and Natural Heritage; and the 2003 Convention for Safeguarding of the Intangible Cultural Heritage, which are currently considered as priorities for ratification by the Government of Somalia.

The workshop participants adopted the following five Recommendations to ensure active engagement by all relevant stakeholders:

- Develop a ratification task force within the Ministry of Education, Culture and Higher Education (MOECHE) and the Ministry of Information, Tourism and Culture to work with Somali Academy of Sciences and Arts (SOMASA) and the Somali National Commission for UNESCO to strengthen collaborations for ratification of UNESCO Conventions in the field of Culture;
- Task SOMASA with presenting the benefits of ratification of UNESCO Culture Conventions to the relevant governmental platforms (i.e. Social Development Road Map Cabinet of Ministers Sub-Committee and the Parliamentary Sub-Committee on Culture, Communication and Media);
- Implement the existing national work plan for the Somali culture sector in close collaboration with local authorities from the municipalities, districts and regional administrations;
- Organize a donors meeting to raise funds and technical support for the culture sector in Somalia;
- Revive the Friends of Somali Culture Group—to be chaired by the MOECHE with meetings held in Mogadishu—and adopt an Action Plan for the group to support the development of the culture sector in Somalia.

As part of UNESCO's collaboration with CISP on the EU project, three of the UNESCO Conventions in the field of Culture were translated into Somali language, and heritage education and outreach activities were undertaken with schools and community groups in Mogadishu and Galkayio. In addition, a media training workshop was organized on 16 December 2019 to raise awareness among media houses in Somalia. Eighteen representatives of the media associations and media operators, together with independent journalists joined representatives from the Somali Ministry of Information, Culture and Tourism in the awareness-raising and training workshop on 'Media Diversity and Cultural Pluralism in Somalia.



This first national inventory of intangible cultural heritage of Comoros was developed into a travelling museum exhibition, which is on a rotating display in the National Centre for Scientific Research and Documentation (CNDRS) on the three main islands of Comoros. The exhibition included video displays of the practices that were documented by the local communities. A closing ceremony was combined with an international colloquium on intangible cultural heritage and also included performances by musical groups from Grande Comore, Anjouan and Moheli.

5.4 Comoros safeguards its intangible cultural heritage

Thanks to financial support from the Abu Dhabi Tourism and Culture Authority's (ADTCA) Funds-in-Trust to UNESCO, the Comoros Ministry of Youth, Sports, Professional Insertion, Crafts, Arts and Culture and UNESCO Regional Office for Eastern Africa collaborated on a two-year "Project to Strengthen capacities for the safeguarding of intangible cultural heritage for sustainable development in Comoros", which was successfully completed in December 2019.

The project carried out an analysis of Comoros' existing legislative and institutional framework and revised texts dating back to 1994 following the guidance of UNESCO Conventions in the field of culture including the 1972 World Heritage Convention, 2001 Underwater Cultural Heritage Convention and 2003 Intangible Cultural Heritage Convention.

A series of awareness-raising workshops were carried out with key stakeholders in Grande Comore, Moheli and Anjouan in 2018 and national teams were formed to lead local communities in undertaking inventories of intangible cultural heritage practices using a participatory video process to document the practices in 2018 and 2019.

The national authorities are currently preparing a request for International Assistance from the UNESCO 2003 Convention Fund for Safeguarding Intangible Cultural Heritage in order to begin preparations for their first nomination of an element onto the Representative List of Intangible Cultural Heritage of Comoros.

5.5 World Heritage Volunteers Campaign

Seven volunteer projects in the Eastern Africa region were selected to be part of the 2019 World Heritage Volunteers (WHV) campaign under the theme: “Empowering Commitment to World Heritage”. For its twelfth year running, 68 action camp projects were implemented at 62 World Heritage properties and sites inscribed on national Tentative Lists around the globe, by 55 organizations in 36 countries. The WHV 2019 campaign provides empowering and enriching opportunities to young people and enables them to go beyond borders in some of the most outstanding places in the world. Volunteers will work together to preserve natural and cultural sites, as well as to raise awareness among local communities about their heritage. The World Heritage Volunteers Initiative is led by the UNESCO World Heritage Centre (WHC) in collaboration with the Coordinating Committee for International Voluntary Service (CCIVS), the European Heritage Volunteers (as a branch of Open Houses) and Better World in collaboration with UNESCO Field Offices and National Commissions.

