Volume 2 Issue 1

February 2007

The Sandwatcher: Special Issue

The Voice of UNESCO's Sandwatch Project

www.sandwatch.org

About This "Special Issue"

Welcome Sandwatchers! This third issue of the Sandwatcher Newsletter features highlights from the Sandwatch Symposium held in **Trinidad and Tobago from 4-6 December 2006.**

The organizers of the event led by Mr. Andy Paul and his team from Mayaro Government Primary School, and Ms Susan Shurland and Ms Monica Regisford-Douglin and their team from the Trinidad and Tobago National Commission for UNESCO, took care of all the arrangements from the day participants arrived in Trinidad to the day they left; they also made sure that every waking moment was packed with activities that were educational, informative and enjoyable.
There were so many memorable events – learning how to expand Sandwatch to the mangroves of Colombia and the rivers of Dominica; discovering that Guyana's Shell Beach is indeed 90 miles long; sampling Trinidad's food, seeing its scenery and enjoying its parang, pan, jazz, comedy and extempo. Participants left with the goal of making Sandwatch everybody's business.
This issue is the first to be published in French and Spanish, and for this we must thank Teacher Pascale Gabriel and her French students at the College of Koungou, Mayotte Island, Indian Ocean and the University of Puerto Rico Sea Grant College Program for the Spanish translations.
Our next issue will focus on contributions from students on what makes Sandwatch different from other school work, so encourage your students to send in their articles to the editors, Paul Diamond and Gillian Cambers.

Welcome Sandwatchers!

This is the 3rd International issue of "The Sandwatcher", a regular newsletter designed to highlight and inform Sandwatch participants world wide of items of mutual interest to the project and related subjects.

Sandwatch seeks to change the lifestyle and habits of youth and adults on a community-wide basis, and to develop awareness of the fragile nature of the marine and coastal environment and the need to use it wisely

All Sandwatchers are encouraged to submit articles on their projects to the editors.

Inside this issue: Sandwatch activities in:

Regional Sandwatch Youth Symposium held in Trinidad

In order to create deeper awareness of the challenges and opportunities facing the environment in the CARICOM countries, a Regional Youth Sandwatch Symposium entitled: Conservation of the Environment - *Education for Sustainable Development* was planned by the UNESCO Associated Schools Project Network (ASPnet) in collaboration with the Trinidad and Tobago National Commission for UNESCO. This event took place from the 4th- 6th December 2006, at the Trinidad and Tobago National Commission for UNESCO in Port of Spain.

Delegates from around the Caribbean attended the opening day of the Sandwatch Symposium

Participants (teachers and students) came from **Bahamas, Barbados, British Virgin Islands, Colombia, Dominica, Dominican Republic, Grenada, Guyana, Jamaica, Puerto Rico, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago**.

Following the Opening Ceremony, presentations were made by each participating country on Sandwatch activities in the respective countries. Guest presentations were also made by representatives of the Institute of Marine Affairs and the Environmental Management Authority. A lively display of the Sandwatch Project activities in the region was exhibited by the participants on 4th and 5th December. Some participants gave special demonstrations of their displays, to the delight of all audiences. Group activities for the participating teachers took place, with discussions on ways in which Sandwatch can be expanded to other schools; means of increasing support for and awareness of Sandwatch in the individual countries and the idea of expanding the Sandwatch approach to other ecosystems, such as rivers and mangroves. Implementation of the Fiji Islands' River Care project in Dominica, as well as The British Virgin Islands' use of a digital microscope for science education were very well received.

The Symposium also included environmental and cultural experiences.

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Barbados: Sandwatch in the Community

A Sandwatch Student interviewing a community member in Speightstown, Barbados

The UNESCO Community Sandwatch competition is long over; winners have been announced and prizes have been distributed.

We have not come to the end of the road, but we have created a new beginning as Sandwatch continues. After all the beach enhancement projects, I hope you can lay back and comfortably say that you are satisfied with the feedback and involvement of your Sandwatch community. The Community Sandwatch competition was just the first phase of getting your community involved in the project. Now we must sensitize them into feeling that Sandwatch is theirs. As a local calypsonian sang in a song

"Dah beach is mine,
Ah gine bathe anytime.
My mudda bathe dey,
My fadda bathe dey,
So I gine bathe dey"

The time has come for us to plan activities within our Sandwatch communities. These will be part of a national effort to increase the understanding of beach erosion and accretion, beach pollution and their consequences and to encourage individuals, families and businesses within the community to address the problem.

Among the activities that involve communities are exhibitions, meetings/discussions, beach clean ups. I will discuss here some of the things we have learnt in planning Sandwatch meetings/ discussions in the community.

The first thing is to organize a planning committee to:

-Decide on the type of meeting you want to hold – keep it simple.
-State the purpose of the meeting.
-Select a location – this should be a central location in the community e.g. a school or church hall. -
-Select a date and time and duration for the meeting. Make sure the date does not clash with other events; best times are usually in the evening when most people are at home. Do not clash with church events. Specify the length of the meeting and keep to it, about 1½ to 2 hours is best; meetings should not be too drawn out as people will lose interest.
- Identify local sponsors (Businesses, restaurants, supermarkets) to cover the cost of posters, flyers, mailings and refreshments.
- Decide what government and private agencies will be involved. They can provide sponsorship and well as resource persons.

