



LAUDAT

Community Assessment For Disaster Risk Reduction



Preparation



Prevention



Mitigation



Better be Prepared...

Figure 1 - Map of Dominica indicating the community of Laudat



Community Background

Laudat is a small community which is situated in the interior of the Roseau Valley, the highest elevated village in Dominica.

The village is named Laudat after a Frenchman Pascal Laudat, who owned estate land in that area. It is six miles from Roseau and forms part of the base of Morne Micotrin, one of the islands tallest mountains with a height of 4,002 feet. The village is at an elevation of approximately 2,000 feet which accounts for its high rainfall. The community is surrounded by the volcanic sites of Morne Trois Piton, Morne Micotrin and Morne Watt.

Laudat is vulnerable to many kinds of disasters, the high rainfall triggers many landslides which poses a threat to human life. The road leading to the village was cut into steep hillsides resulting in the frequent fall of huge rocks onto the road.

The community is home to activities which have a high probability of occurrence to accidents and disasters e.g. Water-sports on the Fresh Water Lake, adventures in the Ti-Tou Gorge, hiking to the Boiling Lake and the Rain Forest Aerial Tram Tours are some of the high risk activities undertaken continuously in Laudat.

The Health Centre is located in the centre of the village whilst the primary school is located to the south-east end of the village. Most of the community persons work in the capital city Roseau, whilst some work in Tourism and the farming sector.



In 1765 the crater lake was formed, the following century in 1856, the Boiling lake was seen by Henry A. Nicolas after searching for an alternative route to Roseau since the original route was undesirable and much too long. The first farming settlement along with wooden houses were introduced in 1990 whilst the first Roman Catholic Church was built in 1921. In 1950 houses were started to be built in blocks. In 1979 the farming community suffered a great blow by the devastating Hurricane David on the 29th August 1979. The construction of the Hydro Electric power plant begun in 1985, 10 years before the construction of the Rain Forest Aerial Tram in 1999. In 2001 the community experienced a major landslide at the entrance of the village. The rehabilitation of the village main road to the Capital Roseau begun in 2008.

OBJECTIVE: *To prepare communities for any disaster so that it may act promptly to save lives, protect property and coordinate activities before, during and after a disaster. This is to be carried out in collaboration with NEPO (National Emergency Planning Organisation).*

Laudat & Cochrane communities have assessed their area to:

- 1. Identify hazards and vulnerabilities in the surroundings*
- 2. Recognize skills and resources available*
- 3. Identify actions which the community can implement to reduce risk*
- 4. Prepare micro-project proposals.*

What follows are the results of these assessments undertaken by community members over the period March 10, - April 30, 2010.

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COMMUNITY RISK ASSESSMENT - Vulnerability and Capacity Assessment (VCA)

Disasters cannot always be prevented but risks can be significantly reduced through the mobilization of people and hazard reduction efforts at the local level.

