

The Sandwatcher

The Voice of UNESCO's Sandwatch Project

www.sandwatch.org



Welcome Sandwatchers!

This is the 4th International issue of "The Sandwatcher" and is our largest and most inclusive to date. It contains great articles and amazing photos from Sandwatch teams in twenty (20) countries all over the world, including new members in Malaysia, Indonesia, Wales and Gambia.

We hope you enjoy reading this issue as much as we all have creating it and we would love to hear some feedback and ideas from you.

Please send your ideas and submissions to pdiamond@surfbvi.com and Gilliancambers@aol.com

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Trinidad
The Bahamas
Wales
...and much, much more!

Sandwatch Meets With Huge Success in Mayotte



A year has now passed since we joined the **Sandwatch Project** and we've done so many things and been involved in such exciting events that we would like to thank a lot of people. We have really enjoyed ourselves! We must first say a big thank you to **UNESCO** for allowing us to be part of the Sandwatch Project.

It's been the most exciting and interesting project we've been involved in so far.

Exciting, because through Sandwatch, we have taken part in many interesting activities and events at school and around our island. In December 2006, we contributed to the Mayotte Science Fair which took place in our school. We created "The Canny Boy" who had a lot of success!

The Canny Boy was made with all the trash we had collected on the beach of Koungou after a "Sandwatch Clean Beach Party". We wanted people to be stricken by the litter that is left on beaches. We welcomed many visitors in our class, teachers as well as students who wanted to know everything about Sandwatch and all the activities.

Mrs Gabriel, our teacher and two of us were invited by

RFO (Radio France Outre Mer) to talk in a programme called Maisha, "that's life" in shimaoré.

That gave us the opportunity to talk about Sandwatch for 2 hours! In March 2007, we planted mangroves to help protect a local beach. We were filmed doing this by RFO and by France 3, a national television station for their programme on Nature and Environment,

called "Grandeur Nature". We learnt plenty of things about mangroves and how important they are for our lagoon.

The most interesting is that mangroves are used as "nurseries" by many species, birds, fish, lobsters, that we would never have imagined. We had a lot of fun!

In April, Mrs Gabriel told us we were going to join a contest to celebrate The Green Turtle, sponsored by the "Oulanga Na Nyamba Association", (Oulanga = Environment, Nyamba = Turtle in shimaoré) And guess what?

Our Green Turtle that we had made with recycled bits and pieces, won the first place!

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Teacher Pascale Gabriel and her Sandwatch Team pose with their prize winning Green Turtle Project

Cuba: Children with Autism take part in Sandwatch

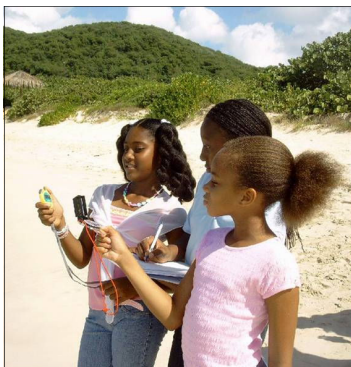


Hola Sandwatchers: You do so many good things but did you imagine that your activities would help put an internet 'surfer' from England in touch with a special school in Cuba? As Sandwatch is an all inclusive programme, the Dora Alonso School in Havana took part in the International Community Sandwatch Competition project in 2004-5. The Dora Alonso School caters for children with autism, and eight students from this school, ranging in age from 8 to 18 years, took part in this competition in a combined entry with students from Centro Vocacional de Arte Dominica del Amo and Secundaria Básica José Antonio Echeverría. Their entry focused on recording the different types of debris and pollution at the beach and ways to involve the community in maintaining a clean and healthy beach. They won a special effort award in the competition. I was able to read about this project on your website and in your news

letter, and I was so impressed that together with my wife, Julyan, we felt that we would like to make a small annual donation to the Dora Alonso School. Through my excellent follow-up contacts with Gillian Cambers in Puerto Rico and Delia Vera Medina in Havana we have been able to give some financial support to the school over the last two years. This year Julyan and I arranged a holiday in Cuba and to our delight we were invited to visit the school. We had a wonderful day meeting with the students and staff, seeing some of the classroom activities, the music and therapy sessions. A colleague we met mentioned that because the autistic children took part in the Sandwatch project, others could clearly see that these children had lots to offer, what a fantastic outcome! This short message is our way of saying 'thank-you' to you and them for all that you do!!

Alan Hunter, U.K.

Two Years of Sandwatch Results From The BVI



BVI Students Michele, Lakia and Darissa note current speed and direction on Savannah Bay Beach, Virgin Gorda

The students of Robinson O'Neal Primary School on Virgin Gorda have been doing Sandwatch for about 2 years now. In that time we have visited our local beach (Savannah Bay) many times and conducted numerous measurements and water tests and reached some interesting and important conclusions. Over the course of our two years of study and observation my students have discovered high and previously unknown levels of E.coli contamination from sewage (The Ministry of The Environment was duly informed), plus we discovered the fact that the Savannah Bay offshore coral reef has been greatly damaged (by about 90%) by the major coral bleaching event of two years ago. We were even able to take underwater photos, many taken by the students them-

selves, showing the damage to the reef before and after the bleaching event of 2005.

We have also discovered that the beach itself is now about a half meter narrower than it was 2 years ago, presumably because the reef is damaged and less able to protect it from wave action.

