



Association pour le Développement Durable  
(ADD)

# **Actions, Achievements and Prospects**

(2007-2017)

**Issued on the occasion of ADD Tenth Anniversary**

April 2017

## FOREWORD

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The Association pour le Développement Durable (ADD) is celebrating its 10<sup>th</sup> anniversary this year. It was formally registered with the Registrar of Associations on 27 February 2007. The members celebrated the occasion in a dignified manner and with pride given the achievements and the contributions of ADD to the well-being of several communities around the island and to the Republic. Its activities remain a model for addressing environmental and sustainable development challenges.

The publication summarises some of the major activities and shows the potential of ADD in making tangible contributions towards the sustainable development of Mauritius. It highlights the dynamism of ADD and its positive and forward looking attitude as well as its commitment and dedication in addressing major environmental issues and climate change-related challenges.

The five pillars of ADD's strength are its (i) dedicated and professional members, (ii) a solid governance structure that ensures self-criticism, transparency, accountability, and the time limit as office bearer, (iii) an approach to project design and implementation that enshrines elements of '*soft*' and '*hard*' components, (iv) a '*bottom-up*' approach to the design, implementation, monitoring and evaluation of projects, and (v) wide-ranging partnerships with all those who can contribute to the optimum conceptualisation and implementation of projects, be they from the public or private sectors, academic or research institutions, local or national NGOs or regional or international organisations.

ADD has earned considerable recognition at national and international levels. These are in part reflected in its affiliations at national level to MACOSS and the Ministry of Environment. At international level, ADD has been granted consultative status with the UNECOSOC and is affiliated to the UN Framework Convention on Climate Change.

The implementation of the projects has been facilitated by funding from the European Union, the MCB Foundation, the Meteorological Services for tsunami sensitisation, the Currimjee Foundation, Robert Le Maire, Dry Cleaning Services and several others. The capacity of ADD has ensured that the funds are used in an effective and efficient manner for the specified beneficiaries.

The vast experience of ADD gleaned over a relatively short period of its lifetime will continue to be placed at the service of the Republic. The shortlist of future activities provided is a modest one. Others that could be added are ambitious projects that have been discussed for implementation include eco-village, river basin cleaning and climate change adaptation.

A challenging future with service to the Mauritian community and the Republic!

**S.N. Sok Appadu**

**President ADD**

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# 1 GENERAL INFORMATION

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## 1.1 Background

The idea to form an association originated back in the 1990's. Many colleagues from the Meteorological Services, who were on the verge of retiring or already retired from their active professional careers, started exchanged views on how they could use their national, regional and international knowledge and experience to contribute to the sustainable development of the Republic of Mauritius and the region and improve the well-being of the people. This was an almost daily conversation on the car trip from the border of France and Geneva between Mr. S. Chacowry, who first proposed the idea and was then special advisor to the Secretary General of the World Meteorological Organization (WMO) and Mr. S. Ragoonaden, during his missions to WMO in 2002/2003.

A visit of Mr. Chacowry in 2005 to Mauritius constituted a good opportunity to widen the core group to obtain more inputs and fresh ideas. For the purpose, an informal meeting was organised in the office of Mr. S.N Sok Appadu, who was then the Director of the Meteorological Services. Other like-minded non- meteorological experts, who occupied high level position in national, regional and international organisations and other institutions and the private sector were invited to participate in the discussion. Decisions were taken on follow up actions in order to form an NGO with wide scope and vision to cover various aspects on the concept of sustainable development.

Procedures for registration and a model for application were obtained from the Registrar of Association. From then onwards, several mails were exchanged between Geneva and Vacoas to discuss and refine the objectives of the NGO. The guiding principles were agreed upon.

### **Guiding principles**

- Complementing the tasks of the Government and public and private sectors in bringing about transformations, especially in the field of environment, that would ensure sustainable activities with a cleaner, greener and safer Republic of Mauritius
- Focusing on the areas, where the potential members have expertise, knowhow and proven experience, including climate change, poverty alleviation, food security, disaster risks management, reduction of greenhouse gases and protection of environment both inland and along the lagoons and the coasts.
- Adopting a bottom-up approach that would give priority to empowering and awareness raising, partnership and networking involving the concerned inhabitants, particularly involving schools, youth, women, senior citizens, Municipalities, District and Village councils, local NGOs and local communities
- Contributing to the implementation of the UN Millennium Development Goals (UN Sustainable Development Goals (SDGs) since 2015) for a safe and liveable planet for future generations
- Ensuring the partnership and involvement of all institutions, public and private sectors, NGOs and other national and international bodies in the development and implementation of activities and projects
- Adopting a soft component (e.g. education, sensitisation) and a hard component (e.g. mangrove plantation, coastal infrastructure, as tangible aspects of sustainable development) in the design and implementation of projects and activities

### 1.1.1 Main objectives

On the basis of the extensive consultation and the guiding principles, a general consensus was reached on the main objectives.

#### **Main objectives**

- Contribute to national, regional, and international policy formulation on sustainable development issues
- Promote strategic studies and research in specific areas that have implications for sustainable development including the environment and the economy of the country
- Identify options and address issues relating to sustainable development
- Maintain partnership with other NGOs and community-based governmental organisations having similar interest at national, regional, and international levels
- Raise awareness of the public and decision-makers on issues related to sustainable development
- Disseminate information through the media, publications and meetings

### 1.1.2 Registration

The Association pour le Développement Durable (ADD) was registered with the Registrar of Association on 21 February 2007. The Association was, thus, officially established having registered number 9974.

## 1.2 Vision and mission

ADD vision and mission have evolved with time.

### 1.2.1 Vision

Promoting community well-being and sustainable island living

### 1.2.2 Mission

Promote sustainable socio-economic development and protection of Earth Systems through related project implementation, studies and awareness-raising.

## 1.3 Affiliations

ADD is affiliated to various organisations and bodies at both national and international levels.

### 1.3.1 National level

It was officially been registered with the Registrar of Association on 21 February 2007.

Other formal affiliations include :

- i) MACOSS with regular participation in its activities. ADD received a Certificate of appreciation in the context of the International Dat 2016 on 22 December 2016
- ii) National CSR (No. 1025) with support and assistance from various private sectors under the CSR scheme
- iii) Education and Information Division of the Ministry of Social Security, National Solidarity, and Environment and Sustainable Development (Environment and Sustainable Development Division).

### **1.3.2 Partnership**

#### ***Ministries***

Close cooperation has been established with several Ministries including the Ministry of Agro Industry and Food Security, Ministry of Fisheries, Ministry of Local Government and Outer Islands, Ministry of Education and Human Resources, Ministry of Youth & Sports, Ministry of Business, Enterprise and Cooperatives and the Ministry of Gender Equality, Child Development and Family Welfare.