The following projects were carried out in the Eastern Africa region:

- Kakamega Rainforest and Isukuti Dance - Natural and Cultural Heritage Programme, Kenya, Kenia Voluntary Service Organization (KVS0)
- Tsavo National Park and Chyulu Hills Programme, Kenya, Kenia Voluntary Service Organization (KVS0)
- Masai Mara National Reserve, Kenya, Global Voluntary Development Association (GVDA)



- Unite for Rainforests, Madagascar, Young Actives for Sustainable Development Madagascar (YA4SD Mada)
- WHV – Preservation and Cleaning of the Rock Art Paintings in Kondoa Rock Arts Site, United Republic of Tanzania, UNESCO National Commission of the United Republic of Tanzania
- Rwenzori Mountain National park, Uganda, Uganda Voluntary Development Association (UVDA)
- Bwindi Impenetrable Forest National park, Uganda, Uganda Voluntary Development Association (UVDA)



United Nations
Educational, Scientific and
Cultural Organization



Sustainable
Development
Goals



COMMUNICATION INFORMATION SECTOR



6.0 Memory Institutions on Preservation of Documentary Heritage

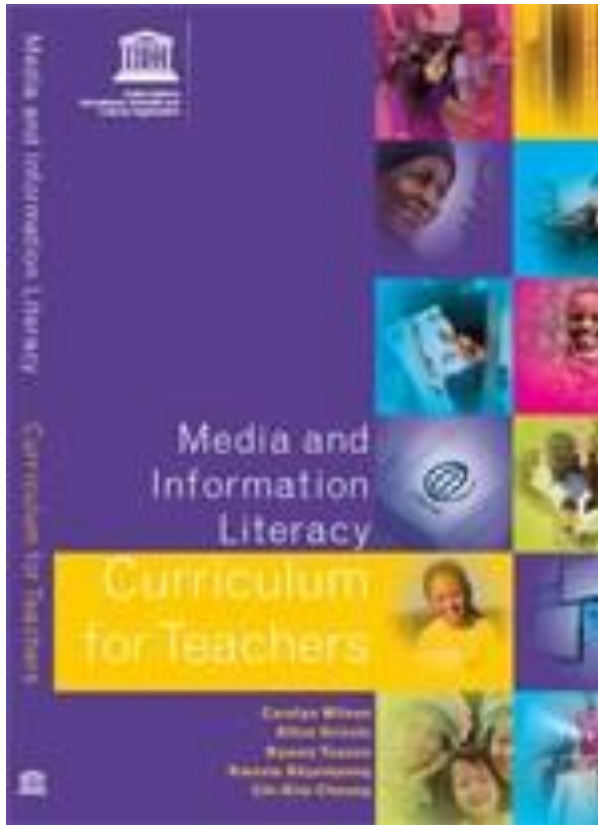
UNESCO Nairobi Office in collaboration with Seychelles National Commission for UNESCO organized a capacity-building workshop on Identification, Preservation, and Access of Documentary Heritage in Mahe, Seychelles. This workshop provided an opportunity for Members of the established National Committee for Memory of the World for Seychelles to be trained on how to develop National Strategies and Guidelines for Preservation of Documentary Heritage. They were also trained on the establishment of National register for Documentary Heritage based on UNESCO Guidelines and Recommendations concerning the Preservation of, access to, Documentary Heritage in the Digital Era. In addition, the managers were trained on development of evidence-based strategies for raising awareness of the importance for preservation of documentary heritage in Seychelles. The training was organized within the framework of enabling universal access and preservation of information and knowledge under UNESCO the Memory of the World Programme.