In addition to all this over the years we have also interviewed almost a dozen scientists and environmentalists in various disciplines, plus students have written monthly stories about the project and their interviews with experts in the local newspapers and even for some foreign magazines. Students have also talked about the project as part of a global video webcast news show, which has been viewed by thousands of people all over the world.

We have also taken field trips to other islands, on a high-tech hydrofoil glass bottom tour boat and even on a ROV Submarine Boat! In May we even had 4 groups of students come down from the United States, courtesy of The University of Southern California's Wrigley Institute for Environmental Studies during which we did two trips to the beach with them and showed them how the project works. So as you can see, doing Sandwatch with your students can be a whole lot more than just a day at the beach! It can have "real world" applications and results, as well as being a great way to introduce and expand your student's interests into many areas of the environment. By **Paul Diamond, Robinson O'Neal Primary, Virgin Gorda, BVI**

Project Tips For Sandwatchers: Google Earth



View of Virgin Gorda, BVI from satellite via Google Earth

Have you used **Google Earth** yet? If not, you should have a look at this fantastic **FREE** program that you can download at....

earth.google.com. The program isn't very large, only 15 Mbs, so it will install quickly, however to use it properly it is recommended that you have access to a "broad band" connection; A dial-up connection might be too slow to use the program efficiently and effectively.

Using this program you can view the entire world from space via satellite, and zoom right down to literally see your island, community and even your school from space in high reso-

lution photographs!

The program also lets you record the longitude and latitude of your school or your adopted Sandwatch Beach, so that you can email it to other Sandwatch teams, so that they can see where you live.

Teachers can also use Google Earth to teach not only the local geography of their island/region, but also world geography.

Please look at this page on the Sandwatch website...

www.sandwatch.ca/project_photos2.htm for some more details, and please let me know if you have any questions about

how to use this program (pdiamond@surfbvi.com)

Other things you can do are, invite local environmentalists and other scientists (government and private) to come and talk to your students about their work, or...

Let the local media (newspapers, TV) know about your Sandwatch field trips and other related environmental endeavors, or...

Use your students Sandwatch Project as a submission to your local Science Fair.

Please share any ideas you think up with everyone too.

Bequia: Sandwatch "Clean Up" Campaign



Bequia students learning how to use a compass

The Small Islands Voice/Sandwatch group launched a 'Clean-up' campaign on the 25th May, 2007. The group are conducting regular 'clean-ups' of the school's surroundings, both inside and out, at regular intervals (once per week). Wednesday is the assigned day for these 'clean-ups.' The first clean-up had the group hard at work cleaning the school's windows. As students graduate and leave school, it always becomes necessary to train new

groups. So on 1st June, 2007, the Small Islands Voice/Sandwatch group embarked on a training session at Lower Bay Beach where new recruits to the program was given a short orientation session by former Coordinator, Mr. Herman Belmar.

The group was given hands-on training on how to measure a beach profile using the abney level, compass, tape measure and datum poles. This provides information

about the size, shape and slope of the beach and shows whether it is eroding or accreting. They were also trained in analyzing sand. Another training session is scheduled for June 23rd 2007 in the area of long shore current, wind direction, wave interval and debris collection.

Joanna Stowe and Michelle Stowe, Sandwatch Group, Bequia Community High School, St. Vincent & the Grenadines

Bahamas Sandwatch Students Protect Reef



Hope Town School has been involved with Sandwatch for many years and our projects on our test site beach are on-going. We have helped to re-plant the dunes with sea-oats after 3 devastating hurricanes, monitored beach use, held beach cleanups and categorized debris, measured, graphed and sorted just about anything and everything in that area. We conducted beach interviews to gain an insight as to what tourists knew about reef etiquette after we had observed too many people standing and walking on our fragile patch reef located right off our test site beach. Then we designed a brochure to place in nearby hotels and rental cottages so people could learn sustainable use of our reef. We continue with our water testing and mangrove cleanups during the year as well. We spent time working on a distant mangrove project that involved removal of some mangroves from a

choked area to allow water to flow more freely in and out so that fish could once again have use of the mangroves to grow in safety. We also took part in the making of cement reef balls which were placed surrounding a local patch reef popular with tourists. We hoped they would attract more fish and marine creatures in that area. More on that in a latter issue.

We had been working on the mangrove project and the Reef Balls project and these projects took us away from our test site beach for a few months. We were pulled back to our beach area suddenly when a tourist informed us that a huge fishing net had settled over the top of the coral on our patch reef. The weather was windy and cool and it was over a week before we could safely make it out to the reef. It is relatively close to shore-- about a 4 minute swim. We were shocked when we reached the reef--nearly

the WHOLE reef was covered. The wave action was causing the net to damage the fragile reef. We felt we had to act quickly but we also had to devise a plan as the net was SO large. We collected some sharp knives to cut off hunks of the net at a time. That seemed to work but was slow going. Four students along with our teacher and another adult who videotaped the event spent quite some time cutting it off bit by bit. FINALLY we were all able to grip corners of it and pop it off without causing more damage. Then came the task of swimming this heavy net to shore and dragging it way up the beach so it never washes out to snag the reef again! REEF RELIEF-- Children Constructively Caring!!!!
By Ben Patterson, James Boyce, Noah Albury, Lance Roberts-- Grade 6 students. Teacher: Mr. Justin Higgs and Videographer, Mr. Matt McCoy.



