



**ANTIGUA & BARBUDA RED CROSS**

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# **BENDALS**

## **Community Assessment**

### **(VCA)**

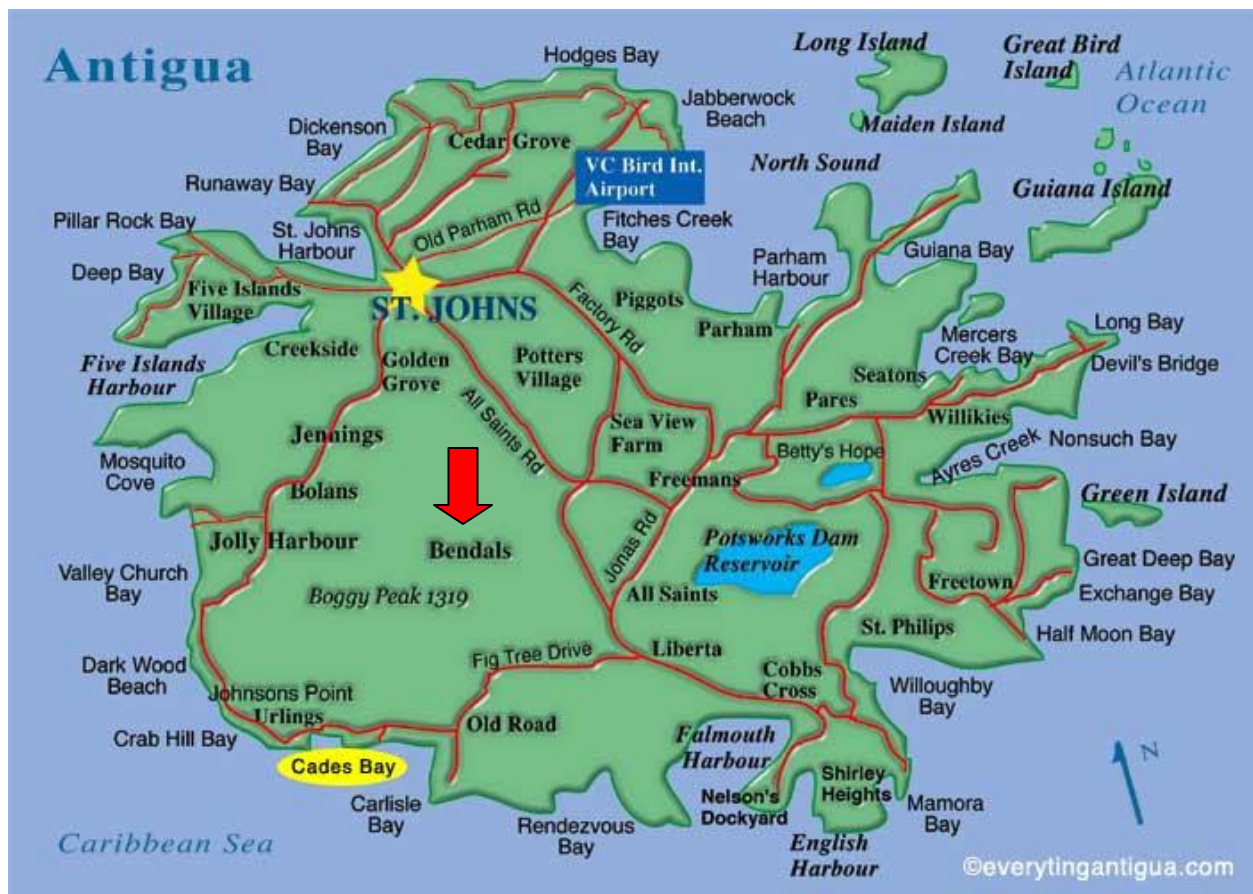
**March 14-18, 2010**

**Readiness to Respond 2009-2011**

BENDALS COMMUNITY

Bendals is a community of approximately 1400 persons. It is mostly a farming area where small and medium size farmers operate, there are no commercial activities taking place except for the unique feature of two quarries, one owned by the government the other by private enterprise.

Most of the working members of the community works in St. John's, the capital city, the remainder either work by farming while others work at one of the two quarries. There is also some level of self employment in the area of small village shops and beauty salons. The area is also responsible for pipe borne water to a greater portion of the city, for it has well or surface water which flows through it and has a very large catchment area. The land is very arable, and at one time had a sugar factory there in the year 1937, and this was the start of the community as a sugar producing area to this day the community still has one of the few agricultural stations on the island. The topography of the community is very rich arable soil, and a hilly area as it is situated between the Eastern and Southern range of hills.



