

# **KANUKU MOUNTAINS PROTECTED AREA PROCESS COMMUNITY RESOURCE EVALUATION**



**RUPUNAU  
VILLAGE REPORT  
November 13 - 27 2002**

# COMMUNITY RESOURCE EVALUATION

## RUPUNAU VILLAGE REPORT November 13 – 23, 2002

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## Acknowledgement

### "Thank you"

This report is the record of work that was done in Rupunau Village by the participants who represented their community and the members of the Conservation International team during the Community Resource Evaluation workshop.

All of the work in this report is the result of the dedication and hard work of these persons who gave their time and shared their knowledge.

We would therefore like to thank each of the participants for taking time out from their lives to be part of the workshop.

The workshop would not have been possible without the help and support of Touchau, Laurentino Herman, the other members of the village council and the Community Coordinator, Cedric Thomas, all of whom worked together to make the CRE a success! Touchau Isaacs also allowed for the use of the Health Center.

We would also like to thank Julita, Sylvia and the helper for working tirelessly to provide the workshop with meals.

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## **LIST OF ABBREVIATIONS**

CI -	Conservation International
CIG -	Conservation International Guyana
CRE -	Community Resource Evaluation
EPA -	Environmental Protection Agency
GCF -	Global Conservation Fund
GoG -	Government of Guyana
GPS -	Global Positioning System
ISV -	Initial Site Visits
KMPA -	Kanuku Mountains Protected Area
NAG -	National Advisory Group
NGOs -	Non-Governmental Organizations
NPAS -	National Protected Areas System
PA -	Protected Areas
PRA -	Participatory Rural Appraisal
RAG -	Regional Advisory Group
USAID -	United States Agency for International Development

## INTRODUCTION

The Kanuku Mountains are considered to be one of the most biologically diverse areas in Guyana. In addition to the numerous eco-systems and unique flora and fauna found there, the Kanukus also support the livelihood, culture, and history of eighteen villages peopled by two of Guyana's Indigenous tribes, the Macushi and the Wapishana. As a result, the Government of Guyana has identified the Kanuku Mountain Region as an important area for conservation.

This report is the result of a Community Resource Evaluation (CRE) exercise that was conducted from May to December 2002 in eighteen communities that directly use the resources of the Kanuku Mountains. The purpose of the CRE was to determine the resource use patterns of these villages. For a period of eight months a group of ten CI researchers collaborated with members of each community to determine resource use in the area through workshops, discussions, fieldwork, and surveys.

This Village Report documents the quality and intensity of the resource use of the community in its interaction with the Kanuku Mountains, and also explores the community's perceived threats to that use. The Community Resource Evaluation (CRE) focused on the resource use categories of farming, hunting, fishing, and gathering.

The CRE report provides the resource use information set required for developing a proposal for a Protected Area in the Kanuku Mountains (KMPA). It is a tool to enable the community to record and communicate its resource use information to key government decision makers and other stakeholders in the process of proposing a protected area.

The information presented in this report was collected during a ten-day workshop in which a Conservation International research team collaborated with community participants to create tools to gather information on the resource use of the village. The CI team included members from the subject communities, who served as advisors, interpreters, and facilitators in the planning and implementation of the workshops.

The results of the CRE workshop are presented in three sections. The first records the research tools created by the participants: the resource list, the seasonal calendar, and resource use sketch maps. The second section presents the results of the data shared by the participants and collected during field observation in the mountains and in the village. In the final section, the results of the tool creation and the field observation are assessed to provide a profile of the way the community uses the resources of the Kanuku Mountains.

The CIG field team members included:

Andrew Demetro	Indigenous Knowledge Advisor
Richard Wilson	Indigenous Knowledge Advisor
Nial Joseph	Global Information Systems Technician
Vitus Antone	Forest Resource Advisor
Margaret Gomes	Wapishana Interpreter
Natalie Victoriano	Macushi Interpreter
Lloyd Ramdin	Agricultural Advisor
Sebastian Tancredo	Field Team Leader
Esther McIntosh	Facilitator
Susan Stone	Project Manager/Facilitator

The entire series of CRE workshops was implemented from CIG's Lethem office with the support and assistance of:

George Franklin	Regional Coordinator
Patricia Fredericks	Education and Awareness Officer
Julie Kanhai	Database Coordinator
Wendy Leandro	Education and Awareness Assistant
Margaret Kahn	Accounting
Vibert James/Stewart Charles	Transportation
Annie Charles	Meals

This study was initiated by the Government of Guyana (GoG) under the auspices of the Environmental Protection Agency's National Protected Areas Secretariat.

## WORDS AND PLACE NAMES

In the writing of this report we have made every attempt to use the names of places and resources most commonly known in the region. Both Macushi and Wapishana are oral languages in their original form. Projects are now underway to create a written form of both languages. During such a transitional period, it can be difficult to find agreed upon for word usage and spellings.

The resource lists and seasonal calendars are reproduced largely as the participants recorded them. When the same resource item was spelled in different ways, the most commonly known spelling was used. This was assisted by the feedback from the participants during the Results Feedback Workshops held in each community, and by the Macushi and Wapishana members of the CRE team.

The spelling of place names was standardized in the text of the Village Reports, again using the most commonly recognized spelling, as best it could be determined. In the list of the geo-referenced resource use sites, the place names are shown as the team members recorded them.

In addition to the community and CRE team members, we have relied on the “Scholars Dictionary and Grammar of the Wapishana Language-Tominpainao Ati’o Wapichan Paradan Parada-karu na’iki Paradauzo-kara kaduzu”, as compiled by the Wapishana Language project in cooperation with Wapichan Wadauniinao Ati’o. The Wapishana language Project, Rupununi, Guyana (August 2000) and “Makusipe Komanto Iseru: Sustaining Makushi Way of Life, edited by Janet Forte, commissioned by the Iwokrama Rainforest Program, copyright by North Rupununi District Development Board, 1996. These works provided valuable guidance in common names, word usage and spellings.

## **CONSERVATION INTERNATIONAL**

Conservation International (CI) is a global leader in conservation – working to preserve threatened ecosystems in more than thirty countries on four continents.

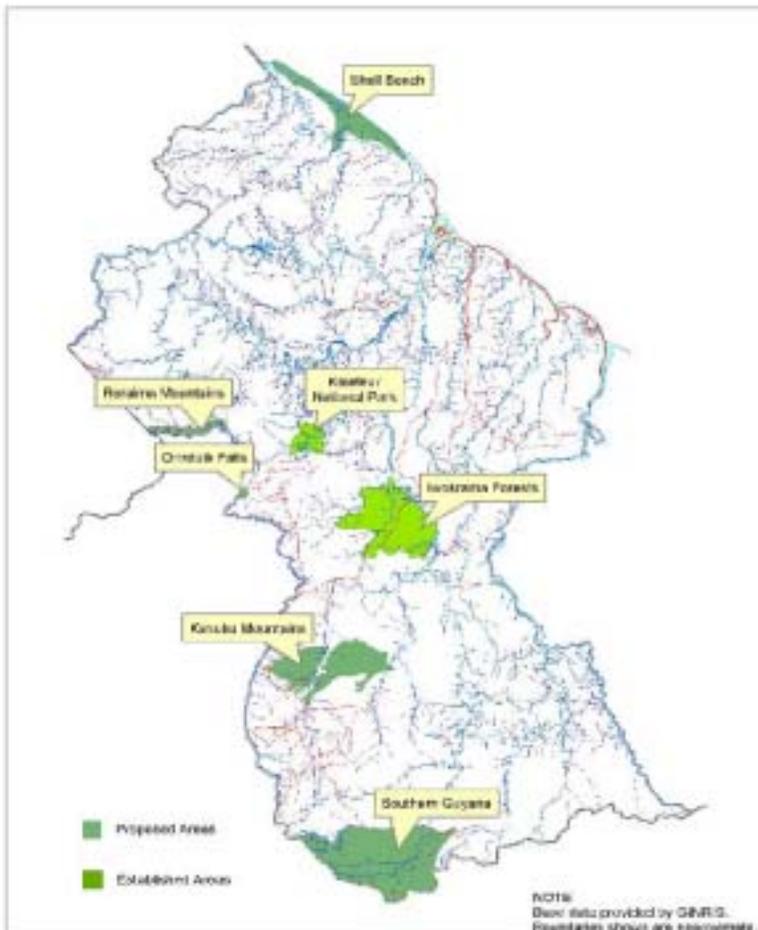
CI has been active in Guyana since 1990 and has led research expeditions, media events and educational activities. The strategic plan of CI Guyana (CIG) is to promote the conservation of biodiversity and the protection of critical ecosystems, through a process comprising scientific research based on priority setting, collaboration with partner NGOs and state agencies, and consultation with communities and other stakeholders.

In 2000, the Government of Guyana, through the Environmental Protection Agency, invited CI Guyana to perform the role of lead agency in the process of establishing a protected area in the Kanuku Mountains, one of the five priority sites identified for conservation. CI Guyana is committed to a process that involves and seeks participation of all stakeholders at the national, regional, and community levels.

## PROJECT LOCATION

The Kanuku Mountains are located in the Rupununi Savannas of Region Nine of southwestern Guyana. The mountains are approximately 100 km east-to-west and 50km north-to-south and are divided by the Rupununi River into eastern and western ranges with peaks up to 1,000 meters.

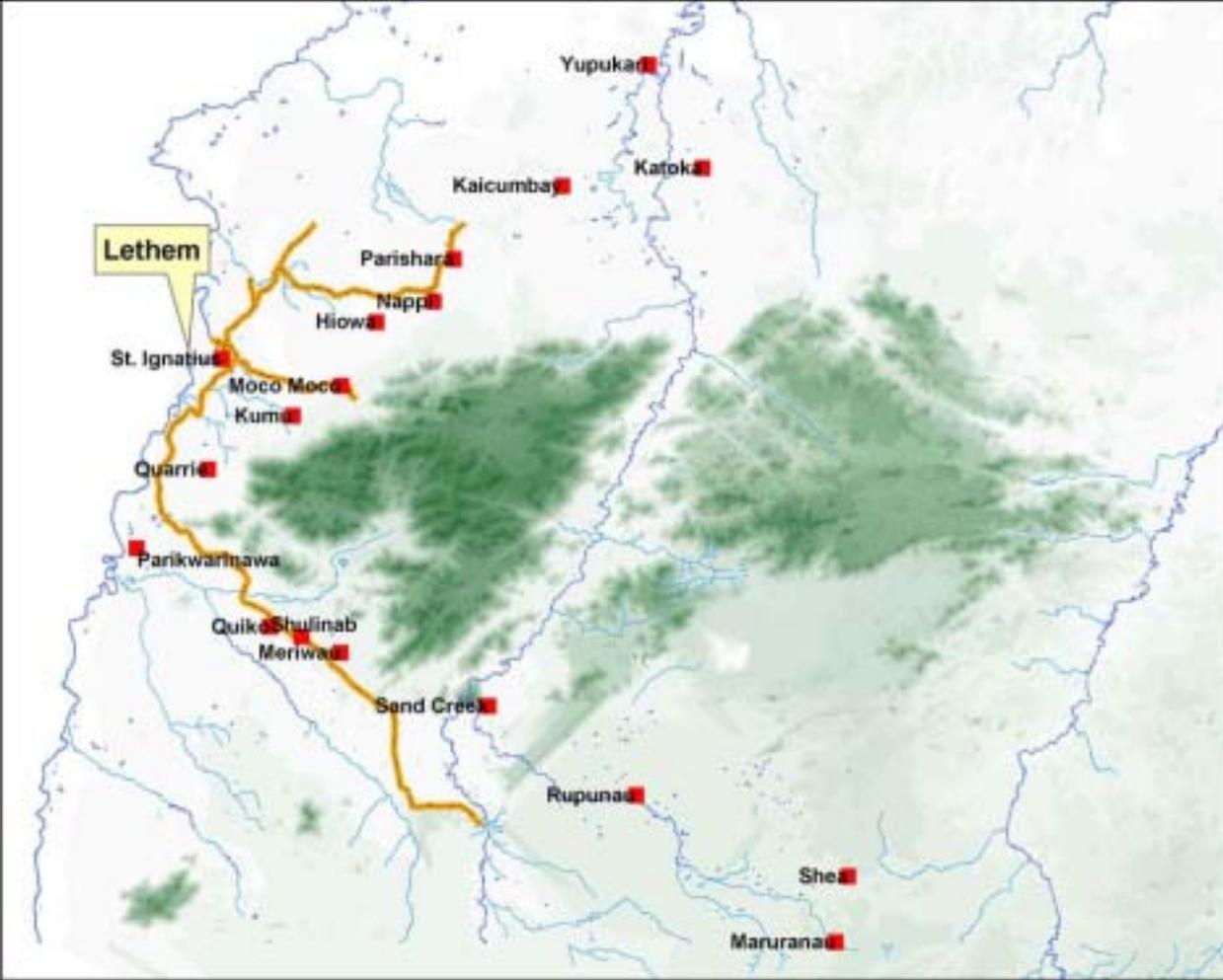
The Kanuku Mountains Proposed Protected Area (KMPA) is one of five areas in Guyana that have been identified by the Environmental Protection Agency (EPA) for conservation efforts. These areas are selected because of their beauty, landscape or richness in biodiversity.