It is good to also involve church and service groups from the community as well as other non-government and community based organizations.
Select a moderator for the meeting as well as identify speaker(s) or persons to serve as panelists.
- Draft a time line for all the events and activities leading up to the meeting.

The committee should:
- Be no more than ten persons who are motivated to work and who can make things happen. It should include the Sandwatch coordinator, two teachers, two parents and two senior students from the Sandwatch school (it is good to select persons from the school who live in the community and are involved in Sandwatch) and three volunteers (these can be from service groups/clubs within the community).

- Meet on a regular basis at times and places convenient to every one. Select a chairperson for the committee. Always have an agenda and take minutes of every meeting so you can keep focus and keep track of what is done and to be done.

By Randolph Woodroffe, Sandwatch Barbados

The latest Caribbean Sandwatcher to join the project is the Sainte-Anne Secondary School on the beautiful French Island of Guadeloupe!

Sandwatch Trinidad Symposium (Continued from front page)

On 5th December, participants were treated to a field excursion to Trinidad's Caroni Bird Sanctuary, an ecologically diverse mangrove swamp on the island's west coast. Later that evening, a cultural presentation of exhilarating song, "ex-tempo" and instrumental music greeted Sandwatch participants as well as ASPnet Coordinators who had arrived for their Workshop to be held on 7 and 8 December.

The Mayaro Government Primary School hosted the visitors on 6th December at the Mayaro BPTT Resource Centre. It was expected that schools in the surrounding areas would participate in the demonstration of the Sandwatch on the beach, however, inclement weather caused all demonstrations to be located at the Resource Centre's facility. The Institute of Marine Affairs facilitated the demonstrations, using beach monitoring instruments which generated many questions from participants.
By Susan Shurland, Trinidad and Tobago National Commission for UNESCO, Andy Paul, Mayaro Government Primary School

BVI student Lakia Leslie talks about the Sandwatch Symposium on the webcast

Sandwatch Symposium Featured on Global Webcast

The students of Robinson O'Neal Primary School on Virgin Gorda in the British Virgin Islands will be doing a follow up video news "webcast" report on the Sandwatch Symposium on Trinidad!
The students recorded a video news story before the Trinidad Conference that received 12,000 hits on the webcast's site!
The project is managed by teacher Bill Reilly from his middle school in upper New York State.
If you are interested in participating in the webcast project with your students, I know he would love to hear from you.
You can see the whole webcast yourself at….
http://bcsd.k12.ny.us/middle/Global/newscast.htm
The Trinidad story occurs 4 minutes into the webcast, after story on polar bears and Global Warming.

Virgin Gorda Students Attend Trinidad Conference

On Dec 3rd two teachers (Mrs. Stevens & Mr. Diamond) and two Grade 6 students, Jamila Stevens and Lakia Leslie, flew to Trinidad (with some help from the BVI's National Commission) to take part in a **UNESCO Regional Symposium** on the **Sandwatch Project** we have been doing for the last year or so.

The trip to Trinidad was ok, though Caribbean Sun lost everyone's luggage. The rest of the trip was very good though. Teachers, students UNESCO staff from 14 countries all came to the 3 day meeting, from all over the Caribbean and even Guyana and Columbia.
We got to meet lots of students and find out about other countries.
The opening ceremony was at the Trinidad UNESCO National Office, and it was very good with lots of speakers and singing and dancing students.
Over the 3 days each country had to give a presentation about what they had been doing for the Sandwatch Project since the last meeting in Dominica in 2003.
Most people showed very good slideshows, but we took the two cardboards we made last year for the BVI Science Fair, and two laptops to show our slide shows. One on our Savannah Beach Sandwatch Project and the other to show people how our digital microscope worked.
Everyone liked our presentations very much, especially the microscope as we had to show it working many, many times over the 3 days. No one could believe that we bought it for only $80. Several of the people there said they would even buy the microscope for their school when they got home.
The symposium was not all work , and we did do other things.
One day we all had a choice of going to the biggest shopping mall in Trinidad or going to a nature park and go bird watching. Most of us went to the mall, but the people who went to the park said they had a great time and saw snakes, crocodiles and lots of colorful tropical birds. The mall was very nice as well with lots of shops, although we bought mostly lots of chocolates.
We also discovered that $1 US = 6 Trinidad dollars., which meant that every time we paid for something with US money, we got lots and lots of Trinidad dollars as change.