The area of Bathlodge which is one of the two main entrances to the wider area of Bendals is on the northern side. This area is located at the upper end of a water shed which has an area of approximately 3500 acres ( 5.5 sq. miles). The lower section of this water shed is sparsely developed and is mainly agricultural or undeveloped lands. The topography of the water shed ranges from relatively flat to a moderate slope, the special feature of this topography is that more than 90% of the area is relatively flat. The surface runoff into this watershed originates along the All Saints Road, Browne's Avenue Area, Golden Grove and the higher areas of Cashew Hill , these are all densely populated .

It is apparent that residential development will be confined to the area already being developed. However there are some serious challenges to the drainage in the lower residential sections. Improved drainage works have been confined to the higher sections of the water shed and the lower sections have seen some attempts at development, however the problem of flooding still remains, and will always be a problem.

The area of Greencastle has a similar problem to that at Bathlodge, but this area is very sparsely populated and the flooding comes from the runoff of both Bathlodge and the greater area of Bendals. Big creek which is an area which is partly dammed for farmers can be said to be part of the problem as the runoff is into a generally flat area that was once used for sugarcane planting.

This area was chosen for the USAID / OFDA program for it's uniqueness , in that ,in times of heavy rainfall it is cut off at both entrances to it because of the waterway that runs through it. A baseline study was conducted of some 100 households and it was determined that most of the persons were not aware of shelters or safe places of refuge in a disaster, though the National Office of Disaster puts out ads on the radio on a regular basis, it was felt that the program had to do with some political group and that had to be overcome but we prevailed and got the help of a considerable number of persons . This has been determined because there is talk in the community that the community group that we chose to work with had political aspirations or were too political.

However, we have persisted and a VCA was conducted, we did not get the full participation as was first promised by the members. There was a poor turnout on the first day only 5 persons showed up, but on the remaining days we had about 18 persons in all, though not at one time. There were some lively discussions, and, we were able to get some very useful information, thanks to Mr. Humphrey Blinker who facilitated this project.



**Members of the Bendals VCA team conducting interviews.**

The purpose of this assessment is to evaluate and observe all potential hazards , vulnerable areas and capacity resources and measurements. Our expectations for the Vulnerability Capacity Assessment (VCA) training is to improve response time, improve community knowledge and prepare the community for unforeseen disasters through awareness and education.

Trained participants have assessed their area to:

- Identify hazards and vulnerabilities in the surrounding areas
- Recognize skills and resources available (First Aid and otherwise)
- Identify actions which the community can implement to reduce risk
- Prepare micro project proposals

These are the results of the assessments which were undertaken by the members of the community from March 14<sup>th</sup> to 18<sup>th</sup> 2010 at the Bendals School.

### **Community baseline and secondary data:**

Official name of Community: Bendals

Location of Community: Mid central of the southern area of the island

Main access route: Main road coming from the north of the village on the eastern side, and main road from the western side of the village. There are two other roads, but these are hardly ever used.

Population of Bendals: 1425 (census 2001)

462 households (census 2001)508 (est.2007) Statistics Division

684 males (2001 census) 741 females (census 2001)

There have not been a breakdown of the age categories by the statistic division for the Bendals community, as this was included in the general area of St. John's rural area 3. A more detailed study will be undertaken to determine this later.

### **DIRECT OBSERVATION**

We noticed the following from our walk about the community:

Blocked drains from garage

No drains in some areas

Water tanks

Old abandoned vehicles along the road

Discarded construction materials

New houses under construction

Agriculture and farming

Incomplete roads, iron rods/ BRC exposed

Roads with pot holes

Cleared hillside land



Bendals has experienced many hurricanes and impacts: 1995 Luis, 1998 Georges, and 1999 Lenny

1. Flooding, reaching up to 7'-10' in some areas, entrance to the village cut off at both entrances.
2. Poor drainage, blocked drains from debris put in water ways
3. Debris and falling trees causing blocked roadways
4. Bushy area – encourage insects
5. Stagnant water – breed vectors such as mosquitoes

Participants of the assessment training went throughout the community to targeted areas to thoroughly evaluate and observe foreseen hazards, capacity and vulnerable areas. Teams were divided into smaller groups with volunteers to accurately assess the community, listed below are their findings:

- Blocked drains by bush and solid waste
- Weak bridge
- Lack of proper drainage for waste
- Unfinished roads in some areas with exposed steel – danger to vehicles
- Dust from quarry affecting school (air pollution – asthma irritant)

- Excess bushes around area
- Houses built in flood prone areas
- Abandoned houses in state of disrepair
- Some homes without running water (health risk)
- No police station in the community
- No hospital, clinic functions partially
- Abandoned vehicles – breed mosquitoes

Upon completion of the community walkabout the participants were able to realize how much they actually knew of their surroundings and what they did not know. All were uniquely aware of the main hazards that existed, they also appreciated the knowledge learnt from sharing with the residents who were interviewed in the neighbourhood.