Bahamas students show the large net they cut off of their local reef

Sandwatch in Ghana, West Africa



Ghana being classified as the gateway to Africa, has within it environment a community / city known as Teshie, Teshie as it is called is located at the southern part of Ghana and also situated at the coast which automatically makes it a fishing community. Since most of them are into fishing, some also have their own businesses which have nothing to do with fishing. Communities in Ghana are basically recognized by their inhabitants and the Teshie community happens to be where a group of people called the GA's live. Even though I myself is not a GA, but happen to find myself as a student in one of the community high school called Teshie Presbyterian Secondary School, I really love to talk about them in terms of their Way of Life (Culture and Beliefs).

As a fishing community, it is obvious that most activities of the day will certainly take place at the beaches / shores and after a days work you can imagine how the beaches / shores might really look like, this brings much concern and thoughts into our minds on issues pertaining to the environmental

sustainability of our beaches.

As a member of the Simba Youth Club; which seeks to empower the youth, for Cultural Exchange and Community Development, I was very glad upon hearing our participation in the "Sandwatch Project" which in summary helps the youth to develop skills relating to critical thinking and conflict resolution which instills a sense of caring for beaches and the environment as being narrated by our group leader.

After a short briefing from our group leader on how the youth can take positive action towards the attainment of environmental sustainability on our beaches / coasts, we decided to pay a visit to the Sun Shine Beach found in the Teshie. On reaching the beach and with reference to the briefing, we realized that much work needed to be done to change the devastating state of our beach.

Our first step was to organize a clean up exercise on a section of the beach environment which was filled with debris all over; we also measured the beach width, length and monitored the waves which indicated how much impact the

waves have on the beach. This was also followed by a check on the nature of the water (sea) in terms of its cleanliness and purity, but to our amazement we realized that the water (sea) had become oily due the activities of oil miners on some section of the sea. We couldn't act effectively at the moment but we intend to send a report for action to be taken. We will also request if contact can be made to our UNESCO office in Ghana concerning our participation in the Sandwatch Project, so that the support can be granted us in our quest to attain a sustainable coastal development.

As a new team for Simba Youth, we pledge to live up to our expectation in relation to the objectives of the Sandwatch Project. Lets all do our best to keep the flame burning.

**Adonis N. Quainoo
Simba Youth Club
T.P.S.S- Accra, Ghana**

EMPOWERING THE YOUTH; FOR CULTURAL EXCHANGE / COMMUNITY DEVELOPMENT.



The "Simba Friends/Sandwatch Team" of Aggrey Sec School, Ghana, West Africa



Sandwatch students take measurements on their beach in Ghana

Kenya: What Becomes Dirtier as it Cleans?



The Equator runs through Kisumu!

Lake Victoria is the largest mass of water in the east Central part of Africa. Our school is privileged to be situated next to this second largest fresh water lake in the world. Our community which live around the lake have a local name for it. We call it 'Namlolwe' which means an endless, undying mass of water.

Yet the Lake's staying power seemed threatened, thanks to polluters and the invasive water hyacinth. You will see from some of the photos that our lake is filled with a green weed called the water hyacinth. As if that is not all there is the decline of fish stocks and deteriorating water quality, experts have already filed Lake Victoria's death certificate.

During one of our environmental class presentations at Kisumu High school in Kenya, Doreen a 13 year old girl posed this riddle; "What becomes dirtier as it cleans?" After a while of guessing and attempts, Doreen gave an answer that shocked and surprised us all. "It's Lake Victoria." She said with a calm voice.

My class burst out in applause for Doreen's Riddle. The riddle had summarized all our fears; the world's second largest fresh water lake looks beautiful and full of life and vitality; it cleans our clothes, our cars and our industries, but a closer

look reveals massive pollution caused by cleaning of motor vehicles on shallow beaches, not to mention industrial effluent and run-offs from urban areas. But a startling scientific report now says that Kisumu's booming car wash industry



posses a fresh threat to the lake's well being.

Oil spills and dirt washed from the vehicles covers the water surface and cuts off oxygen supply. There are about 100 car washers at Kichinjio and each takes home not less than sh300 daily as they charge between sh100 to sh500 per vehicle. They are aggressive and always convince motorists to have their car washed. The vehicles are driven into the shallow part of the lake, where they are cleaned as the owners enjoy their meals.

Early in the year 2007, Kisumu High Environmental club partnered up with Mr Geoff Nelson on a cleaning exercise of the pollutants, oil cans, plastic bags and dirt of the Kichinjio beach of Lake Victoria. This exercise did not go unnoticed.

The Kisumu Municipal Council Environment officer not only thanked us for the good job, but he also gave us a litter van to assist in ferrying all the dirt we collected from the beach area. He also gave us a challenge. He said, young people in Kisumu can help change the attitudes of those cleaning cars around the lake.

During our summer holidays, we plan to raise funds, and hold an environmental campaign dubbed "Remove Motorcars from the Lake Victoria". Part of our plans include: Putting up a car cleaning service that has proper piping and dirty water disposal and recycling plant next to the lake area. The only way to stop people from having their cars washed directly in the lake is to give them an alternative.