Figure 2 Aerial Photograph/ Google earth photo & smaller country map

LAUDAT



Figure 3 - Hazard & Vulnerability Map of Laudat

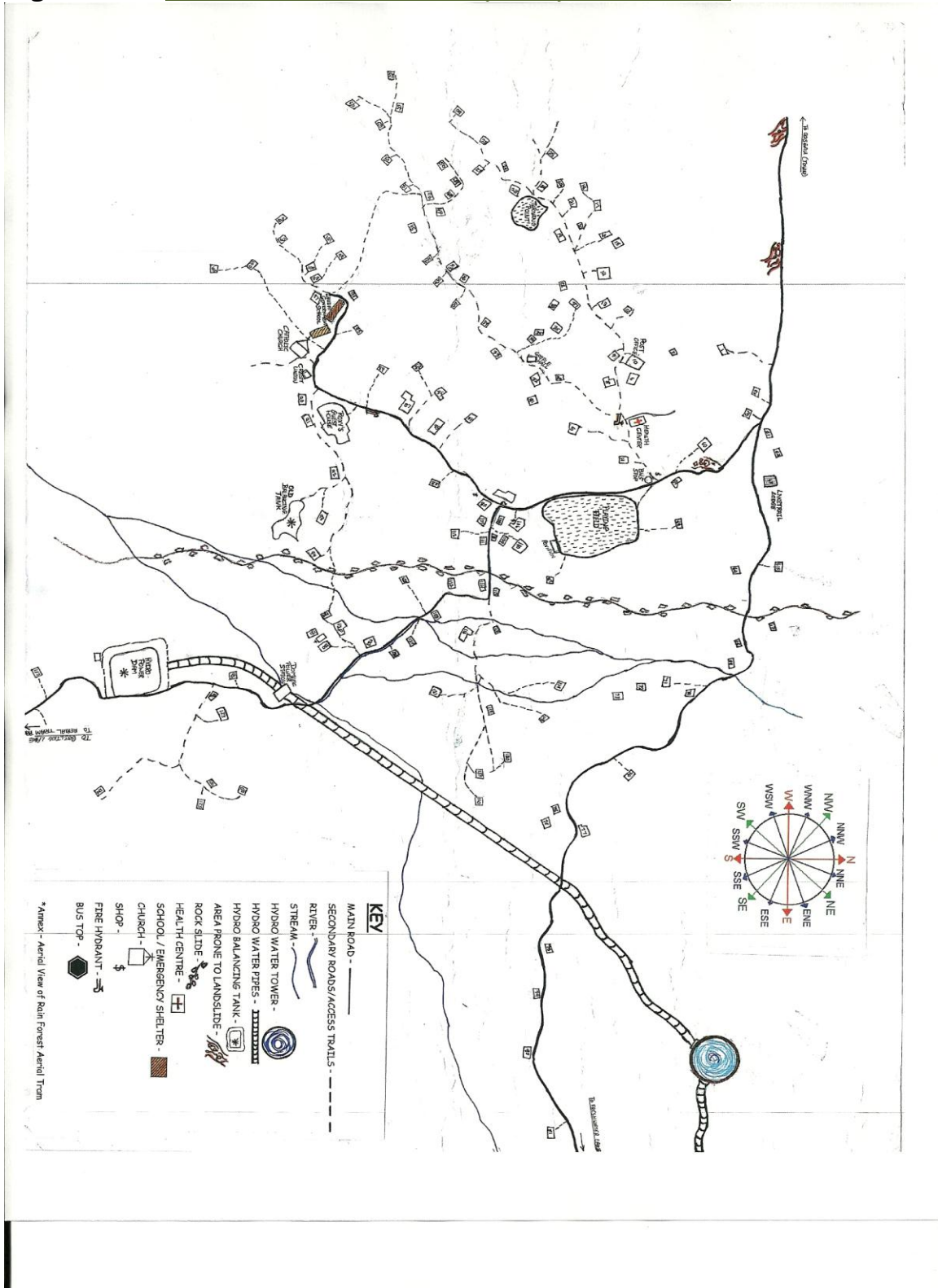
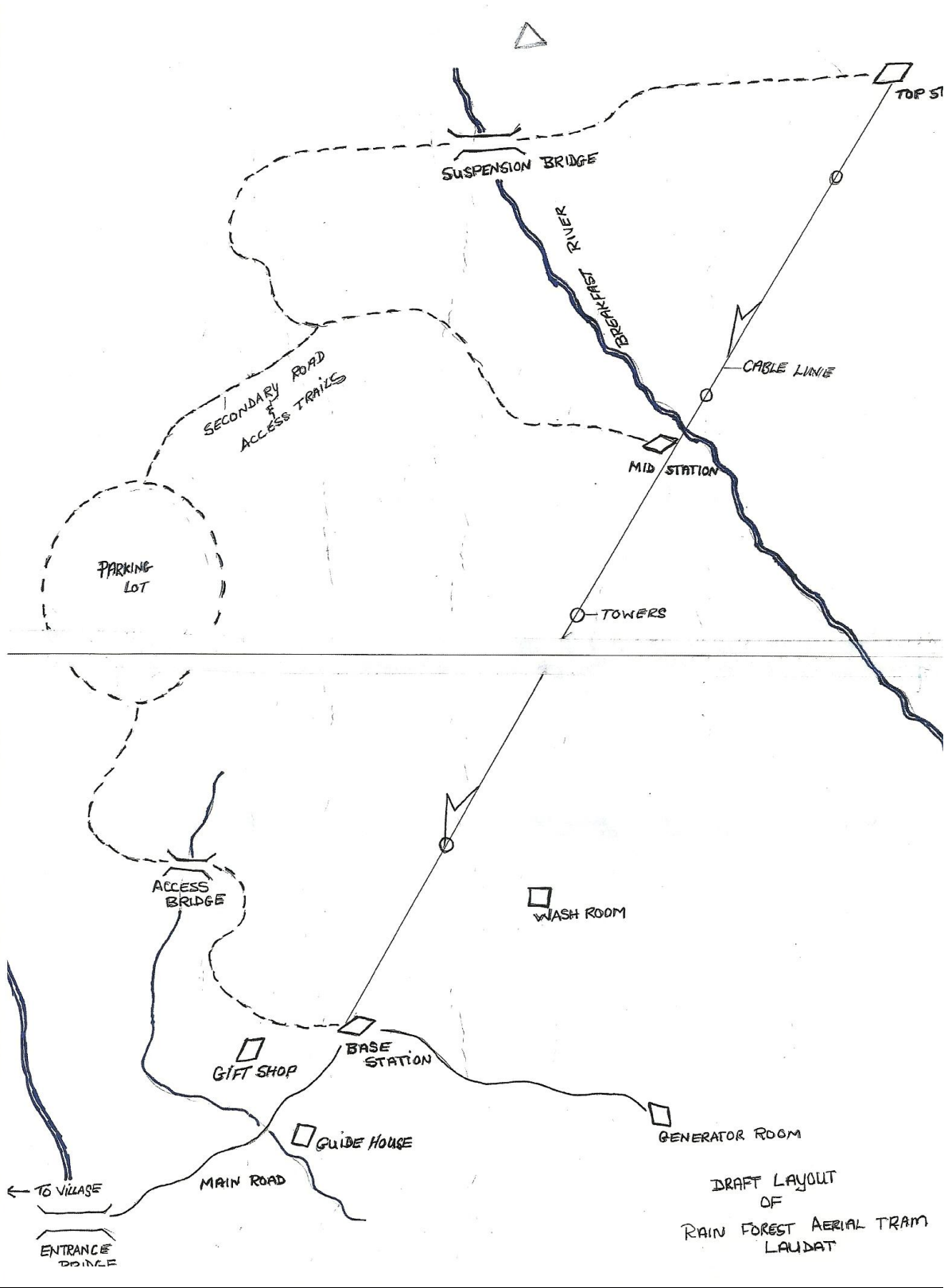