#### ***Departments***

ADD also cooperates with Government Departments such as the Meteorological Services and the Forest Department and parastatal bodies such as the Beach Authority, the Mauritius Institute of Education (MIE) and the Small and Medium Enterprises Development Authority (SMEDA).

#### ***Municipalities and District Councils***

The Association collaborates with the Municipality of Quatre Bornes in its environmental activities. It maintains close working relationship with the Municipality of Curepipe.

ADD had been contributing actively to the sensitization programme of the Municipalities.

The Association has been collaborating actively with the District Councils especially Black River, Moka, Flacq, Pamplemousses and Rivière du Rempart and has established contacts with Grand Port and Savanne District Councils.

#### ***Local and National NGOs***

ADD works closely with NGOs at local levels in the context of its Project implementation. It also collaborates with national NGOs involved in sustainable development activities.

### **1.3.3 International level**

ADD was granted Special Consultative Status with the United Nations Economic and Social Council (UNECOSOC) at its formal session in July 2011. This is the highest level of recognition that UN grants to an NGO. The Association is invited to participate in all UN meetings involving NGOs and may present documents for distribution.

It is affiliated to the United Nations Framework Convention on Climate Change (UNFCCC) in Bonn, Germany. It receives invitation on a regular basis to attend as an observer UNFCCC meetings and conferences. Working arrangements have been established with UNFCCC's Commission dealing with environmental matters.

## **1.4 Governance**

The Constitution of ADD governs the life of the Association. The Annual General Meeting and the Managing Committee are the main organs that ensure its functioning, oversight over all its activities and partnership and transparency in all its operations. A unique feature enshrined in the Constitution is that no office bearer can occupy a position for more than three terms of two years each.

### **1.4.1 Annual General Assembly and meetings**

Annual general meetings have organised on a regular basis since ADD formation. More than 100 meetings of the Managing Committee have been organised. In order to enhance networking and interaction and maintain the family spirit among ADD members, educational and recreational outings are organised occasionally. A family day with the participation of members spouse and children has been a regular annual event during the festive period of December.



### 1.4.2 Managing Committee

It has currently more than 35 members. Mr S. Chacowry served as President from 2007 to 2013 and is now Honorary President. The members of the Managing Committee for 2015/2017 are:

Honorary President	Mr. S. Chacowry
President	Mr. S.N. Sok Appadu
Vice President	Mr. S. Ragoonaden
Treasurer	Mr. R. Nookadee
Assistant Treasurer	Mr. Naim Joomun
Secretary	Mr. S. K. Gopala
Assistant Secretary	Mr. C. Travailleux
Member	Dr. Luximon-Ramma
Member	Dr. J. Naugah
Invited Member	Dr. B. Pathack

For those who wish to join ADD and contribute to its activities, a membership form is available on ADD website ([www.addmauritius.org](http://www.addmauritius.org)). The Secretary may be contacted for additional information.

### 1.4.3 Brainstorming sessions

The Managing Committee has made extensive use of periodic brainstorming session as a democratic mechanism to enable all members and invited guests to review critically its internal functioning, its activities and their relevance to the national priorities in the context of regional and international developments in the area of sustainable development and provide guidance on future (short-, medium- and long-term) strategies and course of action. These sessions have proved to be inclusive and served as a basis for ADD's action plans.

### 1.4.4 Other consultative mechanisms

The Managing Committee often constitutes *ad-hoc groups* to study specific issues, *time-bound standing committees* to manage and implement projects entrusted to ADD or *joint consultative bodies* with other institutions to organise major national events such as conferences.

## 1.5 Contact details

### 1.5.1 The official contact address

c/o 17 Rue Dr. Joseph Rivière  
Les Casernes  
Curepipe  
Tel: +230 5 251 8235

### **1.5.2 Other sources for information**

Website: [www.addmauritius.org](http://www.addmauritius.org)

Facebook: [www.facebook.com/addMauritius](https://www.facebook.com/addMauritius)

Twitter: [twitter.com/ADDMU](https://twitter.com/ADDMU)

## 2. MAIN PROJECTS IMPLEMENTED BY ADD SINCE 2008

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### Introduction

Several projects with focus on the protection and conservation of coastal resources and ecosystems have been implemented by ADD during the last 10 years. They were funded by various national, regional and international funding agencies. The projects include mangrove propagation whereby over 100 000 propagules/seedlings were planted in various parts of Mauritius with almost 90% survival rate, protection of the Poudre d'Or Village Saint Gérân Monument and coastal protection with beach enhancement and landscaping to enhance the site as a tourist destination, and coral farming and beach monitoring to promote better awareness on the importance of coastal and marine resources. A joint project with a Seychelles NGO was implemented. Almost all the project activities were implemented in close collaboration and in partnership with local communities, various Ministries and institutions, the private sector and other NGOs.

### 2.1 EU/DCP/ADD Improving the livelihood and welfare of artisanal fishermen and other coastal communities (October 2008 and November 2009)

This is the first major project undertaken by the Association. It was funded to the tune of € 10 000 by the European Union (EU) through the Decentralised Cooperation Programme (DCP) of the Ministry of Finance. The planting of 10 000 propagules/seedlings at Bassin Léon, Le Morne was one of the four main components of the project. The other components were the sensitization of some 75 school children of Std. IV, V and VI of the Le Morne Village Government School on environment topics of direct relevance to their studies and on sustainable development issues of concern to women, youth, the elderly and fishers (Section 3), development of several information materials (Section 4) and the establishment of a Nature Corner within the premises of Primary School of Le Morne Village (section 4). Practical sessions were organised for school children and youth of Le Morne at the site of the mangrove plantation.



Figure 2.1. Sowing mangrove propagules



Figure 2.2. Mangrove plantation after 2 years

## 2.2 COI-EU-ReCoMaP/ADD Stabilization of the severely eroded coastline around the St. Gérân historical site at Poudre d'Or Village (November 2009 - May 2011)

Some €100 000 were allocated by the European Union (EU) within the framework of the Regional Programme for the Sustainable Management of the Coastal Zones of the Indian Ocean Countries (ReCoMaP) of the Indian Ocean Commission (IOC). The main components were the rehabilitation, consolidation and upgrading of some 200 metres of shoreline to rein in coastal erosion that was threatening the St Gérân Monument, the reinforcement of some 800 metres of coastline in the vicinity of region, landscaping and beach creation as a leisure site for local inhabitants, visitors and tourists. The Monument was erected to commemorate the wreckage of the St Gérân and immortalized by Bernadin de St. Pierre through the novel of the tender love story “Paul et Virginie”.