Map Showing Five Priority Sites in Guyana

The Kanuku Mountain Range was identified because it is one of the most biologically diverse areas in Guyana. Approximately 350 species of birds, or about half of all the bird species so far identified in Guyana can be found in the Kanuku Mountains. Eighteen of these species are unique to the lowland forests of the Guianas. The Kanuku Mountains are also home to two of Guyana's nine Amerindian tribes: the Wapishana and the Macushi.

The eighteen villages that were studied use the resources of both the western (13) and eastern (5) ranges of the Kanukus. The riverain communities of Sand Creek, Katoka, and Yupukari access resources on both sides of the Rupununi River, their activities taking them into both ranges of the Kanukus.



Map showing 18 Communities that directly use the Kanuku Mountains

## PROJECT OVERVIEW

Conservation International has a long-standing presence in Region 9, which began in 1991 with the filming of the Harpy Eagle for National Geographic. In 2000 Conservation International Guyana was asked by the Government of Guyana (GoG), through the EPA to be the Lead Agency in guiding the process leading up to the declaration of a Protected Area in the vicinity of the Kanuku Mountains.

In pursuing this mandate CI's work has been divided into two main areas: gathering information and engaging stakeholders.

The participation of stakeholders has been identified as being critical to the process. Therefore between April 2000 and April 2001, consultations were held with Regional and National stakeholders. Advisory committees were formed at both levels, the Regional Advisory Group (RAG) and National Advisory Group (NAG).

The RAG includes representation from local government institutions, Village Captains (Touchaus) and members of their Councils, the Touchaus Council, Women and Youth Groups, Indigenous Advocacy Groups and other interest groups functioning in Region 9.

Significant contributions of the RAG include:

- The identification of the eighteen (18) communities to be directly involved in the consultation process;
- The identification of two (2) Indigenous Knowledge Advisers to the consultation teams to ensure that culturally appropriate processes were followed, through which community members were able to express their views;
- The identification of two (2) interpreters - one (1) Macushi and one (1) Wapishana, to accompany the consultation teams;
- The endorsement of the principle of one (1) person from each of the communities functioning as a Community Coordinator. The appointment of the Community Coordinator was made by the communities and his/her role was to:
  - a. Provide a continuous presence in the villages after the consultation teams had left;
  - b. Explain during the period that the consultation teams were away from the villages, those concepts that might not have been clear to them during the meetings or for which additional information was needed; and
  - c. Function as a liaison between their community and CIG.
- The endorsement of the programme of consultations, and also the representation of the regional stakeholders on the National Advisory Group.

The RAG also made recommendations for:

- a. Improvement in the proposed programme of consultations, education and awareness engagements and training; and
- b. The scheduling of consultations.

The National Advisory Group was comprised of representatives of the natural resources sectors, other relevant agencies of GOG, the Human Rights Association, all Indigenous Advocacy Groups, other environmental NGOs, opinion leaders and Parliamentary Opposition Political Parties, among others.

Significant contributions of the NAG include the:

- Recommendations to improve the proposed programme of consultations, education and awareness engagements and training;
- Endorsement of the final programme for consultations;
- Identification of the natural resources sectors which were to be more directly involved in the consultations;
- Recommendation of the datasets to be made available for the design of the protected area; and
- Provision of a forum for the concerns of the representatives from the RAG to articulate the views and concerns of the stakeholder groups that they represented.

Initial Site Visits (ISVs) were conducted in all of the eighteen communities to provide information on Conservation International, the protected area process, and the proposed Community Resource Evaluation. Recognizing the need for an informed stakeholder group, workshops were held for community leadership (Touchau, Village Council, Teachers and Community Coordinators). The CRE activity represents a continuation in efforts to engage a wide stakeholder group.

In the area of information gathering several complementary studies were carried out. These included, digital over flights, scientific research for biological data (CI Rapid Assessment Program in 1993, 2001) and a CI commissioned Socio-Economic Survey (Gordon Forte, 2001). The Government of Guyana's 1992 *Country Study of Biological Diversity* informed these later activities. The information obtained from the CRE represents the final set of data that is required to inform the management objectives leading to the proposal of the appropriate type of protected area in the vicinity of the Kanuku Mountains.

## **CRE OVERVIEW**

The overall purpose of the Community Resource Evaluation (CRE) is to work together with the community to understand the extent and intensity of resource use by the eighteen villages that directly use the resources of the Kanuku Mountains. By involving the community in the research the CRE also provides an avenue for the community to communicate its resource use to key decision makers and stakeholders in the process of establishing a protected area

The CRE is an informal data collection exercise to gather information on resource use patterns in the Kanuku Mountains. The study seeks to record what resources are used, the extent of use (where the communities hunt, fish, farm and gather) and local perceptions of resource availability and threats.

Some of the methods that were used in the CRE have been adapted from the Participatory Rural Appraisal (PRA) research methodology used to gather information in rural areas. It stresses a participatory approach to development and learning from the local people.

One of the main strengths of the CRE is that the community, by selecting twenty-five to thirty villagers to participate in the research, has been engaged directly. The participants took part in the exercise, received training, shared knowledge, and were able to successfully contribute to the data collection.

## **METHODOLOGY**

The tools used in the CRE were designed to be simple and to allow for maximum participation. To ensure effective communication and understanding, sessions and discussions were conducted in the local language whenever necessary. The Community Coordinator served as part of the CI team, assisting in interpretation, logistics, and leading bush or village teams. The approach is a learning process; to this end all the participants and the CI team members are simultaneously learners and teachers.

Through discussion, spatial data exercises and field observation, a common frame of reference is created to enable the community to effectively communicate its patterns of resource use to the government and non-government agencies involved with them in the protected areas process.

At the beginning of each CRE a public meeting is held to inform the community about the exercise and to provide information. Twenty-five persons are selected by the community to represent them in the CRE. The selections are made independently, with the criteria that all community groups are represented, (including women, youths, and a range of age groups) and that persons with knowledge of the forests and trails are included.

### **DESCRIPTION OF TOOLS**

The following tools form the basis of the CRE:

- 1. Focus Groups**
- 2. Resource List**
- 3. Seasonal Calendar**
- 4. Resource Sketch Maps**
- 5. Field Observation**
- 6. Surveys**
- 7. Mini lectures**

#### **1. Focus Groups**

The twenty-five participants work with the CRE team throughout the evaluation exercise both in large and small group discussions. During the first day's activities, this group self-selects into three focus groups of eight-nine persons to work in the resource categories of

a.) Farming; b.) Hunting & fishing; c.) Gathering. Their decision is based on their knowledge of the focus group topic. The large group serves as a unit to discuss the results of the focus group sessions, and to provide feedback and broader consensus on the information recorded.

#### **2. Resource List – “The What”**

The resource list is created first, and forms the basis for the other tools. Participants list all of the resources in the category that are actively used by their community. The names of resources are listed in English and, where possible, in the local language.

### **3. Seasonal Calendar – “The When”**

The seasonal calendar is a participatory tool used to explore seasonal changes and the activities of the village during the year in each resource use category. The creation of the seasonal calendar begins with the listing of the twelve months of the calendar year. This forms the basis for a group discussion among the entire participant group. The participants list the main seasons, wet and dry, as they occur throughout the year. The intermittent showers and dry spells are also included. Because the seasons are closely linked to the movement of the stars and other natural events, these milestones are also included. Once the seasonal comparison is completed, the large group then breaks into the three focus groups and individually lists the activities in the resource category that are done throughout the year. The groups then reconvene in the large group and present their work for validation and correction.

### **4. Sketch Mapping**

The core of the methodology is the use of informal sketch mapping. This tool is used to create a visual, spatial representation of village resource use areas. This traditional Participatory Rural Appraisal technique is modified to exclude the use of boundaries in the mapping exercise. The goal is to have the community create a spatial record of resource use, without regard to boundaries, whether actual or perceived, and without regard to land ownership. The focus is the area of actual use wherever it occurs. This approach allows the community to focus their feedback on the primary goal of the CRE exercise - communicating and understanding where and how resources are used – with emphasis on the extent and intensity of use into the Kanuku Mountains.

In order to create a spatial frame of reference for the recording and discussion of use, participants are asked to sketch out a skeleton or base map of the significant features of the community – village center, roads, trails, waterways, that are essential to accessing and using resources. Participants draw the skeleton map on a large chalkboard from each resource group. The entire participant group must come to consensus that the base map created adequately represents the village. The skeleton map is then copied by all the groups onto separate cardboard sheets, which are used, by each focus group to record the specific resources used in the areas identified during their discussions. The maps are then presented to the larger group for input as to content and accuracy. These maps are also taken into the field so that the information can be verified through observation, and the furthest points of use as indicated can be visited, observed and geo-referenced.

When all of the individual Resource-Use Sketch Maps have been created, the resource information is combined and recorded on the chalkboard skeleton map resulting in a complete visual and spatial profile of the type and location of resource use in the community. The entire group must again come to agreement that the combined representation accurately depicts the resource use of the village. The information is then transferred from the

chalkboard onto plywood board using paints in a variety of colors to create a permanent community resource use record.

All the maps are digitally photographed to preserve the data for analysis. The originals of the Resource-Use Sketch Maps and the Master Resource-Use Map remain in the community as their record of the Community Resource Evaluation exercise. A copy of the master resource map is drawn for the records of the CRE team.

## **5. Field Observation**

After the basic tools are completed, the participants are divided into two groups: the “bush team” of approximately fifteen persons, focusing on field observation, and the “village team” of ten persons, focusing on the village survey interviews and student interactions.

The “bush team” meets as a group to study the sketch maps and to decide on the routes to be taken to observe important resource use areas, and to reach the furthest points of use. The group then divides into three groups, each assigned to a different route. The community participants lead the team, with a CI team member facilitating the work. The purpose of the fieldwork is to work together with the community participants to:

- a. Verify information on location and extent of resource use as discussed and recorded in the focus group and sketch mapping activities, using the Resource Use Sketch Map from each individual category, as the basic reference tool
- b. Record information about each site visited on a field data form.
- c. Locate and geo-reference the sites visited, including the points of furthest use in the furthest areas of use

## **6. Village Surveys**

During the four-day period the “bush team” is in the field, the remaining participants on the “village team” conduct informal interviews with the wider community. This is done using a survey with simple questions about resource use in the same categories addressed by the focus groups:

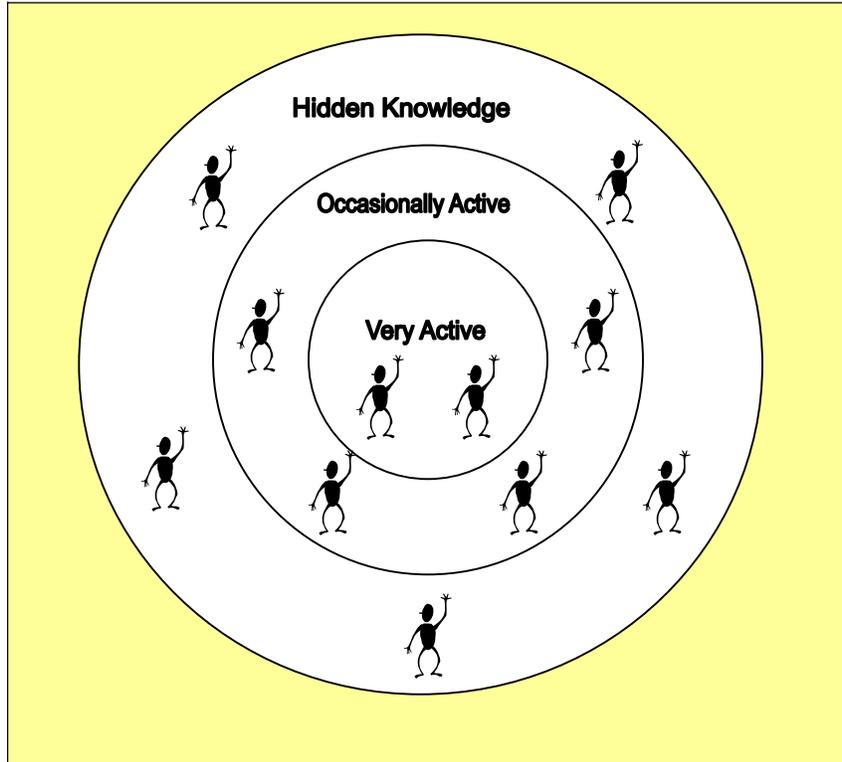
- A mini-lecture is given on information gathering and surveying techniques
- The participants then undergo a mock interview exercise for practice
- The community participants draw an informal sketch map of the village on which all households are placed. The group selects potential interviewees based on representation of village areas and the different social groups within the village.
- The participants go out to the homes of those who have been identified to seek permission for the interview
- The interviews are conducted
- A sample of the results of the survey are compiled and studied

## **7. Mini Lectures**

A number of short lectures are used throughout the exercise to build upon the education and awareness aspect of the consultation process. Topics include those which were presented in the Initial Site Visits.

