



Concept Note for Climate Change Education Training for Mauritius A Partnership Project between UNESCO WFEO OCE and IEM

“Education apart from being a human right is a prerequisite for achieving Sustainable Development and an essential tool for good governance”.

Climate change is a truly global challenge. It will impact all ecosystems and human societies, but in different ways and to different degrees. Addressing climate change requires involvement and action at the local, regional and global level, and Education plays a central role in understanding, mitigating and adapting to climate change.

Climate Change Education brings together these two perspectives. It is about helping learners to understand and address the impacts of global warming today, while encouraging positive changes in attitudes and behaviour needed to put our world on a more sustainable path in the future.

Objective of the activity:

- To integrate climate change education into educational programme at all levels;
- To impart teacher training on climate change education;
- To exchange of experiences and good practices on climate change education among ministries, teachers, practitioners and young people;
- To encourage local field-based education on climate change by using the UNESCO networks on, Biosphere Reserves, World Heritage sites and Associated Schools Network);
- To stimulate the active involvement and innovative ideas of young people on mitigation and adaptation of climate change and integrate them into the education materials for sustainable development;
- To shift society’s mindset and expectation of the ability of young people to take initiatives and create positive social change.

The objective of the Climate Change Education Programme is to provide teacher training and tools which can be deployed in schools for climate change education and awareness. Such training is expected to increase the understanding of the community, especially young people, of climate change, the threats to their nation and actions that can be taken to mitigate these.

Proposed programme:

The event will comprise a four-day training workshop for science educators in Mauritius at the primary and secondary school level.

The programme is hands-on, based on science and adapted to the local environment and culture. The programme will be delivered by the office of Climate Change Education (OCE). The philosophy of the programme is that science education helps students understand their environment, create awareness and develop appropriate skills and knowledge. The science-based education programme involves inquiry, investigation, questioning, reasoning, and problem solving, it promotes the development of thinking skills which require students to apply, analyse, synthesise, evaluate information, so that they can make informed decisions and also be innovative and creative. It will also provide insights into the outcomes of adopting technologies that may have short-term benefits but long-term negative consequences. It can help improve living conditions and address common development challenges. The science-based education programme is important for a country like Mauritius as it will provide young people with appropriate skills such as the capacity to think, reason and solve problems within their own environment. As future citizens, they have to be able to participate in a responsible way in some of the technological discussions that affect their countries' future.

The 4-day training workshop will enhance the understanding of science educators in Mauritius of changes in climate, particularly in the region, and how climate change education activities can be carried out in schools through Inquiry Based Science Education (IBSE). It will enable science educators to implement activities on climate change education using IBSE as an approach. The educators can use their skills to train other climate change educators in the nation.

Taking into consideration the issues confronting small island states, the training workshop will focus on the following:

- Climatic change
- Ocean
- Biodiversity

The workshops will be mainly hands-on, using Inquiry-Based Science Education in approach and includes a study visit.

The site visit could include a demonstration by the UNESCO SANDWATCH team of Mauritius on beaches, on measuring the coastal erosion arising from climate change or a visit to the Biosphere Reserve to experience the context of climate change and biodiversity

Date:

14-17 April 2020

Venue: Mauritius

The specific venue is to be advised following discussions with the Institution of Engineers Mauritius and the Department of Education in Mauritius.

Participants

About 40 participants (teacher trainers from primary and secondary school) from various schools and educational institutions in Mauritius are expected to attend. Invitations and information will be managed by the Institution of Engineers Mauritius and the Department of Education in Mauritius. Teachers from Rodrigues Island will ideally also be invited.

Language

The event will be held in English as this is the official language of Mauritius.

Organizers

UNESCO Natural Sciences and Education Sector

UNESCO's work on climate change is carried out by a large number of staff at UNESCO Headquarters and in the UNESCO Field Offices. Today, all of UNESCO's Sectors and intergovernmental and international programmes feature important climate change activities. In addition, several UNESCO Institutes and Centers, as well as UNESCO Chairs, are actively engaged in climate change work. In order to facilitate coordination and cooperation among Field Offices, with and within Headquarters, UNESCO has established an '*Intersectoral Platform for Action to Address Climate Change*' tasked to oversee the UNESCO Climate Change Initiative and the associated UNESCO Strategy for Action on Climate Change.

Mr Peter Dogsé, Co-Chair, Executive Secretariat, UNESCO Task Team on Climate Change and previously Manager of the Intersectoral Platform on Climate Change, Division of Ecological and Earth Sciences, MAB Programme, UNESCO has been part of the discussions on the climate change education programme for Small Island Developing States (SIDS).

UNESCO has developed educational materials for capacity building in this sector and are expected to be supportive of the proposed programme.