6.1 The Domestication of Ratified Marrakesh Treaty in Uganda

UNESCO supported Uganda Registration Services Bureau to organize a 1-day stakeholder's consultative workshop on Domestication of the ratified [Marrakesh Treaty](#) to facilitate access to published works for persons who are blind, visually impaired or otherwise print disabled in Kampala. The objective of the event was to raise awareness and sensitize participants on the ratified Marrakesh Treaty, [Uganda's Copyright and Neighboring Act \(2006\)](#), and other related rights. It also aimed at gathering views and feedback from stakeholders and build support for the foreseen domestication of the Marrakesh Treaty in Uganda. Uganda ratified the Marrakesh Treaty on 23 April 2018 and came inforce on 23 July 2018.



Stakeholders invited to the workshop included Government officials, organizations representing the blind or visually impaired people, Ministry, Departmental Agencies, publishing houses, collective management organizations among others.



6.2 Validation of Media Information Literacy Curriculum in Teacher Education

UNESCO in collaboration with the Centre for Media and Information Literacy - Kenya and Kenya Institute for Curriculum Development organized a validation workshop for the draft Media Information Literacy (MIL) Curriculum for Teachers for adaptation and mainstreaming in teacher training and professional development in Nairobi, Kenya.

The stakeholders drawn from government agencies, academia, education sector, civil society and the private sector hailed the draft curriculum which was developed based on UNESCO Media Information Literacy Curriculum for Teachers, guidelines as a timely resource for re-tooling the Kenyan teacher to deliver on the new competency based curriculum currently being implemented in Kenya. The preparation of the Model Curriculum on MIL for Teachers is one of the key actions of UNESCO's strategy to promote media and information literate societies and foster the development of free, independent and pluralistic media and universal access to information and knowledge

6.3 Conflict Sensitive and Gender Responsive Reporting

UNESCO partnered with UNDP to train sixty-six journalists drawn from various community, commercial and state owned radio stations, and print media houses in South Sudan. The five-day workshop on conflict sensitive and gender responsive reporting aimed at strengthening the capacity of media professionals to report on conflict issues in a well-researched, factual and non-biased way and contribute to dialogue, mutual understanding and eventually reconciliation and peace.

The media has become an effective platform to contribute to mitigation of conflicts in communities especially when the media workers/journalists are informed and knowledgeable about conflict sensitive reporting and peace journalism issues. As South Sudan moves towards the realization of peace in the country, journalists need to acquire adequate knowledge of conflict theory, as well as additional reporting skills and the analytical “know how” to be able to report accurately, impartially, safely and be gender sensitive within conflict situations.

The five-day capacity building workshop is implemented under the UNDP/UNESCO project entitled “Peace and Community Cohesion” and Peace Building Fund (PBF) project phase II “Strengthening Dialogue for Peace and Reconciliation in South Sudan” that aim to contribute to the reduction and mitigation of community level conflict and insecurity by investing in initiatives that address key drivers of conflict and insecurity.

REGULAR BUDGET 2019

Sector	Allocation (USD)	Expenditure (USD)	Implementation Rate
Education	464,297.67	373,551.55	80.46%
Natural Sciences	498,492.65	423,699.21	85.00%
IOC	103,632.86	101,130.61	98.81%
Social and Human Sciences	100,767.81	87755.57	89.12%
Culture	249,087.90	229,091.34	91.97%
Communication Information	207,964.24	197,165.77	94.81%
Administration	484,268.70	435,042.03	89.83%

2019 IN PICTURES





Material in this publication may be freely quoted or reprinted.

© UNESCO Regional Office for Eastern Africa, 2019, Nairobi, Kenya

Photo credits: UNESCO Nairobi

TEL: +254 20 7622619

Email: nairobi@unesco.org

Website: <https://en.unesco.org/fieldoffice/nairobi/>