

Final Report

A community based Marine Anti-litter Campaign was undertaken by the Windward Island Research and Education Foundation (WINDREF) in collaboration with the Gulf and Caribbean Fisheries Institute (GCFI). The project objectives were achieved through the conduct of the following activities:

1. WINDREF increased public awareness of the impact of marine litter released into the waters of Grenada and the Caribbean region through the successful implementation of a public education and awareness campaign. This campaign was achieved by conducting community outreach activities using local personnel, signage, and other materials created for the project. Outreach activities included presentations at schools, civic organizations and local clubs, as well as talks to authorities and law enforcement agencies about the harms of littering to the marine environment. Signage, posters, and brochures were produced and installed/distributed throughout various locations in Grenada. A public service video was produced and aired on local television, several radio interviews were broadcast, and a guest appearance on a locally broadcast morning television talk show was conducted.
2. WINDREF held several meetings with local waste management authorities to discuss ways to develop best litter management practices.
3. WINDREF held several meetings with law and environment authorities regarding ways to collaboratively improve compliance with anti-littering laws and regulations.

Project Activities

1. Increasing public awareness of impacts of marine litter were addressed through the following activities.

- Design community-based public education campaign.
 1. Poster and signage design was created in collaboration with North American Marine Environment Protection Association (NAMEPA)
 2. Brochure design was created and approved for printing and distribution in local businesses and tourist destinations
 3. A school presentation was developed and permission to present was obtained from the Ministry of Education for 8 primary and 6 secondary schools
 4. A 4 hour teacher training workshop was developed, and invitations to attend sent out to 20 schools
- Implement public education campaign in schools, universities, civic organizations and local clubs

1. School presentations were presented according to the following schedule:

School	Address	Date
Primary		
Alpha Junior School	Mt Parnassus, St. George's	November 2010
Bel Air Government	Belair, St Andrew's	November 2010

Bonair Government School	Bonair, St Mark's	May 9 th 2011
St. John's Anglican	Gouyave, St. John's	May 10 th 2011
St. John's RC	Gouyave Estate, St John's	May 10 th 2011
Grand Anse R.C. School	Grand Anse, St. George's	May 11 th 2011
St. Paul's Government School	Grenada	2010 – Peace Core Volunteer
Telescope Primary	Telescope, St Andrew's	May 12 th 2011
Woburn Methodist	Woburn, St. George's	May 13 th 2011
Harvey Vale Primary School	Carriacou	2010 – Peace Core Volunteer
Dover Primary School	Carriacou	2010- Peace Core Volunteer
Hillsborough Primary	Carriacou	2010 – Peace Core Volunteer
L'esterre Primary School	Carriacou	20101 – Peace Core Volunteer
Secondary		
Happy Hill Secondary	Happy Hill, St. George's	May 16 th 2011
Mac Donald College	Sauteurs, St. Patrick's	May 17 th 2011
St. Andrew's Anglican School	Grenville St Andrews	May 18 th 2011
St. Mark's Secondary	Waltham, St Mark's	May 19 th 2011
St. Rose Secondary	Gouyave, St John's	May 19 th 2011
Westerhall Secondary School	Westerhall, St. David's	May 20 th 2011
Wesley college	Queens Park, St. George's	May 23 rd 2011
Grenada Boys Secondary	Tanteen, St. George's	May 23 rd 2011

- Develop and air anti-littering radio spots.
 1. Radio/TV Broadcast Script was developed.
 2. Radio Interview with GSWMA, 4/21/10, 4/23/10, 4/26/10
 3. Radio interview on “The Rise” with Missy. Chrissy & Simon on Spice Capital Radio (90.1 FM), 6/2/11
 4. TV Interview with Ray Roberts on Spice Morning GIS TV 3/28/11
 5. TV Interview with Lexan Fletcher on Chit Chat Community Channel 6 4/19/11
 6. A two minute anti-litter infomercial has been produced using footage from the beach cleanup conducted at Sevan Swayzee, Bathway, St. Patrick's and is scheduled to air on the Spice Morning program and GBN for specified times throughout the year.

