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Black River Foundation



Our climate change wish list

By Gillian Cambers & Paul Diamond

Inside this Issue...
Sandwatch Activities
in 23 countries world
wide!

Including Anguilla, Antigua & Barbuda, Bahamas, Barbados, British Virgin Islands, Cape Verde, Colombia, Cook Islands, Dominican Republic, France, Kenya, Montserrat, Puerto Rico, South Africa, South Korea, St. Croix, St. Vincent & The Grenadines, Seychelles, Trinidad & Tobago, New Zealand, Nevis, US Virgin Islands, Wales... and much more!

*"All we want this Christmas is a good deal in Copenhagen that would save our Planet Earth" said **Vanessa Roseline, a student from the Seychelles.***

*"Help us continue seeing snow on Mount Kenya and Kilimanjaro by reducing global warming!" said **Gift Sakwa, a student from Kisumu Day School in Kenya.***

*"About the Copenhagen Summit, I hope all nations get ready to act now!" said **Gabriel Torres, a Sandwatcher from Puerto Rico.***

Did Vanessa, Gift and Gabriel, and millions like them, get their wish? Time will tell, but preliminary indications are that the outcome of the Copenhagen Summit was merely a preliminary step on the long road to reach a worldwide legally binding agreement on carbon emissions that will keep global warming within acceptable and manageable limits.

Between 7th and 18th December 2009, high level representatives from 192 countries met in Copenhagen, Denmark, for the 2009 United Nations Climate Change Conference, commonly known as the Copenhagen Summit. The original goal of the Summit, as laid out in the Bali Action Plan (2007) was to finalise a legally binding car-

bon emissions control agreement. However, despite extensive negotiations and several international meetings over the 2-year period between 2007 and 2009, this goal was not achieved in Copenhagen. Instead, on the final day of the Copenhagen Summit, a Copenhagen Accord was recognised by the members present, although not unanimously approved.

The key points of the **Copenhagen Accord** include the objective to keep the maximum temperature rise to *below 2 degrees Celsius*; the commitment to list developed country emission reduction targets, and mitigation action by developing countries; short and long-term funding for immediate action; and mechanisms to support technology transfer and forestry. Further discussions are to be held at a UN Climate Conference in Mexico in 2010.

Reactions to the Copenhagen Accord were mixed. UN Secretary-General, Ban Ki-moon, said in a press release on 19th December 2009 "This accord cannot be everything that everyone hoped for, but it is an essential beginning."

(continued on Page 4)

SANDWATCH
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Inside this Issue...



Will the Copenhagen Conference live up to its hype or is it all just so much hot air? Time will tell.

Welcome to the Ninth (9th) Edition of **The Sandwatcher**, the Official Voice of **The Sandwatch Foundation**. This issue focuses on hopes for **The Copenhagen Climate Change Conference**, together with numerous articles, photos and items of interest from Sandwatch Teams world wide as well as contributions from several colleagues and partners.

Thanks to all of you, Sandwatch has become a recognized global environmental project. Just some of the highlights of this issue include...

- Update on Sandwatch at **The Seminar on Climate Change Education** held in **Paris, France**
 - Details on **The Sandwatch West African Workshop** held in **Cape Verde Islands**
 - Sandwatch continues to expand in the **Dominican Republic**
 - A Sandwatch Regional Workshop Planned for **Mauritius** in June, 2010
 - Plans to expand Sandwatch into **South Africa**
 - Sandwatch **Trinidad** presents at Environmental Youth Conference in **South Korea**
 - Sandwatch plans a joint workshop with UNESCO and UK Govt, to be held in **British Virgin Islands**
 - Sandwatch featured in new **Commonwealth 'Climate Change Toolkit'** publication.
 - Sandwatch expands into new schools in **France, The Seychelles, Columbia and Anguilla**.
- Plus amazing updates, stories and photos from Sandwatch Teams from 20 countries worldwide!

Sandwatchers well represented at Paris Seminar



Sandwatch Directors, Dr. Gillian Cambers and Paul Diamond, give a presentation at UNESCO HQ in Paris.

It was a real pleasure for Gillian and myself to attend **The Paris Seminar on Climate Change Education**, not only to represent Sandwatch at such an important event, but also to meet many Sandwatch Team members from around the world, several of whom we previously knew only from email correspondence. In all Sandwatch representatives from eight (8) countries attended the Paris Seminar.

It was great to finally meet **Pascale Gabriel**, the Sandwatch Coordinator for **Mayotte** (who is our new *French Programme Facilitator*), as well as Sandwatchers **Gail Townsend** and **Jane Taurarii** from **The Cook Islands**, **Carol-Faye George** from **Antigua & Barbuda**, **Laura Lee McIntosh** from **The Bahamas**, **Monica Regisford-Douglin** from **Trinidad & Tobago**, **Jeanette Larue** from **Seychelles** and **Doris Ravai** from **Fiji**.

We were also pleasantly surprised when the **Director-General of UNESCO, Mr Koïchiro Matsuura** in his opening address called "*Sandwatch UNESCO's Flag Ship Project*". High praise indeed!

In addition the seminar also gave us the opportunity to present Sandwatch to an international audience of professional educators and scientists from a wide variety of disciplines.

Two short videos of Gillian and myself giving a 15 minute presentation to the assembly are viewable on-line at www.youtube.com/user/SandwatchFoundation.

Our presentation was very well received and it gave us the opportunity to forge new friendships with many delegates who now want to start Sandwatch in their home countries or expand the existing project into more schools around their countries, these include **South Africa, Kiribati, UK, Maldives, Mauritius, New Zealand and Samoa** to name just a few. Hopefully we will be hearing more from these new friends, so stay tuned! **Paul Diamond, Director, Sandwatch Foundation**



Giving the keynote addresses at the Paris Seminar were, Mr Koïchiro Matsuura, Director-General of UNESCO (centre), P.F. Dam Kristensen, the Danish Ambassador to France (left) and Dr Patricia Bernal, Assistant Director-General of UNESCO for the Intergovernmental Oceanographic Commission (right)



Sandwatch representatives from eight countries took part in the Seminar.

Sandwatch holds Trainers Workshop in West Africa



Educators from all over West Africa met in Praia, Cape Verde for a Sandwatch Workshop



Workshop participants learned Sandwatch testing protocols on a nearby beach

On August 25-28th, 2009, twenty three (23) educators from the Cape Verde Islands, Senegal, Guinea Bissau, Mauritania and The Gambia met on Santiago Island, in the capital city of the Cape Verde Islands, Praia.

Located several hundred miles off the coast of West Africa, the Cape Verde Islands were settled by the Portuguese in the 15th century but have been independent since 1975. The islands were a haven for pirates and slavers, and the small town of **Ribeira Grande** (now a UNESCO World Heritage Site) which we visited, was the first European settlement in the Tropics. It was a very exotic place to conduct a Sandwatch Train-the-Trainers Workshop. Over the course of four (4) days, teachers were shown the background behind Sandwatch, as well as its tools and methods, and several ways of utilizing the internet and other tools to network and expand their projects when they returned home. Even though the workshop was conducted in three (3) languages, **English, French and Portuguese**, everyone had a great time, learned some new and exciting skills, and made many new friends. We should be hearing much more from our new West African Sandwatch Teams very soon, so stay tuned to the website! The West African Workshop was organized and funded by the **UNESCO Office in Dakar, Senegal and the Cape Verde National Commission for UNESCO**, participants were also provided

with basic Sandwatch equipment kits including water testing kits to take home with them. The water testing kits were made available to all participants courtesy of **UNESCO** who had them delivered from the US especially for the workshop. Over the course of four (4) days, the delegates learned not only Sandwatch methods, but also several other technical skills, such as how to edit simple videos, how to use **Google Earth** as a teaching tool, how to edit photographs and how to use several types of online resources and utilities. Teachers also had the chance to learn about each others' community projects. **Guinea Bissau** in particular has a very ambitious project to replant millions of mangroves along their coast, and **The Gambia** is trying to control erosion along the Gambia River.

The workshop was quite a challenge for everyone involved as it was conducted in three (3) languages. First, instructions would be given in English, then translated into French by **Sandwatch's French Programme Coordinator, Mrs. Pascale Gabriel**, which would be in turn be translated into Portuguese by two local translators. This process had to be repeated innumerable

times over the 4 day workshop, and of course the process had to be reversed every time a question was asked or an observation made. But despite the language barriers, we managed to share quite a lot of new knowledge and skills, and also learned a great deal about each others' countries and communities.

Paul Diamond, Director, Sandwatch Foundation



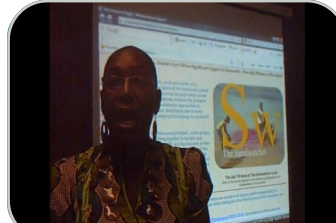
Twenty three (23) educators from several West African countries took part in the Cape Verde, Train-The-Trainers Sandwatch Workshop, Aug 2009



Educators enjoyed learning how to make and edit simple videos as well as use Google Earth and



Paul and Pascale met with Ms. Duarte Lobo de Pina, The Cape Verde's Minister of Education, and give her copies of The Sandwatcher



A video we made at the workshop can be viewed on The Sandwatch Foundation's YouTube channel



Many new friends were made at the workshop.