### Other activities

1. Planting of about 2000 mangrove plants and ‘vetiver’ lining to protect the coast,
2. Creation of a children’s recreational corner to provide access to additional recreation facilities
3. Sensitization of the village school children and youth on major environmental issues (Section 3) to reinforce their knowledge on topics of direct interest in their studies
4. Conduct of a comprehensive survey by the inhabitants on the socio-economic, environmental, cultural aspects of the Village
5. Laying of a wreath including all communities to commemorate the wreckage of the St Gérân Ship off the coast of Poudre d’Or Village during the night of 17/18 August 1744, and to encourage such commemoration as an annual event including a regatta to promote the historical site and the Village among the Mauritian population and tourists
6. Building of a kiosk near the St. Gérân Monument to provide additional facilities to local and international tourists
7. Fixing of ten light posts with twin bulbs to enable villagers, visitors and tourists to enjoy the site during the day and at night
8. Replacement of the old toilet by a modern one with facilities for the handicapped to enhance the aesthetic aspect of the site
9. Resurfacing of the access road to the Monument and the Paul et Virginie Beach with road signs placed in a few prominent places in the Village
10. Planting of endemic, decorative and medicinal plants with name plates and properties to enhance the green vegetation of the site
11. Fixing of signboards with write up on St Gérân, Bernardin de St Pierre, mangrove, etc
12. Development of several information materials to popularize the historical aspects of the village (Section 4)
13. Fixing of a commemorative plaque bearing testimony to the work of ADD and its partners and another plaque indicating the location of the St. Gérân pass where the famous ship was shipwrecked on the night of 17/18 August 1744 to provide additional historical information

Figure 2.3 Before revetment

Figure 2.4 After revetment and a new kiosk (blue)

The implementation of all activities, as provided in the project document and additional activities (4, 5, 6 and 7 above) with extra funding from the Beach Authority and ReCoMaP, was well appreciated by ReCoMaP Management Team. ADD was one of the two organizations selected to make a presentation on the project during a closing ceremony of the ReCoMaP Programme.

Figure 2.5 Inauguration ceremony

Figure 2.6 Monument St Géran after project

### **2.3 MCBFF-1/ADD Improving coastal resilience and Community livelihood at Le Morne Village (February 2011-January 2012)**

This was the first mangrove project funded by the MCB Forward Foundation (MCB-FF) under the CSR scheme to the tune of MUR 1.2 m. It was a continuation of the mangrove component of EU/DCP/ADD project (Sub-section 2.1). Over 30 000 mangroves propagules/seedlings were planted.

Figure 2.7 Before planting

Figure 2.8 Mangrove seedlings after 4 months

Apart from a comprehensive report on the project submitted to MCB-FF, other products include:

- A photographic journey illustrating the project implementation from start to end
- A 16 min documentary on mangroves by the then Mauritius College of the Air in collaboration with the then Ministry of Fisheries and Marine Resources.
- An eight-page brochure on mangrove

The children of the Le Morne Primary School were sensitized on the benefits of mangroves. Many other Government and private schools outside the region also visited the site (Section 3).

Figure 2.9 Mangrove plantation after 4 years

Another main component of the programme was the preparation of a GIS map depicting areas currently under mangrove plantation and potential areas where mangrove could be planted. It was estimated that about 72 ha of coastal area were suitable for mangrove planting. To prepare the map, a desk study was conducted using the aerial photography of 2008/2009 from the Ministry of Housing and Lands and additional information gathered through field surveys over 10 days around the island.

Figure 2.10 Potential sites for planting

Figure 2.11 Potential site at Case Noyale

A commemorative board within the premises of the Le Morne Community Centre was placed on 18 August 2012.

Figure 2.12 Signboard at Le Morne Village

## **2.4 MCBFF-2/ADD Improving coastal resilience and Community livelihood at Quatre Soeurs (January 2012 to December 2012)**

This second project of MCBFF comprised further extension of Le Morne mangrove plantation and the implementation of a mangrove propagation programme at Quatre Soeurs and Pointe aux Feuilles. About 7000 mangrove seedlings were planted at Quatre Soeurs and Deux Frères and 8500 at Le Morne. Other activities included eight sensitisation sessions for the benefit of the Quatre Soeurs village school and a sensitization campaign for the benefit of the women community, senior citizens, fishermen and youth (Section 3).

## **2.5 MCBFF-3/ADD A mangrove restoration initiative to reforest the coastal region of Mauritius and contribute to the improvement of the quality of life of society: Case Noyale/Petite Rivière Noire phase. (January 2013- July 2014)**

The third project on mangroves propagation funded by MCBFF enabled more than 30 000 propagules/seedlings to be planted in the region of Case Noyale near Ilot Malais. The survival rate was 90 %.

Figure 2.14 Ile Malais in the background

Figure 2.15 Mangroves seedlings 6 month old

One notable event during the planting phase was the passage of Cyclone Edilson not far from Mauritius on the 6 February 2014. Though abnormal high water level disrupted operation for three days, no damage was observed to the mangrove plantation. At the beginning of May 2014, heavy rain also caused much flooding in the Case Noyale region. Apart from the massive invasion of the plantation by some debris, poles and plastic objects, not much damage occurred to the newly planted mangroves.

Figure 2.16 Area planted with mangrove under the MCBFF-3/ADD mangrove project

An education programme to sensitize the school children on the importance of the environment and its preservation was implemented for the benefit of the Case Noyale primary school (Section 3). The front boundary of the school yard was cleared and planted with decorative and endemic plants to embellish the school premises. Some educational tools were also provided to the pre-primary school of the Case Noyale region.

The school children (age 10-12 years) of Ecole du Nord visited the mangrove site on 8, 10 and 15 April 2014. There were about 50 children on each occasion.

### **2.5.1 Other activities**

Several other activities were undertaken:

1. ADD participated in an exhibition on 5 and 6 June 2014 organised by the Ministry of Environment and SD within the framework of the World Environment Day at Octave Wiehe, University of Mauritius. One poster was dedicated to the Case Noyale project.
2. The MBC did some shooting of the mangrove sites at Case Noyale on 2 June and Le Morne on 9 June 2014 for a documentary on ADD mangrove projects as one of a series of programme on environment topics. The series was shown in September 2014 during peak time.
3. A beach cleaning with the participation of the workers was organized on the 31 July 2014 to mark the end of the project.