1. Protected Areas
  - The categories of Protected Areas
  - The steps to establishing a Protected Area
2. Conservation International and its role as a lead agency
3. Levels of Community Participation (see diagram below)
4. Where am I on the face of the Earth
  - Informal versus formal mapping
  - Geo-referencing/GPS training – a tool to record resource site location.
5. Survey methods and techniques

## LEVELS OF COMMUNITY PARTICIPATION EXERCISE



**Very Active** participation refers to persons that are always involved in community activities. This group of people is very informed and active in the village. An example of this type of person would be the Touchau, Councillors, Parents Teachers Friends Assn. (PTFA), teachers and community health worker (CHW).

**Occasionally Active** participation refers to persons who are sometimes involved in community activities, because they have an interest in one or more area, for example attendance at the PTFA or church meeting. These persons would only be part of these meetings when the topic affects them.

**Hidden Knowledge** refers to those persons who seldom attend community meetings. Because these persons frequently live far from the village center, they may not attend church services (where most announcements about community events are made) and are not really a part of the activities in the village. These persons often have a broad knowledge about resources and their environment, but as they do not have an opportunity to share what they know, it remains “hidden” from the community.

For the purpose of the CRE everyone is important and has an important role to play in the exercise.

## TYPICAL CRE ACTIVITY TIMELINE

<b>CRE ACTIVITY</b>	<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day OFF</b>	<b>Day 5</b>	<b>Day 6</b>	<b>Day 7</b>	<b>Day 8</b>	<b>Day 9</b>	<b>Day 10</b>
Village Council Meeting										
Public Meeting										
Resource List										
Seasonal Calendar										
Resource Maps										
Field work Preparation										
Field Work										
Student Interactions										
Surveys										
Closing Public Meeting										

For a brief activity schedule see Appendix 1.

# **Community Resource Evaluation Village Report**

**RUPUNAU**

## **RUPUNAU VILLAGE REPORT**

The Community Resource Evaluation (CRE) was conducted at Rupunau from November 13<sup>th</sup> to 23<sup>rd</sup>, 2002.

The CRE engaged a wide range of participants including village councillors, women and church group leaders, youths and elders. The group included persons having a vast knowledge of various aspects of their resources from which the activity greatly benefited.

The CRE was able to successfully meet its objectives in collecting information from the community, geo-referencing the furthest points of resource use and reaching out to members of the wider community.

The information contained in this Rupunau Village Report is divided into three main sections. The first section provides information on the village including demographics and a list of the participant group. The introduction is followed by a section, which lists the results of the workshop tools i.e. resource lists, seasonal calendar and sketch maps. The second section also includes the results of the fieldwork done in the mountains and in the village. The third and final section provides a resource-use profile of the village, which is an analysis of the patterns of resource use as observed and documented during the CRE.

## VILLAGE DESCRIPTION

Rupunau at 2.90404°N and 59.36621°W is predominantly a Wapishana community, located on a savannah between the southernmost hills of the Kanuku range, about 12 miles southeast of Sand Creek. The Kanuku Mountains are approximately 10 miles due north from Rupunau. A vehicular trail runs from Sand creek between the mountains about 13 miles to Rupunau, then on through Achimeri wao to the southeast or Dadanawa to the west.

The villages counts the 36 residents, owners and staff of Weri-Moor Ranch, a few miles north, among its population, as well as 30 persons in 6 households at Achimeri wao, a few miles east. There is one family of 7 at Arantau, an outstation of Weri-Moor. The area is traversed by trails good for carts and bicycles.

## DEMOGRAPHICS

### Population Structure

Age Group	Male	Female	Total
< 1 yr	7	4	11
1 – 4 yrs	16	17	33
5 – 14 yrs	44	28	72
15 – 19 yrs	21	15	36
20 – 44 yrs	29	28	57
45 – 64 yrs	13	13	26
≥ 65 yrs	6	7	13
Total	136	112	248

In total there are 52 households, 42 in Rupunau, 6 in Achimeri wao, 3 at Weir-Moor and 1 at Arantau. All are Wapishana except for the Fredericks family (proprietors of Weir-Moor Ranch) who are of Arawak origin.

### Administration

The following persons in March 2002:

- **Laurentino Herman (Captain)**
- **Martin St. Hill (Senior Councillor)**
- **Cedric Thomas**
- **Harry St. Hill**
- **Juliet St. Hill**
- **Norbert Atkinson**
- **Katie Harley**
- **Desmond St. Hill**
- **Raymond Caitan**

## PARTICIPANT GROUP INFORMATION

The participant group represented a wide range of persons from all parts of the village.

In addition to representatives of the Village Council – including the Touchau Herman Laurentino – there were members of the Church and women’s group who participated. The group included active farmers, hunters, fishermen and gatherers who brought a wealth of knowledge to the workshop.

In total there were twenty-six persons. Of the entire group seven (7) women and nineteen (19) men participated.

The majority of participants had never been involved in a workshop before.

The names of the participant group are as follows:

The names of the participant group are as follows:

Roger Aguilar	Nervin Aguilar	Verlinda Aguilar	Harry St Hill
William St Hill	Martin St Hill	Desmond St Hill	Johnny Indach
Juliet St Hill	Henry Joseph	Claudia Joseph	Laurentino Herman
Leonard Douglas	Basil Douglas	Godfrey Wilson	Jocelyn Wilson
Gabriel St Hill	Nelly St Hill	Elsa St Hill	Kate Thomas
Titus Indach	Annasette Ignace	Henry Pedro	
Noel Indach	Ernest St Hill	Norbert Atkinson	
<b>Cedric Thomas (Community Coordinator)</b>			

### Participant Age Profile

Age	15 - 28	29 - 40	41 – 55	Above 55	Not Stated
<b>No. of persons</b>	<b>6</b>	<b>6</b>	<b>9</b>	<b>4</b>	<b>1</b>

For a profile of the CI team see Appendix 2. The CI team consisted of:

- Vitus Antone** – Forest Resource Advisor
- Richard Wilson** – Indigenous Knowledge Advisor
- Natalie Victoriano** – Macushi Interpreter
- Sebastian Tancredo** – Field Team Leader
- Esther McIntosh** – CRE Facilitator



**From left: Sabastian, Richard, Esther, Natalie and Vitus.**

# CRE WORKSHOP RESULTS

## CREATION OF THE TOOLS



**Hunting and fishing group creating their resource list**

The creation of the tools for the workshop took approximately three days. The participants divided themselves into three focus groups to produce the tools in the different resource use areas; farming, hunting/fishing and gathering. After each tool was complete, the group reported on the work. This allowed contributions and agreement from the whole group for each resource area. Each group created a resource list and sketch map. The seasonal calendar was done with the help of the whole group.

Participants created three tools to help

communicate Rupunau's resource use:

- Resource list – “what” resources the community uses
- A Seasonal Calendar – “when” the resources are used
- Sketch Maps – “where” the resources are found



**Norbert drawing the base map**



**Farming group creating their Seasonal Calendar**

In this section

the results of each of the resource focus groups will be examined individually. The information is presented in the following order: farming, hunting, fishing, and gathering.

## RESOURCE LISTS

### “The What”

#### FARMING

The farming group listed a total of fifty-nine (59) types of crops that are actively planted by the community. The list includes ground provisions (yam, cassava, eddoes), fruits (pear, whitey, passion fruits, dunks, oranges) and poisons (hiari, cunani).

Crops			
1.	Cassava	31.	Hiari
2.	Banana	32.	Cunani
3.	Watermelon	33.	Mango
4.	Potato	34.	Tangerine
5.	Sugar cane	35.	Orange
6.	Pine apple	36.	Dunks
7.	Yam, bell	37.	Coffee bean
8.	Corn	38.	Goiab
9.	Eddoe	39.	Pear
10.	Peanut	40.	Gourd
11.	Black eye	41.	Tomato
13.	Paddy/rice	42.	Cashew
13.	Pepper –hot & sweet	43.	Sugar apple
14.	Sorrel	44.	Coconut
15.	Cotton	45.	Bora
16.	Thyme	46.	Boulangier
17.	Tobacco	47.	Calalu
18.	Papaw	48.	Eschallot
19.	Dasheen	49.	French cashew
20.	Barley	50.	Whitey
21.	Sweet cassava	51.	Carrot
22.	Benah	52.	Lemon
23.	Cucumber	53.	Plantain
24.	Crawa	54.	Jamoon
25.	Ochro	55.	Passion fruit
26.	Squash	56.	Arrow
27.	Cabbage	57.	Calabash
28.	Five finger (bilimbi)	58.	Bread nut
29.	Sour sap	59.	Ginger
30.	Lemon grass		

## HUNTING & FISHING

In total the focus group listed twenty-three (23) species of game that the community hunts. The list includes birds (macaw, toucan, duck, quail) and animals (bush hogs, tapir, armadillo, spider monkey).

The group also listed twenty-six (26) species of fish that are actively caught by the community. The list includes patwa, alligator, hassar and haimara.

<b>Hunting</b>		<b>Fishing</b>	
1.	Deer -Bush & savannah	1.	Tiger fish
2.	Agouti	2.	Quelette
3.	Labba	3.	Haimara
4.	Armadillo	4.	Biara
5.	Tapir	5.	Cuti
6.	Bush hogs	6.	Lukunani
7.	Powis	7.	Yakatu
8.	Turtle –land & water	8.	Dari
9.	Marudi	9.	Mangi
10	Spider monkey	10.	Pacou
11	Waracabra	11.	Patwa
12	Maam	12.	Perai
13	Toucan	13.	Mud eel
14	Macaw	14.	Cat fish
15	Quail	15.	Alligator
16	Watrash	16.	Hassar
17	Duck	17.	Yarrow
18	Anaqua	18.	Houri
19	Iguana	19.	Cassie
20	Salipenta	20.	Banana fish
21	Nega coop	21.	Sword fish
22	Duckla	22.	Arawana
23	Crane	23.	Piab
		24.	Sun fish
		25.	Logo logo
		26.	Crab

## GATHERING

The gathering team recorded a total of forty-eight (48) types of materials that are gathered by the community. This includes an extensive list of lumber ( silver balli, sweet heart, savannah green heart), housing materials (ete leaves, rap rap rafter), and wild fruits (bush nuts, wild cashew, macaw head fruit).

<b>Materials</b>			
1.	Greater teeth rock	29.	Muckru
2.	Ete balli	30.	Nibi
3.	Asha madi	31.	Acquero/aquru
4.	Mora	32.	Cocrite shoot
5.	Silver balli	33.	Wood bark
6.	Sweet heart	34.	Ete leaves
7.	Bitters	35.	Balata
8.	Savannah green heart	36.	Lumber
9.	Purple heart	37.	Red wood
10.	Locust	38.	Frezor
11.	Min for arrow	39.	Water cider
12.	Crab wood	40.	Wichabai wood/fruits
13.	Wi duck fruit	41.	Rap rap rafter
14.	Morawib	42.	Canazib rafter
15.	Turo hue	43.	Purple rock
16.	Genip	44.	Bush nuts
17.	Shoruk	45.	Clay
18.	Errim	46.	Diamond
19.	Wawash	47.	Gold
20.	Savannah hitcha	48.	Axe handle
21.	Turtle ladder	49.	Fish rod
22.	Wild cashew	50.	Achidan
23.	Tarie	51.	Macaw head fruit
24.	Omarie	52.	Kumar
25.	Cocrite	53.	Aruwa
26.	Ginep	54.	Sedium
27.	Ete fruits and leaves	55.	Birri
28.	Manicole fruits & barks		

## **SEASONAL CALENDAR**

### **“The When”**

The participants identified two main seasons, the dry and the wet season. These seasons were then written down in the month (s) of the year in which they occur. As can be seen in the table the group identified a number of shorter intermittent spells of wet or dry that also occurs within the year.