Complete details and lots of photos from the Cape Verde Workshop can be found on our website



Sandwatch expands in the Dominican Republic



The Dominican Republic is leading the way in expanding Sandwatch by holding training programs for teachers from all over the country

Sandwatch continues to expand in Dominican Republic.

Sandwatch has become a vibrant programme in the Dominican Republic since its inception in 2001. With the strong support of the **UNESCO National Commission** and the **Associated Schools Project Network (ASPNet)**, new schools are continually being recruited into Sandwatch, and new methods and approaches are being tested.

In addition, a **National Sandwatch Technical Committee** has been established to further support the project. A new phase for Sandwatch began in 2009 and will continue to 2011.

One of the new approaches being tested is the involvement of experienced Sandwatch leaders to train new groups. For example, on 20 November 2009, a meeting was held at the **Francisco Gregorio Billini and Ernestina Tejada Education Centre** in the Province of Bani to train 20 students and 4 teachers in Sandwatch techniques. A Sandwatch leader involved with Sandwatch in the Province of Peravia since 2001 was among the trainers.

Another approach being tested in the Dominican Republic is to involve private schools and state schools in joint Sandwatch projects so that students from different backgrounds can learn to in-

teract with each other as they implement Sandwatch and become custodians of their beaches. For example, on 26th November 2009, a meeting was held with staff at the **Santa Teresita School** to introduce the 2009-2011 phase of the Sandwatch Project. The primary objective of the meeting was to provide guidance on ways in which the school could continue to implement Sandwatch activities and at the same time involve the local community, in particular other schools in the area. Lic. Amalia Inchaustegui, Director of the Santa Teresita School, committed to provide transportation for the **Palenque State School**, San Cristóbal, so as to guarantee their participation in the Sandwatch Project. The plan is to involve another school located close to the Sandwatch beach and to sensitize the students about environmental problems at the beach and to motivate them to become future stewards of the beach. The project will also promote interaction between students from different backgrounds. During the meeting, the activities in the Sandwatch manual were described and teachers and students who wished to be involved in the project completed application forms. The first fieldwork session was scheduled for 3 December 2009.

The Dominican Republic's Sandwatch Programme continues to be a leader in finding ways to expand the scope and reach of Sandwatch.
By María Mercedes Brito, ASPNet Coordinator



The Dominican Republic has a very large and active Sandwatch organization, and much can be learned from their example

Our climate change wish list (continued from frontpage)

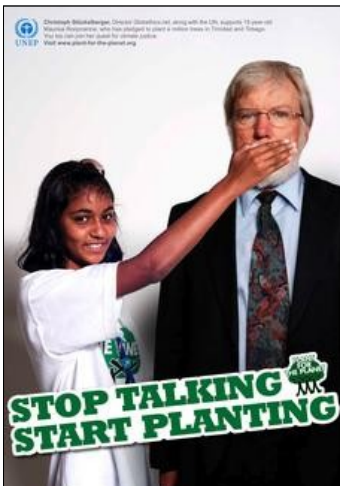
However, representatives from some developing countries expressed their disappointment very vocally.

Ian Fry, the negotiator from **Tuvalu**, a small low-lying atoll nation in the Pacific Ocean, said the Accord's poorly defined emissions targets would lead to the tiny island nation being inundated by rising seas. The funding offered in return was not enough. *"In biblical terms it looks like we are being offered 30 pieces of silver to betray our future and our people ... our future is not for sale"* Mr Fry said. While the negotiators and politicians continue to debate, people around the world are not waiting on them.

Fasslati, a Sandwatcher from **Marseille, France** puts the case for proactive local action very clearly: *"If everybody does something, even a small gesture, the world could become better"*.

The Sandwatchers from the Lyn Jeffers School in **Nevis** go one step further: *"It would be a great step forward if the countries attending the Copenhagen Summit could work towards better environmental practices and agree to research and report evidence of climate change in their respective countries."*

This brings us very clearly back to Sandwatch with its vision to change the lifestyle and habits of children, youth and adults on a community wide basis, to adapt to climate change by building ecosystem resilience, and to develop awareness of the fragile nature of the marine and coastal environment and the need to use it wisely. As Sandwatchers, let's continue to monitor, analyse, share and take action and show the world that our individual efforts, combined together, do make a difference.



United Nations Environment Programme poster.

Regional SW Workshop for the British Virgin Islands



The United Kingdom's Overseas Territories (UKOTs) in the Caribbean Make Collective Plea for Sandwatch Funding—The British Virgin Islands' (BVI) National Commission for UNESCO and local BVI NGO, the **Jost Van Dykes Preservation Society** are working together with **Sandwatch Foundation** organisers Paul Diamond and Gillian Cambers to hold a Sandwatch regional training workshop for the six Caribbean UKOTs – **Anguilla, British Virgin Islands, Bermuda, Cayman Islands, Montserrat and Turks and Caicos Islands**. Also supporting the effort is the United Kingdom Conservation Forum, a UK-based charity which first came into contact with Sandwatch during development of its recent “**Environmental Education Linked Across Territories Project**.”

In recent years, Sandwatch participants from **Turks and Caicos** attended the 2009 workshop in the **Bahamas** while a Sandwatch group from **Jost Van Dyke, British Virgin Islands** attended the **Barbados** workshop in November 2008. Overseas Territories and Crown Dependencies do not usually have local UNESCO offices, and their participation in regional events has been limited.

The idea of a Sandwatch regional training workshop, to be held in the BVI, is gaining support from other NGOs and environmental agencies in the Caribbean UKOTs. With existing interest among the UKOTs in promoting public education and outreach about the effects of climate change, their involvement in Sandwatch and use of its new manual “**Adapting to Climate Change and Educating for Sustainable Development**” is particularly timely. Such a workshop could be instrumental in engaging youth in the UKOTs and putting new Sandwatch groups at the frontline of regional climate change awareness campaigns.

The Caribbean Community Centre for Climate Change has recently hosted workshops in the Caribbean UKOTs (as part of broader climate change adaptation programming) focusing on development of territory-specific Public Education and Outreach Plans. This work is funded in part by the UK's Department for International Development, which may also be approached for support for the Sandwatch regional training workshop.



The Jost van Dyke Preservation Society, the UK Conservation Forum, the UK Department for International Development, the BVI National Commission for UNESCO, UNESCO Paris, and the Sandwatch Foundation are just some of the groups working to organize this workshop.

More trees, less heat : Sandwatch Colombia



The Corporation for the Sustainable Development of San Andres, Old Providence and Santa Catalina (CORALINA), with the support of the Office of the Governor, the San Andrés Police Department, the Consultative Commission and Giro Compàs, sponsored a group of school children on the reforestation initiative: **More trees, less heat**. The children of **San Andres Island** gave the whole community a lesson on environmental responsibility. 90 students from **CAJASAI School, Central Baptist School, Liceo del Caribe and Natania School**; with the assistance of the **Colombian Army, Colombian Air Force and the Colombian Civil Defence**, took on the responsibility

of showing all islanders that we all can and should do something to protect our beaches from erosion and fight global warming.

The first stage of the reforestation campaign took place on the 20-22 of November 2009. A small army of eager school children fought the tiredness and the Caribbean heat to get the job done: Replant more than 400 plants of **Button mangrove, Coco plums, Cordia, Spider lilies** and other samples of local flora on **Spratt Bight Beach and Sound Bay Beach** on the north and south shore of the island. San Andres' **Sandwatchers** rolled up their sleeves, picked up shovels sometimes even taller than themselves and started digging and planting with contagious enthusiasm. Passers-by and local authorities followed their lead and joined the group. Everybody was doing their bit in what was certainly a memorable event. The second stage of the program will start in early 2010. CORALINA, the Secretary of Agriculture and Fishery, and of course, the children, will formally invite hotels and shops on the beaches to sign a commitment to take care of the plants and guarantee their survival. They will also teach tourists about the importance of having plants on the beaches and get visitors involved in the initiative. 2010 will be a year of more trees and less heat. A wonderful start for **Sandwatchers** on San Andres Island: protecting the beaches from erosion and tackling global warming!

Lincoln C. Bent, International Cooperation, CORALINA, Seaflower Biosphere Reserve



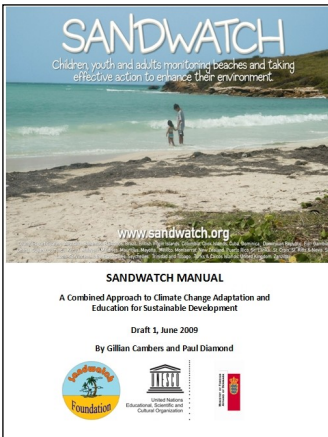
Replanting trees helps to save San Andres' sand dunes and beaches!