(continued on back page)



The Kisumu High School Environmental Club

Barbados: Our Beaches, We Care



Speightstown Beach Frontage showing wave erosion

On June 29th, 2007 at the Speightstown Community Esplanade, the Sandwatch group in Barbados will be holding a Sandwatch Community Exhibition around the theme 'Sandwatch – our beaches we care'. Organized by the Coleridge and Parry School Sandwatch Committee, the Barbados Environmental Youth Programme and the Barbados National Commission for UNESCO, the exhibition seeks to sensitize the public about the various Sandwatch activities in Barbados as well as related private sector and government initiatives.

Among the highlights will be a display of the results of 2005 Sandwatch beach survey in which students from Coleridge and Parry School identified several problems at the Queens Street Beach and devised a programme to sensitise the Speightstown community about the general care of the beach as well as their surrounding environment. Other exhibitors range from the Barbados Sea Turtle Project to the Biodiesel project, and from the Sanitation Service Authority to the Barbados Marine Trust. Primary and secondary schools as well as

several government agencies will also be exhibiting their work.

A school poster competition around the same theme, 'Sandwatch – our beaches we care' has been organized and winners in the different categories will be announced during the exhibition.

**By Randolph Woodroffe,
Coleridge and Parry School,
Barbados**

Sandwatch Project to be Tested in Indonesia



Consisting of 18,000 islands, 6,000 of which are inhabited, Indonesia has a significant potential for Sandwatch. Following the pouring of help to Nanggroe Aceh Darussalam (NAD) Province (on the northern tip of Sumatra) after the devastating tsunami of 26 December 2004, efforts are now focusing on capacity building for local governments, communities and youth. One of the activities of the GTZ (German Technical Co-operation) supported project 'Support for Local Governance and Sustainable Reconstruction' (SLGSR) is looking at ways to develop local capacity in coastal management in NAD. Sandwatch is a programme that has potential at both the school and community level, and SLGSR is working with other partners to test Sandwatch in the Indonesian context.

One of these partners is the GTZ supported Science Education Quality Improvement Project (SEQIP). SEQIP focuses on an integrated approach for science education at the primary school level with the emphasis on a "learning by doing" approach. Modules and lesson plans utilizing special equipment kits help students understand the topics specified in the Indonesian curriculum ranging from magnetism to the digestive system and from energy to water. SEQIP started in 1994 and has been successfully established in over 40,000 schools in the country. Primary schools in Indonesia are organized into clusters of six schools, and SEQIP modules, materials and training are provided to teachers in the core school who then share the knowledge with the teachers from the other schools in the cluster.

A module for Sandwatch is being developed currently and will be tested in the coming months. Tentatively called Environmental Education for Rivers and Coasts, a module and lesson plans will be prepared for the basic Sandwatch methods such as observation and recording; measuring erosion/accretion, sand composition, waves and currents, plants and animals; recording human activities and debris; and solving environmental problems. This will be designed specifically for the science and social science primary school curriculum. The Environmental Education for Rivers and Coasts module will be tested in two primary schools and after being evaluated, support will be sought for expanding the initiative.

By Susian Chan and Farid Selmi
GTZ supported project SLGSR,
Banda Aceh, Indonesia



Large scale replanting at Lampu'uh where more than 60 houses were destroyed in the 2004 Tsunami

Sandwatch Update From New Zealand



From Stanmore Bay Primary School, on the Whangaparaoa Peninsula, not far from the capital of Auckland.

Kia ora everybody, just a short report from the team at Stanmore Bay here in Aotearoa/ New Zealand. Some new students have joined our team and we took the opportunity to make 2 visits to our local beach. On our first visit we looked at the high tide marks at three different

points. We are hoping to go back soon and retake the measurements as a comparison to see if there is any erosion or change. While there we also took some samples of sand at these points to check composition. On our second visit we invited 3 classes to come along with us as we did a beach clean up. The local council provided us with gloves and rubbish bags to do the job. They also arranged for the local Waste

Management to pick the rubbish up at the end of the day. We were pleasantly surprised at how little rubbish there was for the size of the beach. Some samples of rubbish that we found were dead fish, plastics, and the odd piece of paper as well as glass. It is amazing how once you clean up a beach you come away determined to do your best to keep it tidy. **By Teacher Robyn Bennett and students.**



Stanmore Bay students show the Sandwatch Manual and other items sent to them by students in the BVI

Seychelles Conduct New Sandwatch Workshops



The Department of Environment in collaboration with the Ministry of Education conducted two training workshops during the month of April on Mahe and Praslin respectively. The workshops were held as part of the expansion of the Sandwatch Project into eight secondary schools of the country. The day long workshops were opened by Mr. Alain De Comarmond from the Department of Environment who also gave an overall presentation on the Sandwatch project. During the presentation Mr. De Comarmond briefed the participants about the origin of the project and what has been achieved so far. The morning theoretical session was comprised of different presentations

namely on the range of components of the project such as the beach, water quality, drainage and flooding. Participants were also able to learn more about the sandwatch competition which, was launched during the workshops. Various ways of how to collect data, carry out tests, how to do measurements, and what type of activities maybe done as part of the project were also showed during the morning theoretical session. The students and their teachers were able to ask questions after the presentations. The afternoon session was focused on practical side of the project. The students were able to go to the beach whereby they were showed how to conduct activities such as

taking beach measurement, using different equipments and testing water quality. As part of the workshops the students and their teachers were presented with a number of equipments, books, as well as CD which would eventually help them when working on their project. The participating schools will now have to think about what type of project they want to do. They will have to choose a site and implement the project in relation to the different issues that were discussed during the workshops. The school project will have to be integrated and include the whole community. **By Nanette Port-Louis,**
Department of Environment



New Sandwatch workshops were held in the Seychelles as part of the projects expansion into eight high schools

Sandwatch—River Care to Start in Malaysia



Students use the computer lab at the SMK Tengku Ampuan Intan School, Malaysia

Greeting from Malaysia!

