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The Sandwatcher

PROMOTING GRASSROOTS CONSERVATION OF BEACH ENVIRONMENTS AND BUILDING RESILIENCE TO CLIMATE CHANGE

MINISTRY OF FOREIGN AFFAIRS OF DENMARK



Black River Foundation



Coming Soon! The Sandwatch Database!

Some of you will know that UNESCO and the Sandwatch Foundation have been working on the creation of an international database that will provide a permanent archive for Sandwatch data. A software designer, Dr. David Grey, has volunteered his spare time over the past two and a half years to create this database, which is projected to launch early in 2013. An online publishing and technology company has been contracted to house the database.

We are very grateful to Sandwatch groups from Australia, Cook Islands, Dominican Republic, Kiribati, Puerto Rico and Trinidad & Tobago who trialed an early prototype version of the database in May 2012. Their feedback was immensely useful and has been incorporated into the design.

In the words of one of the testers, Andy Paul from Trinidad and Tobago: *"Hats off to the creators and designers of our Sandwatch Database site. It is a dream come to fruition. This Sandwatch Database is a tremendous opportunity for us to experience a global village. Over the years, I have had painful experiences of losing data and difficulty in plotting graphs. Now, it is just a click away. Unbelievable."*

Once the database launches, Sandwatch groups will be invited to register for access. We are currently working on preparing tutorials for users. These will be in English at first, but translated to

French and Spanish during 2013.

One of the primary benefits to using the database is the opportunity to analyze collected data in different ways. The database will allow users to make visual representations of data in the form of graphs, tables and maps. This will help demonstrate to students the importance of monitoring, collecting, and analyzing data.

Another benefit to Sandwatch groups is the knowledge that your data is properly archived and safe. Sometimes, even with the best planning, data can be lost; whether the loss is because of a problem with a computer, such as a virus, or not properly saving entered data. Even if your personal computer gets damaged, you can know that your data is still available through the Sandwatch Database.

Lastly, the database will provide an opportunity to share your data with other Sandwatch groups across the world or down the street. This ability to share and learn with other Sandwatch groups may generate more interest in your local community to take action in preserving the beach environment.

Turn to pages 2 and 3 to see some comments from those groups who have trialed the database and to see what the database can do.

By Gillian Cambers, Paul Diamond, Michelle Verkooy.

Inside this issue Sandwatch activities from 13 countries worldwide!

Including Australia, Bahamas, Cape Verde, Dominican Republic, England, Indonesia, Kiribati, Mayotte, Seychelles, St. Vincent & the Grenadines, Timor Leste, Trinidad & Tobago, Tuvalu ... and much, much more.





Inside this Issue...

Welcome to the 14th edition of The Sandwatcher, the Official Voice of The Sandwatch Foundation.

This issue highlights the truly global nature of Sandwatch as it contains articles and photos from Sandwatch teams in 13 countries all over the world, from the Caribbean, Indian and Pacific Oceans, Africa, Australia and Europe.

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

- **Sandwatch Database** launches soon
- **Preview of Sandwatch Training Videos** from **Puerto Rico**
- **Sandwatch** featured at the **Rio+20 United Nations Global Meeting** in June 2012
- Sandwatch manual published in **Portuguese**
- New Sandwatch teams are started in **Tuvalu**, planned in **Indonesia and Timor Leste**, and restarted in **St. Vincent & the Grenadines**
- Exciting new Sandwatch activities in **Bahamas, Dominican Republic, Kiribati, Mayotte, Seychelles**
- Sandwatch exchange activities between **Trinidad & Tobago and England**, and between **Australia and Kiribati**

Read on for more.....

Trialing the Sandwatch Database: From Trinidad & Tobago



Hats off to the creators and designers of our Sandwatch Database site. It is a dream come to fruition. This Sandwatch Database is a tremendous opportunity for us to experience a global village. Over the years, I have had painful experiences of losing data and difficulty in plotting graphs. Now, it is just a click away.

Unbelievable!

This database is very user friendly. Even a little child can interface with it. My first interaction to it was “wow”, “unbelievable”, “incredible” and “finally”. I could not believe my eyes. Every aspect of data collection for Sandwatch can be easily uploaded, just by the click of a mouse.

What excited me further was the ability to generate graphs for easy analyzing. I no longer have to wonder how I will do this or that. Just type in the data and click.

Imagine I was able to, just to name a few, to add the following:

- Details of the Sandwatch group
- Location of beach
- Map of beach
- Photos of beach
- Beach characteristics
- Historical information
- Erosion and accretion
- Beach profile
- Export Spreadsheets
- Beach composition
- Human activities

Should I go on further? Imagine one can easily generate a timeline. Fantastic! The Sandwatch Database makes data recording and analyzing, so much easier and enjoyable. It is a virtual classroom. It is a joy doing Sandwatch when we have such that we can look forward to. You can save, make changes and view all your graphs. You can export and save spreadsheets. You can view photos and see them and view them large size. What better do you want?