San Andres students planted several species of trees around the island as part of a coastal reforestation project



Feedback on new Sandwatch Manual



The new Sandwatch Manual will soon be available in French, Spanish and Portuguese from UNESCO

In September 2009 a new version of the Sandwatch manual entitled **“Adapting to Climate Change and Educating for Sustainable Development”** was published online at <http://www.sandwatch.ca/members.htm>. This manual incorporates new information relating to climate change, and a set of climate change adaptation activities to build beach resilience. In addition, for groups already familiar with the main Sandwatch protocols, an Addendum relating to **“Climate Change Adaptation through Sandwatch”** was published on the website.

The documents were enthusiastically received and here is some of the feedback received:

I like the additions to the manual. I am going to show it to my geography students as I think there is an opportunity to do field studies using your guidelines, for the Caribbean Examination Council. Miriam Knorr, Lyn Jeffers School, **Nevis, West Indies.**

Thanks for sending me the manual. At first sight, it looks very impressive and instructive. It will go a long way to sensitize the youth on the issue of climate change and the beach. Ragoonaden Sachooda, **Mauritius.**

Thank you for sending this across to us. It will be useful for our coastal programme that we have initiated in the coastal parts of my state. Farida Tampal, State Director, Andhra Pradesh State Office & Coordinator, Education Programme Coordination Group, **India.**

Greetings from Fiji. Thank you for the attached Sandwatch Manual. We will take these out into all Sandwatch schools and will definitely provide feedback. Doris Ravai, Live and Learn Environmental Education, **Fiji.**

I am excited about reading the new manual and will be delighted to introduce the new methods to our students. Herman Belmar, Bequia, **St. Vincent and the Grenadines.**

The Sandwatch programme is among the best introduction to coastal monitoring and building long term important monitoring databases. These updates are great news. Bruce Potter, **Island Resources Foundation.** Announcement of the new manual were also posted on other networks such as the Wider Caribbean Sea Turtle Conservation Network and the Island Resources Foundation.

We would welcome further substantive feedback so that we can continue to revise and improve the manual. Please send your comments to **Gillian Cambers** g_cambers@hotmail.com

The Sandwatch website logs over 12,000 hits!

Since its creation 4 years ago the Sandwatch website passed its twelve thousandth viewing as of Dec 2009...and it seems to be picking up speed as more and more people become aware of the programme. We are making a difference!



Sandwatch team in Montserrat passes the torch

At the St Augustine Primary School, our previous Sandwatch Team is preparing to move on to secondary education, so they are helping to train a new group of students who are just as enthusiastic about Sandwatch. One of the great things about the Sandwatch field trips has been the interest of parents, several of whom attend the trips to give their support to teachers and students as we conduct our training and beach study exercises. Our selected beach - Woodlands Beach - has now undergone a transformation. The previous covered area which was used for picnics and beach parties was no longer safe to use, and so this whole structure was removed and a new structure has been built. Our beach picnic area is now beautiful and safe for everyone to enjoy. Since our last visit to the beach, it has become very stony, and we are now trying to learn more about the beach cycle, and how to monitor this. The team noticed that there were quite a large amount of tin cans thrown around on the beach. This upset the students, as they had learned that tin cans can cause several environmental problems. Some of the Sandwatchers decided to do a project for the Science Fair to draw this littering to the attention of the public. They collected waste cans and made a figure of a girl, whom they named "Can-dy". Can-dy was the centre of attention at the Science Fair, and the students won a special prize for their creativity. The Montserrat Sandwatchers are a keen group of students who are really keen to learn as much as they can about beach monitoring so they can help to do this in Montserrat. We have lost the use of some of our beaches, so we want to protect those that we have left for ourselves and others to enjoy. We hope that we will have the chance to learn and teach more skills soon so that all of us can do more Sandwatch project work. **Ann Marie Dewar, Principal and Sandwatch Leader, St Augustine Primary School**



Sandwatch students on Montserrat create Can-dy Girl, out of debris collected on their beach...and win a special prize at Science Fair.



Sandwatch has its own dedicated YouTube Video Channel at...

www.youtube.com/user/SandwatchFoundation

Sandwatch going strong in St. Croix, U.S. Virgin Islands



The Good Hope School in St. Croix, U.S. Virgin Islands sends best wishes to all those who share our love of the sand and sea! Our beautiful location on the west end of the island offers many opportunities for our fourth grade community to spend time exploring the coastline in order to develop a unique bond with nature. During the first quarter of the 2009/2010 academic year, we've witnessed quite a few changes in our seascape. The months of September, October and November have been hot and windless, except for a few punctuations of swirling weather that lathered up the coast, and caused us to close our classroom windows against some significant storms! We survived, with the beach in one piece, and the foliage bearing testimony to its own strength and fortitude. We took a trip out to survey things, cleaning up the debris, taking a look at the the greenery, and finally, looking closely at the bushes and trees that help to anchor our sand during stressful times. Another chance to experience a facet of what makes things tick along the shore, and draw students closer to their environment. **Cindy Mault, The Good Hope School.**



USVI Sandwatch students use the project as part of their examination of leaves, and plants found at the beach.

Sandwatch gets started in Antigua & Barbuda



Ecozone Summer Camp and the Sandwatch Project

Under the supervision of The Environment Division, 50 campers of the EcoZone Summer Camp experienced their beach ecosystem from a different perspective than that of a place of social activity. Ecozone is a UNESCO initiative for primary and secondary students. This project became a reality because of the monetary assistance from the Climate Change Project and the Government of Antigua & Barbuda, and the support and commitment of Mr. Douglas Nakashima of the UNESCO Head Office in Paris, the former General-secretary of UNESCO – Mr. George Brown, the teachers, technicians, EcoZone Summer Camp Climate Change groups and Kim Derrick of the Environmental Awareness Group.

Sandwatch seeks to change their mind sets and attitudes/habits towards this ecosystem while developing awareness of its fragile composition and to allow them to interpret the changes/effects that were caused by climate change and human activities. Sandwatch promises to be a vital component of Marine and Coastal Environmental Protection Project that could promote conservation of this ecosystem through education, science and culture. This project also holds considerable promise and potential benefits for the people in small islands states like Antigua & Barbuda and beyond this region.

Ms. Carol-Faye George, Environment Education Officer/EcoZone Summer Camp Co-ordinator

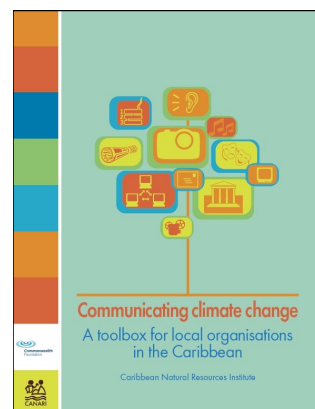


The Ecozone/Sandwatch Team of Antigua show some of the beach trash they collected

Sandwatch in Commonwealth Foundation Publication



With the support of the **Commonwealth Foundation**, the **Caribbean Natural Resources Institute (CANARI)** has published, "**Communicating Climate Change: A toolbox for local organisations in the Caribbean**". The publication is designed to help local (non-governmental, community-based, and grassroots) organisations become more effective in telling their climate change stories and making their voices heard in lobbying and advocating for the policies, laws and other actions necessary to mitigate and adapt to climate change at the international, regional, national and local levels. It sets out a range of tools and approaches for effective communication about issues relating to climate change. The focus is on tools and approaches that are low-cost and easy to put into practice. It also includes suggestions on making effective use of the increasingly-affordable and accessible communication technologies that are available, such as email, the Internet, and video recorders. Although this toolbox has been developed with a Caribbean audience in mind and uses examples from this region, it is suitable for use by organisations in other parts of the world. **Sandwatch Foundation Director, Paul Diamond** contributed a chapter (chapter 5) to the publication citing Sandwatch as an example of a successful grass-roots environmental and climate change program. The publication will soon be available in hard copy and downloadable from the CANARI website (www.canari.org)



Judi Clarke - Senior Technical Officer / Programme Manager for Climate Change and Disaster Risk Reduction Caribbean Natural Resources Institute (CANARI)

Sandwatch is featured in another Climate Change Publication



Sandwatch expands to more cays in the Bahamas



The new Sandwatch Team of Man-o-War Cay, The Bahamas!

Sandwatch Students from Man-O-War Primary School, located on **Man-O-War Cay, Bahamas** have staked out a site at the heart of their community known as **Graveyard Beach**. This is a beach used often for recreation as it is easily accessible. The students participated in the international beach cleanup in September 2009.

When we went back a month later to begin our survey of the beach, we were happy to find a lot of seaweed but very little trash. The students measured and marked off 1,000 feet of this beach. They have taken photographs from marked positions to monitor future changes. They measured the depth of the beach and took note of rock outcroppings, plant and animal life.