On the 3rd day we all went in two big buses to the town of Mayaro, which is 2 or 3 hours down the coast from Port of Spain, Trinidad's main city where the Sandwatch meetings were held.
Mayaro is a very nice town and their meeting hall was very nice and modern, they made good food there too. While we were here we got to meet more important people and see some local children dancing and singing. We also all got a little present up on stage, a nice souvenir doll from Trinidad. We were going to work on the Mayaro beach but it rained hard all day.
It took us a long time to drive back to the city in the buses and the traffic there is very bad.
The last evening, the Trinidad UNESCO Office had a big going away party for us, It was really great with lots of traditional Calypso singing, dancing, jokes and other music. It was a great night for everyone.
The trip home was very tiring as we had to leave the hotel at 4 am in the morning to get to the airport, and we missed our taxi so another teacher had to drive us, but we made in time.

It was a very good trip and we met lots of interesting people, made friends and got email addresses from students all over the Caribbean, and saw lots of great stuff about Trinidad and its people. We are all very glad we got picked to go on this trip.

By Lakia Leslie & Jamila Stevens, Grade 6. Robinson O'Neal Primary School, Virgin Gorda, The British Virgin Islands

ROMPS Principal Mrs. Gracia Stevens and BVI students pose overlooking Port of Spain, Trinidad

The BVI Sandwatch Team pose by their Sandwatch Displays

Strengthening Sandwatch in Dominican Republic

The Sandwatch Project is referred to as the Caribbean Sea Project in the Dominican Republic because at the present time it is only being implemented on the south coast not the Atlantic coast of the island.
The Project is coordinated by the National Commission for UNESCO and the Associated Schools Project Network, with the participation of the Secretary of State of the Environment, Secretary of State of Culture, Secretary of State of Education and the National Aquarium.
A multidisciplinary committee has been established to implement the project. The objectives are to (1) encourage the education community to take on board important environmental problems such as destruction of coral reefs and the disappearance of marine and coastal species; (2) enhance the students' scientific understanding of beach and coastal processes through field measurements and data analysis; and (3) Assist the students in understanding and sharing the results with the local community and other actors so that all can contribute to the sustainable use of the beach.
Working towards these objectives will also contribute to national goals. The project will strengthen exchange of experiences within and between school districts in each region.

We are also looking to expand the project and make it sustainable, especially in the light of budget cuts. For example with the Sandwatch session held in San Pedro de Macorís in the east of the country on the 12 December 2006, three participating schools created a committee of parents of students and professors, who shared the costs for food and transportation for the Sandwatch activity among themselves. This committee of parents and professors managed to involve the participation of the local Civil Defense group, who are charged with safeguarding lives in the event of a disaster. Thus the Sandwatch monitoring could proceed with the knowledge that the students would be safe since several life

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Sandwatch Teachers exmine sand on San Pedro de Marcoris, Dominican Republic

Our Caroni Swamp Adventure!

Principal Candace Key & her students on the Caroni Swamp Boat Tour, Trinidad

We would first like to thank the Trinidad UNESCO office and Mr. Andy Paul for being such great hosts to us. Trini people rock! The students and adults who attended the Trini Sandwatch Symposium sure were a very congenial group! Our students made lasting friends in very short order and the adults are all anxious to gather again in the not too distant future. This goes to prove Caribbean folks know how to get a job done right and then leave time to have fun!

WOW ! The Caroni Swamp adventure was spectacular! We really did not know what to expect from the trip but we enjoyed the bus trip out of the city because we got to spend time talking to our friends. We pulled up to a simple dock and saw several wooden, wide, green, flat boats tied up. The trip is an afternoon one so as to see the birds return to their mangrove roosts from their daily flights to nearby Venezuela.

Bahamas students show their Sandwatch Display in Trinidad

Soon we all loaded into the boats and began our adventure. We were in the front of the first boat--a good vantage point to view the birds we hoped. As the boats pulled away from the dock we were a bit disappointed to see the amount of trash lining the sides of the river heading into the swamp. We wondered why the boat guides could not have cleaned up the litter on days before the trips began. Our excitement grew as we ventured farther into the mangrove area though. It was as if we were transported back in time in a very pristine setting. We relaxed and enjoyed the towering mangroves so unlike what we experience in the Bahamas.

We all did think about how deeply we were going into this swamp and leaving civilization behind---we hoped our guide remembered how to get us back! The occasional egret flew in front of the boat to land in the mangroves and then we saw our first Scarlet Ibis! His colour was spectacular. It was explained to us that the young Ibis were a brown colour.

The Beautiful Scarlet Ibis, Trinidad & Tobago's national bird.

As we took another turn deeper into the swamp we saw several more Ibis high in a tree. Soon thereafter we saw a snake curled tightly around a branch of a mangrove showing no interest in us at all.

Soon the guide headed the boat into a mangrove area and instructed Mr. Andy to tie it to a branch as he shut off the engine. Other boats began to pull up and do the same. The sky was darkening a bit with late afternoon and stormy skies in the distance. As if on a magical cue, the birds began to appear, first in groups of twos and then in larger flocks. The interesting fact was that the egrets would land on the mangrove patch and work their way farther into the bush so they could not be seen. However; the Ibis would land and stay on the outside of the bush. They seemed to come in from all directions and the mangrove patch soon sounded like a haunted house with a cacophony of squawks and the birds' distinctive night time settling in noises. All too soon it was apparent that the storm and night were almost upon us so the guide gave the signal and we untied and sadly left this unusual spot of beauty. It was truly a Trini Christmas card given to us by nature---the Scarlet Ibis on bright green mangroves. Thank you Mother Nature.