Malaysia is very beautiful with its cascading waterfalls, man-made lakes, white sandy beaches, amazing islands and lush green jungles. Our school is located far from the beach but it is near Taman Negara National Park and Lake Kenyir. Lake Kenyir is rated as the biggest man made lake in South East Asia. We also have our own environmental project that we want to do as part of **Sandwatch**, it is called, **Save Our River**. We want to help keep our river free from pollution. A palm oil factory nearby disposes its wastes into the water. As a result, the crystal clear water turns to black in colour. It is hard to find fish there because the river is polluted and unsafe for aquatic creatures. We want to help the river breathe again and runs free. That's our mission, it is not impossible but it needs a lot of effort. The **Sandwatch Project** is amazing

for young researchers like all of us since it provides us with information and guidance for our project. The number one pollutant in Malaysia is organic waste from sewage, animal waste and excessive soil deposits. Organic - human and animal - waste can cause disease and death. Carcasses or feces dumped illegally into our rivers can cause cholera, typhoid and hepatitis A, which sometimes result in death. Oxygen is used up to break down organic waste. If there is a large amount of organic waste, it can deprive river vegetation and animals of much needed oxygen. This can result in killing them, destroying river habitats and part of our food chain. Even though industries and agriculture come a close second, toxic chemical by-products which are being dumped into the river, in fact could also risk people's health. This project involves six students who are willing to work hard

to make this project a success. These students will collaborate with laboratory assistants to do experiments on the water taken from the river (the location is nearby to the palm oil factory). Students take water specimens twice a month at the river polluted with palm oil residues and do experiments on the water. They will test the water by using pH indicator and blue methylene. Students then, write a report about their findings. Besides, another water specimen is also taken at Lake Kenyir to compare the quality of both water taken from different areas. So, participating in the **Sandwatch Project** is a good idea for us to make contact with other young researchers and have a forum to present our findings. Wish us luck! **Rohaniah Brahim (Project Manager)** SMK TENGKU AMPUAN INTAN, TERENGGANU MALAYSIA

Sandwatch Begins in Gambia



The Sandwatch Team and Friends at the Skills Training Centre, The Gambia

Hi Friends and fellow students; hope all of you are enjoying The Sandwatch Project as much we do here. We are proud to be associated with this UNESCO Project and that we are involved in a great program with all of you.

Our aim here is to help fellow youths, students and friends both in diaspora and knowledge seekers to know what we can do, what we can share

together and how we do our own kind of things. Thanks for this opportunity, courtesy of Mr. Paul Diamond who had been very supportive and always there for us. Our country, Gambia is a very small one right in the west coast of Africa, surrounded by Senegal and at the tip by the Atlantic ocean. It is rather long and stretched, but small in width. We have a lot of beaches and rec-

reation areas and scenes, and hope to share this great wealth of nature and our diverse traditions.

We will send you all up-to-date details and tell you of our school and people on our Sandwatch home-pages. Stay blessed

By Mr. Festus Edet and students, Skills Training Centre - The Gambia

World Environment Day on Trinidad



Sandwatch students create giant sand sculptures as part of SandSplash '07, for World Environment Day

The Mayaro Environmental Wave celebrated World Environment Day on 3rd June 2007, in grand style at the Plaisance Beach front, Mayaro Trinidad. This was a threefold activity in the form of a beach cleanup, craft display and a sand sculpturing competition. The celebrations were entitled "SandSplash 2007". As early as 8:00am participants started to arrive to celebrate with us. There were participants from the community, Secondary Schools, Primary Schools, Corporate bodies and other UNESCO Clubs. With seven teams participating, we cleaned approximately one mile of beach and gathered approximately thirty bags of garbage. The most unique debris found was a fire extinguisher. As folk relaxed and viewed our display, excitement was in the air as we got ready for the day's finale -

the sand sculpturing competition. The theme of this activity was "Something Mayaro". Participants had to sculpt anything that can be found in Mayaro. At the sound of the whistle, the seven teams began to sculpt "Something Mayaro." With no more than four members in the sculpturing area at any given time, participants were in a mad rush to sculpt their "thing", within the thirty minutes allowed, as their vociferous supporters urged them on. 10, 9, 8, 7, 6, 5, 4, 3, 2, 1 and it was all over, as shouts of excitement reverberated in the air. Team Easter Diver, one of our Corporate teams, was the overall winner. Our host team, Mayaro Environmental Wave (UNESCO Club) got the third place position. Our day's event was covered by two

media houses, Mayaro Cable and CNMG. The Mayaro Cable is a local Cable provider, while CNMG is national in coverage. It was a day of clean fun and all are excitedly looking forward to 2008 celebrations. Additionally, on the morning of World Environment Day (5th June) 2007, a live radio interview was conducted with Mr. Andy Paul about the celebrations we had on Sunday 3rd June and other environmental matters were discussed. Hats off to the Mayaro Environmental Wave, the new kid on the block, for such a wonderful, memorable, enjoyable, excited, impressive, remarkable, unforgettable event. We eagerly await SandSplash 2008. **By Andy Paul, Mayaro Government School, Trinidad**

Sandwatchers From Around The World!