Figure 4 - *Annex - Aerial of Rain Forest Aerial Tram



VCA PROCESS

A map of the Laudat Community was purchased from Lands & Survey department and together with a printout from Google Earth, these were used as the basis for tracing out the relevant features of that community. Following one day of theoretical training on the goals and methodology for implementing the VCA in the community, volunteers were teamed up with community members and allocated specific tasks and locations for carrying out the assessments and mapping. Infrastructural resources were put on the map sections, the homes were allocated numbers and demographic information on each household collected.

- See attached community survey forms.

Analysis

The main hazards in Laudat are:

- *Landslides*
- *Rock Fall*
- *Hurricanes*



Road works taking place in area prone to landslide



Landslide prone area

Other community concerns:

An alternate entry/egress route to Laudat (via Trafalgar) has been identified as a need by community residents. Following a major landslide in 2001 residents were isolated due to a complete blockage of the road. Major road works carried out in 2009 resulted in a number of smaller landslides which isolated the community for 24-48 hours at a time.

The Vulnerable

<u>Hamlet</u>	<u>Elderly Persons</u>	<u>Disabled Persons</u>	<u>Children 0 -9 years</u>
Lake Road Area	Molly John. Lewis		1
Tanqued Road	Bertand St. George Evon Shillingford Matson Rolle Rudolphia Rolle Henderson Rolle	Matson Rolle	
Middle East Road	Ashley Rolle		5
Church/ Laudat Area	Geraldine Daway James Daway		

Resources available in the Community

<u>ITEM</u>	<u>QUANTITIY</u>	<u>CONTACTNAMES</u>	<u>AVAILABLITIY</u>
Doctors	0		
Nurses	3	Francis Jolly Tamara Jolly Marie-Louise	Tanqued Road - Mondays
Trained First Aiders	27	Jason Bernard Mc Swain Bertrand Rhonda Celaire Emilla Daway Donaldson Magloire Joan Peters Tony Peters Aaron Rolle Claudette Rolle Alfred Rolle Naithan Rolle Andrew Stedman	Weekdays & Weekends

		Albert Noel Kendel Laurent Gary Shillingford Alvin Noel Kelvin Noel Simon Rolle Keenan Cadette Clyde Cadette Terry Ann Graneau Najee Laflouf Nixon George Marvin Philbery Delisha Coriette Denise Laurent Beverly Stedman	
Shelter Kit Technician	1	Albert Noel	Tanqued Road Weekdays & Weekends
USAR - Urban Search And Rescue	1	Kendel Laurent	Weekdays & Weekends
Radio Operators	3	Tony Peters Matthew Daway Gary Shillingford	Weekdays & Weekends
Schools	1	Laudat Government School	
Fire/Ambulance	0	Roseau	
Shelter	2	Primary School & Church	

EQUIPMENT RESOURCES

<u>ITEM</u>	<u>QUANTITIY</u>	<u>Contact Person</u>
Chain Saw Operators	7	<ul style="list-style-type: none"> • Demon Rolle • Harris Hodge • Robinson Rolle • Ross Rolle • Phillip Rolle • Phillip Matthew • Francis Magloire
Mini Buses	3	<ul style="list-style-type: none"> • Alvin Noel • Cecil Leatham • Willie Jhn. Lewis
Excavating Equipment	1	<ul style="list-style-type: none"> • Raymond Bertrand
Dump Trunks	5	<ul style="list-style-type: none"> • Phillip Matthew • Mc. Lean Jhn. Lewis • Raymond Bertrand • Harris Hodge • Elliot Rolle
Mini Trucks	12	<ul style="list-style-type: none"> • Merril Matthew • Phillip Rolle • Francis Magloire • Thomas Dequential • Mitchell Jhn. Baptiste • Donald Hector • Peter Corriette • Fitzroy Bertrand • James Daway • Mc. Lean Jhn. Lewis • Charles Mc. Lean • Lindy Laurent

Our Community's History

Historical Profile

<u>Year</u>	<u>Events</u>
1765	Crater Lake was formed.
1856	Boiling Lake was discovered by Henry A. Nicolas after searching for an alternative route to the capital city, Roseau.
1990	The first farming settlement along with wooden houses was introduced.
1921	The first Roman Catholic Church was built.
1950	Construction of block houses started.
1960	Tests were carried out for television network.
1970	Cable Television was made available to the community.
1979	Devastation caused by Hurricane David on 29 th August.
1985	Construction of the Hydro Electric power plant.
1999	Construction of the Rain Forest Aerial Tram.
2001	Community experienced a major landslide at the entrance of the community, fortunately no deaths occurred.
Dec 2004	Earthquake
2005	Tourist facilities were built at the various attraction sites.
2007	Hurricane Dean which caused landslides at the entrance to the community, damaging one house which was fortunately unoccupied at that time. The agricultural sector also suffered significant damage to its crops.
2008	The rehabilitation road project of the main village road to the capital Roseau.
2009?	Earthquake off Guadeloupe

The main hazards in the community are the threat of earthquake eruption, infrequent but damaging hurricanes and regular landslides which isolate the village.

Community history through pictures/sketches

<u>YEAR</u>	<u>TREES</u>	<u>HOUSES</u>	<u>PEOPLE</u>	<u>RIVER</u>	<u>LIVESTOCK</u>	<u>DISASTER</u>
1960						
1970						
1980						
1990						
2000						
2010						

An increasing settlement population means more persons have been exposed to the three hazards over the years. The clearing of land for housing and improved road infrastructure has resulted in the increased incidence of landslides. The availability of water from the river had diminished in the period 80's - 2000. One possibly related to a dry spell which affected the eastern Caribbean in 1982-83 and also the early 90's. The clearing of land for housing and improved road infrastructure has resulted in the increased incidence of landslides.