## **2.6 SADC/GIZ WIO project “Engaging youth and community in coral reef restoration (Mauritius) and beach monitoring (Seychelles)” (February 2014 to May 2015)**

The SADC/GIZ project was implemented jointly by Mauritius and Seychelles with Mauritius focusing on activities related to coral reefs involving school students of Gaetan Raynal State College and DAV College. The Project was reviewed and selected during a SADC Training workshop on ‘Climate change Adaptation and Mitigation’ in January 2014. Mrs Ramlugun of Gaetan Raynal State College represented ADD at the event. It was funded by the **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH** through ADD. The Association of Gender and Science and Technology (GASAT) co-sponsored the Project.

### **2.6.1 Aims and objectives**

The main objectives were to:

- Enhance sensitization of students on climate change and its impacts and advocate effective measures to be taken to mitigate and adapt to them
- Conduct interviews in order for students to gather indigenous information and anecdotes about the changes in coral reef status and beach profile over the last decades.
- Engage school students and local community namely women, skippers and fishermen in coral farming in Mauritius and in beach monitoring in Seychelles to gain hands-on practical experience and become ambassadors to promote the conservation and protection of coastal resources and ecosystems, in particular related to coral reefs
- Promote an exchange program for the sharing of good practices in Mauritius and Seychelles.

Ministries, institutions and NGOs that contributed in various activities in Mauritius in terms of presentations on corals, technical support and logistics and infrastructure included Ministry of Education and Human Resources, Tertiary Education and Scientific Research, Ministry of Fisheries, Mauritius Oceanography Institute (MOI), ADD, GASAT, Mauritius Marine Conservation Society, Reef Conservation Mauritius and Hotel Tamarin. The implementation followed three main components: sensitization, hands-on activities and documentation.

### **2.6.2 Sensitization**

There were presentations by a research assistant of Mauritius Marine Conservation Society on climate change and its effects on marine ecosystem and by officers of Mauritius Oceanography Institute and Reef Conservation Mauritius on impacts of climate change, and on mitigation and adaptation measures as well as on how to retrieve corals from the seabed at Albion and prepare them for coral farming. More 100 students both from the science and non-

science streams of Gaetan Raynal State College benefited from the programme. A questionnaire was devised to obtain information from tourists and skippers and fishermen and around 65 students participated in the interview.

Figure 2.17: Sensitization amongst students

### 2.6.3 Hands-on activities

An aquarium for coral farming was installed at Hotel Tamarin opposite the Tamarin public beach to enable maximum exposure to the project. However, this site was found unsuitable for coral growth. The corals underwent thermal stress and many of them did not survive. The aquarium was transferred to Reef Conservation Mauritius at Hotel Blue Marine, Anse La Raie.

Figure 2.18 Aquarium for land-based coral farming at Hotel Tamarin

Monitoring of the corals' growth was effected regularly by the students of Gaetan Raynal State College. They had the opportunity to visit wetlands and mangroves in the region, learn the techniques of sea water sample collection for the analysis salinity, pH, turbidity and temperature, observe the various coral species in the aquarium of Reef Conservation and gather information on measures being taken to preserve coral reefs integrity.

Figure 2.19 Water Samples Collection

Figure 2.20 Analysis of sea samples

Digital aquarium has been placed at Gaetan Raynal State College and another aquarium has been given to DAV College to enhance the knowledge of a wide range of school students on coral reefs.

### 2.6.4 Documentation

The trained students prepared power point presentations to spread the knowledge gained to a large population of students. A poster on coral reefs was designed by them for display within the schools premises. Posters to encourage energy saving among student, thus contributing to combat climate change, were also prepared and fixed in classrooms and offices.

Figure 2.21 Poster on coral reefs by trained students

### 2.6.5 Other Measures taken at school and community level

To sensitize students on the death threat of plastic to marine animals and corals, a competition was organised at school level for the collection of plastic bottles to be sent to Polypet Recycling Co. for recycling. The parents of the students also participated in the process which involved the collection of plastic bags from home and the neighbours. A few students along with their neighbours removed plastic bottles and bags from rivers thus preventing these from reaching the sea. Each participating student of the winning team was rewarded with a T-shirt, specially designed to further sensitise people on the need for protection of our corals.



About 670 young girls and 80 adults (teaching and non-teaching staff) and parents in the secondary schools (GRSC and DAV) and skippers (at Tamarin Hotel, at Blue Bay Marine Park, at Pereybère) were sensitised.

### **2.6.6 Exchange visits –Seychelles and Mauritius**

Students and coordinators went to Seychelles in 2015 to familiarize themselves about the Beach Monitoring carried out in Seychelles. Subsequently, the Seychelles participants visited Mauritius to learn about the Mauritian initiative regarding coral reef restoration. Three students from GRSC formed part of the delegation to Seychelles. It was a very enriching experience. They learnt more about beach monitoring and the six species of mangroves, compared to only two in Mauritius.

Figure 2.22 A mangrove site in Seychelles

Figure 2.23 Beach monitoring

## **2.7 Funding from other partners**

Robert Le Maire and Dry Cleaning Services provided some funding in the context of their CSR activities and overall concern for the environment. The funds were used in sensitisation activities especially for school children on the environment and publication of sensitization materials.

## **2.8 Additional information**

The above report is a summary of projects implemented. More details are available on ADD website ( [www.ADDMauritius.org](http://www.ADDMauritius.org)) including a photos gallery with more than 200 photos showing the different stages of implementation. Other information on detailed reports and other products (flyers, posters, Tsunami cartoon strip and stickers) can be obtained from ADD Secretary or President.

Figure 2.24 Site before planting

Figure 2.25 Planting propagules

One major activity prior to the implementation of the project was a beach cleaning activity organized in March 2012, whereby more than 80 inhabitants and 20 interns from different countries around the world, within the framework of the exchange programme of the International student association (AISEC). (Section 3) participated in the cleaning exercise. Logistics support was provided by the Village Council while transport was graciously offered by the Savanne District Council.

### 3. ADD SENSITIZATION PROGRAMME

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Sensitisation at all levels from grassroots to secondary schools and youth to senior citizens to protect the environment and safeguard natural resources is at the centre of all ADD activities. It is an integral part of all projects implemented by ADD and, in some cases, as a standalone activity. All stakeholders including the Ministry of Education, Mauritius Institute of Education (MIE), schools authorities and Parent Teachers Association, Municipalities, District and Village Councils and Community centres are involved in the process. The main ADD sensitization programme on the environment and Climate change, mangroves and Tsunami are described below.

#### 3.1 Environment and Climate change

A sensitization programme at the Le Morne and Poudre D'Or primary schools, for the benefits of children of Standard IV, V and VI, was one of the main components of the ADD/EU/DCP (Le Morne) and ADD/COI-EU-ReCoMaP (Poudre d'Or) projects (section 2). It consisted of 8 presentations made during the 1st and 2nd terms on:

- Natural resources and sustainable living
- Earth and Space
- Weather, climate and climate change
- Energy
- Water
- Waste and pollution
- Coastal vegetation
- Health

It was conducted in collaboration with the Mauritius Institute of Education (MIE) who provided some guidance on the pedagogical approach. Some presentations were also made by lecturers from MIE. Competitions were organised on the last day of school of the second term on drawing (Std IV), quiz (Std V) and essay (Std VI). Prizes were offered to the best candidates.