The storm arrived! Our guide was prepared with a huge plastic tarp we all rolled from the back to the front over each row of heads. We all laughed with delight as the rain beat on the tarp and we stayed dry underneath. What a wonderful way to end our environmental summit-- this unique opportunity to see nature at its most beautiful. Please protect it well Trinidad.

By Laura Albury, Aly Boyce, Louivenson Etienne and Mrs. Candace M. Key, Principal, Hope Town School, Abaco The Bahamas

Sandwatch & Sustainable Livelihoods in St. Vincent & the Grenadines'

The Hon Jerold Thompson, Minister of Telecommunications and Technology, and Herman Belmar meets with gravel miners

The Bequia Community High School Sandwatch/Small Islands Voice Youth group is taking on a very ambitious yet sustainable project, to work with the Gravel Miners of the North Leeward communities of Petit Bordel and Chateaubelair. Approximately thirty persons, largely women, of these two north-western communities earn their livelihood mainly from the daily collection of gravel and some larger stones under 20kg in weight along the beach of the Richmond and Larikai Bay area. Tons of gravel are brought to the seashore daily by the two small rivers which flow directly from the slopes of the La Soufriere volcano. The deposit is distributed by the relatively strong longshore currents, and piled onto the black sand beach. The miners harvest these stones daily and make dozens of gravel mounds along the beach, ranging from two to eight cubic yards in size. These mounds of gravel are then marketed to the many construction companies and individuals for anything ranging from roads to hotel construction. By itself, the quantity and supply of gravel might have appeared to be inexhaustible.

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Conserving Columbian Mangroves & Crocodiles

Experimental pilot project for the conservation of *Crocodylus acutus* for local communities in the mangroves of Cispatá Bay, San Antero, Cordoba, Colombia

In Colombia the Caimán aguja or American crocodile (*Crocodylus acutus*) is in danger of extinction. The Regional Independent Corporation of the Valleys of Sinú and San Jorge (CVS) and the Ministry of Environment, Housing and Territorial Development have outlined a zone for the preservation of mangroves in the area of Caño Salado, in the Bay Cispatá, San Antero, Cordova (Caribbean coast of Colombian) where there are a large number of crocodiles.

Since 2002 a conservation strategy has been developed to manage the area in a sustainable manner so as to maximize the ecological, social and economic benefits. The conservation model incorporates scientific monitoring of the wild populations as well as those raised in captivity and community participation.

The project is conducted with the support of the National Institute of Biological Investigations Alexander Von Humboldt, the Ministry of National Education, Conservation International - Colombia (C.I.), Fundacion Natura, Agrosoledad S.A., Zoben S.A. y Garbe S.A..

Presently the municipality of San Antero leads the school community and particularly the Education Institution Jose Antonio Gallant, in implementing a plan of action, together with the children of the old crocodile hunters, to strengthen awareness and focus the attention of the community on the importance of conserving the species and the wise use of the mangrove resources (extraction of wood, fish, oysters, etc.) in the Bay of Cispatá.

The children of the old crocodile hunters are concerned that "if the crocodiles disappear, this will harm the habitat of many animals and will be the end of the dreams of our families and our people, already our parents are learning to use the species sustainably, that is to say use without exhausting" Yuraini López, 8th Grade, I.E. José Antonio Galán.

"If the species disappear, the quality of the fishing diminishes, and the water flow in the mangrove areas is reduced. The crocodiles are in control of maintaining the quality of the ecosystem. Our parents wish that that the children recognize the importance of conserving the crocodiles" Antonio Luis Díaz, 8th Grade I.E. José Antonio Galán.

By: Clara Lucía Sierra Díaz, Hovaimar Morelo Gutiérrez, Yuraini López Solano, Antonio Luis Díaz González, Colombia

One of the Columbian Crocodiles being protected and conserved

Clara Lucia Sierra and her Students from Columbia attend the Trinidad Symposium

The latest Caribbean Sandwatcher to join the project is the Sainte-Anne Secondary School on the beautiful French Island of Guadeloupe!

Hurricane Damage to Grenada's Beaches

The Importance of Sandwatch and Caring for Beaches in the Context of Climate Change

The tri-island state of Grenada, Carriacou and Petite Martinique is located to the southern end of the Caribbean. This tri-island state is blessed with several sandy beaches used as habitats, protective barriers, places of recreation and for raw materials in construction.
Our beaches are being threatened by sand mining on a daily basis. With the passage of Hurricane Ivan (2004), these beaches are being threatened even more as a result of increased construction of homes and other buildings.
Beach erosion is also caused by natural changes, including changing climatic conditions involving increased storm and hurricane intensity, wind strength, sea surges, accelerated sea level rise and watershed run-offs.

Carriacou offers a bleak picture, where steady erosion has occurred on many of the beaches. This is significant since it threatens the roads, villages, hotels and other forms of infrastructure, which are situated on or behind the beaches.