To assist you in moving around the website, the instructions are very, very simple. Your youngest member will be able to read, understand and follow the instructions. It is like “ABC.” This “global village” Sandwatch Database also allowed me the opportunity to see what’s happening with other Sandwatchers around the world. Therefore, one can compare and contrast with other “sites” and share information. It’s great to know what’s happening around the world.

So creators and designers, “bring it on.” This is overdue. Thank you. Enjoy the experience Sandwatchers. Looking forward in seeing your data and interacting with you.

However, if I have one suggestion to make, it will be this. Please consider having a blog, a chat room somewhere on the site. Let us bring all Sandwatchers closer. Be interactive.

Congratulations again and “bring it on.” Enjoy the experience.

Andy Paul, Principal, Mayaro Government School, Trinidad & Tobago



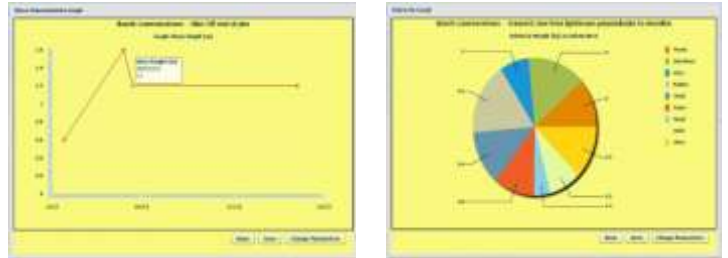
What does the Sandwatch Database look like?

The Sandwatch Database is almost ready for use by the Sandwatch community! We have completed development and are making final arrangements for a permanent hosting site. Soon Sandwatch groups will be able to enter their data into a central repository. More information on training and access will be available shortly.



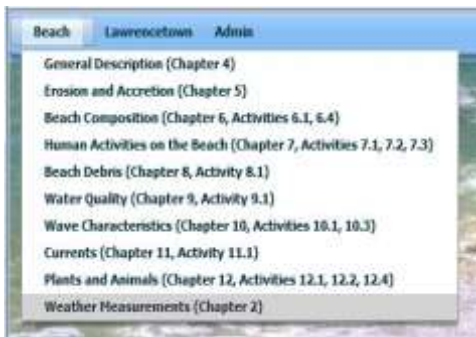
Screen shot of the Sandwatch Database homepage

The software includes support for generating simple graphs of your data. For most data items you will be able to graph the data observations over time. These graphs can be saved locally on your computer and subsequently printed or added to reports.



Screen shot of a time series graph & pie chart

The software has been set up to complement the Sandwatch Manual. There is a section for the activities for each chapter. Screens are cross referenced to the related activity in the Manual.



Screen shot of the activities relating to chapters in the manual

Where appropriate bar charts and pie charts can also be produced. You can also export any table to an Excel spreadsheet and save it on your local computer. This will provide you with access to your data for other investigations and comparisons.

For those groups that have been using Sandwatch beach profile software you can upload your beach profiles. Your beach width and profile area data will be displayed in the table. You can then display time-series graphs of this data or export the table to a spreadsheet.

Screen shot of the Beach Profile page

Most screens will provide a table showing past observations. Each Sandwatch group will appoint one or two editors who will be responsible for adding new observations that the group makes. On the editor's screen above the table there will be a button to click for adding a new observation set. This will bring up a screen with a data entry form. To fix a mistake in an observation already stored the editor just has to double click on the appropriate row in the table.



Screen shot of the data entry page

We have provided a simple connection to Google Maps so you can display your beach location and allow users to navigate around the beach area using the Google Maps tools. In the future we hope to make better use of this tool to let you place the location of your observation points.

For each chapter we have provided a place to upload pictures related to the activities for that chapter. Each photo page shows small scale versions of the photos that have been uploaded. Clicking a photo shows it enlarged.

The introduction of the Sandwatch Database will start an exciting new phase for the Sandwatch Project. We look forward to working with all Sandwatch groups to make good use of this tool. Soon it will be easier to share and compare data between groups and across regions!

Dave Gray, Canada

Sandwatch Manual in Portuguese

The Portuguese edition of the Sandwatch Manual is now available online: Sandwatch: Adaptar-se à mudança climática e educar para o desenvolvimento sustentável.

The manual can be downloaded from www.sandwatch.org and www.unesco.org/csi/sandwatch. Hard copies can be obtained from UNESCO Offices around the world listed at www.unesco.org/csi/field-offices.

The Manual is now available in four languages: English, French, Portuguese and Spanish.

The different language versions, besides making Sandwatch available to a much wider audience, also provide a useful resource for the teaching of foreign languages. Ideas for using Sandwatch to teach a foreign language are shown in Box 2, page 28 of the English version of the Manual (and on corresponding pages in the other language versions).



Sandwatch manual now available in

Sandwatch featured at Rio+20

Sandwatch features at a side event of “Rio + 20 the future we want” event:

At the Rio+20 Conference, world leaders, along with thousands of participants from governments, the private sector, NGOs and other groups, came together to shape how we can reduce poverty, advance social equity and ensure environmental protection on an ever more crowded planet to get to the future we want.