- Develop marine litter teacher training manual and teaching aids.
 1. A teacher's resource guidebook was created using one designed by representatives from the Sustainable Grenadines Project, St Vincent and the Grenadines as a guide and posted to the WINDREF website for open use. (<http://etalk.sgu.edu/windref/pdf/WINDREF-Marine-Litter-Teachers-Guidebook.pdf>)
 2. Power point presentations were created for school presentations and teachers training workshop and posted to the WINDREF website for open use. (<http://etalk.sgu.edu/windref/pdf/WINDREF-Marine-Litter-Workshop-Presentation.pdf>)
 3. Other materials used as teaching aids were the posters and brochures.

- Train school teachers as multipliers of anti-littering message.

1. A 4 hour teacher awareness workshop titled “Marine Anti-Litter Awareness Workshop: How to encourage students to put their trash in the bin” was presented to 20 primary and secondary school teachers 5/18/11.
2. Workshop invitations were sent to the following schools:

School Level	School Name	Address	City
Primary	Alpha Junior School	Mr. Parnassus	St. George's
Primary	Bel Air Government	Belair	St. Andrew's
Primary	Beaulieu R C School	Beaulieu	St. George's
Primary	Bonair Government School	Bonair	St. Mark's
Primary	Calliste Govt School	Calliste	St. George's
Primary	Concord Government School	Concord	St. John's
Primary	Corinth Government School	Corinth	St. David's
Primary	Crochu R C School	Crochu	St. Andrew's
Primary	Florida Govt School	Florida	St. John's
Primary	Grand Anse R C School	Grand Anse	St. George's
Primary	Grand Roy Government	Grand Roy	St. John's
Primary	Kids Learning Centre	Paddock	St. George's
Primary	Mt Moritz Angelican School	Mt. Moritz	St. George's
Primary	South St George's Govt School	Springs	St. George's
Primary	St. John's Anglican School	Gouyave	St. John's
Primary	St. John's RC School	Gouyave Estate	St. John's
Primary	St Mary's Junior School	Tempe	St. George's
Primary	St. Patrick's Angelican	Sauteurs	St. Patrick's
Primary	St. Patrick's R C School	Sauteurs	St. Patrick's
Primary	Woburn Methodist	Woburn	St. George's
Secondary	Anglican High School	Tanteen	St. George's
Secondary	Boca Secondary School	Boca	St. George's
Secondary	Grenada Boys Secondary	Tanteen	St. George's
Secondary	Happy Hill Secondary School	Happy Hill	St. George's
Secondary	Mac Donald College	Marli	St. Patrick's
Secondary	Presenation Brothers College	Old Fort	St. George's
Secondary	St. David's Secondary	Belle Vue	St. David's
Secondary	St. John's Christian Secondary	Bothers	St. John's
Secondary	St. Joseph's Convent	Church Street	St. George's
Secondary	St. Joseph's Convent	Grenville	St. Andrew's
Secondary	St. Mark's Secondary	Waltham	St. Mark's
Secondary	St. Rose Secondary	Gouyave	St. John's
Secondary	Westmorland Secondary	Marrast Hill	St. George's
Secondary	Westerhall Secondary	Westerhall	St. David's
Secondary	Wesley college	Queens Park	St. George's

- Develop and distribute marine litter posters and brochures to schools, clubs, shops, tour operators, hotels.
 1. 50 24"x38" posters were printed and distributed to primary and secondary schools and 50 8.5"x11" posters for other establishments were printed and distributed to hotels, restaurants, local shops and supermarkets, community centers, and fish markets around Grenada
 2. 300 brochures were printed and distributed to selected hotels and restaurants, ministries and fish markets around Grenada. Some brochures were also distributed to teachers who attended the "Teacher's Awareness Workshop."
 3. At least 4 press releases were distributed during the course of this project
 4. A Facebook page was created on behalf of the campaign where pictures were uploaded from different activities. (Marine Anti-Litter Campaign (Grenada))

- Install anti-littering signage at beaches, marinas, parks and community areas.
 1. 4 permanent signs have been produced and will be installed at specific locations – pending approval from Mr Purcell with the Physical Planning Unit. A field officer is being currently assigned to make a field trip with our team to different locations and approve installations. Suggested areas include:
 - a) The fish Market area in Waltham
 - b) Telescope Bay
 - c) Savan Suez beach
 - d) Bathway Beach
 - e) River Antonie Beach
 - f) The Lance Bridge area in Gouyave close to the river.