For our next **Sandwatch Club** meeting the students collected water samples from the sea shore and the harbour. They then used the water testing kit to test for turbidity, temperature, coliform bacteria, dissolved oxygen and nitrates. The students enjoyed using the test tubes and plan to continue the remaining test when time allows. We're happy to be joining other students around the earth to monitor our beaches. **Ms. Kellie Janes, Teacher**



Graveyard Beach, Man-o-War Cay, our adopted Sandwatch turf.



Graveyard Beach doesn't have much development on it, but we still get trash washed up from other islands as well as locally.



Our school, **The Hope Town Primary School on Abaco, The Bahamas** took part in the **Climate Change Day of Action** recently. This picture (center) shows our students' full body form of the number 350. ***This number represents the amount of ppm of carbon in our atmosphere that scientists feel is an acceptable amount for a healthy earth.*** In our picture two girls are holding hands. This signifies the whole world must act together to lower the emissions to this amount. Although the Caribbean does not produce much of the pollution that raises the carbon level, we stand to lose the most!

Our small island nations--especially the flat Bahamas-- could become covered if the sea level rises due to the effects of global warming.

We could become a nation of homeless people. Some of the mountainous islands residents could run for the hills, but not us! Overloading the oceans with carbon dioxide causes them to become acidic which can cause the death of reefs and sea creatures.

Our reefs are not only homes to many forms of sea life, but are a great tourist attraction for snorkelling activity. Reefs are also important to us because they act as storm break in severe weather and

storms. In the past few years our school's **UNESCO Sandwatch Team** has studied the patch reef we use for any changes in its health. We swam out to it to remove a large fishing net which had settled over it and we swam out to remove plastic garbage caught in the coral.

Last year we produced a brochure for tourists on proper reef etiquette.

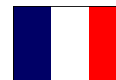
In our **UNESCO Sandwatch Project** we monitor changes on our test site beach. We will be checking closely for changes in sea level rise and doing several types of water tests often to observe changes.

As the **Copenhagen Climate Change** meeting is taking place now, we are hoping that the world leaders can come to an agreement to work together to lower the world's carbon emissions to better the earth. This will insure our island life for future generations.

Albury Higgs
Grade 6

Hope Town School Sandwatch Team member

Sandwatch France: La Ciotat and the Mugel Park



This is a small report on our first **Sandwatch** outing by our school, the **Collège Massenet**. On a beautiful rainy day, on Tuesday October 20th, we left with Mrs Gabriel, Mrs Bilde and Mrs Ghali to **La Ciotat**. La Ciotat is a very pleasant town, between **Provence** and **Côte d'Azur**. It used to be a boatyard but it is now a small seaside resort. It is 35 kilometres from Marseille, where our school is and we had to get there by bus.

We spent the whole day there, there was a guide Alexandre Caramelo with us. He works for the **Conseil Général des Bouches du Rhône**. In the morning, we led an investigation with the inhabitants of La Ciotat. We had to fill a questionnaire, this survey took place on the old port, it was a very pleasant morning in spite of the bad weather. We were very disappointed because we couldn't go to **L'île Verte** (Green island), the sea was too rough.

We asked questions to the people and the fishermen who were selling the fish caught during the night.

When we asked "*Have you noticed any changes in the past 30 years?*", they said that nowadays they could see new species of fish, tropical ones, such as **barracudas** and **sharks** they didn't use to see. After a long walk we ate in the park of the Mugel, there were very beautiful flowers and very beautiful plants,

it is a remarkable garden. There were also animals such as ducks and goldfish. We walked along the sea and climbed up the cliff, it was very physical but we had a very beautiful view on the sea. This cliff is made of sedimentary rocks composed of small pebbles and not of fossils. This structure has got the shape of an English pudding and it has become "**poudingue**" in French. We then visited an association of defence of the coast, which is called the **blue workshop**. There was a big aquarium with various sorts of marine animals, octopuses, fishes, shrimps, anemone, starfish. There was a shop window with shells, starfishes, sea urchins. Then we left by the sea, it was very beautiful. There was a photographer with us who took a lot of photos, Mr Gabriel. When we returned to the bus we were all exhausted but we had plenty of souvenirs in our head. We thank the Conseil General des Bouches du Rhône, Mr Alexandre Caramelo, Mrs Gabriel, Mrs Bild and Mrs Ghali for taking us to all these places we didn't even know they could be so near of Marseille.

The New Sandwatchers of Collège Massenet, Marseille, France



The New Sandwatchers of Collège Massenet, Marseille, France



In a bid to curb the unprecedented loss of the world's species due to human activity – at a rate some experts put at 1,000 times the natural progression – **the United Nations** is marking 2010 as the **International Year of Biodiversity**, with a slew of events highlighting the vital role biodiversity plays in maintaining the life support system on Planet Earth. "*Humans are part of nature's rich diversity and have the power to protect or destroy it,*" the **Secretariat of the Convention on Biological Diversity (CBD)**, which is hosted by the **UN Environment Programme (UNEP)**, said in summarizing the Year's main message, with its focus on raising awareness to generate public pressure for action by the world's decision makers. Environmental organisations, such as **Sandwatch** are called on to hold events in support of this important initiative and we would like your ideas on this.

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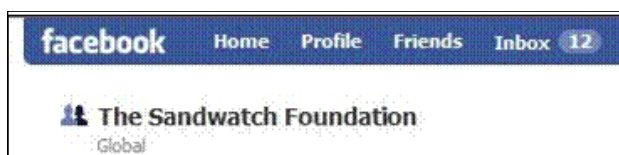


Sandwatch students of Collège Massenet, conducted a survey of fisherman and they are now catching tropical species of fish

Sandwatch Foundation launches Facebook Forum

In its ever continuing efforts to keep up with rapidly changing technology, **The Sandwatch Foundation** has recently set up a dedicated 'Sandwatch Forum' on the globally popular social networking website '**Facebook**'. If you are a member, or are considering joining the website (it is free) then simply do a Facebook search using the

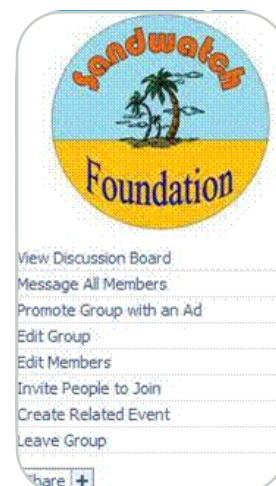
phrase '**The Sandwatch Foundation**', and it will pop up on your screen. Then you click on the dialog box that asks you if you would like to join this group....and that is basically it!



Once a member of the Sandwatch forum you can post photos, links, ask questions, communicate with other members all over the world and be regularly updated on Sandwatch events and activities etc. The

Facebook forum has just started and has already proven to be quite popular with members, especially

students and we hope that you will join the forum and help to make it a viable, informative and fun way to exchange Sandwatch and community information.





The GAIA Sandwatchers of Puerto Rico



Club Gaia of San Juan, Puerto Rico are new members of Sandwatch.

As the environmental science teacher of **Cupey Maria Montessori School** in **San Juan Puerto Rico**, I began last September a **Sandwatch Program Project** with my **Environmental Club GAIA**. The group has students from middle and high schools and today the group has 35 members. We are working in the **Escambrón beach** in the north area of San Juan. We began with a workshop in the school library to introduce the students to the climatic change theme. Then we arranged a visit to the beach and we went there with some parents to evaluate our beach, doing interviews with the visitors, reviewing topographic maps of the area, doing some research on the plants and animals there and trying to see what human activities take place around the beach for locals and tourists.

The next visit we collected data from the beach area and we conclude that a source of distress in our investigation area was litter, (the main types of litter are plastics 73%, non-plastics 14% and 13% other solid residues) so now we are working on the preparation of an educational campaign to compile data to devise strategies to combat pollution and to increase public participation in solving the problem of pollution and to increase public awareness and appreciation of the coastal environment.

Ms. Betty Díaz , Sandwatch, Puerto Rico



Sandwatch at student conference in The Cook Islands



Manihiki students collecting rubbish around the beach

The Cook Islands Ministry of Education are excited to announce the 2010 ESD & EIU National Student Conference, **Taporoporo No Apopo” (Keeping Alive for Tomorrow)** which will be held on the **15th – 18th June 2010**.

The students will be presenting projects such as **Sandwatch**, based on one or a combination of the three areas of sustainability – environment, society and economics with culture as the fundamental element. These projects can range from a **Sandwatch** beach study, water resources, biodiversity or to language and cultural aspects. Schools are encouraged to choose topics that will be of interest to their students and would be of use to them in the future.