The United Nations Conference on Sustainable Development took place in Brazil on 20-22 June 2012 to mark the 20th anniversary of the 1992 United Nations Conference on Environment and Development held in Rio de Janeiro, and the 10th anniversary of the 2002 World Summit on Sustainable Development in Johannesburg.

The Conference focused on two themes: (a) a green economy in the context of sustainable development and poverty eradication; and (b) the institutional framework for sustainable development. The preparations for Rio+20 highlighted seven areas which need priority attention; these include decent jobs, energy, sustainable cities, food security and sustainable agriculture, water, oceans and disaster readiness.

As part of the focus on oceans, UNESCO's Intergovernmental Oceanographic Commission organised a side event on 20 June 2012: “One planet, one ocean: knowing our ocean, protecting our marine treasures, and empowering ocean citizens”. The Sandwatch Foundation was invited to make a presentation.

The event was opened by Irina Bokova, Director-General UNESCO, who spoke about ocean observation, ocean conservation and the important role of programmes like Sandwatch in contributing to ocean education.

The presentation on Sandwatch focused on its contribution to (a) volunteerism and ocean stewardship, (b) science and learning, (c) education for sustainable development, and (d) making science fun for students. I also expressed acknowledgement and thanks to the many organisations, groups and individuals that support Sandwatch and help make it a worldwide programme.

Gillian Cambers, Sandwatch Foundation, Fiji



From left to right: Gillian Cambers, Sandwatch Foundation; Jean-Michel Cousteau, Ocean Futures Society; Wendy Watson-Wright, Intergovernmental Oceanographic Commission; Romain Troublé, Tara Oceans

Sandwatch in Tuvalu: Off to a Good Start



Introducing beach monitoring and linking it with education programmes was identified as a climate change adaptation measure by stakeholders working on the Tuvalu National Climate Change Adaptation Programme of Action in July 2011. After learning about the Sandwatch programme they contacted the Sandwatch Foundation.

One year later, a Sandwatch Training Workshop was held in Funafuti, Tuvalu, from 22-24 August 2012. The workshop was sponsored by the Department of the Environment, Ministry of Foreign Affairs and Environment, Tourism, External Trade and Labour; the Ministry of Education and Sports; and the Sandwatch Foundation.



Teachers at the workshop making the short walk to the beach in Funafuti

Twenty four primary and secondary school teachers from Funafuti and Vaitupu participated in the workshop which was led by Carol Young, from the Faculty of Education, University of Auckland.

Due to limitations with air freight services to Tuvalu in July and August, the equipment purchased in advance for the training workshop did not arrive in time. So participants had to make do with some equipment that could be purchased locally such as tape measures, magnifying glasses and rulers with spirit levels, as well as improvising, for example using food colouring instead of dye tablets for measuring longshore currents.



Joining the individual sketch maps to make one complete map of the beach

During the first day the participants divided into five groups and each group had a 20m long stretch of beach to observe and record. Having agreed on a map scale, the participants prepared sketch maps of their observations along their beach section. After completing the sketch maps the maps were joined up on the wall to make a complete picture of the entire 100 m beach length.

On the second day, participants measured beach composition and beach profiles. The mathematics teachers were excited about giving students "real" data to use in the math lessons. They also discussed rising sea levels and how the

beach was likely to re-position itself further inland with rising sea levels. This resulted in discussion about seashore and mangrove planting. Measurements of longshore drift also generated a lot of interest.

On the third and final day, participants presented their sketch maps, and three groups composed songs and sang them. Participants also discussed plans for starting Sandwatch in their schools. All the participants plan to inform other teachers in their schools and in some cases to practise the Sandwatch activities with their teachers before doing them with students. Other participants proposed holding mini-Sandwatch workshops with their colleagues. The participants were also introduced to the Sandwatch website.



Teachers measuring beach width



Measuring a beach profile

The unofficial feedback from the workshop was that the style of workshop whereby participants carried out the activities themselves - was not what they were used to - and they **loved** it.

One participant commented: *"Thank you to all stakeholders who have made this wonderful workshop a reality. It has been an eye opening event for such a big issue (beach sustainability) but was delivered in such a manner that it was very easy to follow and simple to implement from materials that can be obtained simply and could be done by everyone.*

Thank you once again Sandwatch now, I can contribute positively to the better health at our beach."

Carol Young, Auckland



Participants at the Tuvalu Sandwatch Training Workshop

Sandwatch a Priority for Motufoua School, Tuvalu



I participated in the Sandwatch Training Workshop in Tuvalu in August 2012. I was a bit embarrassed in the beginning since I was the only Commerce (Accounting) teacher in the workshop. Most of the participants were Science and Geography teachers. During the workshop I learned a lot and it changed my mindset so that "climate change" is not a business for scientists and geographers only" rather "climate change is everyone's business" including me as an Accounting teacher. It was indeed a very interesting workshop and I thank Carol for sharing her expertise in this area and in the area of teaching pedagogy.

We have followed up on the workshop and on Wednesday, 14th November, I was given the chance by the School Principal to display our second awareness program to the whole school (students and teachers) about the Sandwatch programme. I talked about the brief history of the programme, the main purpose and objectives of Sandwatch, activities and our action plan for 2013.