- 2. Work towards the development of best litter management practices by mobilizing the hands-on participation of local stakeholders. GCFI will assist with developing litter reduction evaluation techniques.
 - Plan for and procure waste and/or recycling receptacles.
 1. The Grenada Solid Waste Authority was skeptical about adding new bins as they are currently lessening the amount of bins around the island. They believe that excess bins in areas where pick up is not frequent encourage more pests (rats etc.) So they are attempting to localize bins to general areas where everyone in a community can access.
 - Install waste and/or recycling receptacles.
 1. Due to the short period of time allocated to this project and limited resources we are unable to establish a recycling program.
 - Collaborate with relevant local stakeholders for appropriate disposal of collected waste.
 1. We have identified two problem areas in the north of the island which require urgent attention. Further discussions are planned with Mr. Andre Worme, Chief Environmental Officer at the Ministry of Health and Mr. Vaughn Forsyth, Operations Manager at Grenada Solid Waste Management Authority.
 - a) Sevan Swayzee, Bathway, St. Patrick's
 - i. A Coastal Cleanup was conducted May 15th 2011 at 8:30 a.m. Over 25 members from local community group (The Snell Hall Sports and Cultural

Club) were present plus members from ECO group at St. George's University. We have developed a plan to totally clear the area of all large debris items.

- b) River Antoine, St. Patrick's
 - i. Local community members continue to dispose of their garbage next to the road and this needs to be further addressed.

3. Improve compliance with anti-littering laws and regulations.

- Compile list of applicable anti-littering laws
 - 1. A paper copy of the anti-littering laws of Grenada was obtained and reviewed

- Develop litter warden program
 - 1. Due to the scope of this endeavor and available time and resources for this project it is not feasible to develop this program

- Design and implement an education campaign for local community leaders, authorities and law enforcement agencies about anti-littering laws and regulations
 - 1. Productive and informative meetings have been held with a number of authoritative figures in Grenada who supported us in various ways throughout this campaign.
 - Mr. Vaughn Forsythe, Operations Manager, Grenada Solid Waste Management and Authority (GSWMA)
 - Mr. Paul Phillip, Chief Environmental Officer, Ministry of Environment, Foreign trade and Export
 - Mr. Johnson St. Louis, Chief Fisheries Officer, Ministry of Agriculture, Forestry and Fisheries
 - Mr. Andre Worme, Chief Environmental Health Officer, Ministry of Health
 - Supt. Edwin Martin, Operations Officer, Royal Grenada Police

 - 2. A workshop titled "Marine Anti-Litter Awareness Workshop: Encouraging local police and other law enforcement agencies to target littering issues in Grenada" for Police and Environmental Health Unit Officers is scheduled to be held on July 5th, 2011.

Enclosures

- 1. Press releases
- 2. Radio/TV broadcast script
- 3. Photographs of beach cleanups, teacher workshop, school presentations
- 4. Teacher workshop invitations
- 5. Teacher workshop agenda
- 6. Teacher workshop sign in sheets
- 7. Teacher workshop presentation <http://etalk.sgu.edu/windref/pdf/WINDREF-Marine-Litter-Workshop-Presentation.pdf>
- 8. Teacher workshop manual <http://etalk.sgu.edu/windref/pdf/WINDREF-Marine-Litter-Teachers-Guidebook.pdf>
- 9. Teacher workshop certificates