Sandwatch is a truly global project, with schools in almost 40 countries participating



Bahamas students cut away a lost fishing net that was damaging their local coral reef



Autistic Children in Cuba take part in Sandwatch for the first time



Sandwatch students in New Zealand after cleaning up trash on their adopted beach



The Green Turtle Mayotte students made from broken glass to win an environmental prize



US Students visit Virgin Gorda to learn about Sandwatch from the students of Robinson O'Neal Primary School



Trinidad Sandwatch students create sand sculptures for SandSplash '07



Mayotte students attend turtle spotting camping trip



BVI students do a Sandwatch field trip on a glass bottomed boat



**Crocodiles at the Katchikali - Bakau, Gambia
A threat the local Sandwatch Team has to look out for!**



BVI students & their '07 Sandwatch Project at the National Science Fair



Malaysian students pose by the school clock



Children from Flic en Flac, Mauritius about to participate in Environmental Rally



Susian Chan collecting water samples, Lampu'uh Beach, Aceh, Indonesia

Sandwatch Launched in Mauritius



Mr. Sachooda Ragoonden explaining climate change issues to students at Le Morne Primary School, Mauritius

Sandwatch, which was launched in Mauritius in January 2007, is based on a community participatory approach. The project has taken the form of a pilot project in two coastal villages namely Flic en Flac and Le Morne respectively. Both are situated on the west coast of the island. Flic en Flac is a major tourist resort while Le Morne village is isolated from the tourist resorts based in the area. However, the coastal zone of both villages is suffering from coastal erosion and other beach related problems.

The various local civil society groups are being mobilized through the project in order for them to understand the marine ecosystem and the impact of development and climate change on the coastal zone. This is currently being done by face-to-face meetings; working groups on problems within the village through the use of participatory methodology such as the 'Planning by objectives' techniques; organization of activities for specific groups such as the elderly, small pleasure craft owners,

artisan fishermen, school children and teenagers and encouraging each group to take pictures of their likes and dislikes of the village environment. The current process has enabled us on the one hand, to understand the social dynamics of each village and on the other hand, to bring together a group of community leaders including teenagers to form a Sandwatch group in each village. Formally they are known as Sandwatch Flic en Flac and Sandwatch Le Morne.

Apart from meetings and group discussions, Sandwatch has been able to organize a pedestrian rally on coastal issues and climate change for the schoolchildren and teenagers of Flic Flac and a talk on climate change for the schoolchildren in the primary school of Le Morne village as one way of community mobilization. In operationalising the project on the ground, the necessity of alternating empowerment of the villagers and concrete activities became obvious, as the community is not used to participate in long meeting and work-

ing sessions on a regular basis. In actual practice, this duality of empowerment and development of concrete actions will be developed in parallel as the process is moved forward.

However, various challenges still lie ahead before this community approach could mobilize the whole community behind its objectives and vision. Sandwatch has the merit to shed light as a process on the coastal zone as a space of conflicting interests, a regulatory space in terms of heterogeneous norms (cultural, legal, political and social) and as a political space where diverse public authorities including the local ones and civil society forces have to do their apprenticeship in working in partnership. These issues should be addressed as part of a sustainable island living strategy.

By Pynee A. Chellapermal
Sandwatch Coordinator
Centre for research and Documentation in the Southeast Indian Ocean (CEDREFI) Mauritius

Sandwatch Manuals will shortly be available in both French and Spanish Editions
An announcement be made on the Sandwatch Website with they are out



Sandwatch looks forward to working with the UKOTCF on several islands worldwide

UK Overseas Territories Conservation Forum



UK Overseas Territories to Investigate Participation in The Sandwatch Project.

The twenty one (21) or so United Kingdom Overseas Territories and Crown Dependencies (UKOTs) are scattered across the world, and the majority are small islands, for example in the Pacific, the South Atlantic and the Caribbean. More information about these, and where they are, can be found on the UK Overseas Territories Conservation Forum (UKOTCF) website at www.ukotcf.org.

UKOTCF is a small, UK-based NGO which aims to promote biodiversity conservation in the UK's overseas territories. It is a federation of organizations both in the UK and in the UKOTs.

When many of Britain's former colonies became independent, the UKOTs chose to stay attached to Britain. The UK government and the UKOTs Governments together

signed Environment Charters in 2001, to help safeguard the extremely valuable natural environment of these places. This project fund is called the Overseas Territories Environment Programme (OTEP). A grant from this fund has just been awarded to UKOTCF for a project I am managing on Environmental Education – links across territories.

This project, running over the next 2 years, will develop an environmental education section of UKOTCF's website.

The aim is to develop the environmental education section with 3 strands:

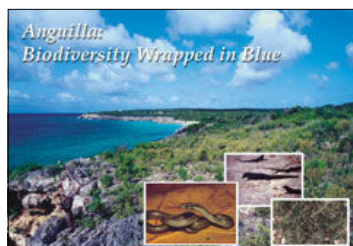
1 – an environmental education resources section, where people can be made aware of ideas and materials for environmental education, and these can be shared. This should help the development of environmental education programmes and materials tailored to a particular locality, by allowing people to build on existing work.