In Grenada, the situation is even more frightening, since eight of our most popular beaches have either completely disappeared or are disappearing. Many more are being threatened due to climatic changes or the rising sea levels.

Hurricane Ivan destroyed the majority of our agricultural industry. No longer are we able to depend on the exportation of nutmeg, cocoa and banana, thus we are dependant on the sea, sand and sun to sustain our livelihoods.
With our rapid growth in tourism, care of our beaches is of dire importance in generating foreign exchange. We hope that through the Sandwatch program, students in schools can assist in the monitoring of beaches, through the involvement of clubs and other extra curricular activities. Parents and coastal residents would then be involved through student interaction. Students would directly learn about the importance of our beaches and will be taught different practices in monitoring our coastal environment.

The Sandwatch program is extremely important if we are to preserve our little islands.

By Decima Joseph, Anglican High School, Grenada

Graves in Carriacou being washed into the sea as a result of beach erosion

Conserving Turtles at Shell Beach, Guyana

Observing nesting Leatherback turtles on Shell Beach, Guyana

Shell Beach Conservation Camp is located on the wild rugged coast of Guyana. This 90-mile stretch of land has developed with a mangrove shoreline interspersed with shell beaches along the Atlantic Coast. The Camp is located on Almond Beach.

Because of its distance from any permanent settlement the area has remained unharmed. A few temporary fishermen's houses and a small number of Indigenous Amerindians of the Arawak nation farm there.

Working along with the Amerindians, Dr. Peter Pritchard of the Florida Audubon has been able to discourage the slaughtering of the turtles for meat and converted farmer turtle hunters to protectors of this very special region. Four of the world's eight sea turtles nest here – the Leatherback largest of all sea turtles, the Green, Hawksbill and Olive Ridley. The turtles now have refuge, protected by continual educational campaigns for the Amerindians and watched over by the James' Family. Romeo James, awarded by Conservation International for his work in protecting the endangered species, and his parents, fully trained wardens, manage the camp and share with you the behavioural patterns of the turtles.

Nesting occurs between April – August usually at night when the turtles emerge from the water to burrow deep into the sand and lay as many as 130 eggs. So as not to disturb the site, the camp is located some distance away. This allows you to enjoy either a boat ride or beautiful star lit walk along the beach in search of the nesting turtles. A few people get to experience this wonderful occurrence. To add to your experience, spot a variety of bird and wildlife in the lagoons and rainforest behind the camp, including Scarlet Ibis.

By Paula Tulloch, UNESCO, Guyana

Involving Jamaican Communities in Sandwatch

Sandwatch students record data on Runaway Bay, Jamaica

The Small Islands Development (SIDS) meeting in Mauritius in January 2005 exposed several countries to the work of the UNESCO sponsored project Sandwatch. Following the Mauritius meeting, the Construction Resource and Development Centre – a non government organization working with community groups decided to promote the programme.

Several of these communities were either managing local beach areas or were in close proximity to beaches. The loss of prime beach area has been a concern for residents and fishermen in several communities. In Hellshire, for example, fishermen bemoaned the fact that most of the beach areas they once enjoyed have now either disappeared or are disappearing.

Several of the schools which are in close proximity to the beach or who are users of the beach already have some kind of environmental programme – and some have been involved in beach clean ups. If the scientific side of the Sandwatch programme could be expanded within the schools while at the same time involving the community in the process, then students' scientific knowledge as well as the sustainability of these beaches would take on far greater meaning.

Two community areas were selected as pilots for Sandwatch: Roselle in St. Thomas and Hellshire in St. Catherine. The Runaway Bay Primary School has been included as a third pilot site.

Four persons from Jamaica participated in the Sandwatch Symposium in Trinidad from December 3-7, 2006, and also had the opportunity to benefit from a hands-on demonstration of Sandwatch by the students of Mayaro Primary School. The actual exchange was a rich experience for the Jamaican participants who also got a chance to see the equipment used to conduct all these beach activities. As one Jamaican participant pointed out "The symposium has helped to stimulate a deeper interest in the Sandwatch Project. I am motivated and better prepared to run with the vision."

Specific activities have been planned for each pilot area. These include involving schools located in the pilot communities in beach monitoring activities, adopting beaches, holding road marches to sensitize people living in the community, twinning with other groups (e.g. Red Cross, environmental groups), exchanges with Mayaro School in Trinidad, sharing information with the Fishermen Cooperative.

The Symposium in Trinidad has put new life into the programme. The Jamaican participants are now energised and ready to take Sandwatch to another level.