The conference will be held here on **Rarotonga** the capital of the **Cook Islands** in which the Ministry will be bringing a representative of 5 – 6 students from all schools in the Southern Group of the Cook Islands from Year 5 (Grade 5) – Year 10 (Form 4). It was the Ministry of Education's hope to include the Northern Group schools in such an opportunity but due to budget constraints were not able to do so. However, a copy of the students work during the conference will be sent out to the Northern Group schools. During the conference students will be expected to present their researched work. They may wish to do this by power point, a discussion or visual aids. Students are also encouraged to provide either a piece of art work for the exhibition or compose a song, dance or drama based on their topics. The Ministry of Education would like to wish all teachers and students involved in this years ESD & EIU National Student Conference all the best with their projects for the conference. **Jane Taurarii, Sandwatch Coordinator & Science Advisor, Ministry of Education**



Sandwatching tidal pools in Wales

Promoting the preservation of the variety of habitats which form part of the coastline

At present we are entering our winter season but during the summer term at **Brynhyfryd Junior School** we focused more on pupils handling and learning about the habitats and lifecycles of the creatures living on our coastline.

They learnt the importance of these animals to the beach environment and the differing habitats found there.

Pupils had the opportunity of carefully handling these creatures and the importance of returning them to where they found them.

This coming summer term will see pupils looking at the contrasting features and habitats on a rocky beach compared to a sandy beach.

Mr. Russell Bevan, Brynhyfryd Junior School, Swansea, South Wales



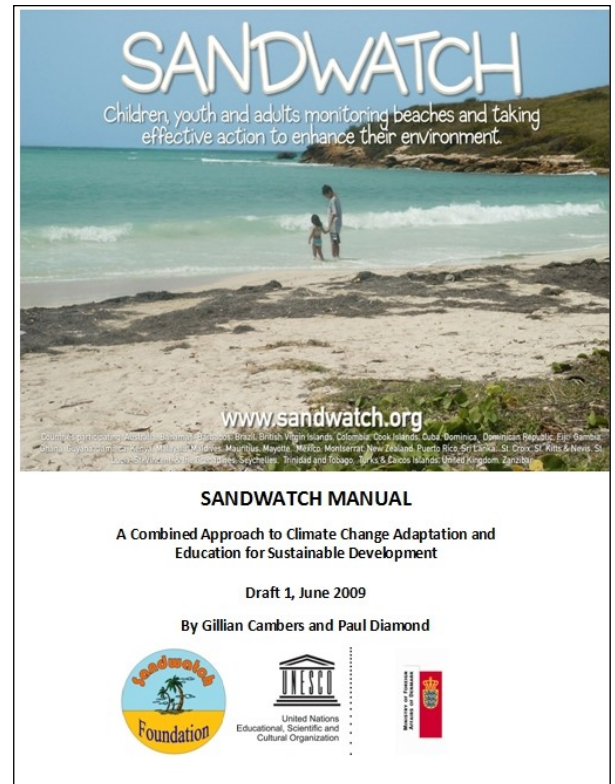
The Sandwatchers of Swansea, Wales are some of our youngest participants

The new UNESCO/Sandwatch equipment bags



The new UNESCO sponsored Sandwatch Kit Bags (right) contain everything need to start and equip your own Sandwatch Team!

In addition to the sturdy and durable shoulder bag, each unit contains, *a new 3rd Edition Sand-watch manual (top right), a 30 meter measuring tape, a clip board, a compass, a magnifying glass, a stop watch, dye tablets and a complete water quality monitoring kit*, capable of testing water samples for dissolved oxygen, pH, and several organic contaminants such as E.coli, phosphates and nitrates.



The serious Sandwatchers of New Zealand



Stanmore Students Serious About Saving Sea Creatures By Ruby Dunphy

Last term Stanmore Bay students were asked to draw a picture of their favourite sea creature and make sure it was bright, bold and had a message around it. The message was to serve as a reminder, that when they throw rubbish on the ground, it often goes down the drain and straight out to sea. Creatures such as penguins think that plastic bags are jellyfish, swallow them and eventually die.

For the last two weeks, Stanmore Bay students have painted the drains in the school. Because of the drain painting, the other students have become very aware of what could happen. They believe that it is important to keep the oceans pollution free. Stanmore Bay student, Mireya Seuseu aged 11, has lived overseas and many of the beaches she visited, had signs that said Do Not Swim, Beach Polluted. She stated "It would be a shame if it was like that in New Zealand." It is hard not to agree with her. Without clean oceans there would be less swimming and fishing, two things that many New Zealanders enjoy.



Megan, a Stanmore Bay School student shows the drain she decorated to raise awareness about marine pollution



Nevis Sandwatchers dismayed by wetland destruction

From Wetlands to...



Nelson Spring Wetland before December '09.

...Wastelands



One of Nevis's last coastal wetlands lies illegally bulldozed and burning. Will those responsible be held accountable?

Once again a priceless and irreplaceable piece of **Nevis's** environment and biodiversity has been deliberately and critically damaged, probably beyond repair. During the first days of December '09, the beautiful, endangered and legally protected **Nelson Spring Wetland** was illegally bulldozed, cleared, partially filled in and then burned! The natural channels that drain water from the surrounding area into the Spring's pool have also been deliberately filled in and blocked with mud. The trees, shrubs and other vegetation that shelter the birds and anchor the soil have been cleared right to the edge of the ponds. The splintered trees and foliage was piled up and set on fire like a huge funeral pyre, as indeed it was to numerous species of plants and animals. Over the years, we have written about the critical importance of our wetlands not only in terms of the biodiversity represented but also due to its **prime importance** as a nursery for numerous species of fish and crustaceans. In addition, the wetlands provide nesting sites for dozens of species of birds, many of them endangered. Not to mention the critical role they play in *filtering water, preventing coastal erosion, mitigating local flooding* and a host of other functions. Every year tourists, birdwatchers, teams of scientists, researchers and even local students, such as **The Sandwatchers** come to study and admire our rapidly disappearing wetlands and the unique flora and fauna they contain. **The Nevis Government & Tourism Office** spends huge quantities of money each year internationally presenting Nevis as an '**untouched jewel of the Caribbean**'. We doubt the photos that accompany this article will appear in any Nevis Tourism articles, magazines, brochures or websites, though perhaps they should. Hardly a week goes by without government officials being quoted in local media on the general theme of how committed they are to the environment, how the environment is the bedrock on which our tourism industry is founded, how critically important the environment is, not only for tourists, but also for the well being of Nevisians, our water supplies, our food sources, our very existence. The **Nelson Spring Wetland** represents an excellent test case to show just how much the government really cares about our environment and its biodiversity. Will they find those responsible and force them to attempt to undo the damage they have done? Or will they just ignore it and hope Nevisians won't notice that yet another irreplaceable piece of their island has been criminally ruined, due to inaction and inattention, much as our coral reefs and fishing industry have been? In **The Bahamas** they have a slogan "**Wetlands...anything but Wastelands**" On Nevis sadly, we take the opposite view, we take our wetlands and literally turned them into wastelands. **By Paul Diamond, Director, Sandwatch Foundation**



Anguilla: The Newest Sandwatch Member

Based on the success of our recent environmental camp "**Adventure Anguilla**" and the positive response received from the students, the **Anguilla National Trust** is now seeking to expand its environmental camp into an on-going weekend programme for Anguilla's young people. We have researched the **Sandwatch programme** and are impressed with the initiative's organisation and ability to transfer information through practical methods. We are therefore looking at integrating the **Sandwatch programme** into this new environmental programme.

Ms. Farah Mukhida, Executive Director, Anguilla National Trust

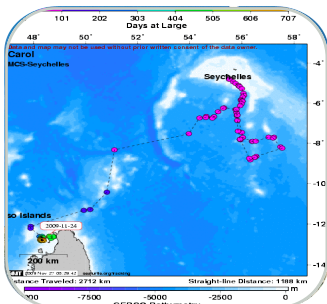
www.axanationaltrust.org



Tracking Carol, the Hawksbill Turtle in the Seychelles

In December 2007, the Marine Conservation Society Seychelles (MCSS) deployed 2 satellite tags on Hawksbill turtles nesting in the south of **Mahé Island, Seychelles**.

The project was funded by Barclays Bank and run in collaboration with Ministry of Environment and Transport (MENRT), Xanadu Guest House, Simpson's Strong-tie Epoxy, Underwater Centre, SeaTurtle.org and the Wildlife Clubs of Seychelles. The project was initiated based on findings from the ongoing Nesting Turtle Monitoring Project in the South of Mahe by MCSS with funding from the **Green Imperative Fund of Banyan Tree Resort, Seychelles**. Following the tag deployment, the first turtle was killed by poachers some 10 days later while the other, named Carol by a local school child in a national turtle awareness campaign, has surprised researchers by heading to foraging grounds off the **north of Madagascar**. Previously it was believed that Hawksbill turtles nesting in Seychelles remained on the Seychelles plateau to forage between nesting seasons. Some 23 months later, Carol is still transmitting and is showing no signs of heading home for the 2009-10 nesting season. She travelled some 2350km to get to her foraging grounds, dived to depths of over 120m and so far seems to be one of the longest transmitting turtles tracked by satellite to date. MCSS is hoping to deploy 2 more Satellite tags to see if other Hawksbill turtles from the South of Mahé Island will follow Carol to Madagascar. If you would like to make a donation to support the Satellite Tracking Project, please contact us: info@mcss.sc. For more information about MCSS, please visit www.mcss.sc.