## **Historical Profile of Bendals**

Historical Profile questionnaire. Community members visited and informally interviewed their neighbours, asking the following questions

- a. How long have you lived in the community?
- b. Has there been any major disasters during that period?
  - i. What were these?
- c. Has the community changed drastically during the period?
  - i. What are the major changes
- d. Do you recall the dates of construction of any major sites?
- e. Are these sites a major hazard or of benefit to the community?
- f. Is the area prone to flooding?
  - i. What areas are most vulnerable?
  - ii. Has this areas been cut off from the rest of the country?
- g. How do residents cope with disaster?
- h. What are the areas of most concern in the event of a disaster?

<b>Date</b>	<b>Event</b>
1900	Start of the Bendals sugar factory
1939	Bendals sugar factory closed
1950's	<b>Bridge</b> constructed along main road Relocation of village from Hamilton to Bendals
1969-1970	School relocated from area near St. Luke's church to present location
1970	Quarry opened
1974	Relocation of the area of St. Thomas, due to <b>blasting at quarry</b>
1974	<b>Earthquake</b> - many houses damaged, St. Luke's church damaged
1980	Blasting at quarry <b>injures student</b> (Eldra Bachelor – leg injury)at the school. Public demonstration - Quarry hazard to school
1989	<b>Hurricane Hugo</b> - area flooded
1995	<b>Hurricane Luis</b> –many houses destroyed, also the St. Luke's Church <b>Area flooded</b> many houses damages
	<b>Ash fall</b> from Montserrat Soufriere volcano forces school to close
1998	<b>Hurricane Georges</b> - area flooded, damage to houses
1999	<b>Hurricane Lenny</b> caused widespread flooding
2003	Heavy rains causes <b>flooding</b>
2008	<b>Hurricane Omar</b> rain bands causes flooding
2009	<b>Bush fire</b> on Quarry Hill Picketing Public Works to continue the road construction program Major <b>road accident</b> resulting in the death of one person
2010	<b>Hurricane Earl</b> flooding 4'-6' next to farm and bridge

### Figure 1 - Vulnerability Map of Bendals

Based on the hazards the vulnerable areas are near the Bridge whose structure has been in a state of neglect for years.

Flooding in the area Bath Lodge (c. 40 homes) and Green Castle (c. 12 homes) as well as in the center by the bridge area ( Clinic, bakery, government nursery and about 6 houses).



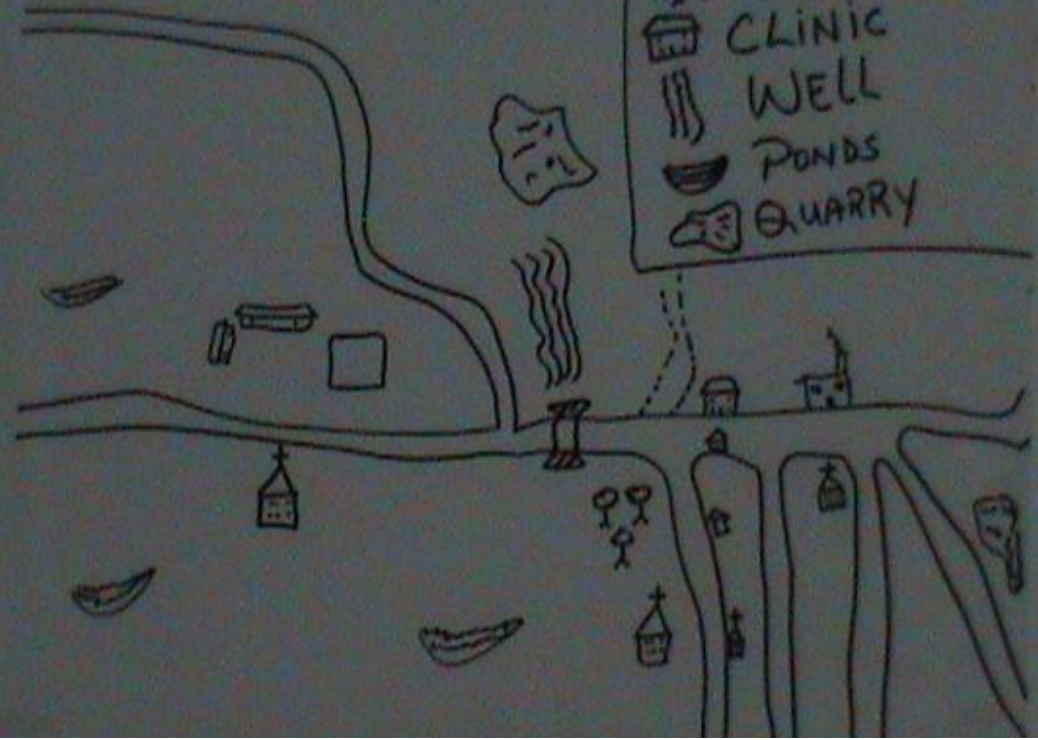
## Capacity, Livelihoods and Coping Strategies