On the 20th November, during our Prize Giving and Graduation Ceremony, the Principal, Mr. Siautele Lito declared in his Annual Report that the Sandwatch programme is one of our priorities and that the school will commit to implement it by the 1st quarter of 2013 and to continue thereafter. He further explained to parents, guests and Chief Guest, Dr. Sir Tomasi Puapua, the former Prime Minister and Governor General of Tuvalu that this programme is very useful and the management is now ready to carry out the integral part of Sandwatch – integrating it into the existing curriculum of the School.

Fineaso M. Tehulu, Motufoua Secondary School, Tuvalu



Funafuti, Tuvalu



Mr. Siautele Lito, Principal of Motufoua School, Tuvalu, speaking at the graduation ceremony.

Kiribati Comes to Coogee in Western Australia



Sandwatch students at South Coogee Primary School were delighted to invite Ms Tarema Henry from Kiribati to the school to talk about life in Kiribati and to perform a traditional I-Kiribati dance. Tarema is nearing the completion of her studies in Perth before returning to Kiribati to continue her career with the Government of Kiribati.

Tarema gave her personal insight into life in Kiribati describing how community members support each other through the sharing of food and the responsibilities that all members of the community have for each other. The students were surprised to hear that from a very early age young children in Kiribati help look after babies, collect and cook food and undertake many tasks for an extended family that may include grandparents, aunts, uncles and cousins.

Tarema described Kiribati as a country of low lying coral atolls rising only a metre or two above sea level with sparse vegetation, limited agriculture and a strong dependence on fish as the main source of protein. Of recent concern to the residents of Kiribati is the issue of climate change and potential sea level rise and the effect this would have on atoll countries such as Kiribati. Tarema mentioned that sea level rise could isolate islands, contaminate water supply, severely affect food crops and affect fish stocks that the people rely on.

After talking to the students Tarema then changed into traditional costume and described how plants such as the coconut tree are used to make the decorations that she was wearing. She then performed a traditional dance about the sun and the moon for the students and guests including Logan Howlett, Mayor of Cockburn.

Through the Sandwatch project and the Verve Energy Adopt a Beach project, students from South Coogee Primary will link with students from Moroni School in Kiribati to share experiences and gain a greater understanding of the climate change issue and how people in developed countries can participate in global based actions.

Craig Wilson, South Metro Coastcare Officer, Perth, Australia

Tarema Henry and Vicky Hartill



Tarema Henry and Craig Wilson



Sandwatch Day in Kiribati

The first Sandwatch Day in Kiribati was held on the 21st September, 2012 with the theme of “Ara Bike Reirei” or simply “Our beautiful beach.” The main purpose of having this Sandwatch Day was to promote and to let the wider community know about “Sandwatch”, its principles and what it is used for.

Prior to the Sandwatch Day, the Sandwatch Committee had been working with the Kiribati Green Bag project for several months to prepare for the event. The Green Bag project promotes the “user pays” principle – residents have to pay for green bags in which to place their garbage for collection. This encourages them to reduce the amount of garbage produced by separating recycling materials and organic wastes.

A competition was organized for participating schools such that during the three days, 17-19th September, each participating school was given a 500m length of beach to clean and they had to place the non-organic waste in the green bags provided. The school filling the highest number of green bags would win a prize. The participating schools were Junior Secondary School (JSS) Bikenibeu, KGV & EBS, Moroni High School, William Goward, JSS Animarao, BTC JSS and St Patrick College. The students worked hard in the hot sun to clean the beaches before the judges arrived to inspect their work.



Students from Animaro JSS cleaning the beach

Sandwatch Day, 21 September 2012, started with the arrival of honored guests which comprised the Honorable Speaker to the House of Parliament, Honorable Ministers, Australian High Commissioner, Mr George Fraser, New Zealand High Commissioner, Mr Mike Walsh, the Charge d’ Affaires from Cuba and many others. The occasion was officially opened with a speech by the Minister for Education, Mrs Maere



Beach cleaned by Animaro JSS before (left) and after (right) cleaning



Tekanene which was then followed by some dance entertainments from the youth group, all based on “Ara Bike rerei”.

A drama based also on the Sandwatch theme was performed by the Moroni High School while King George Fifth (KGV) and Elaine Bernachi School (EBS) completed the entertaining performances by singing the Sandwatch Day song which they composed themselves with the assistance of their teacher.



Sandwatch Day ceremony on 21st September 2012

The winner who had collected most of the green bags during the three days of cleaning up was Moroni High School with the total amount of 304 bags. It was impressive that the total amount of rubbish collected off the beach by the six schools was around six tones! This is thought to be the highest number of green bags collected containing beach debris on South Tarawa in just 3 days.

This Sandwatch day was even more interesting with displays made by all schools. This time, only six schools were actively involved in this weeklong event starting from the 3 day clean up leading up to the Sandwatch day.