By Toniann Anderson, Yvonne Cox, Carmelita Griffiths, Natalie Robinson, Jamaica

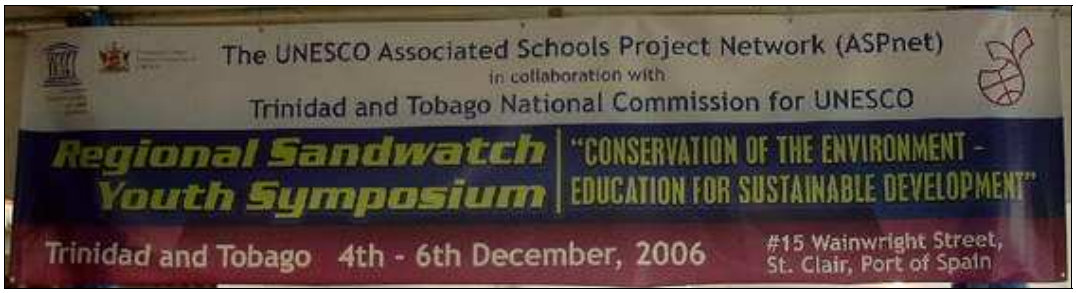
Teacher Pascale Gabriel and her students on Mayotte

"The Sandwatcher" Goes Tri-Lingual!

Due to the overwhelming success of first two issues of The Sandwatcher, all future issues including this one will shortly be available in both **Spanish** and **French** language Editions!
The French Language Edition is courtesy of teacher **Pascale Gabriel and her Sandwatch Students at the College of Koungou, Mayotte,** a small island in the Indian Ocean. The Spanish language edition is courtesy of the personnel at the **University of Puerto Rico's Sea Grant College Program**. Now Sandwatch will truly be a global environmental programme!

Sandwatchers From Around The Caribbean!

Sandwatch is a truly global project, with schools in more than 30 countries participating



This Special Issue of the "The Sandwatcher" is dedicated to the December '06 Regional Youth Sandwatch Symposium held in Trinidad. Delegates From 14 Caribbean Countries attended...Our Biggest Sandwatch Event ever ...so far!

Virgin Gorda student show their two Sandwatch displays

Wrestling Crocodiles in Columbia

Sandwatchers on the Trin-City Tour bus

Local children sing at the opening ceremony

Remember, studying the environment can be fun!
Sandwatch Team, Virgin Gorda, British Virgin islands

Trinidad students attend the symposium

Dominica Present their Findings

Sandwatch teachers learned survey skills

The rare Scarlet Ibis in flight at the Caroni Swamp on Trinidad

Sandwatch students also had some free time to learn how to make balloon animals

Symposium students make Sandwatch Posters and Banners

Desertification & its Effects on Beaches on St. Lucia

Deforestation on St. Lucia is causing degrading of the land and increased erosion

The United Nations convention to combat desertification defines the term desertification as 'land degradation' in arid, semi-arid and sub-humid areas resulting from various factors including climatic variation and human activities. (UNCCD Art. 1(a).

Land degradation in St. Lucia is due to a variety of reasons. These include climatic variation over the years; deforestation; poor farming practices; poor irrigation and animal grazing. These factors have in many ways impacted on the beaches in St. Lucia.

Climatic Variation has led to some areas in St. Lucia experiencing less and less rainfall, and drought conditions during the year. One such area is Micoud. The relief of the area is mountainous and is in an open woodland area. The valley areas between the mountains were formerly used for sugar cane cultivation. Due to climatic variations and limited rainfall this is no longer possible. This area is now used for cattle grazing during the wet season. In times of heavy rainfall such as occurs during the hurricane season, the land is prone to erosion of topsoil that eventually finds its way to the coastal areas.

Deforestation & other unsound land practices are causing major damage and soil erosion to the landscape of St. Lucia

Deforestation in St. Lucia is ongoing as more and more land is being cleared for farming, housing development, road construction and for industry; especially the tourist industry by way of the construction of hotels both inland and along the coast. This sort of activity has led to increased sedimentation of rivers and coastal waters and hence the destruction of coral reefs along some sections of the coast. This in turn has affected our shoreline as they become unprotected and vulnerable to wave action especially during the hurricane season. Areas affected the most are the Soufriere area in the southern part of the island, and the Choc Bay and Rodney Bay areas in the northwestern part of the island.

In addition to deforestation, *poor farming practices* and *poor irrigation* has led to land degradation in some areas in St. Lucia. Two such areas are La Riche and La Pointe in Choiseul, where farmers cultivate cash crops on sloping land, much of which is not irrigated and is poorly drained. Eventually valuable topsoil is removed as it becomes dry and is easily washed away when it rains. Coastal areas are again affected as heavily sedimented rivers make their way to the coast, and change the nature of the coastline.

MEASURES ADOPTED TO DEAL WITH THE EFFECTS OF LAND DEGRADATION INCLUDE:

-The establishment of Lucerne plots at La Pointe, Choiseul.

-Regulating tree planting on the watershed catchment area at Talvern, Babonneau in the north of the island.

-Discouraging cattle grazing on steep slopes that would trigger erosion.

-Having lectures at schools and with various community groups to raise awareness.

- Farmers are encouraged to practice terracing, contour ploughing, using check dams on slopes, mixed cropping along contours; and are discouraged from planting on steeply sloping areas, that must be kept under forest because it provides better protection against soil erosion.