The track of Carol the Hawksbill from Seychelles to Madagascar

Sandwatchers around the world!

Sandwatch is a truly global project with schools in more than 40 countries participating



Students in Puerto Rico measure longshore currents



Measuring boulders on Intendance Beach, Seychelles



One of the photos taken by students in the Seychelles as part of a display on erosion for Copenhagen Conference



Sandwatchers in Puerto Rico get close to nature on their field trips

"The Flagship UNESCO Sandwatch Project is an excellent example of what can be achieved...Sandwatch provides a framework for school children and local communities to work together to critically evaluate the problems facing their beach environments and develop sustainable management solutions. Since its launch in the Caribbean in 2001 which I myself attended, while visiting several islands of the region, Sandwatch has expanded to the Pacific and Indian Oceans, and is now active in around forty nations world-wide, including about 20 SIDS (Small Island Developing States)"

- Excerpt from The Opening Address by Mr Koïchiro Matsuura, Director-General of UNESCO, on the occasion of the International Seminar on Climate Change Education - UNESCO, 27 July 2009, Paris.



YEP-Sandwatch students in BVI help to inject a tracking device into a sea turtle



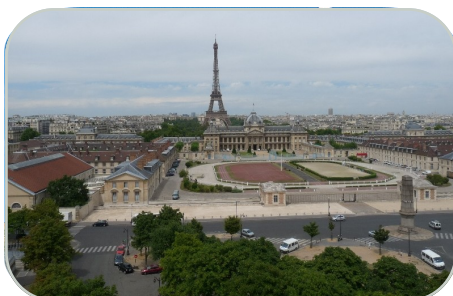
Sandwatch students in Kenya, pose with wood confiscated by police from the Mau Forest



Sandwatchers on San Andres Island, Colombia replant vegetation on their beaches



San Andres Island students, Colombia replant vegetation on their beaches



View from 7th floor cafeteria, UNESCO HQ, Paris where Sandwatch attended Climate Change Seminar



Sandwatch in The Bahamas!



Carol The Hawksbill Turtle tracked from Seychelles



Sandwatch Trinidad & Tobago in South Korea



Maurisa Roopnarine arrives at the Youth Conference in South Korea.

The United Nations Environment Programme (UNEP) in cooperation with UNEP National Committee for the Republic of Korea hosted a **Tunza International Children and Youth Conference on the Environment** in Daejeon, Korea from the 17 to 23 August 2009. The conference brought together approximately 550 children participants and 200 youth from 110 countries. Trinidad and Tobago was represented by **Ms. Maurisa Roopnarine** (youth delegate) and **Mr. Andy Paul** (chaperone). They both are members of the **Mayaro Environmental Club**, a UNESCO Community Club and chosen because of their involvement in **The Sandwatch project**.

This historic conference was supported by several UN entities such as UNEP, UNICEF, UNFPA, FAO, WMO, UN-HABITAT, UNDESA, UNESCO, the Secretariat for the Convention on Biological Diversity and international youth organizations

such as the World Organization of the Scout Movement, the World Association of Girl Guides and Girl Scouts, 350.org, 2 Degrees as well as private sector partners such as Bayer and Global Voices.

The theme of the conference was **Climate Change: Our Challenge**, with the highlight of the conference being **The Seal the Deal Global Town Hall** and the **Global Debate**, which

resulted in a Declaration to world leaders and an action plan by participants for promoting actions on climate change. During the conference many children, including **Trinidad and Tobago** presented the projects they implement in their respective countries.

On Wednesday the 19th Maurisa spoke about our **Sandwatch Project** which involves children, youth and adults working *"together to scientifically monitor and critically evaluate the problems and conflicts facing their beach environment and then design and implement activities and projects to address some of those issues, whilst also enhancing the beach environment and building ecosystem resilience to climate change."* Apart from sharing information and

exchanging ideas on climate change related issues, participants were engaged in workshops and field-trips to environmental sites and venues to enhance learning. Themes discussed were climate change and its effects on bio-diversity, climate change and young people, water and sustainable lifestyles. Leading up to the Global Town Hall meeting was the Global Debate. This debate engaged political and business leaders, senior UN dignitaries and the children and youth in a discussion on the scenarios that the global community will be faced with in the event of a deal or no deal at the climate change negotiations in Copenhagen. This historic Global Town Hall meeting took place on 20th August and linked other participants from 15 other cities across the world via web technology.

It has been the largest, truly global conference of young people on climate change ever. Participants have pledged to organise rallies all over the world as

part of a major push to persuade governments to Seal the Deal at the crucial UN climate convention meeting in Copenhagen in December 2009. Delegates pledged to keep global warming high on the international and national agendas as the **Tunza International Youth Conference in Climate Change** ended. *"Climate Change is the greatest threat we are facing in the 21st century, and many countries are vulnerable. If we the children and youth don't*

act now, we cannot be sure there will be a future for us, for future generations" (James Marcellones, Tunza Youth Advisory Board member). **The Prime Minister of the Republic of Korea, Mr. Han Seung-Soo** recognizing the importance of this conference addressed the children and youth and encouraged the world to pressure their Governments to **Seal the Deal** in December. He is leading by example and called on the world leaders "Seal the Deal". To the leaders of our national community and to the Government of Trinidad and Tobago, we are saying that we have had enough talk, it is time for action. Seal the Deal in Copenhagen!

Mr. Andy Paul, Sandwatch Co-ordinator, Trinidad & Tobago



Sandwatch Coordinator Andy Paul, signs the conference "Seal The Deal" Banner for Copenhagen.



Maurisa Roopnarine gave a presentation on Sandwatch at the Tunza International Children & Youth Conference on the Environment



Maurisa Roopnarine presented Sandwatch at the conference

Sandwatch Barbados: Empowering youth



Educate. Conserve. Protect.

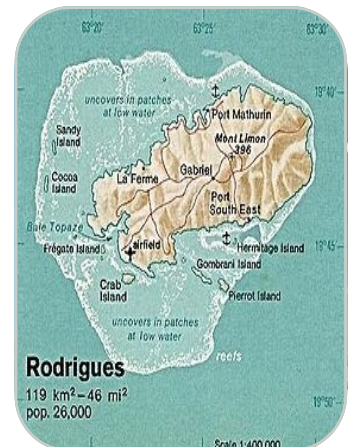
The Future Centre Trust (formerly Counterpart Caribbean) located in Edgehill, St Thomas, Barbados, played host to a workshop organised and facilitated by the Caribbean Natural Resources Institute or CANARI, in December 2009.

The title of the workshop was 'Empowering Youth to Respond to Climate Change'. The workshop focused on how youth could assist their communities by providing different ways of informing them of the impacts of climate change. The group, which was comprised of students and teachers from three Barbadian schools, namely Coleridge and Parry, Ellerslie and The Lester Vaughan School, who are aligned to the Sandwatch accredited Barbados Environmental Youth Programme (BEYP), were reminded and informed of the many aspects of climate change by workshop facilitators Ms Judi Clarke and Ms Nicole Leotaud both from CANARI. Additional presentations were provided by Mr Randy Woodroffe of the BEYP and Ms Nicole Garofano of the Future Centre Trust who were, along with Dr Gillian Cambers of Sandwatch, the organisers of the successful Youth and Climate Change Workshop held in Barbados in November 2008. The students who participated in the workshop commented on the need for more of their peers to become involved in environmental clubs and to take more interest in understanding their part in the environment. *"I feel that young people should care more about the environ-*

ment and take care of it for their future" said Skye, one of the participants. Another student commented *"not very many people are aware of climate change"* and that together they agreed more workshop and focus days like this were helpful, but more students needed to be involved to change the attitudes. One of the younger participants in the workshop, Arianna said *"I think that I am more knowledgeable about climate change after today"*. This comment was supported by teachers who agreed workshops like these can help people learn and interact with each other's thoughts and share initiatives. *"Young people can influence the older generation"* stated the UNESCO representative present, with Mr Woodroffe adding that we need to *"Encourage the youth to make the contribution and we need to highlight the good that they are doing"*. It was also noted that policymakers are responsible for the people and they need to implement policy which ensures the livelihoods of the people of their country and to assist public efforts in adapting to climate change. Overall the workshop provided a good opportunity for students to refresh their knowledge and to be updated on the subject of climate change. We thank CANARI for this opportunity and we look forward to participating in more of these events which provide knowledge, interaction with new peers, and fun. All while establishing a network of youth interested in and actively playing their role in spreading the climate change message. We need to adapt and we need to reduce our impact on this planet. Youth hold the power! Help your school community and take action! **By Ms Nicole Garofano – Future Centre Trust Administrator and Director**



Students were asked to create a drawing of their beach, showing all its features and activities



Rodrigues Island is 560km north east of the main island of Mauritius

Sandwatch Workshop Planned for Mauritius

UNESCO HQ in Paris in cooperation with several of their regional offices in the Indian Ocean Region and The Sandwatch Foundation are in the process of organizing a Regional Sandwatch Workshop to be held on Rodrigues Island and Mauritius, in June 2010. Sandwatchers from around the Indian Ocean and beyond will be invited to attend. So stay tuned for further developments.