Sandwatch students from JSS Bikenibou in front of their display

This was a great awareness for “Sandwatch” as a large audience gathered around the Bairiki Square, listening and viewing the displays by the different schools. Expenses for the day were all paid for by the GIZ (German funding) through the Secretariat of the Pacific Community (SPC) and the New Zealand Aid through Kiribati Te Boboto and the EU funded ESAT (Environmentally Safe Aggregates for Tarawa) Project.

By Titeem Auatabu, Ministry of Fisheries & Marine Resources Development

An Outing on the Lagoon

We Sandwatchers of Mayotte are very proud of our lagoon because it is unique and full of sea treasures ! So we were very pleased to spend a day at sea thanks to Mayotte Parc Naturel Marin, which is a state owned company for the protection of sea areas.

The lagoon measures 1400 square meters and it has got a double barrier reef. Scuba diving is the main activity here and there are plenty of sites worth exploring : the S pass, reefs of Peitro, Prévoyante, Surprise, Boa Sadia or north islets, reefs of Bandrélé and Saziley natural sea park, inner reefs and huge south reef pass, Great barrier, preserved reefs and several places recently discovered in western island.

We left early in the morning and started by a visit in the mangrove, it was high tide and we could explore the mangrove canal with the boats, beautiful vegetation, lots of birds and probably a lot of fish that we couldn't see. Then we went outside the lagoon in search of dolphins and we found them: we could see a large group of stenellas dolphins swimming around us and that was exceptional, especially for some of us who had never seen any. Before lunch, we stopped on the white sand islet which is in the South. There, we learned a popular legend about a sultan marrying his daughter and ordering all his people to put the rice they had on the ground so that the bride wouldn't get her dress dirty. But it was a time of great famine, God got angry with the sultan and sent pouring rains which sent the rice in the lagoon and built the isle. But in fact, we learned that the sand is made of coral!

We had lunch on the Bandrélé islet and we could swim, sunbathe, play volleyball on the beach and enjoy the afternoon. That was a wonderful day indeed! Thank you very much Parc Naturel Marin for this beautiful present!

The Mayotte Sandwatch team



Sandwatchers making their way to a white sand islet.



One of the dolphins

Training the trainers in Cape Verde

As part of the UNESCO Associated Schools Net, twelve teachers were trained in Sandwatch methods at the University Institute of Education, Mindelo, Sao Vicente Islands from 4-5 Octobers 2012. The trainers were Sandra Moniz and Carlos Inácio.

The teachers came from primary and secondary schools and the trainers took them through the different Sandwatch methods at Laginha Beach.

The teachers also had an opportunity to exchange experiences and discuss logistics and how to make the project work. The first day was a classroom session and the second day was a practical session.

The first day of the meeting was extremely positive and informative as we learnt about the scope and application of Sandwatch in schools. It is important for students and communities to learn about the preservation and



The Cap Verde Sandwatch Trainers group, October 2012

conservation of beaches and coastlines, as well as their sustainability and rational use. We also learnt about the communication and socialising aspects of Sandwatch.

During the second day of the meeting, emphasis was placed on the practical activities on the beach at Laginha and trainees enthusiastically tried out the different activities relating to erosion and accretion, waves and currents, beach composition, human beach use, solid waste, water quality, plants and animals.

José Monteiro, School Suzete Delgado, said "I am committed to getting my students undertake Sandwatch and share the results with other schools. This meeting was very good." Other teachers said the workshop was extremely useful and gave them confidence to work on Sandwatch with their students.

Carlos Inácio, Sandwatch Trainer, University Institute of Education

Send us your news and articles!

Sandwatch is a global community and we want to hear from you so we can feature your Sandwatch news and activities in this newsletter.

Please send us your updates (maybe just a couple of sentences) or articles for the next issue, due to be published in May 2013.

We welcome articles written by teachers, students, anyone who is interested. We love to hear from you! Please send items for the May newsletter to Gillian at g_cambers@hotmail.com or Paul at bones@caribsurf.com



From Trinidad to the UK

WOW! What an experience. Nineteen students, three members of Staff, three members of the Mayaro Environmental Wave (MEW) and four parents started a Global School Partnership (GSP) journey to the Kings Park Primary School (KPPS) of Bournemouth, UK. What an experience! Mayaro Government Primary School (Trinidad and Tobago) and Kings Park Primary School (United Kingdom) have partnered on the Sandwatch project as we seek to work together on global themes, develop our curriculums and make our schools more relevant and efficient. Life at these two schools will never be the same again, thanks to Sandwatch.



Members of the Mayaro Government Primary School Team in the UK

As a lead up to this visit, students from both schools were engaged in writing to each other. This was designed to help students learn about international themes and become responsible global citizens. This GSP provided educational benefits for our students to develop into global citizens. Sandwatch was creatively used to facilitate such.

The main aims and objectives of this initiative were to develop joint curriculum work, prepare students to function in this global society, where they can critically reflect on their own attitudes and perceptions and challenge idealised or negative perceptions of 'other' people and places.