- Rehabilitation of reefs in the Soufriere area by the Soufriere Marine Management Authority (SMMA). Very little is done to stem the tide against construction as the country continues in its thrust towards development.

Mrs. A. Johnson-Lowrie.
Teacher in Charge.
St. Joseph's Convent Secondary School's Save the Environment Club (STEC) -St. Lucia.

*"**Sandwatch** is such a hopeful project," says Ushio Miura, UNESCO Programme Specialist in Education. "It gives all of us a sense to look forward to the future. It also gives us a sense of connections with our neighbors, classmates and co-workers, as well as with those on the other side of the sea. And these senses are the keys to creating a sustainable world, to look forward to the future together with those who share the world around you."*

Students taking part in River Care Clean-up and planting activities in Dominica

Dominica: River Care Projects

Dominica is a mountainous island with 365 rivers. Yet many of the island's freshwater resources – rivers, streams, lakes, waterways, waterfalls and springs - are under threat from indiscriminate cutting of trees along river banks and from pollution in its many forms.

A River Care project, started in 2006, seeks to engage young people to reverse these trends by positively contributing to the conservation of their natural resources.

This is one of the activities Dominica is engaged in as part of the International Decade for Action on Water for Life (2005-2015).

The objectives of the project are to help restore and maintain Dominica's fresh water and aquatic resources for sustainable uses; explore issues pertaining to biodiversity and to highlight many of the negative effects that are associated with the indiscriminate cutting of forest/trees along river…
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Trinidad & Tobago: Coastal Conservation Project

Scientific information (beach profile monitoring data, littoral processes data and physical oceanographic data) is needed to effectively guide programmes to alleviate coastal erosion and to enable planners and decision makers to formulate a comprehensive policy for coastal development around Trinidad and Tobago.
As such, the Institute of Marine Affairs (IMA) Coastal Conservation Project for Trinidad and Tobago, which involves long-term coastal monitoring, was developed in the early 1980s to monitor beaches. The project goals are to:
- Develop an understanding of the physical dynamics of the coastal environment and
- Assess the effects of coastal development and other activities (such as beach sand mining) on the shorelines of Trinidad and Tobago.
Between 1990 to present, the IMA collected beach profiling, littoral processes (e.g. breaking wave height, wave period and longshore current speed and direction) and beach sediment data regularly at 67 established beach monitoring stations around Trinidad and 37 stations in Tobago. Some of the key findings of the research are:
-Trinidad north coast beaches are dynamic (dynamic equilibrium) and undergo erosion during November to April when large waves occur, and accretion between May and October when there is a decrease in wave energy except during storms and hurricanes.
- The east coast of Trinidad is exposed to the Atlantic Ocean and is subjected to large swells especially during the North Atlantic winter period, storms and hurricanes and as a result this coast has been suffering extensively from erosion over the years.

Erosion at Corral Point, southwest coast of Trinidad

- On the south coast of Trinidad, the geological outcrops consist mainly of unconsolidated silts, clays and sandstone, which provide little resistance to oncoming waves and as such, some bays such as Guayaguayare Bay have been eroding for the last century. One of the few coastal areas where accretion is taking place in Trinidad is at Punta del Arenal, at the southwestern end of the island.
- During the last 20 years the shoreline of the west coast of Trinidad, which is the most sheltered coastline has changed significantly as a result of erosion, coastal development, reclamation and the construction of coastal protection structures.
- In Tobago, beach sand mining which started in the early 1980s, is still taking place but on a smaller scale. This activity has been the main influence on coastal erosion. Recovery has taken place at some of the affected beaches while some have never recuperated from this activity
The coastal monitoring data is important to the country and is consistently being used by the IMA to prepare research reports and publications. This data is also of relevance to Government Ministries such as the Town and Country Planning Division of the Ministry of Planning and Development for the establishment of building setbacks for coastal development projects. Additionally, the IMA also provides students from UWI and other private institutions with data for their research projects. The data is also sold to the private sector and other Government Ministries such as Ministry of Works and Transport, Drainage Division, for use in the design of coastal protection structures.

Dr. Charmaine O'Brien-Delpesh, Institute of Marine Affairs, Trinidad and Tobago

Pipe laying work in progress, Guayaguayare Bay, southeast coast of Trinidad (July 2003

Guayaguayare Bay, south east coast of Trinidad, after pipe laying (April 2004)

Dominica: River Care Projects (continued from pg 8)

banks; and engage young people in reversing to reverse the trends of tree cutting by positively contributing to the conservation of their natural resources.

The River Care project is supported by the Youth Development Division of the Ministry of Education, Human Resource Development, Sports and Youth Affairs, the Dominica National Commission for UNESCO and many other partners.

The project started in 2006 with a summer school programme called 'Youth safeguarding waters'. One thousand primary school students aged 9-12, and 300 high school students took part in a summer vacation programme that included river and waterway clean-ups, tree planting, and learning about the proper methods of garbage disposal, land use and preservation and beautification of their environment.

Commencing in 2007, students from high school environmental clubs will begin monitoring different aspects of rivers, e.g. water flow and river discharges, water quality, plants and animals living in and along the river and their habitats.