In addition to very detailed information on village activities throughout the year, the group also listed several names in the local language. The seasons that were noted with local or Wapishana names are: Turtle Rains (February – March) First Rains (April – May) Wininau Taptann (14<sup>th</sup>/15<sup>th</sup> June) Dazarii (June-July) and Cashew Rains (November - December).

Once the seasons were established and agreed to by the participants, they proceeded to look at each resource category (farming, hunting & fishing, and gathering) and to list the activities that occur in those seasons. The information that follows is a description of the results of the completed seasonal calendar.

### **FARMING**

The selection of farms occurs for a large part of the year (January – October). From October land preparation begins which includes: under bushing, burning, and cleaning of the land. Planting starts in April and the maintenance of the farms are done from June through to December. As the calendar shows reaping of crops occurs practically throughout the year.

### **HUNTING & FISHING**

Fishing occurs during certain seasons of the year. January – February, April, May – June and October. As the calendar shows a number of species of fish are caught including: houri, tiger Fish, sunfish, mangi and yakatu.

The methods used are numerous; cast nets, seines, bow and arrows, diving masks, fish rods, and hand nets.

Hunting occurs between May and November. The calendar shows a number of species that are caught by the community during this time.

### **GATHERING**

The gathering of materials is done throughout the calendar year. The list of resources harvested is extensive and includes a variety of lumber (savannah green heart, wine wood, purple heart etc.), medicines, wild fruits, honey, wax, minerals, and leaves.

## Seasonal Calendar for Rupunau

January	February	March	April	May	June	July	August	September	October	November	December			
Dry Season		Turtle rains		First Rains 'Sun Bee'		7 stars setting short <i>sun</i> <sup>1</sup>	Heavy Rains Floods Dazarrii	Sun and rains	Sun and rains	Sun		Cashew Rains	Long dry	Season
Selection of farm									Under Bush and cut high bush			CYCLE		
Burn & clean		Planting			Keeping the farm clean							FARMING		
Reap: banana, plantain & sweet cassava		<i>Reap: Cassava, arrow, watermelon, ochro, corn, boulanger, pine apple, pumpkin, lime, eschallot, eddoe, bora, gourds, yam, sweet cassava, sugar cane, pear, , dasheen, pigeon pea, banana, lemon, potato, benah, whitey, paddy, papaw, squash, cotton, ginger, calalu, cabbage, lettuce, pepper, thyme</i>			Reap: barley, sorrel, tobacco, crawa, hiari, Cunani, cucumber, coffee, water eschallot, peanut, bulb eschallot. cucumber	Reap: black eye	Reap: green corn, potato, watermelon, cotton, pepper, pumpkin	Reap: black eye, tomato	Reap: cassava, paddy, dry corn, coffee, yam, tobacco, dasheen, Cunani, pop corn, barley, ginger	Reap: peanut, yam, sorrel, tomato,	Reap: sugar cane, hiari	FARMING		
Reap: Papaw						Reap: Papaw							FARMING	

<sup>1</sup> Tiptian 14/15<sup>th</sup> / Wi Yuu Kotapan

<sup>2</sup> *Crop planted* -Cassava, arrow, watermelon, ochro, corn, Boulanger, pumpkin, Eschallot, eddoe, gourds, yam, sweet cassava, sugar cane, pear, dasheen, pigeon pea, banana, lime, lemon, potato, benah, pine apple, whitey, paddy, papaw, squash, cotton, bora, ginger, Calalu, cabbage, lettuce, pepper, thyme

### Seasonal Calendar for Rupunau continued

January	February	March	April	May	June	July	August	September	October	November	December			
				Agouti, labba, armadillo, bush hog, land turtle, watrash, Salipenta, adouri, bush deer, iguana (hunted throughout the season)						Bush & savannah deer, bush hog, tapir			HUNTING	
Methods used: bow and arrow, hunting dogs, wooden traps, shovel, sticks														
Tiger fish, quelette, Lukunani, Yakatu, patwa, hassar, yarrow, houri, swordfish, sun fish, logo logo				Mangi, Yakatu, catfish, banana fish, Perai				Piab, pacou, quelette, houri, yarrow, cassie, cat fish, sword fish				Tiger fish, sunfish, quelette, Lukunani, mangi, cuti, dari		FISHING
Methods: cast net, seine, bow & arrow, hand net, fish line, diving mask														
Muckru, nibi, aquru shoot	Cocrite shoot, etc leaves, lumber, red wood	Frezor, water cedar, bitter cedar	Conazib, mora, silver balli, sweet heart	Savannah green heart, wine wood, Purple Heart, locust gum		Caramani, crap wood, morawie, tapra	Turtle ladder, tarie, fish rod, axe handle	Gold, clay, purple rock, greater teeth	Ete balli, ashamadi, bush garlic, honey, wax	Cocrite worm, tucuma worm, tibisiri	Blood wood, gum,		GATHERING	
Errip Water turtle eggs				Turo, lou, wi duki, locust fruit, lumber, shoruk, wawash, gini pap, wild cashew, achi dam				Iguana and alligator eggs						

## SKETCH MAPS “The Where”

The sketch maps were the last tools that were created. A group of participants most knowledgeable about the community’s resource areas was selected to draw a base or skeleton map on a chalkboard, noting major features such as rivers, creeks, trails and the mountains. After the entire group viewed and agreed to the accuracy of this representation, the base map was copied onto separate cardboards. These were then used by each focus group to record the resource locations. In total three sketch maps were created in the three resource group categories of farming, hunting & fishing, and gathering. The keys of each resource map show the main resources that the participants selected to be included on the map.

The sketch maps were used by each of the field research teams to choose their routes. The maps show all the major resources in each resource category as prioritized by the participants.



**Gathering group creating their resource use map**

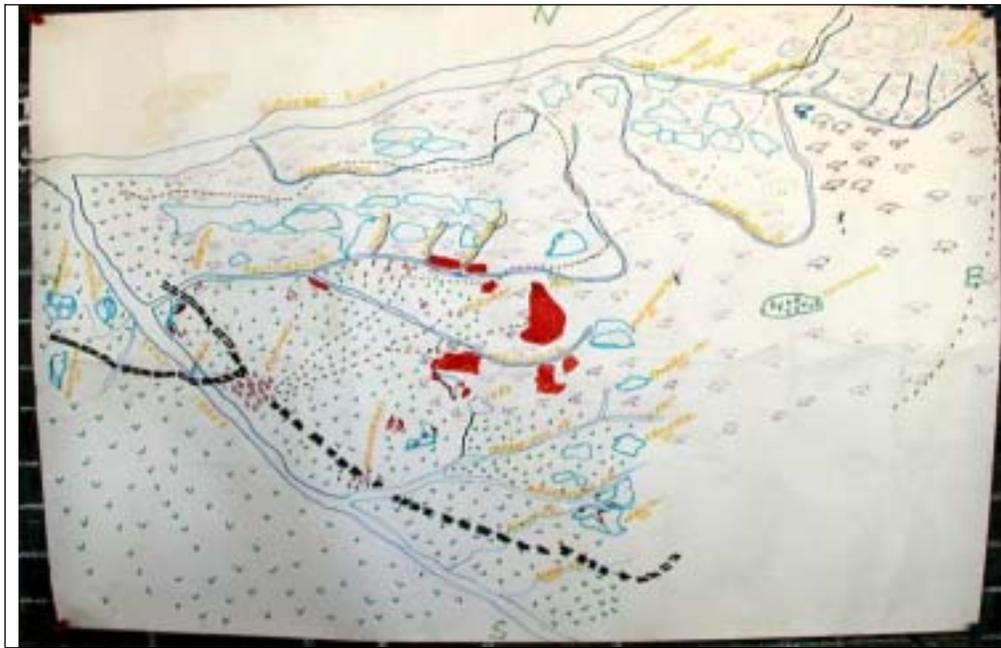
## FARMING RESOURCE USE SKETCH MAP

There are three main settlements; namely Rupunau proper, Weri-Moor, where a small church is located, and Achimeri wao another small settlement along the Achimeri wao creek. All three settlements have separate farming grounds.

Rupunau farms are located easterly from the village, the largest and most highly concentrated farming areas. The farms are clustered in sections between different families in the area. These areas have fairly fertile soils that produce high yields.

Weri-moor farms are located more towards the Kanuku mountains in a northeasterly direction which are more fertile than the Rupunau farming grounds due to the pristine state of the forest and cooler climate conditions. Farming in this area is also done in groups according to family.

On the other hand Achimeri wao farming is done differently. Farms are made singly and separated from each other. Farms are found on bush islands or small mountains like Nat tau and We We Tau. Farms are also located in the bush mouth areas.

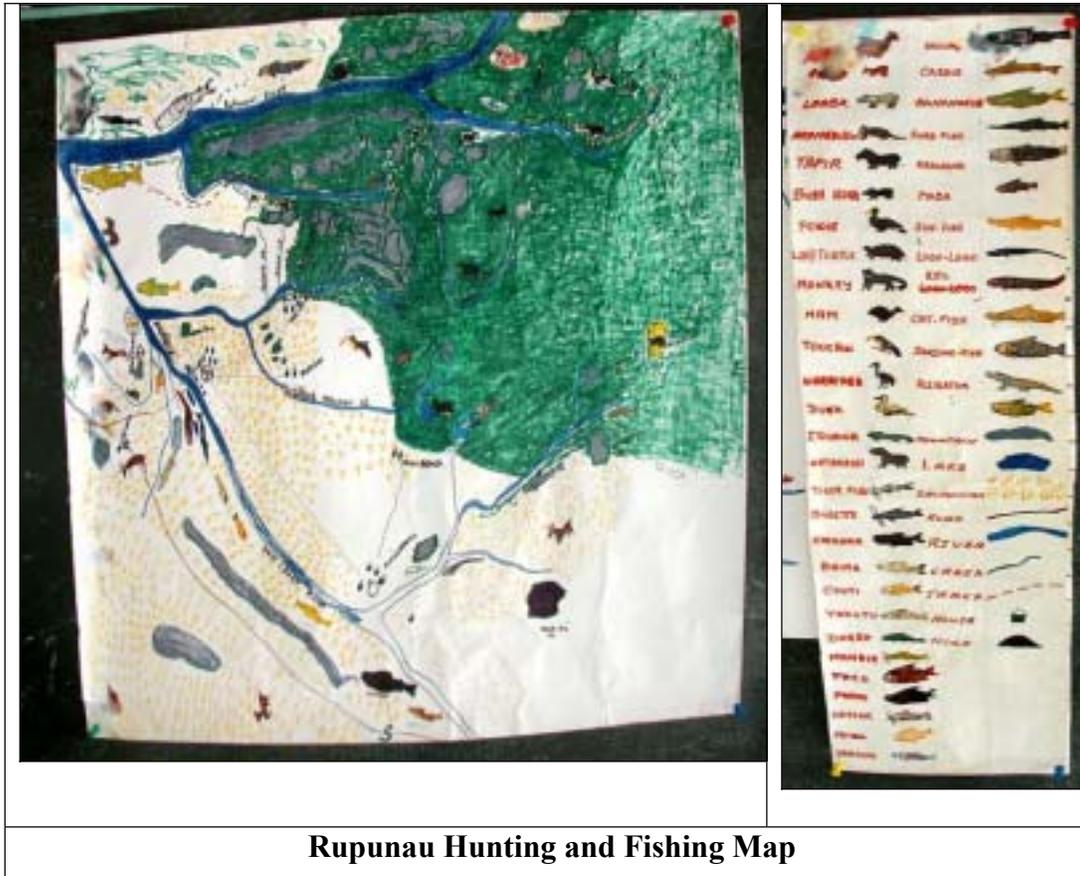


**Rupunau Farming Map**

## HUNTING & FISHING RESOURCE USE SKETCH MAP

This map shows the spatial area in which the village of Rupunau uses its hunting and fishing resources. It shows the savannah, the bush area, and the mountains. One can see that most of the resources use areas are close to the village.