So where are we? Mayaro Government Primary School (MGPS) is back on the Sandwatch project. After being dormant for a few years, a new team has been created. Despite some challenges, we intend to be an active agent. We have been working along with KPPG to develop their Sandwatch team and programme. Training sessions were conducted and have been facilitated by members of the Mayaro Environmental Wave.

From my personal involvement in the GSP, I have concluded that this global school partnership can:

- Increase students' understanding of global issues
- Equip students with skills and knowledge to become active global citizens
- Ensure young people's commitment to a fairer and more sustainable world

Despite the challenges to sustain this partnership, we all agree that the benefits to be derived from the GSP for the students are worth it.

During our stay at Bournemouth, we had the awesome opportunity to visit Buckingham Palace, Trafalgar Square, the National Arts Gallery, Hengistbury Head, Brownsea Island, and the famous London

Eye. The highlights of our visit were being able to witness the Olympic Torch Relay, while adding a "trini" flavor to it and the visit to the school by one of the runners who participated in the Olympic Torch Relay. Breath-taking. Our students will never forget holding the 2012 Olympic Torch and taking pictures with it. This will be cherished for a life time.



Group photo with the Olympic torch!

Being active participants in the classrooms and having the opportunity to teach at the KPPS were awesome opportunities. Our students interacted with other students, were active participants in the classrooms and enjoyed every moment of those experiences.



Learning about erosion at Hengistbury Head, UK

Thank you Kings Park Primary for a wonderful and unforgettable experience. Special appreciation to the following for making this educational trip an awesome experience. Thank you Mrs Melanie Berkhauer. All your hard work and dedication brought delicious fruits. Thank you to the Head Teacher, Mrs Tanya Bunting for being a willing facilitator. Thank you to all who have contributed in making this possible; British Council of Trinidad and Tobago, the willing sponsors who assisted Mayaro Government Primary School, our Staff and parents. Thank you to the Trinidad and Tobago Ministry of Education and the South Eastern Educational District.

We look forward to the reciprocal visit in November 2012. A warm 'Trini' welcome awaits you. Lets us continue to work collaboratively on the Sandwatch project and make it a resounding success at both schools.

Andy Paul, Principal, Mayaro Government Primary School

From the UK to Trinidad



With bated breath we waited for them to emerge from the arrival lounge. Finally they were here! Six excited Britons armed with their luggage arrived for a whirlwind visit to the beautiful Trinidad and Tobago. This was the return visit of the Kings Park Primary School as the Global Partnership grew between their school and the Mayaro Government Primary School.

Their visit was from the 8th November to the 17th November, 2012. Theirs was a packed schedule which included a one day visit to the scenic Tobago and a Port of Spain (our capital city) and environs tour, along with a trip to the Bird's Sanctuary. The Bird Sanctuary visit was a historic and unforgettable experience; a first for them in such an environment, boating through lush mangroves, observing the environment and seeing thousands of our National Bird, the Scarlet Ibis. What a sight it was. Every day was an adventure which included costume making and a visit to a hindu home for the Divali celebration, an event which saw them all bedecked in oriental garments.

Students of the Mayaro Government School benefitted from the partnership as they were fortunate to experience child centred education under the guidance of the Kings Park Teachers. Our students and teachers tremendously enjoyed these lessons. Even those students whose lasses weren't taught were elated to interact with the students and staff of our partner school.

Since we are working jointly on the Sandwatch project, Mr. Paul once again facilitated another workshop. They visited our Plaisance Beach front, our monitoring area, and participated in hands-on experience of how it is done. They were thrilled and saw areas where they can develop their sandwatch programme. They have decided to include longshore current and wave intervals in their programme. Their teachers were constantly taking notes and videotaping, while the students and Ms Mel, as she is fondly called, were active participants, doing all the fun work.

Back in school, they were also introduced to sand analysis and how it is done. This will also be a feature of their programme.

It was a truly, memorable experience. Thanks to Global School Partnership our counterparts got a tantalising taste of our Trinidad and Tobago culture.

Mala Mohammed, Sandwatch Coordinator & Teacher, Mayaro Government Primary School



Craft depicting the partnership between the two schools



Salima, Maurisa and Vernicia— Sandwatch workshop facilitators

St. Vincent & Grenadines to restart Sandwatch



St. Vincent and the Grenadines has been involved in Sandwatch right from the very start when the programme was just an idea. We took part in the Sandwatch planning sessions back in 1999 and have been keen participants and advocates of the programme ever since.

But as so often happens, people move jobs and sometimes it is necessary to find new champions for volunteer programmes such as Sandwatch.

After a couple of years of inactivity plans are underway to look for a new approach and restart the programme. The UNESCO National Commission for St. Vincent and the Grenadines and the "At the Water's Edge" programme have provided some funding for new Sandwatch equipment and we look forward to restarting in 2013.

Herman Belmar, St. Vincent and the Grenadines



Display on beach issues at a 2008 climate change workshop

Dominican Republic Establishes a Virtual Archive



The Dominican Republic has been very active in Sandwatch for more than a decade and several schools on the south coast of the island are involved in Sandwatch.

Sandwatch is coordinated by a committee which is led by the UNESCO National Commission and involves the Ministry of the Environment and the National Aquarium.