Figure 3.1 Sensitisation at Le Morne school      Figure 3.2 A drawing for the competition

A nature corner has been set up within the premises of the Le Morne School for educational purposes. Some endemic, medicinal and decorative trees were planted with name plates and description of the benefits.

Figure 3.3 Nature corner at Le Morne Government Primary school

At Poudre d'Or, the children of Std IV presented a 15-minute play on climate change.

Figure 3.4 Play on climate change at Poudre d'Or Government Primary school

The school presentations were further improved for the ADD/MCBFF-2 Mangrove Project at Quatre Soeurs, Pointe Aux Feuilles and Le Morne (January 2012-December 2012) project. On the prize giving day at the end of the 2nd term, a cultural show was organized. It included a slam and poetry competition. It was concluded with a dance show on the tune of Anarkali from an Indian film.

Figure 3.5 A dance show at Quatre Soeurs Primary school

At Case Noyale, a drawing competition on “How can you protect your environment” was organised. Around 130 children participated in the competition.

### **3.2 Mangrove**

Sensitization of schools, youth, women, fishermen and senior citizens on mangroves to enhance their understanding on the importance of planting mangroves in their villages and encourage stewardship is the first activity carried out in the context of all ADD mangrove propagation programme. This is vital to avoid vandalism and uprooting as there is false perception among coastal inhabitants that mangrove plantation is a favourable environment for mosquitoes breeding. It also acts as barrier to the sea view. In this respect, areas where there is settlement have been avoided.

Apart from the villagers Government school, which have always been included in the ADD sensitization programme where mangrove planting has been carried, private schools have also shown much interest. The Ecole du Nord has been a regular annual visitor at various mangrove sites for many years.

Figure 3.6 Women at the Le Morne site

Figure 3.7 Ecole du Nord (Case Noyale)

### **3.3 Sensitisation Campaigns on Tsunami in Mauritius and Rodrigues (August 2009 to October 2010)**

The Mauritius Meteorological Services entrusted ADD with another NGO with the responsibility of developing and implementing an awareness programme on tsunami in the Northern of Mauritius within the framework of a National Tsunami Early Warning System (NTEWS). The southern part was covered by another NGO. The Tsunami Warning system has been established in Mauritius with the assistance and support of international organizations and friendly countries and the Meteorological Services was designated formally to assume responsibility for monitoring and issuing tsunami warnings. In view of the threat to Rodrigues as well, ADD took the initiative, in consultation with the Mauritius Meteorological Services, to extend the sensitization programme to Rodrigues.

The series of presentation started in September 2009 with the civil society followed in January 2010 by primary schools and in April by secondary schools. Two computer-based presentations were prepared, one for secondary school and shorter version for primary school and civil society (Annex II). Multiple-choice questions were designed mostly for primary schools to evaluate the amount of information retained. A DVD was prepared for distribution. Other materials included in the DVD are:

- Intergovernmental Oceanographic Commission of UNESCO Tsunami Teacher, which provides detailed training materials on Tsunami for a wide range of trainees with different back ground.
- The MMS film on Tsunami “Pran conte Tsunami”

### 3.3.1 Civil society sensitization programme

Most of the presentations were made at the Sugar Industry Labour Welfare Fund Centres. In order to ensure maximum participation, it was coincided with other activities organized by the centres. The number of participants ranged from 30 to 100 depending on the region. Sessions were organized at 10 centres and the numbers of participants was about 800.

Figure 3.8 Tsunami Sensitisation Campaign at St Julien SILWF Centre

### 3.3.2 Primary schools

The first presentation was made at Jean Eon RCA Primary School at Grand Gaube. It is located close to the sea, where the potential danger of inundation is real in case of a tsunami. Sixteen primary schools were covered by the sensitization programme. Two and, in a few cases three sessions, were organized on request. The number of pupils reached was more than 1000.

Figure 3.9 Tsunami Sensitisation Campaign at Grand Bay Government School

### 3.3.3 Secondary schools

The last in the series were presentations made at secondary schools during the second term of the school calendar. Most of the colleges have large halls equipped with public address systems, which made it possible to address a large gathering at a time. Nine schools were covered with nearly 800 students sensitized.

Figure 3.10 Tsunami presentation at Royal College, Port Louis.

### 3.3.4 RODRIGUES PROGRAMME

A representative of the Mauritius Institute of Education participated in the sensitization campaign. Six primary schools and three secondary schools, as well as about 50 fishermen of the region where the South East Marine Park Area (SEMPA) project was implemented, benefitted from the programme.

Figure 3.11 Basile Allas GS, Port Mathurin

Figure 3.12 Fishermen of the SEMPA region

Additional products prepared

The following products were prepared in the context of the programme:

- i) A poster
- ii) A flyer
- iii) Sticker
- iv) A strip cartoon of 20 pages – M. Conntou et Ti Malin on tsunami for kids

Figure 3.13 Poster on Tsunami

Figure 3.14 A sticker on Tunami

### **3.4 Beach cleaning**

ADD contributed in minimizing the wash away of land based debris and pollution toward the sea through beach cleaning. A beach cleaning exercise was carried at Le Morne before the implementation of the second ADD/MCBFF mangrove project with the involvement of the youth of the region. At Case Noyale, a beach cleaning campaign was organised in collaboration with the villagers and Rotary Club of Riviere Noire.

Figure 3.15 Beach cleaning at Le Morne

Figure 3.16 Beach cleaning at Case Noyale

A half day beach cleaning activity was organized on 12 February 2012 before the implementation of the MCBFF-3/ADD mangrove project at Quatre Soeurs (section...). The participation of 20 interns from different countries around the world, within the framework of the exchange programme of the International student association (AISEC), added more value to the event. More than 80 inhabitants comprising youth, women and senior citizens also participated. A talk by ADD on climate change and a briefing prior to the Quatre Soeurs beach cleaning was organized for the benefit of the interns at University of Technology, Mauritius.

Figure 3.17 Briefing of AISEC overseas representatives

Figure 3.18 Beach cleaning at Quatre Soeurs by villagers and AISEC interns

### **3.5 Participation in Fairs**

The Association has participated in several fairs on sensitisation for the benefit of the general public. These include fairs and activities organised in particular by MACOSS to provide opportunities by NGOs to showcase their activities, Municipality of Quatre Bornes to enhance sensitization of the public on the environment, Ministry of Environment and Sustainable Development to mark the World Environment Day.