Most of the hunting and fishing activities take place along the banks of the Rupununi River between Sand Creek and Dadanawa, Kwasshwo mouth and upper Sand Creek River, creeks and in the bush islands and savannahs.

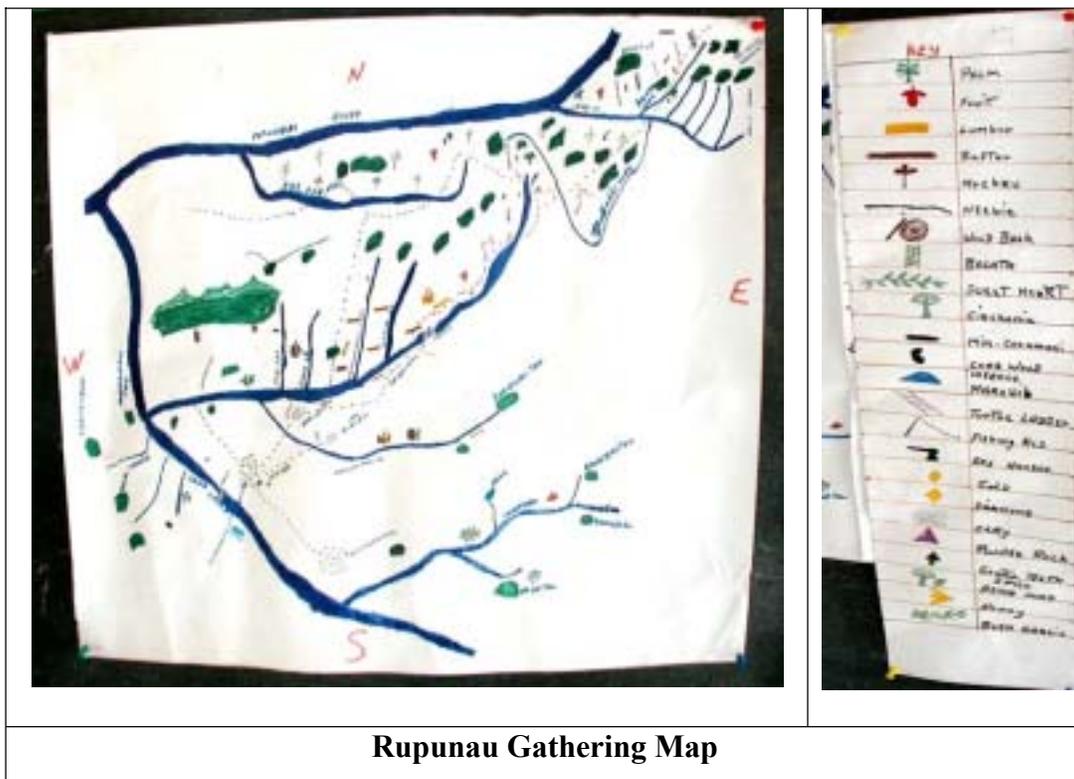


## GATHERING RESOURCE USE SKETCH MAP

The area represented on this map is between the Rupununi River and Sand Creek. In this community, the areas where the gathering resources are located are concentrated in the mountains.

Trails leading into the mountains clearly represent the use areas. The forest resources gathered are craft material e.g. muckru, nibbi, logs and other housing material e.g. leaves, medicinal material and minerals.

Most of the areas used are along the head of the creek in the mountains.



Gathering of grater teeth occurs at Drupe Wao Head, etc leaves at the back of We We Tau and Arantau, and craft materials along Kwasshwao, Crabwood, Dabarri wao creeks.

# FIELD OBSERVATION

## INTRODUCTION



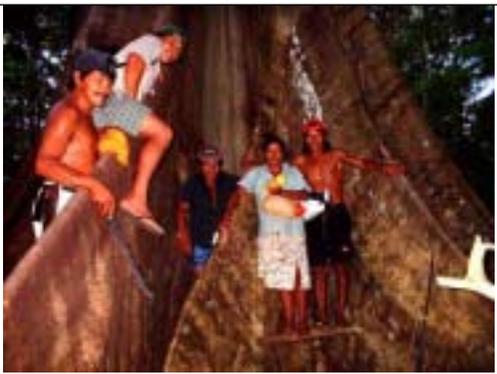
**Participants learning to use the GPS**

The fieldwork in Rupunau was done over a period of four days. Before the fieldwork began the members of the “bush team” received training on:

- How to use a GPS unit
- How to complete data forms

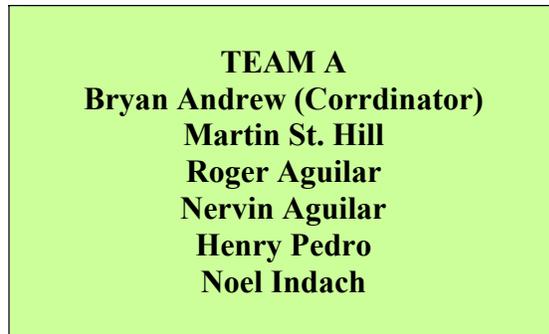
In total there were three teams, with 6 persons on each team. The teams were grouped according to the areas that had to be covered. Each team observed and geo-referenced areas found along the way in each of the resource categories: farming, hunting & fishing and gathering.

A CRE team member led each team but all members of the team actively contributed to the information collected.



**Bush team of Rupunau**

The reports that follow reflect observations and information gathered from the entire group. The information is presented individually, for each team including, who was on the team, the areas that were covered, and general observations. Team A was lead by the Coordinator of Sand Creek, Bryan Andrew.



## **AREAS COVERED**

The furthest point visited by the team was **Ma wer bau**. Other farming grounds visited by the team were:

- **Oru-Y Tau**
- **Kwao-Ma-Toon**
- **Ma-wer Bau**
- **Omezi Bau**
- **Maparar**
- **Buru Bau**
- **Farm Mountain**
- **Ma-Kur-Pan**
- **Music island**
- **Ma-B-wao Tau**
- **MA-B-wao**
- **Nat Tau**
- **We-We Tau**
- **I-que Tau (Brain Mountain)**
- **Arrow Mountain**

## **OBSERVATIONS**

The majority of the farms visited are found on low land areas main soil types observed were sandy soil and red loam especially at Oru-Y Tau and Nat-tau. The main crops planted are: cassava, banana and pineapple. These crops were found in all the farms that were visited. Acoushi ants are the main threat to the farms. Other threats include bush deer, hogs, monkeys, agouti and cows.

Places like Oru-Y tau, Kwao-ma toon, Buru Bau, Maparar and Farm Mountain are very old farm grounds, but have a large area for farming which is extending more and more into the dense forest.

The majority of farms are found at Farm Mountain area. The farms here are very close to each other. Another similar place is Music Island. The majority of the farms are between two and three acres. The conditions of the forest where the farms are found are good.

Places like Arrow Mountain and Nat Tau have very little space for more farming. A total of forty-six farms were visited. Farmers of these areas also farm in the main bush area.

## **TEAM B**

**Sebastian Tancredo (CI)**

**Harry St Hill**

**William St Hill**

**Gabriel St. Hill**

**Ernest St. Hill**

**Titus Indach**

## **AREAS COVERED**

**Shrimp creek** was the furthest point visited on this trip. Other main resource areas visited were **Rap-Rap-wao**, the source of **Dabari-wao**, **Kwass wao falls** and **Grasshopper creek**.

## **OBSERVATION**

During the trip it was observed that not many farms are located in the mountain top area. One of the participants, Titus Indach, said that they do not farm in this area because during the dry season the soil becomes very compacted, which is not ideal for cassava growth. So mostly farming is done to the east of Weri-Moor settlement along the base of the mountain. The farmlands are in the high forest and good produce are produced here.

Along the Kwassi-wao the entire village gathered their housing materials. Fruits are gathered in this area too. In one area it was observed that there is plenty of bitter cedar, water cedar and wichabi, which encourages lumbering in the area. The mountains are used for gathering nibbi, muckru, bush medicine and axe handles. There are two particular areas (Holder Claim and Rap Rap-wao) where people do pork knocking (prospect for gold with pick axe and shovel). According to the participants, people from Shea, Sand Creek and Brazil also do mining in this area.

Hunting is done both in the savannahs and up the mountains. The hunting grounds are mostly in the high forest areas where it was observed from the tracks that the game in the area was plentiful. There is a swampy area in the mountains characterized by a sort of palm forest and many creek sources, and animals feed here during the dry season.

The main fishing areas are Kwassi-wao falls and Rap Rap-wao. Fishing is done throughout the year but more so during the rainy season. All fishing grounds observed were in excellent condition.

## TEAM C

**Richard Wilson (CI)**  
**Johnny Indach (Hunting expert)**  
**Desmond St. Hill (Gathering expert)**  
**Norbert Atkinson**  
**Godfrey Wilson (Fishing expert)**  
**Annesettie Ignace**

### AREAS COVERED

The furthest resource use area visited by the team is **Old Camp Site (Balata Creek Head)** 03.15188° N, 059.27096° W. In order to reach this area it takes eight hours on foot. Other areas that were visited were:

- **The bush mouth**
- **Middle bush**
- **Kwassiwao Creek Falls**
- **Kwasiwao Head camp site**
- **Wild Cashew Creek**
- **Lobster/Shrimp Creek**
- **Mountain top**
- **Crab-wood Creek (Crapud)**
- **Balata Creek**
- **Min Tau**
- **Muckru Creek**



Participants gathering data in the field



Weaving a fan from the akuyuru shoot

### OBSERVATIONS

Around the area of the bush mouth there is a small neighborhood known as Weri Moor. Villagers farm there at the bush mouth area and each year they extend their farms deeper into the bush. The farmlands are fertile and farmers are able to get excellent yields.

From the farmland areas to the mountain foot areas, both the residents of Weri Moor and those of Rupunau gather materials. Further on at Kwassiwao Falls, a profound fishing area exists especially in the dry season, gathering for materials is also done here.

Lobster Creek is famous for hunting wild hogs and other wild game. Crabwood Creek (Krapud) is a tributary of the Rupununi River. This creek is known as an excellent fishing area especially because it is not often used. The gathering areas are in excellent condition; wild fruits are gathered seasonally. The areas through Krapud and balata Creek are very rich in biodiversity. These areas are conserved for special occasions.

# DATA RESULTS

## INTRODUCTION

Over a four-day period the fieldwork was conducted in the areas that were identified on the Resource Use Sketch Maps. A description of each of these trips was reported under the Field Observation section. The purpose of the exercise in addition to observation was to geo-reference the areas of furthest use this was done using a Global Positioning System (GPS) unit and a Data form, which is described below.

The entire participant group was given basic training on how to use the GPS units. The bush teams received additional training on the units and were also shown how to record data on the data forms. The information presented in this section is therefore the result of the work, which was recorded by the “Bush teams”.

The results of the geo-referencing exercise are presented in this section of the report. The information is presented in the forms of bar graphs. The graphs are used to show the main threats to the area visited, as well as the intensity and quality of use.

Each graph is followed by a description of the information that is represented on the graph. The information is presented in for the three resource use categories, farming, hunting and fishing and gathering.