Recently they have established a national Sandwatch repository using Google Documents where all the key documents are housed and available for public access. You can visit this repository at https://docs.google.com/folder/d/0B_OEaJVLjMKOeTZ2RUJvS2ZVTUK/edit

There is a calendar folder which contains calendars for 2012 and 2013 and allows Sandwatchers in the country keep track of key meetings, training events and field camps.



Calendar of events for 2013



Map showing the Sandwatch schools on the south coast

There is also a folder where photos can be added. Other folders document the outcomes of coordination meetings and contain supporting documents such as a list of contacts, a map showing the location of the participating schools, a directory, the Sandwatch Manual, presentations on Sandwatch and much more besides.

This depository represents an important archive of activities and allows everyone to see what is going on.

We will be making a link on the Sandwatch website to this important depository.



Learning to measure beach width

Text provided by Franklin Jesus Tejeda, UNESCO National Commission for the Dominican Republic.

Update on Sandwatch Training Videos



As announced in our May newsletter the University of Puerto Rico Sea Grant College Program is producing short videos of each chapter in the Sandwatch Manual. These are designed to especially help new Sandwatch teachers, community leaders and groups learn firsthand about the Sandwatch methods as well as to help experienced Sandwatchers update their skills.

So far, the first ten chapters have been completed in English and Spanish. The video for each chapter is about 5 minutes long and they complement the particular chapter in the manual. The remaining chapters will be completed early in 2013 and thereafter they will be compiled onto a DVD and made available on the web.



Screen shots from the Sandwatch training videos



Sandwatchers Assess Coastal Erosion in Seychelles: Follow-up Visit to Anse Kerlan



Sandwatchers from English River Secondary School made a follow-up visit to Anse Kelan in Praslin on 23rd November 2012 to observe and assess the effectiveness of the coastal development project being undertaken by the Ministry of the Environment.

This was a follow-up to the fieldwork carried out in January 2012 and also one of the club activities on the Sandwatch plan.

The objective of the visit was to evaluate the problems facing the coastal environment and observe different approaches to address these issues. Two experts from the Ministry of Environment accompanied the English River Sandwatchers on the second visit to explain the project being implemented by their Ministry in detailed.

The objectives of the November visit were:

- To enhance partnership with the Ministry of Environment and the local community on Praslin.
- To educate and spread awareness on the effects of climate change to the youth and adults and promote environmentally friendly behaviour.
- To carry out interviews with the local community-based on issues of coastal erosion and development.

Wendy Noel, English River Secondary School, Mahe, Seychelles

Coastal protection at
Anse Kerlan



Wendy Noel at a Sandwatch workshop in 2010



Sandwatch Teaches Valuable Lessons in Science in Bahamas



Hope Town Primary School has been involved in Sandwatch for over 10 years and many students through the years have become more proficient in all levels of Science because of the many, varied activities the school has participated in. They also have continually done well in Science Fairs using their Sandwatch projects.

This year the Abaco Science Fair was held in October and the students had to choose a habitat that is threatened as their topic. Hope Town School naturally chose the coral reef as that is where most of their Sandwatch studies take place. The project was titled "Underwater Cities in Peril".

The project was a comparative study of their adopted patch reef between the years 2008-2012. This reef is located in front of a local resort and is only 50 feet offshore. Students and teachers frequently swim out to the reef to check on its condition.

Students conducted interviews in the community to see how aware local residents and visitors were about proper reef etiquette. They snorkelled out to check on its condition and videoed the adventure. They compared previous studies and found that the reef looked better and had a better selection of fish on it. But unfortunately they still found trash washed onto the reef.

Their conclusion was that the reef needs constant monitoring, protection, and more education needs to be given so that people understand the reef's importance. They took immediate action to produce a brochure with this needed information printed on it. These brochures are put in areas where visitors and residents alike

frequent. They also wrote a letter voicing their concerns to their local Member of Parliament along with a letter to officials announcing that a certain section of reef was officially being adopted by the school. Their entry consisted of models they constructed of the reef, examples of trash that they found and a display of the video they shot.



Students display their work at the Abaco Science Fair



This project earned them first prize in the Upper Primary category (Grades 4,5 & 6) and they were awarded an iPad as their prize. It was a thrilling day and they were pleased to be able to educate many students from so many other schools that attended from all over the island of Abaco.

Not to be outdone, the Lower Primary grades (Pre-School, 1,2, & 3) posed the question: "Do Humans Hurt or Help our Coral Reefs?" as their project. At first the students thought that people were helping our reefs but they looked at the trash taken off the reef and the way people stand on the reef and break off pieces of coral and they made the conclusion that we humans are the leading contributor to the reef's destruction. The students created signs for the reef's protection asking people not to stand on the reef or anchor boats on the reef. Their project earned them second prize and they were awarded a microscope.

It was a very educational experience and one that the students will continue to work on as they practice their Sandwatch work in that beach area.