Notes:

Review of the historical information. From the tables above:

- *What have we learned about our community?*

Due to limited social infrastructure and a decline in agriculture many residents are now employed in the capital city of Roseau. The community is less sustainable in terms of access to resources. Skilled resource persons have relocated to Roseau or migrated.

- *When last was the community affected by a severe hazard?*

Hurricane Dean in September 2007 was the last major event to affect Laudat.

It resulted in landslides at the entrance to the community, damaging one house which was fortunately unoccupied at that time. The agricultural sector also suffered significant damage to its crops.

- *Are there relationships between the topics or events?*

Due to the maintenance of farming on steep slopes and the cutting of trees for road rehabilitation works this has resulted in greater soil erosion and landslides.

- *How have changes over time placed us at greater risk?*

The clearing of land for housing and improved road infrastructure has resulted in the increased incidence of landslides.

Events throughout the year tell us when to prepare; what are the best times to put on awareness activities and training or implement projects.

SEASONAL CALANDER

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
LANDSLIDES												
HURRICANES												
MOSQUITOES												
DISEASE												
INFLUENZA												
CROP SEASON												
COMMUNITY ACTIVITY												
TOURIST SEASON												
ALCOHOL ABUSE												
INCREASED SEXUAL ACTIVITY												

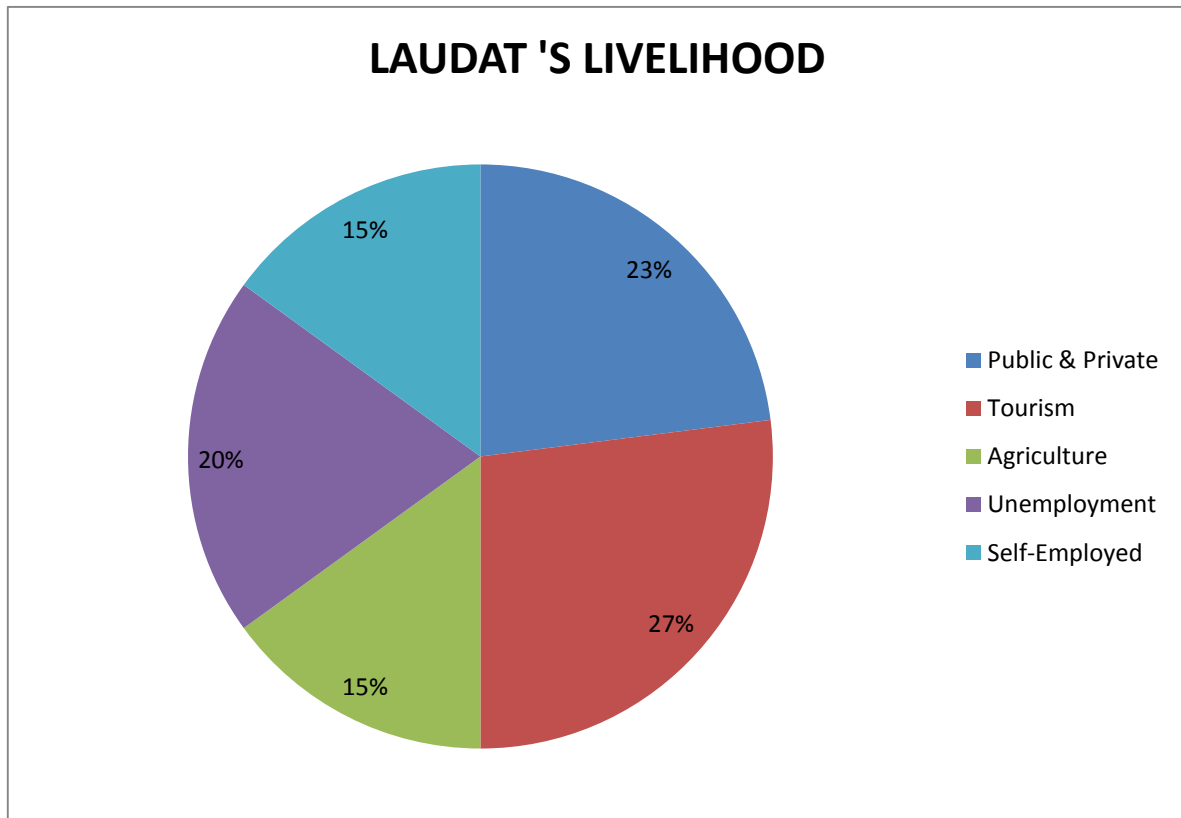
Analysis:

Relationships between items to each other. Just a few lines on observed relationships and when is the best time for risk reduction activities.