## DATA SUMMARY

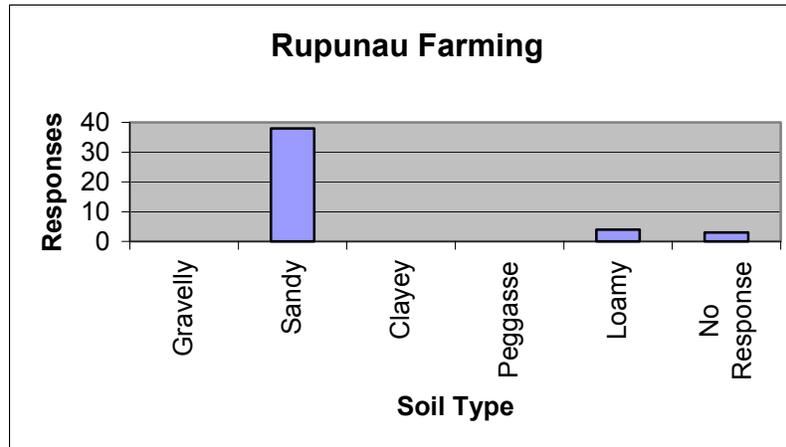
In total eighty-nine (89) waypoints were taken. The following is a summary of all the waypoints that were taken in each category

- **Farming**        **46**
- **Hunting**        **16**
- **Fishing**        **7**
- **Gathering**     **20**

## FARMING DATA RESULTS

### QUALITY

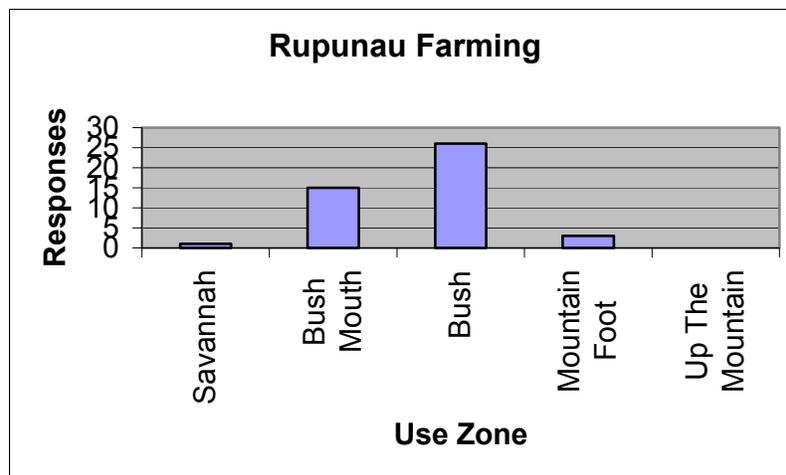
The soil type in the majority of farming areas visited was sandy (38). **See graph**



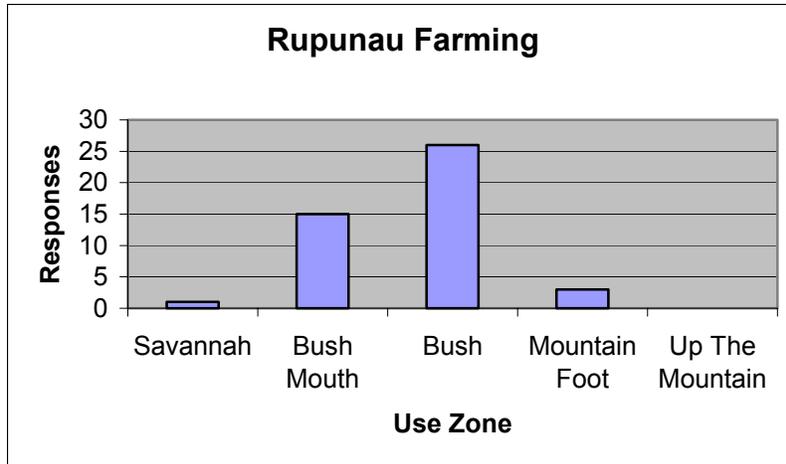
The crops planted on the farms are mainly mixed crops (43) and cassava (2).

### INTENSITY

The farms that were visited are concentrated in the bush (26) and the bush mouth areas (15). **see graph**. All of the farms visited were actively used.

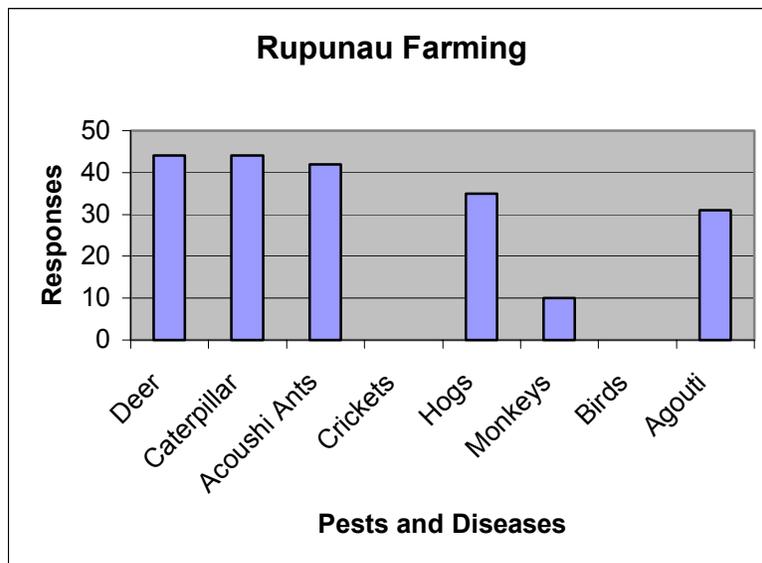


The farms are mainly 2-5 acres (26) and one acre (18) in size. **See graph** The produce on all the farms visited is used for domestic consumption.



### THREATS

There were no threats recorded at any of the sites. A broad number pests and diseases affect the crops: deer (44) caterpillar (44) and acoushi ants (42). **See graph.**

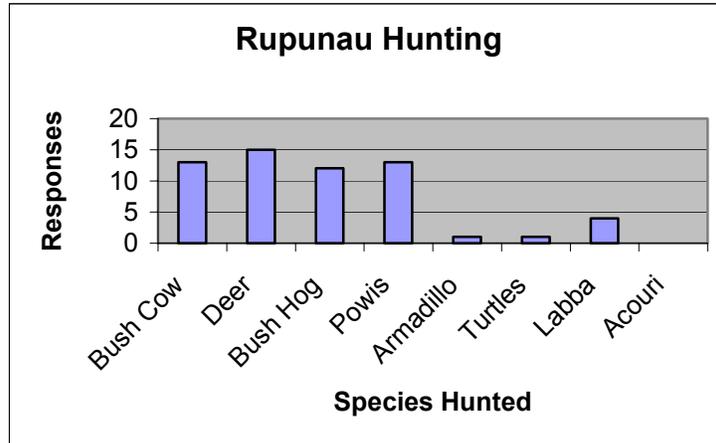


# HUNTING DATA RESULTS

## QUALITY

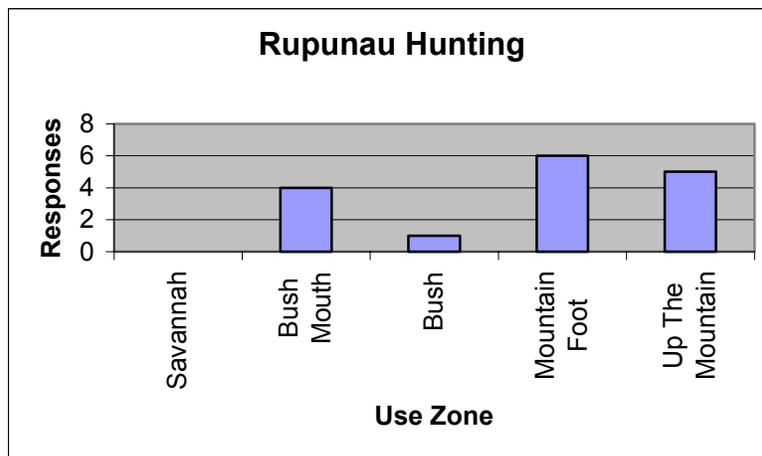
The quality of the hunting resources is considered to be excellent (8) and good (5).

The game that are hunted were entered as deer (15) bush cow (13) powis (13) and bush hog (12).  
**See graph**

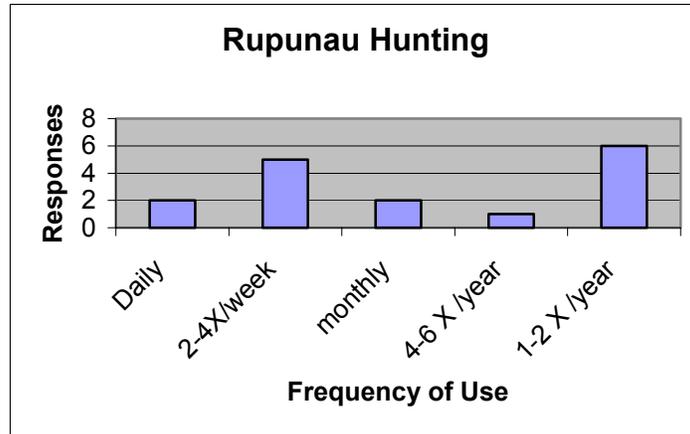


## INTENSITY

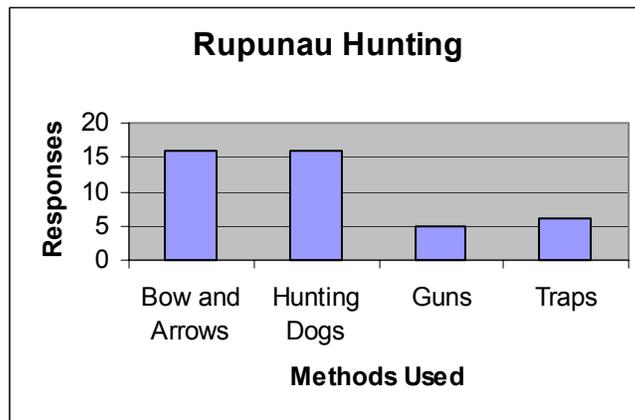
The areas that were visited are concentrated at the mountain foot (6) and up the mountain (5) see **graph**. All of the sites that were visited are actively used.



Hunting is done in these areas mostly 1 – 2 times a year (6) and 2 – 4 times per week (5) see **graph** The amount of game taken is usually less than three (13). Thirteen of the sites use the game for domestic use only.



Hunting is done using primarily traditional methods: bow and arrows (16) and hunting dogs (16) and to a lesser extent modern methods, guns (5). See **graph**



### THREATS

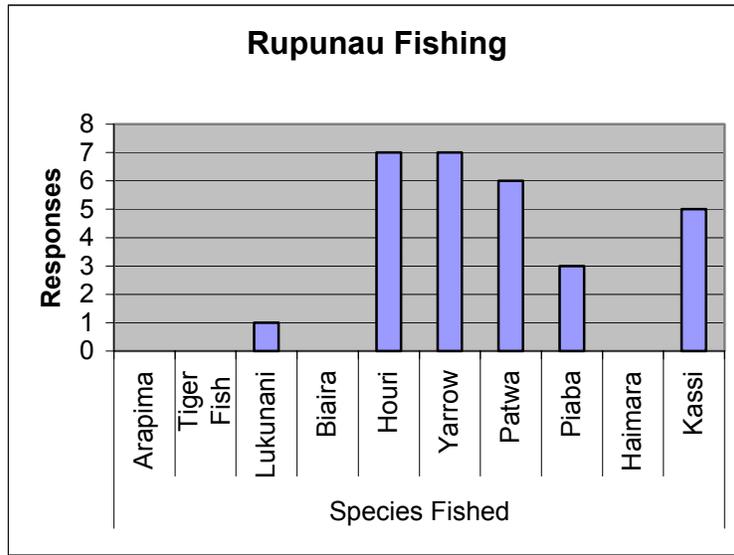
There was only one threat recorded at one of the sites - over hunting (1).

# FISHING DATA RESULTS

## QUALITY

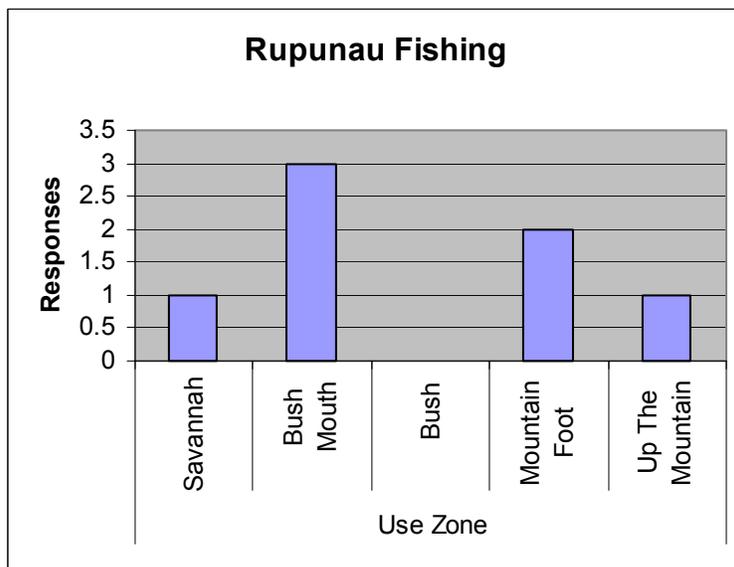
The condition of the fishing resources was considered to be excellent (5) and good (2).

The resources that are caught are houri (7) yarrow (7) and patwa (6) see graph.