Hope Town Primary School Sandwatchers, Bahamas

Assessing Coastal Erosion in Praslin



Over the course of one year Sandwatchers from the Praslin Secondary School have been involved in a community based project in partnership with the Green Island Foundation to monitor the changes, effects and rate of coastal erosion along the selected sites and whether these are a result of human activities on the coast or natural causes. The Global Environment Fund (GEF) was responsible for financing this project but it has currently stopped so not much study and work was done this year. A team of concerned citizens held talks with the organization but they are still waiting for a feedback.

In November 2012, the Praslin Sandwatchers joined up with the English River Secondary School Sandwatchers to carry out an assessment. They visited 11 sites stretching from the airport to Palm Beach Grand Anse.

Palm Beach was one of the areas most affected and as a result rock armoring had been put in place by one hotel owner to protect his area. But it was not a success as his actions affected the whole surrounding area. This is because it was not carefully planned and as a result increased the rate of erosion on the other side the beach. The vegetation has disappeared and the rates of wave and wind erosion are at their peak.

Other areas observed include Anse Marie Louis, Anse Consolation and Anse Lazio where coastal erosion is a major problem.

Grand Anse School Praslin and in particular the Sandwatch Club are taking the initiative to survey the beaches on the whole island on a monthly basis and they plan to publish their findings after one year.

The group came up with several suggestions:

- Sensitization in schools and community about the need for coastal protection.
- Market the Sandwatch club in all schools.

- Replanting and trimming instead of completely removing coastal vegetation in developed areas. (Takamaka, velutie, coconut and Bone care are trees that thrive well along the coast.)
- Tourism is partly to blame, and sensitizing tourists about the need to protect these areas is in order, especially since their beauty is the reason tourists were attracted to them in the first place.
- Organizations like the South African Development Community SADC are willing to fund such initiatives but no one has taken the initiative to forward this project.
- This project needs to be properly planned in order to be effective.



Discussing ideas on ways to care for Praslin beaches



The schools participating intend to publish their findings after one year.

Other activities included:

- Tree planting (by the English River School at North East point).
- Monitoring coastal pollution and participating in cleanup activities along the coast.

Veronica Souyana, Praslin Secondary School Sandwatch Group

Sandwatch to start in Indonesia and Timor Leste



The UNESCO Jakarta Office has produced a Sandwatch brochure in Bahasa for use in Indonesia and Timor Leste so as to raise awareness about Sandwatch. The brochure is available on the Sandwatch website.

Planning has been underway for some time now on starting Sandwatch in Indonesia and Timor Leste. In Indonesia, "Coral Watch" is quite well-known, but of course their focus is on corals. The opportunity to implement Sandwatch represents a new environmental education opportunity which is particularly exciting because it requires few funds, which is particularly important in schools which do not have a budget for environmental education.

Plans are underway to start on a small scale early next year with only 2 or 3 sites in each country (with 1-2 schools at each site).

Lisa Hiwasaki, UNESCO Jakarta Office

New Sandwatch brochure for Indonesia and Timor Leste

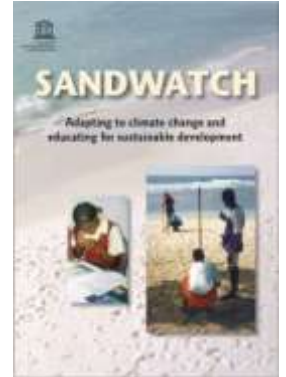
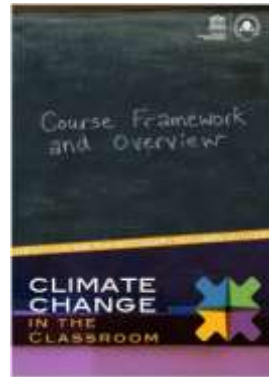


Training Programme for Secondary Teachers on Climate Change

UNESCO and the Sandwatch Foundation are working together to develop a training program for teacher educators, trainers and teachers. This training programme will be based on the UNESCO Secondary Teacher Course on Climate change in the classroom and the Sandwatch Manual.

The goals of this training programme are to ensure that trainees are:

- equipped and confident to integrate climate change into pre- and in-service teaching programs.
 - confident in facilitating climate change education for sustainable development across the curriculum and inside and outside the classroom
- equipped to provide out-of-the-classroom educational programs in accordance with the MAST (measure, analyze, share and take action) approach which constitutes the basic principles of the Sandwatch program.



Some of the resources for the training program on climate change

It is anticipated that this work will be rolled out in 2013.

Sandwatchers around the world!

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



Measuring beach height at a 2010 Sandwatch workshop in Seychelles 2010

“I participated in the Sandwatch Training Workshop in Tuvalu in August 2012. I was a bit embarrassed in the beginning because I was the only Commerce (Accounting) teacher in the workshop. Most of the participants were science and geography teachers. I learned a lot and it changed my mindset so that climate change is not for scientists and geographers only, rather climate change is for everyone including me as an accounting teacher.”

Fineaso M. Tehulu, Motufoua Secondary School, Tuvalu



Mayotte Students



Hengistbury Head UK



Mayotte Turtle



Database planning meeting



Screenshot of map from database



Sandwatch Day display in Kiribati