The project also seeks to enhance community and national development by promoting volunteerism.

Based on a presentation by Yolande Prosper, Goodwill Secondary School, and Jahisiah Benoit, Environmental Coordinating Unit, Dominica

Dominican Students also take part in summer camp hiking, camping and snorkeling

Sandwatch Expands on St. Kitts & Nevis

Every visit is a learning experience especially when done for the first time, so declared Duriel Pemberton and Patrick Johnson, two teenagers from St. Kitts and Nevis. They claimed that the visit enabled them to live what they read in many literature and history books. What thrilled the two young champs most was interacting with other Caribbean youths on an issue as important as Sandwatch. Sandwatch to them is a very important programme for countries with coastlines. It helps with the education of children on coastal conservation.

Our shorelines are important for food, recreation and the tourism dollars. The creatures that inhabit near them are important to us and everyone should be aware of how critical these areas and creatures are to us as a people. Sandwatch can be expanded in all the countries including St. Kitts and Nevis through several means.

Firstly we could include more beaches and schools in the Federation. This can be done by firstly convincing the Education officials of the importance of the programme. This should be followed by attending with permission, meetings held especially for head teachers and Principals as well as Heads of Departments. Visits by the National Coordinator as well as the Secretary General for the UNESCO National Commission can be made to schools and information be disseminated during assemblies and Parent Teacher Association meetings. We should also increase publicity by the issuing of articles in newspapers as well as conducting radio talk show programmes. We could also try to do more beach cleanups in every community. Hotels should be encouraged to sponsor this as it attracts their product: the tourists. Sandwatch is not for one but for all.

Warren Wyatt, Sandy Point High School, St. Kitts and Nevis

Sandwatch Students from St. Kitts & Nevis man their display at the Trinidad Symposium

Strengthening Sandwatch in the Dominican Republic (Continued from page 3)

....lifeguards and a doctor were present.

By complying with national requirements, the students and professors help to strengthen the institutionalization of Sandwatch; the best example is related to National Law no. 179 d/f 23 of November 2003. This law establishes that each student, in order to graduate, has to fulfill 60 hours work to improve the environment or to work with the community. This work can include beach cleaning, reforestation and environmental education. In two education districts attempts have been made to use Sandwatch activities to fulfill the 60 hours requirement. We thought that this will contribute to formally justifying the Sandwatch project and also will give greater publicity. Really, we are using the principles of coordination and institutional involvement to strengthen the Caribbean Sea stage of our Sandwatch project in 2006 – 2008, and then we will expand to the next stage, the Atlantic coast.

By Maria Mercedes Brito and Bienvenido Santana Ferreras, Dominican Republic

Sandwatch & Sustainable Livelihoods in St. Vincent & Grenadines' (cont'd from Pg 4)

nevertheless there seems to be a reduction in the size of the beach, caused by the dangerous practice of harvesting sand along with the gravel. While the gravel miners may not be directly involved in the mining of the sand, sections of the beach are disappearing, leaving most of the gravel in deep water where it cannot be retrieved.

The Sandwatch team has had discussions and conducted demonstrations with the gravel miners on two occasions to help them understand how they can measure the sustainability of their livelihood, and to introduce to them the basic tools of beach monitoring. This was well received by the entire group, as a number of them are concerned about the economic stability of their families and would like to be able to continue to pay for their children's education, if nothing else. They, therefore, appreciate anything that would help, but are disturbed about the sand mining operations.

To make a difference, Sandwatch proposes the following:

- Start a regular monitoring regime to establish the volume of aggregate collected on a weekly or monthly basis.
- Measure the volume of gravel that is distributed on the beach over a prolonged period, in order to establish a safe level of harvesting.
- Monitor river flow to establish if the source of gravel is changing.
- Measure longshore currents to understand how the beach shape changes.
- Regulate sand mining.
- Determine the feasibility of a gravel miners' cooperative.
- Establish a depot for the storage of gravel and stones and where they can be marketed as a cooperative.
- Remove the piles of stones from the beach.
- Clean and regulate the beach so it can become a tourism attraction.
- Absorb some of the miners as workers in the Bed and Breakfast Campsite thereby reducing the number of miners.
- Train some of the miners as Tour Guides and Beach Guards.
- Establish buoyed swimming areas to offer security to swimmers and create further employment.
- Construct gazebos or other huts near the beach area to market local food, drink and craft to visitors.
- Train groups in Water Safety, Basic First Aid and CPR.

Sandwatch believes that this project, though challenging, could enhance the entire area, provide alternative livelihood opportunities for many of the gravel miners and their families, as well as provide the basic comfort, safety and real wilderness experience which could attract many visitors to the North Leeward community. It would require several months of travel to set up and monitor the programme, which would certainly involve expenditure beyond the Sandwatch group's ability. We however believe we could partner with UNESCO, our Government, and other willing organizations on this project, and help to transform the area and practices of the people into a very sustainable venture.

By Herman Belmar and Marsha Gregg, St. Vincent and the Grenadines

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