10. Police & Environmental Health Unit workshop invitations
11. Poster
12. Financial report
13. Brochure

Financial Report

See attached excel spreadsheet

Your Desired Future Steps and Follow-Up Actions

1. Education and Outreach
 - Based on the amount of garbage that has been observed on beaches and other coastal areas around Grenada we have come to the conclusion that many people have not yet changed their behaviour. Therefore, in order to reduce the amount of marine litter that enters the marine environment a long-term public education campaign is necessary. This should involve local Community members and organizations, schools, government and authority, and the tourism and fishing Industries. People require the knowledge, training, and motivation to voluntarily change their behaviour. Also, local community members need to be educated on the aesthetic, environmental and economic impacts of illegal dumping and the legislation associated with it.
2. Community Litter Warden Pilot Program
 - We propose a future pilot project that will focus on the River Antoine - Bathway area in St. Patrick's. In doing so, we can monitor the effectiveness of the program before implementing in other areas.
3. Recycling Efforts
 - Evaluate the possibility of recycling in Grenada
 - a) The objective would be to emphasize recycling as it can help reduce some forms of litter such as, glass, paper and clothes and plastics. This can be accomplished by promoting new and existing recycling initiatives through school activities. Currently, the Grenada Solid Waste Management Authority is conducting the Environmentally Friendly Schools Initiative (EFSI) in which schools participate in environmental projects and competition. Participating schools have created some simple ways to recycle items by using them for arts and crafts. Another suggestion is to involve local supermarkets in promoting recycling initiatives. For example, Foodland Supermarket on the Lagoon Road conducted a plastic bag recycling venture where costumers would be refunded (10 cents) for reusing old plastic bags.
 - b) These are currently not large-scale recycling efforts but we would like to have the opportunity to start somewhere. This can create awareness of the importance of caring for environment and initiate the change in behaviour that we are looking for in our people. And in the future open the way for more large-scale recycling opportunities.

4. Law and Legislation

- The Waste Management Act 16 of 2001 is in existence and states “A person who generates waste and who discards it in an inappropriate receptacle commits an offense penalty: A fine of \$20,000 and/or imprisonment for 3 months.” This law is not enforced so a lot of locals do not know of their existence. Therefore, much work needs to be done with authority and government agencies on developing and implementing the best ways to increase awareness about the Anti-Litter Act and lay emphasis on the fact that offenders can be prosecuted when caught littering illegally.

5. Working with local organizations and Non-governmental Organizations (NGOs).

- In Grenada there are various organizations that work together to combat the issue of littering. Although government organizations are usually in charge of protecting our natural environment they cannot succeed without the help of the local community and NGOs. As a result we need to pull all our resources together and come up with effective ways of dealing with illegal littering and environmental pollution. This close interaction between all parties responsible is a crucial component in making this initiative a successful one. For instance, in Grenada there are a number of environmental friendly events organized by The Ministry of Agriculture, Forestry and Fisheries and Ministry of Environment, Foreign Trade and Export which are scheduled to take place all through the year (2011). This is in accordance with the year 2011 being declared by the United Nations, The International Year of Forests.
- To follow is a list of different government agencies and their proposed responsibilities;
 - i. Ministry of Health, Environmental Unit, is responsible for the control of land-based sources of pollution (solid waste).
 - ii. Ministry of Environment, Foreign trade and export is also responsible for the control of land-based sources of pollution (solid waste).
 - iii. Grenada Solid Waste Management Authority works in collaboration with the Ministry of health and is also responsible for the control of land-based sources of pollution (solid waste).
 - iv. Ministry of Agriculture, Forestry and Fisheries is responsible for both land and sea-based sources of pollution.
 - v. Grenada Ports Authority controls the litter associated with the port areas.
 - vi. Royal Grenada Police Force is responsible for enforcing the Anti-Litter Act along with officers from the Ministries.

Conclusion

This Marine Anti-Litter Campaign most certainly has the potential to expand and be strengthened in the future. But in order to do so much research has to be done. The successfulness of the campaign also depends on how well we as campaign coordinators understand the behaviour of persons who litter before targeting them. Over the course of this project we have impacted the awareness of many local groups and are continuing to do so. For example, after our radio interview with Missy Crissy and Simon on Spice Capital Radio, the radio community volunteered to undertake a coastal clean-up venture with us within the next two

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months. Little community initiatives like this one would indicate that people are becoming aware of the problem and are motivated to take action to take care of the environment.