Figure 3.19 ADD stand at Grand Bay Conference Centre (MACOSS NGOs fair)

### **3.6 Outreach materials**

Several outreach materials have been produced. A list which includes sensitization materials is given in Section 4.

#### 4. PUBLICATIONS AND EDUCATION MATERIALS

Thirty seven posters/flyers/booklets to enhance sensitization and education on various environment themes and historical aspects related to ADD projects have been published.

S/N	Type of Publication	Projects/Themes
1	Flyer	Information on Association pour le Developpement Durable (ADD)
2	Poster	Some details on Association pour le Developpement Durable (ADD)
3	Poster	ADD Project to uplift the image of Le Morne village
4	Poster	Concept of “Developpement durable”
5	Poster	Information to enhance knowledge on “Changement climatique”
6	Poster	Some details on “Ressources cotieres”
7	Poster	General Information and benefits on Mangrove
8	Poster	French version on Mangrove “Benefices economiques”
9	Poster	Sensitisation on “Eco-gestes pour eco-citoyens”
10	Poster	Sensitisation on “Eau”
11	Poster	Sensitisation on “Déchets”
12	Poster	Some details on “ Le Projet Le Morne”
13	Flyer	Sensitisation on Mangrove
14	Video film	Le Morne Project
15	Poster	Sensitisation on Tsunami
16	Sticker	Sensitisation on Tsunami
17	PP presentation	Tsunami for schools Natural hazards
18	Video	Tsunami
19	Questions	Tsunami presentation–Primary and secondary
20	Script Cartoon	M Konntou et Ti Malin on Tsunami for kids
21	Poster	Activities of ADD CSR
22	Booklet	Report and materials - Primary School Programme (Le Morne)
23	Booklet	Report and materials - Primary School Programme (Poudre d’Or)
24	Flyer	Sensitisation on Poudre d’Or Project
25	Poster	Sensitisation on St Gérân
26	Poster	Sensitisation on Poudre d’Or Project
27	Poster	Some details on Places of Interest – Poudre d’Or
28	Flyer	Education on Sustainable Development with MIE
29	Flyer	Information on Poudre d’Or – Places of Interest
30	Flyer	Information on Paul et Virginie
31	Flyer	Information St Geran wreckage off Poudre d’Or
32	Flyer	Ocean Resources in the context of ADD/ReCoMaP Project
33	Flyer	Protecting our Coasts in the context of MCBFF Mangrove Project
34	Booklet	Photographic Journey - Mangrove in the context of MCBFF Mangrove Project
35	Flyer	MCBFF Quatre Soeur , Pointe aux Feuilles and Le Morne project
36	Games Video	Games for Primary School Children
37	Poster	Poster on coral reefs

## 5. INTERNATIONAL CONFERENCES

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Two international conferences were organized, namely on

1. Science, Technology, Gender and Sustainable Development Conference - Challenges and Opportunities 2025 - Legacy for future generations in April 2014
2. *Engaging stakeholders in climate change issues prior to the Paris Conference* in October 2015. Both conferences were well attended by high officials, scientists and experts from various ministries, organizations and institutions as well as experts from well renowned institutions from overseas.

### 5.1 ADD/GASAT International on Science, Technology, Gender and Sustainable Development Conference (Mahatma Gandhi Institute, Moka, 17-19 April 2014)

THE ADD-GASAT International Conference -Challenges and Opportunities 2025-Legacy for future generations - aimed at

- (i) promoting the exchange of knowledge among social and natural scientific communities, national institutions, women, youth and other civil society groups
- (ii) contributing towards developing Earth-sensitive attitudes that would lead to reducing poverty and developing resilient societies. The Opening ceremony was performed by the Minister of Education and Human Resources (Figure....)

Figure 5.1 Opening ceremony on 17 April 2014 at the Mahatma Gandhi Institute, Moka

#### 5.1.1 Participants and presentations

There were about 125 participants from including the Ministry of Education and Human Resources, Mahatma Gandhi Institute, Open University of Mauritius, Mauritius Research Council, Mauritius Institute of Education, Maurice Ile Durable Foundation, Mauritius Telecom Foundation, Early Child Care and Education Authority and Biosanté. Ten experts from overseas also attended the Conference; among them was the International Chair of GASAT, Prof. Stella Erinoshio from Nigeria and a keynote speaker, Prof Mike Watts from Brunel University, London UK.

Figure 5.2 Part of the audience

Over 50 abstracts were received following an open call for papers from local and international participants. Fifty three papers were presented. The presentations were divided along three broad thematic areas namely: Capacity building with 19 presentation, Sustainability with 21 and Resilience and Culture with 13 presentations.. The papers submitted were peer-reviewed and published as the Proceedings of Conference on ADD website.

#### 5.1.2 Recommendations

A Conference Statement was presented at the end of the conference in the presence of the Minister of Foreign Affairs- Figure 5.3 and adopted by acclamation on 19 April 2014. It included six recommendations. These were:

**Recommendation 1:** Capacity building should be integrated into national development framework with investments in formal and informal education and networking with some emphasis on science, technology and environmental programmes that draw on local conditions, and take into consideration gender equality and empowerment of women, to enhance human and institutional capacity for sustainable socio-economic development and poverty eradication.

**Recommendation 2:** Civil society and in particular, NGOs should be provided with adequate technical and knowledge-based support and financial resources to strengthen their capacity so that they can effectively contribute to the realization of national development agendas and the global Sustainable Development Goals (SDGs).

**Recommendation 3:** Healthy and productive ecosystems, central to sustainability should be enhanced through conservation and reduction in the rate of biodiversity loss.

**Recommendation 4:** Strong early commitment to address climate change and sea level rise should be made at national and international levels with adequate funding, knowledge and technology from international sources, particularly for developing countries and SIDS, to enable the integration of climate change policies in all national development programmes through well-planned adaptation and mitigation strategies.

**Recommendation 5:** All natural resources including living and Non-living Ocean and coastal resources should be exploited sustainably and an ocean-based economy promoted.

**Recommendation 6:** Resilience-building measures based on science and technology and on culture should be integrated in national policies with lessons learnt and appropriate knowledge and technology exchanged at regional and global levels.

The Conference Statement was subsequently submitted to national policy makers and through the authorities as NGO inputs to global platforms such as the UN SIDS Conference, Apia, 2014 and the UN Post 2015 Development Agenda.