UNESCO educational materials are available at: <http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/capacity-building-and-partnerships/educational-materials/>

The project is also supported by Dr. Jayakumar Ramasamy, Senior Programme Specialist; Head of Natural Sciences Sector, UNESCO Regional Office for Eastern Africa, Nairobi. UNESCO Nairobi has compiled a volume giving reference to Africa: *Climate Change Mitigation and Adaptation Simple Guide to Schools in Africa*, which could also be used for this training

See: <https://unesdoc.unesco.org/ark:/48223/pf0000372168>

Government of Mauritius

Mauritius is a parliamentary democracy in the Indian Ocean, located in Africa. Mauritius covers 2,030 square kilometers of land and 10 square kilometers of water, making it the 183rd largest nation in the world with a total area of 2,040 square kilometers. Mauritius became an independent state in 1968. The population of Mauritius is 1,313,095 (2012) and the nation has a density of 647 people per square kilometer. Mauritius does not share land borders with any countries.

The Department of Education of the Government of Mauritius is supportive of the training programme for educators. It is anticipated that the materials and content provided as part of the training programme will be included in the school curriculum with the approval of the Ministry.

Institution of Engineers Mauritius (IEM) is the national professional institution for Mauritius and is a national member of WFEO. Mr. Raj H Prayag is President of IEM, and is leading the organization of the training programmes in Mauritius. The IEM was established in 1948 and aims at fostering engineering science and its application in all engineering disciplines; ensuring the highest standard of service in engineering and improving the status and safeguarding the interests of the engineering profession. The Institution holds and sponsors meetings aimed at the general advancement of its members and the public at large as well as promotes exhibitions of engineering goods, machinery, systems and applications of engineering knowledge.

Details on Institution of Engineers Mauritius is available at: www.iemauritius.com

Office for Climate Education

The Office for Climate Education began in 2018 as a foundation under the auspices of La main à la pâte Foundation and founded by *the Institut Pierre Simon Laplace (IPSL), the Institut de Recherche pour le Développement (IRD), Météo-France, and Météo & Climat*, in partnership with the *Potsdam Institute for Climate Impact Research (PIK) and the Siemens Stiftung*. It aims to organise a strong international scientific, educational and operational cooperation for Climate Change education. The OCE and its partners offer to primary and middle schools teachers free, open, multilingual, and interdisciplinary educational resources, as well as professional development opportunities and field accompaniment based on IPCC “Assessment reports”.

Based in Paris, *the Office for Climate Education* works with a global network of local, regional partners and international partners.

Further information is available at <https://www.oce.global>

The World Federation of Engineering Organizations

The World Federation of Engineering Organizations is the peak body for engineering, representing nearly 100 nations and 30 million engineers. It is the voice of engineering at an international level and promotes the important role of engineers in key issues that the world is now facing: sustainable development, the growth of our cities, climate change and strategies for energy production to meet the needs of the growing population around the world. The World Federation of Engineering Organizations (WFEO) is the only international organization at the international level that represents all engineering disciplines around the world. It is an associate of UNESCO and Co-Chair, with the International Science Council, of the Scientific and Technological Community Major Group of the Major Group of stakeholders at the United Nations.

WFEO recognizes that every one of the UN Sustainable Development Goals requires engineering. This is particularly true for addressing Climate Change and its impacts (SDG 13) as it is engineers that will design and implement solutions to reduce greenhouse gas emissions, mitigate the impacts of

climate change and design and build resilient infrastructure and cities to withstand the weather borne natural disasters that are resulting from climate change. The members of WFEO are the main national and regional professional engineering institutions of the world. WFEO members include Fiji, Mauritius and other Small Island Developing States (SIDS) where climate change is having a significant impact. There is an urgent need for climate change education. This is the first programme that is being established and if successful, the model will be used for similar programmes with other WFEO national members.

WFEO has partnership agreements with leading international organizations and is able to bring together educational institutions, governments and industry to facilitate projects that address the need for engineering capacity in various regions of the world.

WFEO is ready to work with its national members and its partners including the the Office of Climate Change Education (OCE) in collaboration with UNESCO to deliver a programme on Climate Change Education in Mauritius.

In future, WFEO will facilitate similar programmes in other Small Island Developing States including Madagascar and Seychelles and through its members in the West Indies. However, in each case, support from the relevant Ministry for Education and local engineering institution will need to be established.

Details on WFEO are available at www.wfeo.org

National Environment Agency Singapore

As laureate of the 2019 H.J. Sabbagh/WFEO Prize for Excellence in Engineering Construction, the National Environment Agency Singapore (NEA) has kindly donated its award's cash prize to WFEO to support the programme.

It has been agreed with NEA that they will be kept informed at the main steps of the project, and that their support would be acknowledged on all relevant material.

Proposed Costs and logistics

The office of Climate Change Education (OCE) will provide facilitators and materials to deliver the training programme. It is proposed that the programme delivery will be led by two facilitators of OCE.

The Institution of Engineers Mauritius will organize local logistics for the training venue and field visits and invite the educators to attend the programme. Mr. Raj Prayag will lead the programme in Mauritius. IEM will also liaise with the Government of Mauritius Department of Education for approvals and support where needed.

Programme partners and supporters including UNESCO and WFEO representatives will provide support for the programme as needed and representatives may attend at their own cost.

Updated 23 February 2020