-The Editors

Bequia Sandwatchers clean-up their beach



The Bequia Community High School Sandwatch group took part in the annual International Coastal Clean up day in September 2009. The enthusiastic group of young teenagers eagerly cleaned the whole area of the Industry Beach, collecting some sixty (60) bags of debris, inclusive of empty juice cartoons, lube oil bottles, glass and plastic bottles, and containers. The group is currently undergoing training in sand erosion and accretion, longshore currents, sand analysis, water quality testing and more. In April of this year (2010) the group is hoping to undertake a project training all beach users in the Grenadines, including fisher folks, water taxi operators, hotel users, dive shop operators and others in beach monitoring activities. **Ms. Joanna Stowe, Sandwatch, Bequia, St. Vincent & the Grenadines**



Sandwatch Bequia students with some of the trash they cleared of their beach



Sandwatchers working to save the Mau Forest in Kenya



Kisumu students with spades ready to replant some trees as part of reforestation efforts

Saving The Mau Forest to Save Lake Victoria in East Africa The Sandwatchers at Kisumu High School in Kenya last week left the sandy beaches of Lake Victoria to travel 50 miles into a mountainous place called the Mau Forest complex.

On arrival at the Mau forest complex **The Sandwatchers** were shocked. In the mountains above the **Maasai Mara National game park**, turmoil reigns. No wonder Lake Victoria is drying up!

We saw with our eyes how large chunks of forest land have been hived off, illegal loggings and poaching are rife. The forest being destroyed through charcoal burning, organized by unscrupulous entrepreneurs and corrupt government officials.



Kenyan Sandwatchers with their teacher, Mr. Peter Amunga

Environmentalists and conservationists around the world are now urging the Kenyan government to **relocate 20,000 families** that are doing irreversible damage. Kenya and indeed Africa is now feeling the pinch. Rainfall has become unpredictable, leading to reduced water in the country's main rivers and lakes. Scarcity of water in the urban centers like our very own city of Kisumu has become the order of the day. Agriculture has been adversely affected, increasing food insecurity. The country's sources of hydro-power have been depleted, occasioning a massive increase in the cost of electricity.

The Kenyan chapter of **The Sandwatchers** alarmed at these reports depicting high rate of destruction of one of the world's most important ecosystems, decided to visit the Mau forest. Now, to get a clear picture of what is going on I have to point out that, **the Mau Forest Complex**, is indeed *East Africa's biggest closed-canopy forest and a vital water catchments that feed water to Lake Victoria and the River Nile and by extension the Mediterranean Sea.*

The Mau forest is the area of south-western Kenya and is a water tower for **10 million Kenyans** and **hundreds of millions of the rest of the Africa population**, but *illegal settlement and deforestation have destroyed 24 percent, or 107,000 hectares (264,000 acres), of its trees over the last 20 years.*

What happens to the Mau, which feeds **Lake Victoria** and the **White Nile**, has big implications for a region where *23 million people are now currently afflicted by a fifth year of drought.* That is why we as **Sandwatchers** living next to Lake Victoria, the Second largest freshwater lake in the world decided to take action.

We not only went to witness with our eyes, the wanton destruction of the Mau Forest but also

planted trees, dug trenches, helped government officials in tracking and confiscating logs acquired illegally by corrupt and environmentally insensitive charcoal burners.

If we lose the Mau Forest, we will not only lose the biodiversity and ecosystem services held within, we will also lose the Lake Victoria, and the White Nile.



Illegal logging, poaching, charcoal making and slash and burn agriculture are having hugely negative effects on the Mau Forest and the massive watershed it feeds

It is that serious. Right now the entire world is in Copenhagen to talk about the environment and conservation.

The Sandwatchers in Kenya have only one message for the Copenhagen delegates...

"If you help Save The Mau forest then you will be saving the Lake Victoria."

**Written By Mr. Peter Amunga, Patron
The Sandwatchers. Kenya**

"Copenhagen, please help us to continue seeing snow on Mt. Kenya and Kilimanjaro by reducing global warming"

- Gift Sakwa, age 13 of Kisumu Day High School. Kenya



Students planted trees and dug irrigation ditches to help the trees return

Sandwatchers utilize Google Earth and Movie Maker



An increasingly important part of Sandwatch workshops and training is not only showing educators how to use the Sandwatch manual, and methodology, but also how to network and expand your project using inexpensive or free technologies. This includes using **Google Earth** to show people where your country/community/school/beach is located, or using it to teach your students geography. It is very popular with teachers, especially the first time they use it.

Using **MS-Publisher** to create newsletters, press releases or event flyers is also very popular. Using the free video editing program, **MS-Movie Maker** to create and edit simple videos that you and your students can create, even using a cell phone camera, is also popular. It develops valuable skills with numerous

Applications. Two dozen schools worldwide used Movie Maker for **The Sandwatch Climate Change Video Contest 2008-2009**.



Using Google Earth we located and labelled our hotel and the beach on Cape Verde that we used for Sandwatch training

Also part of the workshop training is showing educators how to use popular and useful utilities and programs, such as photo editing software, **Face Book**, **You-Tube** and even free online language translation sites such as **Yahoo translate** or **Babel Fish**. Most teachers who attend Sandwatch workshops are amazed and excited by how easy these programs are to use, and how that be used to enhance their teaching.



Sandwatch teachers from Guinea Bissau learned to make and edit simple videos at the Cape Verde workshop

Sandwatch Seychelles: Portraits of resilience



The project - being held under the theme: **Portraits of resilience and islands in peril** - will give the **English River Secondary Sandwatch students** training in use of a camera to capture the impact of **climate change**.

A one-week training session started on Monday at the **Climate Environment Services** in the ex-English River clinic, led by Canadian professional photographer Lawrence Hislop who has run previous courses in the **Arctic communities**. He will be training the students in the presence of the **Sea Level Rise Foundation's** (SLRF) project officer Veronique Carola. The aim is to use cameras to bring personal stories and faces from vulnerable regions to the floor of the **United Nations Framework Convention on Climate Change conference** to be held in Copenhagen in December 2009. The activity has been organised by the SLRF and the Ministry of Education in partnership with the GRID-Arendal United Nations Environment Programme (UNEP). GRID-Arendal, a collaborating centre of the UNEP, was set up by the government of Norway as a foundation to communicate environmental information to policy-makers and help in their decision-making for change. Mr Hislop said the project illustrates people and their landscapes and how they are dealing with issues caused by climate change. He said island nations like **Seychelles** may be affected by a sea level rise that causes other environmental problems, and the students through their photos will show what is happening here and how the issues are affecting the community.

"The photos will then be displayed at the Copenhagen climate change negotiations, where people involved will be able to see the impacts and how these countries are adapting to the situations," he said. Seychelles is the first Small Island Developing State to take part in the project, and Mr Hislop will make his next trip to northern Canada for another such workshop with students.

The students taking part are also members of the **Sandwatch club**, which was founded early last year with the aim of monitoring the impact of climate change on our coastal ecosystem.

Its activities include beach monitoring and developing resource material to educate people in the community about climate change and its adverse impact on our daily lives. Photos will be taken in districts such as North East Point, Roche Caiman and Anse Aux Pins and focus on coastal erosion, sea level rise and the shoreline. Their photos will also appear on the website:

www.manystrongvoices.org/portraits/ accompanied by short stories in which they will give their views on these issues.



West African Educators enjoyed learning how to use Google Earth at the Sandwatch Cape Verde Workshop



Photographer Lawrence Hislop shows Seychelles Sandwatchers how to use the cameras



YEP students on Tortola, BVI, help inject a tracking device into a young sea turtle with help from Conservation and Fisheries Officers



YEP joins Sandwatch in the British Virgin Islands

The Youth Empowerment Project (YEP) is headed by The YEP Foundation. We are a non-profit organization formed almost 4 years ago with the goal of constructing a physical facility (youth centre) and programs for the youth in the BVI. In May of last year we officially opened the first YEP centre on the Eastern end of **Tortola, BVI**. Since then we have provided activities for over 100 youth (we had anticipated 40 at most) in the surrounding area during their leisure time. We operate during after-school hours, Saturdays and school vacations, which afford our members the opportunity to "drop in," "hang out" and "get involved" during these times. The aim of YEP is to provide a positive and meaningful avenue by which our youth can engage in activities which allow for positive outcomes.

Our program facilitators are primarily community volunteers who offer on average one hour per week of their time. This allows for the positive interactions between adults and youth within our community. It is our hope that the programs and experiences gained will decrease the recent epidemic of teenage pregnancies, crime, drop-outs and drug abuse in our communities, while broadening the minds of our youth. Feel free to visit our website (www.yep.vg)

Sandwatch referenced in Wikipedia

The Sandwatch Foundation is now referenced in the popular online encyclopedia Wikipedia.