Figure 5.3 Closing ceremony

## **5.2 International Conference on: Engaging stakeholders in climate change issues prior to the Paris Conference (City of Port Louis, 8 to 10 October 2015)**

The wide socio-economic implication and impacts of the outcomes of the Paris Climate Change conference (8-10 December 2015) and its legal binding agreement on development alternatives prompted ADD to organize an International colloquium from 8 to 10 October 2015 in collaboration with the public and private sectors, academic, research institutions and NGOs of the region. The theme of the conference was: **Engaging stakeholders in climate change issues**. The overall aim was to provide a platform for stakeholders to share their experience and express their views on related themes and propose solutions or alternatives for the future. The main sponsors included the Ministry of Environment and Sustainable Development, and Disaster and Beach Authority and Mauritius Research Council.

The **three thematic areas** are:

- The challenges posed by climate change and the adequacy of current and planned actions and existing mechanisms to ensure sustainability
- National commitments and expectations - incorporating these in the framing of a new legal instrument



- Opportunities and challenges that a new instrument may offer and strengthening mechanisms for implementation

The **objectives of the Colloquium** are to provide a platform, at national and regional levels, and engage stakeholders in:

1. Exchanging experience on climate change issues and identify areas that need to be addressed for long-term sustainability
2. Discussing issues of concern that have to be included in the new legal framework that is expected to be adopted at the Paris Climate Change Conference (PCCC)
3. Proposing ways of optimising benefits from such an instrument and addressing challenges in the implementation and discuss suitable mechanisms for follow-up

The colloquium brought together decision makers, scientists, researchers, representatives from public/private sectors, NGOs, academic institutions, and highly knowledgeable resource persons from different disciplines as well as eminent personalities from national and regional institutions.

### 5.2.1 Opening and participation

The opening address was performed by the Hon. Jayeshwur Raj Dayal, CSK, QPM, PDSM, FBIM psc (UK), MAIMS, Minister of Environment, Sustainable Development, and Disaster and Beach Management. Mr. Mohammad Oumar KHOLEEGAN, **Lord Mayor , City of Port Louis**, H.E Mrs Marjaana Sall, The Ambassador of the European Union to the Republic of Mauritius H.E. Laurent Garnier, The Ambassador of France to the Republic of Mauritius also addressed the gathering during the opening ceremony. One of the highlights of the opening ceremony was a video dedicated message on the colloquium from the Secretary General of the World Meteorological Organization.

There were more than 70 participants with a few experts from overseas.

### 5.2.2 Presentation of papers

Thirty two papers were presented covering the following themes: Paris Conference status, Climate change scenario and impacts, mitigation, adaptation, capacity building, Technology transfer and sensitization and implication of possible outcomes of the Paris Conference, national and regional cooperation. These included two key note addresses on Paris Conference-Status and Challenges and Opportunities – **The INDC (Mauritius)**

The organisations and institutions presenting papers included the Rajiv Gandhi Science Centre, CLIMAGRIC Ltd CLIMAGRIC Ltd. Ministry of Environment, Sustainable Development, and Disaster and Beach Management, Meteo Reunion Mauritius Meteorological Services, Ethiopian Institute of Agricultural Research, ADD, , GASAT, Forestry Services of Ministry of Agro Industry, National Disaster Risk Reduction and Management Centre and Individual consultants

### 5.2.3 Conference statement

A conference statement was adopted by acclamation at the end of the conference on 10 October 2015. The main message was an appeal to all Governments attending the Paris Conference to limit greenhouse gas emissions, so as to avoid continued global warming, and

keep global temperature, preferably below the critical 1.5°C threshold by 2100 as endorsed by SIDS. The participants reiterate their strong determination to work with all stakeholders and contribute to combat climate change and sea level rise. The conference statement was submitted to the Government of Republic of Mauritius and the UNFCCC. The latter subsequently uploaded the Statement on its website.

## 6. FUTURE ACTIVITIES

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Brainstorming sessions have been organized regularly to discuss lessons learnt and make a SWOT analysis following projects implementation as well as provide a platform for members to thrash out and prioritize any new ideas which can be developed into project proposals for submission to donors' agencies. They provide also an opportunity to review ADD objectives and new areas that can be covered to enhance ADD contributions to sustainable development of the Republic of Mauritius and well-being of the population. A brief on the future activities which would be considered is given below.

### 6.1 Mangrove

Mangrove propagation has been a major activity of ADD since its establishment in 2007 with the planting of nearly 100 000 propagules/seedlings on various coastal sites around Mauritius (section 4). It will continue to be given much attention as ADD contributions to protect coastal ecosystems and resources and enhance carbon sequestration in the face of climate change. In order to identify potential sites for mangrove planting, a desk study using 2008/2009 aerial photography followed by a field survey was carried out in 2013. The result of the study is given in Figure ....

Figure 6.1 Location and extent (m<sup>2</sup>) of potential sites around Mauritius

The Case Noyale site was selected for the ADD/MCBFF-3 mangrove propagation project (section 4) on the basis of the study. The next two sites identified are Coteau Raffin in the south west region and Le Morne opposite the pathway leading to the top of the Le Morne mountain. Currimjee Foundation is a new partner, which is prepared to sponsor ADD mangrove propagation programmes. Preliminary discussion has already been held with the local communities at Coteau Raffin and fishermen community at Le Morne. At both Coteau Raffin and Le Morne, the fishers have already shown resistance to the mangrove project.

Figure 6.2 and 6.3 Potential sites Le Morne

#### 6.1.1 Fishermen involvement in mangrove propagation

The Ministry of Ocean Economy is responsible for granting clearances for the implementation of mangrove propagation programme. For public beaches, authorization should also be obtained from the Beach Authority. Additional permission should be obtained from the Le Morne Heritage Trust Fund for the buffer zone of the Le Morne Mountain Heritage site. In principle, there is no need to seek approval from the fishermen community. However, on pass experience, its involvement as from the conception of any mangrove programme, is crucial in order to avoid vandalism and ensure its success. At Quatre Soeurs, for instance, most of the propagules and seedlings were uprooted.

It is essential that the fishermen community is viewed as one of the key stakeholders in mangrove preservation and rehabilitation programmes. It needs to be integrated in the discussion right at the beginning. However, there is no doubt that the fishers would avail of the opportunity to obtain some benefits in return. Their requests in monetary terms need to be taken into consideration and form an integral part of project proposals.

### 6.1.2 Mangrove research

Potential planting sites have been selected on the basis of visual assessment – existence of mangrove plantation, muddy coastal environment and an inland supply of fresh water. It has been found that on the same site, for example at Le Morne, the survival and growth rate has varied from region to region. In some areas, all propagules/ seedlings have died even after replacement. There is, therefore, a need to determine the favourable conditions required for mangrove planting at the regional level in Mauritius and Rodrigues.