2 – a virtual tour of each territory. Knowledge and understanding of the UK overseas territories within the UK is very poor, so this would help raise awareness there, as well as enabling people from the territories to get to know more about their "sister" territories.

3 – an online discussion forum for the sharing of information, concerns and issues between the territories. This was a particular wish of the students who helped develop the ideas for the project, and would be targeted initially at young people.

We are just at the planning and start-up phase, as the project has only recently been approved, but I hope that when we have the message board / discussion system set up (hopefully in the next few weeks), some of you may wish to become involved, especially if you live in a UK Overseas Territory.

By Ann Pienkowski, UK Overseas Territories Conservation Forum
apienkowski@clara.co.uk



US Students Visit The BVI to Learn About Sandwatch



In May '07, the Robinson O'Neal Primary School's Sandwatch Team members had some very special guests visit us. They were teachers and students from 4 US schools in California and New Jersey.

(The Francis Parker High School, CA; Horace Mann Middle School of Expedition, CA; Marine Academy of Technology and Environmental Science, NJ; Veterans Memorial Middle School, NJ) They came to The British Virgin Islands because they had won the top prizes in the QuikScience Challenge Contest...

(www.usc.edu/quikscience)

They came here to Virgin Gorda with Marine Biologist, Terri-Lyn Bidle from the University of Southern California's Wrigly Institute of Environmental Studies, who helped to organize the trip.

They came to our school to show us the projects they had made to win, like making a food web/chain with students acting the parts of plants and animals in the environment. They showed us how if even one plant or animal is removed from the web, the whole thing can stop working.

They also did projects on how they tried to get rid of mercury from their towns and also how important it is not to pollute water though the storm drains.

The US students also came to our school to hear about our Sandwatch Project that we have been doing for about 2 years. They all came down to our Sandwatch beach (Savannah Bay) with us to do some measurements and tests, so that they could learn what the Sandwatch project was all about.

It was good that other students want to see what we are doing to study and protect our own environment.

The best things about their trip was the free posters and especially the saltwater taffy that the teacher from New Jersey gave us. Our teacher won't give us the taffy until we hand in all our assignments, he is really mean.

It is great that even people in other countries are not only interested in our Sandwatch project, but also will travel all the way down here to find out more about the project and work with us. Other Sandwatch teams should invite teachers and students to visit their schools and see them doing Sandwatch as well, so that more people can learn about it.

**Darissa Rogers, Grade 5,
Robinson O'Neal Primary, BVI**



Students from New Jersey & California pose with BVI students on Savannah Beach, Virgin Gorda

Sandwatch Team Plants Mangroves in Mayotte

On Monday March 26th, we went to Doujani in the East of Grande Terre. We were going to plant trees mangroves. How exciting!

Our team Sandwatch (11 girls) was accompanied by our English teacher Mrs Pascale Gabriel and the team "Les Naturalistes Juniors" (12 boys and girls) and by our history & French teachers, Mrs Hélène David and Mr Alban Brégnat. When we got there the tide was low and there was no water at all, it was quite muddy. We were met by a journalist from French television (FR3), Michel Huet and each Sunday at 11:30, he presents a programme on Nature and Environment called "Grandeur Nature". Michel Charpentier, the President of the association "Les Naturalistes de Mayotte" was there too. Les Naturalistes have a maga-

zine and they write lots of things on Mayotte and its wildlife, environment, lagoon, etc. They organise lectures and outings as well. Another young man, Fabien Barthelat, a botanist from the DAF (Direction de l'Agriculture et de la Forêt) explained everything about the mangrove. It was very interesting because we learned many things. We had never realised how important the mangrove is for our lagoon, it is a good protection for our beaches. We didn't know the names of the trees either, in French, we call them paletuviers and there are species of them, white ones, red ones and yellow ones! We didn't know that we could plant these trees, we thought that they grew by themselves. We learnt that some fish prefer living in the mangrove

and that there are a lot of animals which live there as well (birds, crabs, fish and even dugongs). We started the planting in the sun and heat, some (boys!) climbed trees to pick new sprouts because we went too fast and there weren't enough plants! We were filmed by 3 men. After the planting, we had some drinks and biscuits and typical Mahorese food. It was raining cats and dogs when we returned to school but the bus-driver was very nice and stopped whenever we asked him, so we didn't have to walk under the rain for long. We really enjoyed our afternoon and we feel like planting mangrove again!

Toymina, Hadjira, Echati, Anillah, Rassinia, Koudoussia, Moitsoumou, Zouriane, Maissara, Souraiya and Anfiati— The Mayotte Sandwatch



Sandwatch team member Anillah starts to plant mangroves, at Doujani Beach, Mayotte

Wales: The Importance of Sandwatch

Brynhyfryd Junior School is situated in Swansea, the second largest city in Wales.

The children from Year 3 have been studying the importance of preserving our beaches for future generations. In particular they have chosen one bay to visit and carry out a variety of experiments and investigations. The bay is Langland Bay, which is a very popular beach with

local families and surfers.

The children have been learning about the physical and man made features around the bay and the impact tourists have made.

The bay is comprised of sand and rocks. Pupils now have a good sound knowledge and understanding of the need to protect the environment of the bay rather than the importance of commercial benefits.