- ✓ The month of January to May is best suited time for risk reduction activities such as awareness campaigns.
- ✓ Cruise ship season, the months of October to June has proven to be the best time in terms of economical activity for the community.
- ✓ Hurricanes and landslides coincide with each other. The significance is that the wet season kicks off the areas prone to landslides and rock fall.
- ✓ July to February would be the best time for planting, also taking into consideration the type of crop planted. This is based on the weather pattern as one would be looking at maximizing
- ✓ The months of August to October is the period seen with an increase of alcohol abuse owing to the communities activities
- ✓ Influenza and diseases are based on two factors, main one being the influx of Patron in the month of October for the festivals oppose to the weather pattern for air and water borne diseases during the wet months.

Livelihoods and coping strategies

- a) How do people support themselves and their families? This can be expressed as a pie chart or list.



The community of Laudat is very vulnerable to disaster risk and slow recovery given its high unemployment, agricultuer and self employment rate.

- b) Make a list of how people in the community cope with emergencies and disasters; what strategies are used; what gets reduced first?
- Peer counseling
 - Evacuation plan from Danger Zones
 - Education sessions in Disaster Management
 - Community awareness programmes to handle before, during and after events of a disaster

Social networks in Laudat

	Groups & Institutions	Point of Contact	Telephone numbers
Government	Laudat Primary School	Eugenia Richards	265-7769
Business	Shop	Bertha Royer	
	Shop & Bar	Thomas Dequental	265-1310
	Underground Shop & Bar	Adrian Lalflouf	615-0512
	Mon Plesi Cafe	Patricia Rolle	276-0367
	Roxy Mountain Lodge	Marie-Louise Rock	
NGOs	Rain Forest Aerial Tram	Admin. Manager Nickima Royer	275-9429
	Laudat Village Improvement Committee	Aaron Rolle	276-7863
Religious	Roman Catholic Church	Charles Martin	448-2766
	Adventist Church	Loyd	613-5818

Reducing risk and make the community stronger. We can transform our community by reducing how much harm a hazard can cause.

Hazard - Scenario	Reasons for damage and or injury	Possible actions to reduce or eliminate risk
<i>Landslides</i>	<ul style="list-style-type: none"> - <i>Poor road rehabilitation</i> - <i>Lack of drainage to run-off of adequate water</i> 	<ul style="list-style-type: none"> - <i>Better planning for road works</i> - <i>Implement proper and correct techniques to help heavy rainfall</i> - <i>Improve self sufficiency of community to last until the road is cleared</i>
<i>Hurricanes</i>	<ul style="list-style-type: none"> - <i>Not using correct methods for building</i> - <i>Not removing immediate danger ex. Trees, hanging branches</i> - <i>Lack of planning</i> 	<ul style="list-style-type: none"> - <i>Using hurricane straps on roofs</i> - <i>Installing hurricane shutters to windows that are not strong or with glass</i> - <i>Educational programmes to let the community aware of disaster preparedness</i> - <i>Improvins shelter readiness</i>
<i>Earthquake</i>	<ul style="list-style-type: none"> - <i>Lack of enforcing the country codes</i> - <i>Poor mixtures of materials in buildings</i> - <i>Emergency preparedness</i> 	<ul style="list-style-type: none"> - <i>Better building codes</i> - <i>Proper use of building materials</i>

Volcanoes	<ul style="list-style-type: none"> - Lack of educating the public - Not respecting evacuation plans 	<ul style="list-style-type: none"> - Educating the public - Testing the plan with simulation exercises - Improve evacuation planning
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Change we can carry out now.