It is known from literature that the pre-condition at the site for success include:

1. Type of substrate
2. Depth of water at high and low tides
3. Salinity of water trapped in mangrove mud at low tide
4. Ground vegetation and mangrove associate plants
5. Mangrove species (number of trees of each species per hectare)

Studies conducted elsewhere should not necessary be applicable to coastal areas in the Republic of Mauritius. Some studies on mangroves have been conducted by the University of Mauritius. In addition, students at undergraduate and MSc levels have carried out some research projects to determine environment conditions for optimum growth as part of the requirement for their courses. However, no manual or expert tips are currently available for effective guidance and application to ensure planting success.

It is vital that some studies be conducted with the participation of all stakeholders including the Ministry of Fisheries, University of Mauritius, Ministry of Environment, Meteorological Services and NGOs. The studies need to focus on the following elements:

1. Type of substrate
2. Salinity
3. Tidal range
4. Slope of the planting site and depth of water at low and high tides

## 6.2 UNESCO Sandwatch programme

Sandwatch is an educational process through which school students, teachers and local communities work together in the field to monitor their coastal environments; identify and evaluate the threats, problems and conflicts facing them; and develop sustainable approaches to address them. Particular emphasis is placed on observations and adaptation strategies relating to the impacts of [climate change](#) and [natural disasters](#). In this way, Sandwatch participants contribute to building ecosystem resilience and adapting to climate change.

One or several different aspects of the beach can be selected for investigation. These include:

1. Beach erosion and accretion
2. Sediment composition
3. Impact of Human activities on the beach
4. Beach debris, pollution
5. Water quality
6. Waves
7. Currents

## 8. Plants and animals

The schools of many countries are participating in this UNESCO programme. In Mauritius, some schools including Flic en Flac community and the Le Morne Primary school participated in the some activities in 2007 within the funding framework of the Sandwatch programme. For the implementation of the SADC/GIZ/ADD/GASAT **project on coral reef restoration and beach monitoring in Mauritius and Seychelles involving secondary school students** (section...), Seychelles used the methodology developed by Sandwatch to monitor beach erosion at Anse Royale, one of the most affected beaches in Mahé by erosion. However, in the latest edition of the Sandwatch newsletter of March 2017 ([http://www.sandwatchfoundation.org/uploads/6/6/9/5/66958447/the\\_sandwatcher\\_march\\_2017.pdf](http://www.sandwatchfoundation.org/uploads/6/6/9/5/66958447/the_sandwatcher_march_2017.pdf)), Mauritius is no longer listed as a participating country in sandwatch activities.

### 6.2.1 ADD participation in Sandwatch

ADD is already implementing sensitization programme related to coastal conservation in schools. Funding is now available from Currimjee Foundation to raise awareness on environmental issues involving protection of mangroves. It is envisaged to extend the programme to include Sandwatch activities. The UNESCO Sandwatch has been contacted to consider ADD participation in the programme. As a first step, the Mauritius National Commission to UNESCO needs to be approached in order to get its support before subsequent action.

## 6.3 Sea level research

Enhanced ocean warming and ice melt in the last few decades are causing an increase in sea level rise. Observations have shown that in the North Indian Ocean, an acceleration of sea level rise has been occurring since 2002. A study by ADD in collaboration with the Ministry of Environment, for Mauritius and Rodrigues, also found that the average sea level rise has increased from 2.4 mm/yr (1986 -2001) to 5.0 mm/yr (2002 – 2014) for Mauritius and 3.2 mm/yr (1988 -2003 to 9.0 mm (2003-2014) for Rodrigues. According to IPCC, sea level is expected to continue rising with far reaching socio-economic and ecological impacts on coastal and marine resources and ecosystems such as a decrease in fisheries stock and enhanced beach erosion and coral bleaching.

The ADD study on sea level has been conducted using daily research quality data from the University of Hawaii Sea Level Centre (UHSLC). The UK Permanent Service for Mean Sea Level (PSMSL) has further refined the data from UHSLC and compiled monthly and annual Sea Level data using a new reference level. An updated research using the PSMSL data with further refinement, taking into consideration annual variation in atmospheric pressure and other factors affecting sea level changes, will improve the integrity of the findings. In addition, implication of an accelerated sea level on coastal goods and services is fundamental to enable policy makers to formulate policy options and take informed decisions. There is a need to involve other organizations and institutions including the Meteorological Services, Department of Environment, Albion Fisheries Research Centre, Mauritius Oceanography Institute and other NGOs. A project proposal needs to be prepared in collaboration and partnership with all stakeholders and funding sought from funding agencies such as MRC, IOC, WIOMSA or EU.

## **6.5 Research on flood**

In Mauritius, economic development, growth in population and intensive land use have resulted in greater human use-environment interaction with accompanying increase in flood conditions and the vulnerability of inhabitants exposed to flood risk.

Using case studies, flood occurrences and the perception of the affected communities in building resilience to recover in the aftermath of flood hazards would be examined. The assessment will be made through the lens of the overarching concept of community resilience that encompasses six types of resilience. A holistic perspective is used to explore factors that influence the building of community resilience and the realisation of long-term recovery and rehabilitation.

Issues to be explored include social inequity and environmental injustice, factors that lead to increase in the level of vulnerability and adversely impacting on their resilience. Based on the research findings, an integrated framework for disaster risk reduction management (IFDRRM) would be developed. The framework could be applicable in defining policy options and implementation strategies in Mauritius and possibly in other Small Islands Developing States (SIDS) with similar challenges.

The research results are being drafted for publication in peer reviewed journals. These will follow the publication of a first paper on the subject namely “Public perceptions of living with flood risk from media coverage in the small island developing state of Mauritius” published in International Journal of Disaster Risk Reduction 19 (2016) p303-310.

## **6.6 Historical survey of natural disasters**

The project involves the systematic search for all natural and human-induced disasters as reported in media and Departmental reports such as those of the Meteorological and the Public Works, as available from the National Archives. As far as possible, occasional publications will be consulted.

The natural disasters will include cyclones, inland and coastal flooding, droughts, heat and cold waves, landslides, storm surges, advent of the impact of volcanic eruptions, tsunamis. The human-induced disasters include fires, sugar cane burning and oil spills.

The information will be compiled in suitable format that will facilitate preliminary analysis and exchange of the available data and information. Apart from Excel, other suitable softwares will be used.

The preliminary analysis will provide basic statistics on the number, frequency, intensity, return period, impacts of the natural disasters on socio-economic sectors and the environment. The findings will be published in a suitable peer-reviewed journal, in local media and on the web site of ADD. The data and findings will be made available to interested institutions and research institutions and researchers.

The project will be funded by the Mauritius Research Council (MRC)