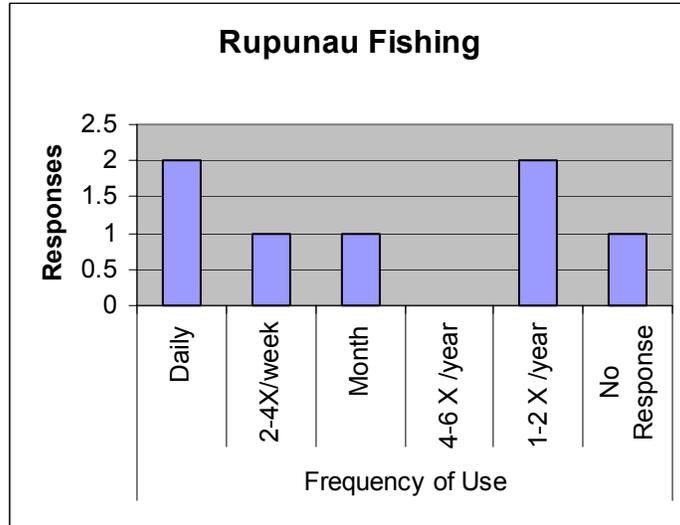


## INTENSITY

Waypoints were collected at the bush mouth (3) and at the mountain foot (2) See graph. All of the sites visited were active.



The main methods used for fishing were bow and arrows (7) hook and line (5) and cast nets (5). Most fishing at the sites is done 1 – 2 times a year (2) and daily (2). **See graph.** The catch is usually between 20-50 (4).



### THREATS

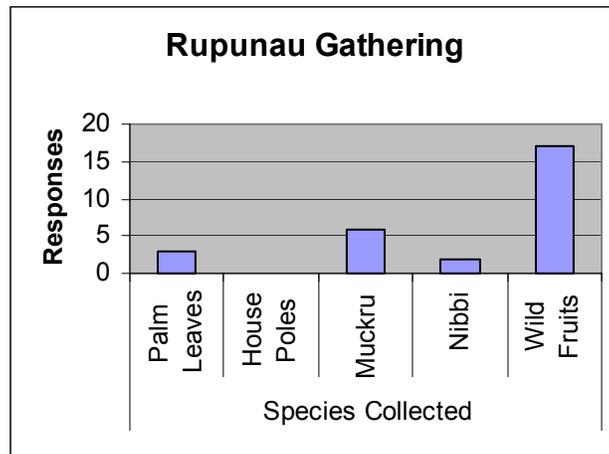
There was only one threat recorded - poisoning (1).

## GATHERING DATA RESULTS

### QUALITY

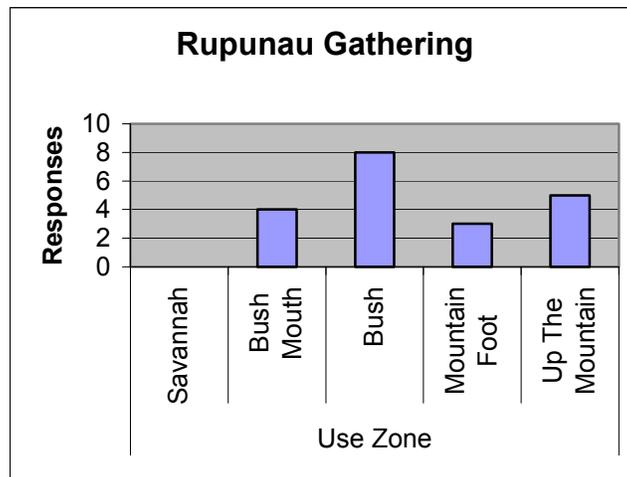
The gathering resource condition was recorded as being “excellent” (15) and “good” (5).

The resources collected are wild fruits (17) muckru (6) and palm leaves (3). **See graph**

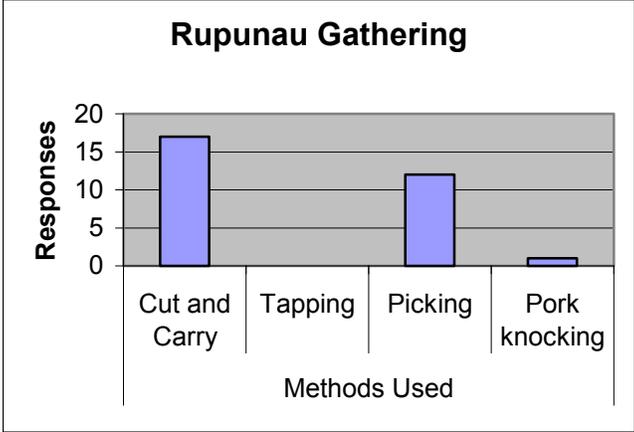


### INTENSITY

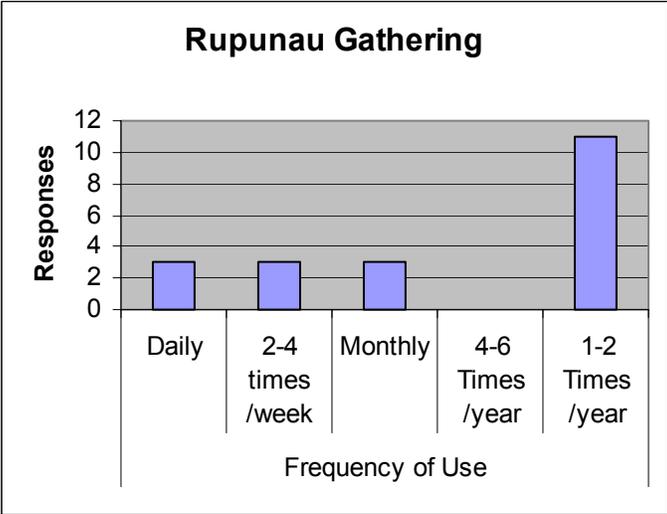
The gathering sites that were geo-referenced were spread out, with points recorded in the bush (8), up the mountain (5) and at the bush mouth (4) **see graph**. All of the sites that were visited are active.



Cut and carry (17) picking (12) and pork knocking (1) **see graph** are the methods used in these areas.



Gathering is done mainly done 1 – 2 times per year (11) **See graph**. Seventeen of the entries were used for domestic purposes and three was for both sale and domestic use. .



**THREATS**

There was only one threat recorded - over logging (1).

# VILLAGE SURVEYS

## INTRODUCTION

The village fieldwork was done over four days during the same period that” the bush teams” were doing field observation of resource use sites. The fieldwork focused on two main exercises-collecting surveys and conservation stories. The questions in the surveys were based on three specific areas (1) **threats** (2) **the quality** and (3) **availability of resources** in the village.

The participants were fully involved in every aspect of the village survey. The exercise began with a mini lecture on surveying methods. This was followed by the creation of a village sketch map from which the participants selected households to be interviewed. Each household was informed the day before and given the option to take part in the survey. The exercise ended with the compilation of the results that were gathered in the field.

For the completion of these exercises the participants worked in teams each of which was headed by a CI staff member or a Community Coordinator.

In addition the village work had several other objectives:

- To provide general information to a *wider* representation of the village.
- To allow villagers to ask questions related to the CRE, Protected Areas or CI and have them answered
- To involve the school in an activity during the CRE

### The Village Team



#### DOVE

Esther McIntosh (CI)  
Cedric Thomas  
Nelly St. Hill  
Elsa St. Hill  
Jocelyn Wilson

## INTRODUCTION

In total eight women participated in the workshop and one woman went out to participate in the geo-referencing. The seven women who remained were instrumental in the success of the village surveys.

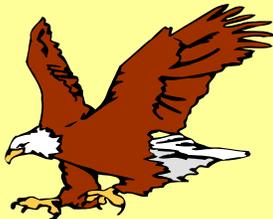
They were active in many ways: organization, informing interviewees, assisting in translation and interviewing fellow villagers.

In total twenty-four village surveys were completed representing a sample of approximately 40%. This figure should be tempered with the fact that Rupunau is very

spread out and in some areas especially Weri Moor (7 miles outside of Rupunau) several people were not available to be interviewed.

The major sections of the village, which were visited by the village teams included: Yakatu, Buru Bau, Music Island, Achimeri wao and Weri Moor. Most of the houses in the village are spread out so effort was made to visit households that were far away. The group divided themselves into two teams, Doves and the Harpy Eagles.

### The Village Team



#### HARPY EAGLE

Natalie Victoriano (CI)  
Juliet St. Hill  
Claudia Joseph  
Verlinda Aguilar  
Kate Thomas

## OBSERVATION

At the beginning of the workshop there was a lot of apprehension and fear on the part of the participants about the purpose of the CRE, CI as a facilitator, and Protected Areas. Before going out in the community the teams benefited from the information and presentations that were made, so they felt more comfortable to go out in their community and carry out the surveys.

The information that they received also helped them to assist in explaining concepts and relaying information to their fellow villagers, which they took the initiative in doing.

It was necessary to explain at every household:

- CI and its role in the PA process
- Protected Areas
- The purpose of the CRE

When the teams visited homes the villagers generally welcomed them into their homes. There was a lot of misinformation being spread in the village. Some villagers said that they were told that they would be restricted from using their lands. Generally though people asked many questions.

Although it was felt that more information is needed, significant headway was made in distributing information and clarifying misgivings, and in creating a focus on the need to conserve and protect their resources.

# VILLAGE SURVEY DATA RESULTS

## INTRODUCTION

Over a two-day period the fieldwork was conducted for the village survey. The village survey was an informal information gathering exercise. The households that were identified on the village sketch map by the participants were visited and surveyed.

For many people in the community, it was the first time that they had taken part in a Resource Use survey of this type. As a result they were asked to respond to questions and sections with which they felt most comfortable. In some cases, for example, women did not feel comfortable to answer questions as related to hunting even though they may accompany their husbands and actively hunt. Therefore the number of responses in some sections may vary.

### PROFILE

#### THE ARTISTS WHO CREATED THE MASTER RESOURCE USE MAP

Whilst the “Village Team” was out doing surveys and collecting stories from the village, Touchau Laurentino, Brother Basil and Henry created the Master Resource Use Map.

They first used pencils to draw on all the resources, roads and the village and then they painted it with water paints.

The group listed all the names of the resources in the local Wapishana names and these were all explained to the community at the public meeting.



**Henry, Brother Basil and Touchau Laurentino**

The results of the village survey exercise are presented in this section of the report. The information is presented in the forms of tables. The tables are used to show the main threats, the intensity and quality of the resources.

The information is presented in for the three resource use

categories, farming, hunting and fishing and gathering.

## VILLAGE SURVEY DATA SUMMARY

In total thirty (30) surveys were collected. The following is a summary of all the data that was collected in each of the three resource categories:

- **Farming** 27
- **Hunting** 8
- **Fishing** 17
- **Gathering** 12

## FARMING DATA RESULTS

### INTERVIEWEES INFORMATION

#### *Age*

15-28	29-40	41-55	Above 55
5	6	9	7

#### *Gender*

Male	Female
9	18

### INTENSITY

During the village survey, most people who were interviewed said that they farm in the bush mouth area (18) and up the mountains (9). **See table**

#### *Where is your farm?*

Savannah	Bush	Bush Mouth	Deep Bush	Mountain Foot	Up the Mountains	Other
0	1	18	0	0	9	2

Farms are visited on a regular basis. As the table below shows most of the responses were either daily (8) weekly (8) or four times a week (4). **See table**

#### *How often do you visit your farm?*

Daily	2 x Week	3 x Week	4 x Week	5 x Week	Weekly
8	1	3	4	1	8

Most of the farms are wither between 2-4 acres (15) or 1>2 acres (7). **See table** The majority (16) of the produce from these farms are for both domestic use and for sale. Ten (10) persons said that they use their produce only in the home, for domestic use.

#### *How big is your farm?*

< 1 Acre	1>2 Acre	2-4 Acre	5 Acre and more
4	7	15	1

### THREATS

Acoushi ant (24) was felt to be the main threat to farm crops. Other threats listed were wild animals (15) domestic animals (7) monkeys and caterpillars (1). **See table**

#### *What are the threats to your crops?*

Wild animals	Acoushi ants	Weather	Caterpillar	Weed	Monkey	Domestic animals	Other
15	24	0	1	0	1	7	2

## HUNTING DATA RESULTS

### INTERVIEWEES INFORMATION

#### *Age*

15-28	29-40	41-55	Above 55
0	3	2	3

#### *Gender*

Male	Female
4	4

### QUALITY

Seven (7) persons who were interviewed said that they felt that they had to go further to fish than they did in the past. Five (5) persons responded that there had been a change in the availability of resources while one (1) said that there had not been a change. Many persons commented that the reason for this was the increase in the population and that game was generally less than in the past.