Our community has a lot of capacity to reduce risk and respond in times of disaster.

Capacity	Source	Notes
Shelters	Church	Church of God Zion Church Adventist Church
	School	Bendals primary School
Food & other supplies	Shops	Aunty Baby - Top of Main Road Celina Sadai (super market)
	Bakery & Shop	Patrick Colbourne
	Agricultural station / green house	In flood prone area
	Butcher Stall	Lawrance
	Farmers	
Health & water	Clinic	
	Well	Eastern side of the bridge. Government uses as water treatment plant
	Water ponds Bendals Ghaut (creek)	Farmers in Green Castle Farms on the main road pump from the creek
	Nurse	Retired
Materials	Quarry	
Human Resources	Barber shop	Mr. Vanscito Thomas
	Hairdresser	Sadai Suzie
	Pastor	
	Builder/Photographer	Trinity Adams
	Contractors Back hoes	Elliot
	Heavy Equipment Trucks	Ewart Issac
	Teachers	Lindale Daniel
	Electrical Engineer	Jason Peters
	Welder	Alexis Joseph
	Police Officer (retired)	Violet Martin
	Manager	Derek scout
	Researchers / Historian	Linley Winter

# CAPACITY MAP BENDALS

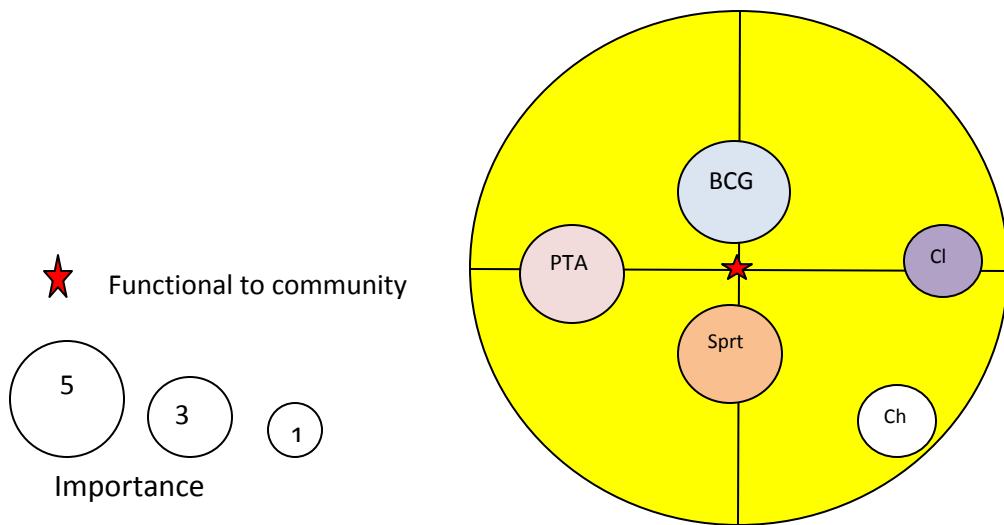
- CHURCH
- SCHOOL
- SHOPS
- AGRICULTURAL STA
- CLINIC
- WELL
- PONDS
- QUARRY



## Institutional Analysis

Bendals has a number of important and useful organizations. A review was undertaken by the community.

Organisation	Average score	
	Important to community	Functional and Useful
Bendals community group	4.4	3.6
Primary School PTA	4	2.2
Sports	4	3.2
Health Clinic	2	1
Church Groups	2.6	1.4
Pathfinders	0	0
Women's Group		0
Youth group		



For Bendals it is important and useful to include the PTA, sports groups and the Community Group in risk reduction activities. It is also necessary involve the church group and the clinic personnel.

