

ADD/CJ/UNESCO SCHOOL SANDWATCH PROGRAMME –

A project proposal on adapting to climate change and educating for sustainable development

Proposed Public Beach: La Cambuse

Proposed school: France Boyer de la Giroday SSS, PlaineMagnien

1. Background

Sandwatch is an educational process through which school students, teachers and local communities work together in the field to monitor coastal environments, identify and evaluate the threats, problems and conflicts facing them, and develop sustainable approaches to address them. Initiated by the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2001, it is now become a fully fledged international programme implemented in more than 50 countries. The Republic of Mauritius has shown much interest in participating in the UNESCO Sandwatch programme. Three participants from Mauritius representing the United Nations Development Programme (UNDP), Albion Fisheries Research Centre (AFRC) and South East Marine Protected Area at Port Sud Est (SEMPA), Rodrigues, attended the Indian Ocean Sandwatch Workshop in Seychelles (04-08 October 2010) to develop and strengthen sandwatch activities in the Indian Ocean. The launching of the sandwatch on line database, which helps to create visual representations in the form of graphs, tables and maps of data collected within sandwatch framework, was hosted by Mauritius on 20 March 2013.

A sandwatch pilot project was implemented at La Preneuse (January – July 2018) by the Association pour le Développement Durable (ADD) with the involvement of students from La Gaulette SSS in collaboration with the Currimjee Foundation and Ministry of Education and Human Resources, Tertiary Education and Scientific Research. There is still much scope and opportunities to develop the programme further and extend the activities to other schools to take science from the classroom to the field and promote “Science in Action”

2. Objectives

The main objectives are to:

- i) Train school students to participate in practical monitoring activities, in the field, to demonstrate in real life the day to day application of scientific theory and knowledge gained during studies in class.
- ii) Assist and involve them in the collection of appropriate data, particularly in scientific observation and measurement and analysis, for the wise management and preservation of coastal ecosystems and resources.
- iii) Enhance awareness on climate change and sea level rise with focus on its impacts on the beach and shoreline for proper action to address associated problems.
- iv) Complement the on-going beach monitoring activities, which are currently being conducted by relevant Ministries and Institutions, and thus contribute to climate change monitoring and adaptation and beach protection.
- v) Promote science at the school level and demonstrate job opportunities in the ocean economy

3. Proposed Beach

La Cambuse beach is located near the village of Mon Desert in the south east part of Mauritius. It is a public beach, complete with public restrooms, fireplaces, benches and a few roofed beach huts. Coastal erosion is now visible. A hotel will soon be constructed in the region. It is therefore appropriate to initiate monitoring of coastal resources and ecosystems on a long time scale to identify any changes for prompt and timely actions. No regular monitoring is currently being undertaken by any authorities. Data and information collected during the proposed implementation programme will be useful for operational and research activities and will instrumental in developing informed strategies for proper beach management to protect and conserve beach resources.



4. Proposed school

It is planned to initiate the programme at France Boyer de la Giroday SSS at the beginning of 2019. Located at L'Escalier Road, Plaine Magnien, it is the nearest school to La Cambuse. It was opened in 2009 to girls and was upgraded to the status of a 'National College' since January 2009. The student population in 2017 was 888 and number of students in Lower and Upper six Forms were 109 and 149 respectively. Its academic performance is very high. In 2015, one of its students was among the laureates. Several extra-curriculum activities are being sponsored by the private sector including Shandrani hotel - sports activities - and OMNICANE.

The proposal is to involve students of Lower VI to ensure optimum outcomes and dedication. They are mature students and do not have the pressure to sit for a national exam at the end of the year. The programme will be repeated every year with a new batch of students to ensure sustainability and obtain, in the long run, a long series of data to identify changes for proper beach management.

Activities will comprise both classroom sessions and field exercises. They will be conducted from January to July.

5. Methodology

The methodology recommended by the UNESCO Sandwatch manual – Adapting to climate change and education for sustainable development (<http://unesdoc.unesco.org/images/0018/001894/189418e.pdf>) - will be followed. It comprises four main steps – Monitoring, Analysing, Sharing, Taking Action (MAST).

These will include observation and recording, erosion and accretion, beach composition, human activities, beach debris, water quality, waves, longshore currents, plants and animals in the field and data compilation and analysis in class in the form of graphs, tables and pictures with proposals for actions.

For the La Cambuse beach profile monitoring, an Abney level instrument will be used for surveying beach slope in contrast to the “Emery Rod method” which was used at La Preneuse by the La Gaulette SSS students. The methodology for using the Abney level is given in the sandwatch manual and a programme is already incorporated in the UNESCO International Database to calculate any volume of sand lost/gained. The students will thus get the opportunity to learn how surveying work is carried out using simple equipment as another example of scientific application in real life.

6. Activities

Activity 1 – Pre-arrangement

- Following approval by the Currimjee Foundation, write to the Ministry of Education and Human Resources, Tertiary Education and Scientific Research for clearance
- Arrange a meeting with the Rector and Educators of La Gaulette SSS to discuss modalities
- Obtain the formal approval of the proposed school authorities and Parents-Teaches Association
- Keep concerned Ministries, Beach Authority, local authorities, Village Council and relevant NGOs informed of the planned activities to obtain their support during the monitoring exercise and any follow-up activities that might be envisaged
- Write to Ministry of Ocean Economy and marine resources with a request to contribute in the training, monitoring and analysis of the marine biology aspects

Activity 2 – Training

- Conduct a sensitizing campaign in the selected school by making a presentation on beaches in Mauritius, the need for beach monitoring and its useful contribution and application to national monitoring and beach preservation programme
- Conduct on-site training by ADD representatives and other relevant institutions while associating science and other interested teachers
- Showcase the outcomes of the La Gaulette SSS sandwatch programme.
- Train school participants in the preparation of project reports

Activity 3 – Tools development

- Pass an order for the purchase of an Abney level equipment from Ducray Le Noir for beach monitoring.
- Prepare all relevant datasheets for entering data

Activity 4- Classroom exercises and on-site operation

- Make arrangement with all stakeholders on the dates and time for the starting date and subsequent planning
- Conduct field exercises – about 4 - to collect data on erosion and accretion, beach width and profiling, beach composition, human activities, beach debris, water quality, waves, longshore currents, plants and animals. Equipment already acquired for the La Gaulette SSS sandwatch activities will be used. A new instrument – Abney level – will be purchased for the beach profiling component.
- Train students – 4 sessions will be required - how to analyse data and upload it on the UNESCO Sandwatch International database for analysis, producing graphs and tables, permanent archival and future use.
- Provide training for the preparation of project reports by educators and students with recommendations

Activity 5 – Presentation of achievement and final results

- Organise a Presentation and a Closing ceremony to provide opportunities to the students to present their results. This could be organized together with La Gaulette SSS who will be implementing a similar programme at La Prairie to promote exchange of knowledge and inter-college interaction and networking.
- Extend invitation to all stakeholders who have participated, both directly and indirectly, in the process.
- Organise a ceremony for award of certificate of achievement/participation to participating students

Activity 6 – Follow up programme

- Prepare a mural photo of 2*A- size pictorial narration of the implementation process from start to end to be handed to the school to commemorate its first participation in Sandwatch
- Conduct 2 monitoring after the termination of the project to follow changes
- Plan sandwatch activities for 2020 at La Cambuse and La Prairie
- Contact the Ministry of Education to discuss the development of a school sandwatch programme in two other schools to replicate sandwatch on two public beaches in the east and north.