To view our entries, simply go to www.wikipedia.com and do a search on **'Sandwatch'**, and read a brief background of our history, activities and references. Wikipedia is reportedly the worlds most popular online reference tool and is written collaboratively by volunteers from all around the world. Since its creation in 2001, Wikipedia has grown rapidly into one of the largest reference web sites, attracting around 65 million visitors monthly as of 2009. As of today, there are 2,947,635 articles in English. Every day, hundreds of thousands of visitors from around the world collectively make tens of thousands of edits and create thousands of new articles to augment the knowledge held by the Wikipedia encyclopaedia.

Please feel free to update or add onto the Sandwatch entry yourself.



Sandwatchers can add/edit their own comments/photos/articles into Wikipedia



Camargue: From the jetty to the sea

Camargue was our destination for our first Sandwatch outing on Tuesday November 24th, 2009

Camargue is a National Nature Reserve, a hundred and fifty kilometres far from our school in **Marseille, France**. We had to go there by bus. Camargue is an island, it is surrounded with the **Mediterranean Sea** and the delta of the River Rhone. It is a wonderful place with a lot of animals (mostly birds) and plenty of vegetation. It is not polluted, it is not noisy and we could breathe and enjoy plenty of fresh air.

Camargue is the only spot in Europe where **Flamingos** come and nest. We could watch a lot of birds and learn many new words, including some of the birds' names such as oystercatchers, herons and egrets.

Every winter 50,000 to 100,000 ducks come from the Northern Europe and stay in the National Nature Reserve of Camargue. All these birds are so protected that nobody can approach them by boat, even scientists. You can only take photos or watch them from the jetty.

The vegetation is called the **"sansouire"** is a French word that means **little forest**.

In Camargue, plants have to resist to salt and wind. Some plants, named **"salicornes"** grow in salt water, and they are edible. We tasted them, and we agreed on one thing: it doesn't have much taste! The gorse bush and the plants from the goosefoot family are other plants that grow in the area. The dunes have a large amount of sand brought by the wind and are protected by wooden fences. You mustn't walk, nor run, nor slide on them. They are fragile natural landscapes.

The beach is long, vast, wide, beautiful. We walked along the beach for 2 hours and had our picnic. We picked up some shells dead on the sand (razor shells, trough shells, tellines, screw shells, nautica)

The sand was white, with small grains, very fine and beautiful. We came back with plenty of souvenirs in our head, some students said they never had thought such a place existed, others said they were going to come back with their family. We all loved it and asked Mrs Gabriel to take us in another beautiful place with the Sandwatch Project.

By Fasslati, Nafissa, Soulaika, Lamia, Abdoukarim, Delia, Faisoil, Kevin, Jaouad, Ahmed, Sakina, Patricia, Fania, Zakaria, Chams, Fethi, Alawiya. Pytheas College, Marseille, France



The new Sandwatch Team of Pytheas College, Marseille, visited the Camargue nature reserve, a vitally important bird sanctuary

Ms. Pascale Gabriel was the Sandwatch Coordinator on **Mayotte** (Indian Ocean) for several years, and now teaches in **Marseille, France**. She is the French Language Coordinator for the Sandwatch Foundation and is currently creating the French Edition of the new Sandwatch Manual for **UNESCO, Paris**. As a teacher of English as a 2nd language she uses Sandwatch in her lessons and wrote about her techniques on page 20 of the new manual.

Jost Van Dyke, BVI establishes monitoring program



The Jost Van Dyke's Preservation Society Launches Start of Official Environmental Monitoring for Jost Van Dyke, BVI. As part of its broader OTEP-funded project "Jost Van Dyke's Community-based Programme Advancing Environmental Protection and Sustainable Development" the Jost Van Dykes Preservation Society has begun designing and launching a community-based monitoring programme for Jost Van Dyke. The monitoring programme is intended to help track and monitor key environmental issues and concerns identified in the recently published "Environmental Profile of the Island of Jost Van Dyke", which was developed by project partner, **Island Resources Foundation**. Some key issues include degradation, incremental filling and dumping of garbage and other pollutants in our salt ponds, severe erosion from coastal development and overgrazing by livestock (and resulting loss of bio-diversity), destruction of mangrove areas, marine pollution from visiting yachts and on-shore pollutant sources, to name a few. The monitoring programme will include **coral reef monitoring, participation in the National Parks Trust's Annual Bird Count (and future participation in the International Waterbird Census), Marine Turtle monitoring, rainfall and ambient air / water temperature recording, and of course, measuring beach erosion and accretion through Sandwatch**. The monitoring programme offers many opportunities for Jost Van Dyke's **Sandwatch students' involvement**. On January 2, some students participated in the Annual Bird Count, in addition to playing games that focused on birds in our food chains and webs. In late January, the Society will place a datalogger—a thermometer that can be placed at depths of up to 200metres in waters adjacent to one of our coral reefs. Once placed, the data logger will accurately record ocean temperatures every 2-3 hours for up to 3 years. The Society will remove it on a bi-annual basis. In the unfortunate event of future coral bleaching events, the water temperature data may help provide scientists with useful data to better understand the bleaching process.

By Susan Zaluski, Director, JVDPS



Jost van Dyke in the BVI, students learn the fine art of bird watching in the islands' endangered salt ponds and also learn about the local bats!

Sandwatch may expand into South Africa



We have been looking over copies of **Sandwatch** materials as we have been working on coastal education with three Masters researchers and we hope to develop an education research programme on marine and coastal issues. SAEON (**South African Environmental Observation Network**) coastal node has started its work with a series of scientific monitoring projects to report against international conventions and this work includes public participation as well as school involvement in local projects. Also as part of our international programme, I will be visiting The College of The Bahamas in mid February where I am hoping to make contact with **Candace Key** and her **Sandwatch group** to learn about youth participation in environmental projects such as Sandwatch. We have recently noted how significant beach erosion has been, primarily because of two southern Indian Ocean weather events that have generated massive waves that have pounded the coast for 3-4 days at a time. The media coverage and visual impact on beaches would be a good starting point for a 'Sandwatch' programme that could perhaps be run at coastal Eco-Schools alongside the 'Blue Flag Beaches' initiative providing a school and community scope to the project. We did have a programme similar to Sandwatch some years ago (**CLEO - Continuous low-level environmental observations**) that involved a network of coastal schools submitting beach data but it fell away when the enthusiast who had started it moved on to another job. Another home for Sandwatch may be MCM (**Marine and Coastal Management**) a state organisation that runs science and education programmes including SAEON. Sandwatch could provide a framework for much of the diverse coastal education work that includes school field trips to learn and coastal cleanups amongst a wide diversity of issues orientated community engagement around estuaries, pollution and the conservation of keystone species, for example.



We are currently working up our first **Handprint for Change** booklets (<http://www.handsforchange.org>) on coastal resource use and I would hope to link these to the start-up of a Sandwatch initiative. As the Handprints are produced towards the end of Feb and with feedback from potential partners on my return from The Bahamas, I would hope that a lead partner organisation identifies itself to begin a pilot start-up with our support. My sense is that

Sandwatch has a lot to offer and any initiative, once started will naturally gather momentum.

**Prof. Rob O'Donoghue, Rhodes University Environmental Education and Sustainability Unit
Department of Education, Rhodes University
Grahamstown South Africa.**



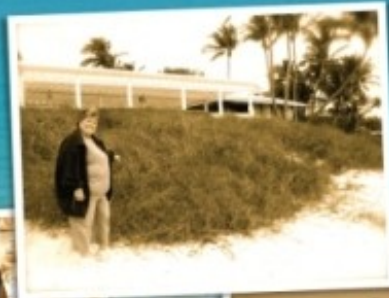
New Zealand Sandwatchers show their winning school newspaper design. See their *Sandwatch* homepages for full details



With several thousand miles of coastline, South Africa would make a valuable addition to Sandwatch

SANDWATCH

Children, youth and adults monitoring beaches, analyzing data, sharing results, taking action



www.sandwatch.org

Countries participating: Australia, Bahamas, Barbados, Brazil, British Virgin Islands, Colombia, Cook Islands, Cuba, Dominica, Dominican Republic, Fiji, Ghana, Guyana, Jamaica, Kenya, Malaysia, Maldives, Mauritius, Mayotte, Mexico, Montserrat, New Zealand, Puerto Rico, Sri Lanka, St. Croix, St. Kitts, St. Lucia, St. Vincent & the Grenadines, Seychelles, Trinidad and Tobago, Turks & Caicos Islands, United Kingdom, Zanzibar

Sandwatch Vision Statement

Sandwatch seeks to change the lifestyle and habits of children, youth and adults on a community-wide basis, to adapt to climate change by building ecosystem resilience, and to develop awareness of the fragile nature of the marine and coastal environment and the need to use it wisely.

SANDWATCH
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