Of the “Possible actions to reduce risk” above, pick out the ones we CAN CHANGE and do for ourselves.

- ❖ *Ongoing educational sessions and testing methods and practices learnt. Raise community awareness on what to do before, during and after a disaster as occurred*
- ❖ *Cut all tress and branches near buildings which may be a hazard to life and property*
- ❖ *Clear damage;*
- ❖ *Stop deforestation; replant trees cover*
- ❖ *Ensure emergency shelter is more resilient as community could be isolated*
- ❖ *Carry out simulations periodically*
- ❖ *Keep Disaster Plan updates and test the plan using the community persons and involving other organizations to help in the process*
- ❖ *Gathering more community involvement in disaster risk management*

Methodology

The Community Assessment (Vulnerability and Capacity Assessment - VCA) is a participatory investigative process. It is designed to assess the risk that people face in their local areas, as well as the resources and skills the community have to cope and recover from adverse events.

The process is a skills-transfer approach. The community is trained to carry out the assessment and develop solutions which will reduce risk. The output is not only an assessment of community risk and capacities, but also micro-project solutions to reduce the frequency and impact of disasters.

The results of the VCA are developed through direct observation and interaction with other community members over a period of time. Persons gathering the information in the field record and analyze their:

- *Direct observations of visits through the community,*
- *Structured and semi-structured interviews with other community members*
- *Focus group meetings with target audiences*
- *Mapping of hazards, vulnerabilities, capacities and resources*
- *Brainstorming as a team and*
- *Quick surveys.*

The information gathered from the community is cross referenced with secondary statistics, historical records and other materials available.

The intention is to understand the community better and have the residents implement solutions to risk reduction developed by themselves.

Glossary

Brainstorming: *The gathering of as many ideas as possible in a short period of time, usually to solve problems.*

Capacity (C): *Combination of all the strengths and resources available within a community, society or organization which may reduce the level of risk, or the effects of an event or disaster.*

Coping Strategies: *The ways in which people manage and reduce the impact of a hazard.*

Disaster: *Serious interruption of the functioning of a community or society which causes loss of human life and/or important material, economic or environmental losses which exceed the capacity of the affected community or society to manage the situation using their own resources.*

Direct Observation: *A process of observing objects, people, events and relationships.*

Emergency: *A situation of a threat or actual hazard which requires an almost immediate response, to prevent or reduce harm. Often the affected community has the capacity to respond using their own resources.*

Hazard (H): *A potentially damaging physical event, phenomenon or human activity, that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.*

Historical Profile and Historical Visualization: *Tools for gathering information of what has happened in the past to tell how past events has had an effect on the community. These are represented as lists and a table of sketches respectively.*

Livelihoods: *The way people use the resources they have available to support their lives. For most people this means the method of earning cash income.*

Mitigation: *Structural and non-structural measures undertaken to limit the adverse impact of natural hazards, environmental degradation and technological hazards.*

Mapping: *A visual form to get an overview of the main features of an area in relation to its surroundings (Spatial map). It can also show dangers and exposed homes, services and infrastructure (Hazard and Vulnerability map); or resources and skills available in the community (Capacity Resource Map)*

Risk: *Probability of harmful consequences or expected losses (deaths, injuries, property, livelihoods, interruption of economic activity or environmental deterioration) as a result of interactions between natural or anthropological disasters and conditions of vulnerability. It is sometimes expressed as $(H \times V) / C = R$*

Seasonal Calendar: *Visualization over the course of the year of weather patterns, social and economic conditions, festivals and other seasonal activities.*

Social Network: *The community's key groups and individuals, the nature of their relationship with the community and the perceptions residents have of their importance.*

Transect Walk: *A walk through the community to observe the people, relief of the land, surroundings and resources. It is represented as a cross-section diagram beneath which are descriptive topics. It helps to understand inter-relationships in a selected section of the community.*

Vulnerability (V): *The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.*

Humanity

The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavors, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

Impartiality

It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavors to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality

In order to continue to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

Independence

The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary service

It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity

There can be only one Red Cross or one Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality

The International Red Cross and Red Crescent Movement, in which all Societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.