Children have created a massive display of the beach and completed numerous activities around the curriculum subjects. They are really excited about the forthcoming visit to Langland Bay and will carry out variety of tasks, which we will report back on in the next Sandwatch publication.

By Teacher Russell Bevan



An aerial view of Swansea and Langland Bay

High Waves Damage Seychelles Beaches



Originating in the Southern Ocean to the south of South Africa, large swell waves moved into the Indian Ocean in mid May 2007 causing severe coastal damage in many islands and countries surrounding the Indian Ocean. The swell waves moved eastwards and reached as far as Indonesia and Australia. In Seychelles the most significant impacts were felt on the three main islands, Mahe, Praslin and La Digue over the period 14-18 May 2007. Most observed and reported impacts were on Mahe. There was considerable flooding especially on 16 May, and the surge extended 50 m inland in places. Where the road network was close to the sea, e.g. at Beau Vallon and Port Glaud, roads were undermined by the swell waves. The rock armouring at Baie Ste. Anne jetty in Praslin was also damaged. However, at most of the islands' beaches, the surge was beneficial, bringing in additional sand and making the beaches wider. This was largely a result of the protective coral reefs, which broke the force of the swell waves, and the coastal vegetation which absorbed much of the surge's impact. The surge also moved large volumes of sand, seaweed, tree branches and trunks inland, covering roads in places; this debris then had to be cleared with bulldozers. A survey of the impact showed that the tidal surge had exposed clear 'weak spots' along certain coastlines and beaches which need to be addressed with different forms of management during the short and medium term. Although there were only a few instances where the coastal infrastructure was impacted, the surge and swell waves clearly showed the need for adopting a precautionary approach with new coastal development. By **Alain De Comarmond, Department of the Environment, Seychelles**



High waves penetrate inland at North East Point Beach, Mahe, Seychelles

Kenya: What Becomes Dirtier as it Cleans? (continued from page 4)



Putting up posters and banners urging the Kisumu city population to stop washing their cars in the Lake. Make handbills and draw cartoons sensitizing Kisumu residents on the dangers of pollution. Our club intends to use kids from our school and neighboring schools to reach out to their parents and relatives with the above message. Hold demonstrations and processions in Kisumu Town urging the authorities to take action against car washing in Lake Victoria. Hold an Essay writing contest and invite essays from all school going children on the theme of "Dangers of Lake pollution to nature" To achieve this our club needs 5,000 US dollars. So far we have raised and received pledges of \$1200. US dollars. We are calling to all lovers of nature to join us in this campaign. You can write to us with your views and comments or even make a contribution. We are committed to a cleaner Lake Victoria in our generation and time. Thank you. Kisumu High Environmental and Conservation Club
Email: kisumudayhighschool@yahoo.com, Contact Person. Mr Peter Amunga, P.O. BOX 2296, Kisumu 40100, Kenya. (Left: Kisumu Environmental Club students on the shores of L. Victoria)

Sandwatch Meets With Huge Success in Mayotte (continued from Front page)



It was even more popular than our Canny Boy. (see photo right)

We were very proud because we appeared in every newspaper in Mayotte. We really felt like stars! We will always remember that day, it was fantastic! In May, we had the greatest days ever! We went on a bivouac, on one of the beautiful beaches of the South of Mayotte, Saziley Beach to watch turtles nesting.

That was the first place prize awarded for our turtle project.

We could watch turtles nesting during the night, swim, admire the landscapes and the sunset and enjoy all these magical moments. It was gorgeous.

At school, the week after we watched two films for the festival of the international underwater film that came to Mayotte.

Wonderful images of the underwater world!

Through Sandwatch and all these projects, we have an opportunity to do lots of different activities: We have spoken English (Mrs Gabriel always insists about it), written in English, used new technologies, translated Sandwatcher articles from English to French, (for the Feb Special Issue of The Sandwatcher) and even created art objects. We have also learned a lot of things about our sea, lagoon, beaches, turtles, mangroves.

We want to thank our teacher Mrs Gabriel who helped us so much. It was great fun to share all these happy moments with her, she has always encouraged us and been our greatest supporter. Many thanks to her husband too, who took a lot of photos. Thanks to the Principal of our College, Mr Bernard Waymel. He always allowed us to go on outings and to use all the equipments at school and that was very helpful.

He has always welcomed our plans with enthusiasm and has never said no!

Many thanks to the association Oulanga Na Nyamba and The Nature Brigade of Mayotte for the terrific turtle nesting bivouac.

And many thanks too, to Mr Paul Diamond, our Sandwatch Webmaster who always works so hard to update the site.

On Tuesday June 19th, we are going to participate to a day for the Education, Environment and Sustainable Development. We will be there with our noticeboards, articles and photos on Sandwatch. We will bring our Canny Boy and Green Turtle. We hope to convince a lot of people (schools, teachers, students) to join Sandwatch. The other dream we are having now would be to meet other Sandwatch people from other islands in the Indian Ocean. That would be great! Hopefully one day our dream come true.

Nice Summer Holidays and Cheers to everybody. Goodbye. The College of Koungou Sandwatch Team... Au revoir. Koïheri

Anillah, Amina, Moïtsoumou, Echati, Souraya, Zouriane, Anfiati, Hadjira, Koudoussia, Zaianti, Rassinia, Maissara, Nouria, Toymina.