### Seasonal Calendar

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Hurricanes												
Wet/Rainy Season												
Dry Season/Drought												
Flooding												
Bush Fires												
Flu												
Mosquitoes/Dengue												
Festivals												
School Term												
Crops												

Many opportunities for training and interventions occur in the first part of the year. Application of response training activities will occur in the latter part of the year in response to flooding. This period is the best time for hurricane flood and mosquito protection programs. However mid year May June is a good time to carry out mosquito prevention programs with information on reducing breeding sites.

## Problem Statements

### Issues to be addressed in the community of Bendals.

Risk reduction	CIA/T	Actions	Other development issues	
Collapsing road – next to the farm on the main road. Exposed BRC	Influence	Repair road 1 mile	Unfinished roads – exposed steel danger to vehicles	
Weak bridge	Influence	Retrofit/Rebuild bridge	No running water - school	
Gutters and drainage system needs to be cleaned	CAN	<b>Clean drains and gutters</b>	Clinic functions partially. Need a cottage hospital and a resident doctor	
Excess bushes – mosquito problem	CAN	<b>Trim or clear bushes</b>	No police station – nearest one 3 to 4 miles away	
Poor drainage for runoff and waste water. Floods- blocked drains from garbage, no drains in some areas, village cut off at both entrances. Main road at both entrances and area next to the farms on main road.	CAN C/I  I/Accept	<b>Improve drainage – clearing, deepening, straightening, making proper channels</b> Build a dam	More public transport after hours	
Abandoned buildings –danger of collapsing, earthquake	Influence municipal Corporation	Remove old building	School needs to start functioning using regular hours	
Dust from quarry	Accept Can- takes time for trees to grow	Close quarry – no jobs or aggregate <b>Plant tree barrier</b>	Unemployment	
Hurricanes- debris and falling trees block roadways. Hugo '89 ,Luis '95, Georges '98, Lenny '99, Omar ' '08 Earl '10	CAN – need APUA assistance	<b>Trim trees before hurricane season</b>	Need a food bank (when isolated in floods)	
Vectors- mosquitoes and rats- bushy areas, stagnant water, abandoned vehicles	CAN  Influence/Accept	Clear bush Fix drainage (above) Remove vehicles (if possible)	Sidewalk incomplete	

## **Mitigation Action<sup>1</sup> Options**

### **Flood Risk Reduction**

Drainage channels is over grown, filled with garbage

Clean channel of overgrown bush and garbage within the channel

Enlarge, straighten channel

Plant trees and shrubs to protect river bank

Repair drainage channels in .....

### **Actions**

Consult Public Works to:

(a) If there is an existing study of and solutions for the flooding in Bendals

(b) would they be willing to provide technical support to guide mitigation works which could be undertaken by the community members to help alleviate some of the worse flooding (within the RC budget) or do a cost share for the additional works.

Who: Community member: ABRC DM Team and DG

### **Budget:**

To be determined

### **Timeline:**

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<sup>1</sup> In choosing mitigation actions the solutions must 1) reduce risk in the community 2) not make the problem bigger or create another problem 3) be sustainable e.g. how will the fix be maintained? 4) be within the RC micro-mitigation budget 5) serve either the most vulnerable and or the most people in the community 6) community members will be directly involved in the work 7) completed within the life of this project – Dec 2010: Aug 2011

To be determined

**Resources available from the community**

Back hoes - Elliot

Chainsaws – CDRT

Wheel Barrows

**Plant tree barrier around quarry and trim trees near roadway**

Dust from the quarry and trees falling	Trees falling and blocking roads during severe weather.
Tree barriers near and around quarry to trap and reduce the dust spread.	Trim trees near roads to reduce damage and blockage
Discuss opportunity with the Bendals Quarry management to seek their support	Contact APUA to seek assistance in tree trimming
Contact Min. Of Agriculture and the environment to source seedlings and small trees for the project	
Budget	
Timeline:	
Resources available from the community: Labour, shovels, some manure, gardening tools	Chainsaws, truck to move debris, labour, cutlasses

**Retrofit weak bridge** - in danger of collapsing thereby causing injury and death to persons. A walkway for pedestrian could also be included.

Actions that need to be taken –

- Liaise with Ministry of Public Works for technical support and approvals
- Volunteers from the community will assist in the construction and other persons in the community who have heavy equipment..
- Perhaps engineers within the community can assist with design and implementation
- Consult Masonry Products, Bargain Center

**Budget:**

To be determined

**Timeline:**

To be determined

**Improve Shelter**

Present shelter – school – has inadequate facilities (no inside toilets or showers)

Build a Community Center in the main village to serve those on that side. Which can also serve as a shelter with indoor plumbing, kitchen and sleeping quarters.

**Budget:** \$280-340/sq foot (beyond RC budget)

**Timeline:**



To be determined

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