#### *Has there been a change in the availability of resources?*

Yes	No	No Response
5	1	2

### INTENSITY

Hunting is done in the savannah (3), in the deep bush (2), at the mountain foot and up the mountain (1). **See table**

#### *Where do you hunt?*

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain	Deep Bush	No Response
3	0	0	1	1	2	1

Hunting is done using the bow and arrows (4) and guns (1) and is done mostly monthly and weekly (3). **See table** The game that is caught is used for domestic purposes only (8).

#### *How often do you hunt?*

Daily	2 x Weekly	Weekly	Monthly	Yearly	Seasonally	Other
0	0	3	3	0	0	2

### THREATS

The main threats to hunting sites were felt to be the increase in the population (6).

# FISHING DATA RESULTS

## INTERVIEWEES INFORMATION

### *Age*

15-28	29-40	41-55	Above 55
2	6	5	4

### *Gender*

Male	Female
8	9

## QUALITY

Fifteen (15) persons who were interviewed said that they felt that they had to go further to hunt than they had done in the past. Ten (10) persons said that there had been a change in the availability of fishing resources while two (2) persons said that there hadn't been a change. The comments that people made on this question was mainly to highlight the increase in the population and they also noted that fishing resources are less or scarce.

### *Has there been a change is the availability of resources?*

Yes	No	No Response
10	2	5

## INTENSITY

Fishing is concentrated mostly in the savannah (13). Other areas listed were at mountain foot and up the mountains (1). **See table**

### *Where do you fish?*

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain	Deep Bush	No Response
13	0	0	1	1	0	2

The following new methods are mainly used to fish: hook and line (15), seine (13) and cast nets (7). To a lesser extent bow and arrows (5) are also used. Fishing is done mostly weekly (6) or monthly (3). **See table**

The fish that are caught are mainly used for either domestic use only (15) or for both domestic and sale purposes (2).

### *How often do you go fishing?*

Daily	2 x wk	Weekly	2 x Monthly	Monthly	Seasonally	Other
2	0	6	0	3	1	5

## **THREATS**

The major threat to the fishing sites was felt to be the increase in the population (9) and poisoning of fish (3).

# GATHERING DATA RESULTS

## INTERVIEWEES INFORMATION

### Age

15-28	29-40	41-55	Above 55
2	3	5	2

### Gender

Male	Female
7	5

## QUALITY

Six (6) persons who were interviewed said that they felt that they had to go further to gather materials than they had done on the past. Eight (8) persons said that there had been a change in the availability of resources while four (4) persons felt that there had not been a change.

### Has there been a change is the availability of resources?

Yes	No
8	4

## INTENSITY

Gathering is done up the mountains (4), in the bush (3), at the mountain foot, at bush mouth (2) and in the deep bush (1). **See table**

### Where do you gather?

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain	Deep Bush
0	2	3	2	4	1

Gathering is done mostly every 2 years (2) and every 5 years (1). Some people also said that they gather every 6, 4 and 2-3 years. These responses are reflected in the “other” responses box. **See table**

### How often do you gather?

Daily	Weekly	Yearly	Every 5 Years	Every 2 years	Quarterly	Seasonally	Other
0	0	0	1	2	0	0	9

## THREATS

The major threats to gathering resources were felt to be the increase in the population (4), over-harvesting and the overlapping or resources with other communities (1).

### What are the threats to your gathering resources?

Over-Harvesting	Over lap of resources	Population	Fire	Other	No Response
1	1	4	0	1	5

## CLOSING ACTIVITIES



**Part of the crowd at the final public meeting**

The CRE concluded with a series of activities. The first such activity was a presentation that was made by the village team participants to the school **children**. This presentation was done to explain to the older school children the work that was done during the workshop it included:

- The resource lists
- The seasonal calendar
- The sketch map
- The results of the village survey

It was also an opportunity for the participants to share the knowledge that they had with their students, which included the local names of some resources and stories.

On the last day of the workshop the bush and village teams met after being apart for four days. At this last meeting the two teams used the time together to tell each other of their experiences during the village survey and field observation exercises.



**Reporting on the bush trip.**

The workshop was closed with a village public meeting. The public meeting was an opportunity to share with the other villagers the work that they had done, their experiences and their knowledge of the mountains, of their resources and of the seasons of resource use. This knowledge was often a real learning experience for other members of the community who may not have been aware.

The final meeting was done mainly in the local language and the participants themselves did all of the presentations using photos to communicate their experiences.

The participants were also presented with certificates of participation.

## RESOURCE USE PROFILE

The resource use profile is an outline of how the village uses the resources based on the information that was collected during the CRE in the **resource discussions, data forms, village surveys** and in the **field observation**. The purpose of the resource use profile is to show:

- **The main areas that are used by the community**
- **The factors that affect the use of the resources**

Rupunau village is found on the right bank of the Sand Creek River in the Eastern Kanukus. It is approximately ten miles south of the Kanuku mountain range. It was geo-referenced at 2.90404°N and 59.36621°W. Rupunau is divided into three sections – Weir Moor, Achimeri wao and Rupunau proper. Each area has its own distinct farming area. Hunting, fishing, and gathering are done in common areas that are very spread out.

This report takes into consideration, all the areas that were identified by the community and, particularly the areas that were visited by the “Bush Teams”, in a collaborative effort involving the village participant group and members of Conservation International Guyana team. The Participant group related their resource use via the tools created during the workshop in the areas of:

- Hunting
- Fishing
- Farming
- Gathering

### RESOURCE USE “ZONES”

All the communities are located in the savannahs with some situated closer to the mountains than others. Use occurs in different areas with specific characteristics, from the savannah to the mountains, known by the communities as follows:

#### SAVANNAH

The savannah areas are the wide-open grasslands with scattered bushes dominated by the characteristic sand paper tree (*Curatella Americana*). There are low land savannahs and high land savannahs that are found in the mountain valleys. There are also other areas termed “bush island” or small-forested area surrounded by savannah, called **Cashew pond and Nat-tau** where farming is done.

#### BUSH MOUTH

The community describes this area as where the main savannah land ends and the bush or the forest begins, extending approximately one mile into the bush. The vegetation of this area is typically secondary growth with the majority being fallow lands or old minabs, as the villagers call them. This term ‘bush mouth’ is used commonly when relating to the activities done within this particular area. For example, if a villager has a farm in this area, he would always refer to it as his/her bush mouth farm. So bush mouth areas

generally do not have names unless they are close by a creek or some other natural feature. **Music Island** and **Ma-b-wao** were geo-referenced in this area.

## **BUSH**

The term bush relates to the area between the end of the bush mouth and where the mountain foot area begins. The extent of the bush size varies in each community, depending on the amount of forested area between the bush mouth and the mountains. In communities with extensive bush the far areas are referred to as the ‘deep bush’. The deep bush is not usually farmed, but is used for hunting, gathering or fishing activities. The vegetation of the bush is mainly primary forest with minimum canopy opening due to minimal human impact.

**Farm Mountain** and the source of **Ma-wer-bau** are sites observed by the bush teams.

## **MOUNTAIN FOOT**

This area lies within a mile range before the mountain slopes. The mountain foot areas are very fertile with a cooler climate and very favorable for crops. Communities that are located closer to the mountains prefer to use mainly these areas for farming. From the farms access is gained to the surrounding areas as well as up the mountains for resource use. Access to the mountains requires passage through the mountain foot. **Kwassiwao Falls, Wild Cashew Creek, Lobster Creek** were geo-referenced at the mountain foot.

## **UP THE MOUNTAIN**

This refers to all the areas beyond the mountain foot, up and into the mountains. All mountain areas are very rich for resources such as nibbi, caramanni, balata, medicine and game due to the forest being untouched. Hunting is the primary activity up the mountain due to the abundance of game animals with some amount of gathering carried out at the same time. **Balata Creek Head, Muckru Creek, Min Tau, Crab-wood Creek (Crapud), Balata Creek** are all located Up the Mountain.

Main activities are generally carried out in the following areas:

- **Farming – bush mouth, bush, creeks banks**
- **Hunting – main rivers, creek, mountains**
- **Gathering – mountains**
- **Fishing – main rivers, creeks**

## **QUALITY**

In the areas that were visited by the bush teams, the resource condition was generally listed as “good” and “excellent”.

The farming areas of Rupunau proper are located east of the village and farms are generally made in large clusters. The areas have been in used for long periods of time and as a result the produce is considered to be fairly good. This can be contrasted with those of Weri-moor, where the soil is more fertile than those of Rupunau due to the cooler climate and proximity to the mountains and cooler climate crops are also. The farming of

the Achimeri wao section is also done on bush islands and on small mountains in the savannahs such as **We We Tau, Nat Tau, I-que-tau (Brain Mountain) and Arrow Mountain.**

The amount of the lumbering materials harvested is regulated by the Village Council, which permits a maximum of 2000bm (board measurement) of lumber to be extracted per person, per year.

## INTENSITY

### Use Zone

Rupunau	Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain
Farming	1	15	26	3	0
Hunting	0	4	1	6	5
Fishing	1	3	0	2	1
Gathering	0	4	8	3	5

**The above table shows the areas or “zones” the bush team visited, and the number of geo-referenced points recorded in each one.**

The gathering of housing materials is confined to the mountains areas. The source of the **Kwassiwao Creek** is an area that is used by villagers to gather house materials and lumber. Within the mountain regions, starting from the mountain foot continuing up the mountain, are where most of the hunting and gathering resources are found today. This makes the mountains a very important resource use area of the Rupunau villagers. The hunting resources were noted as being in excellent condition by the bush teams. However, some species were listed as being either diminished or rare. These are: armadillo, land and water turtles, and some birds.

The mountains are also used seasonally for mining gold. These areas are **Kwassiwao Creek, Holder Claim and Rap Rap Wao** where prospecting is done on a small scale by only a few villagers. Basically all house materials are harvested from the bush and mountain foot regions. The mountains are more used for other materials like nibbi, muckru and others that are less likely to be found in the bush zone. It was also reported in the village survey that villagers felt that the resources were less than they were in the past and that they had to go further for their resources.

The villagers in the Weri-Moor section practice a system of farm extension, which has resulted in more farms being moved towards the dense forest areas going towards the Kanuku Mountains. Likewise, the villagers of Rupunau proper have the same system. The majority of Rupunau’s farms are located in one area, Farm Mountain, where there is a vast tract of forest. Achimeriwao section of Rupunau, follows a system of shifting cultivation in which they rotate their farming areas on the bush islands

The major fishing activity of Rupunau is limited to the Sand Creek River all the way to the Rupununi River. On the bush trips there were quite a few creeks mentioned where fishing is carried out when in the area example Kwassi-wao and Rap Rap wao.

## THREATS

The main threats as noted in discussions, data forms and village survey was the acoushi ant, which affect farms. In addition caterpillars, wild and domestic animals were noted for destroying farm crops. Caterpillars are a significant threat to the cassava crops, which is the main stable of the village's diet during the first rains just prior to the main rainy season.

## SITE GEO-REFERENCE POINTS

The table below shows the sites observed and geo-referenced during the CRE Bush Team fieldtrips. The readings were taken with Global Positioning Units (GPS). Heavy clouds or tree cover can make it difficult to get a perfect reading, so all geo-references should be considered approximate, generally within 25 meters. This is part of the information recorded by the participant team members while observing resource use sites. The site names are spelled in the table, as the team recorded them, so there is sometimes more than one spelling for the same site. The following information is listed:

- **Site Type**-this allows what type of resource use happens at this site. Some areas are multiple use, that is, more than one type of resource is used, so this type of site is listed for each resource use checked on the data form
  - **F = Farming**
  - **H = Hunting**
  - **FS= Fishing**
  - **G = Gathering**
- **Village** – location of site.
- **North** – the North or latitudinal reading. This number is shown in “decimal degrees”, or how many degrees North of the Equator (0°) the site is located.
- **West** – the West or longitudinal reading. This number is given in “decimal degrees” showing how many degrees west of the Prime Meridian (0°) the site is located
- **Area Name** – the name of the site as recorded by the teams on the data form. When the site had no specific name this line is left blank.
- **Site Zone** – the “zone” or geographic location of the site. At times one site name applies to several zones, as a creek that may flow from a site “Up the Mountain” all the way out into the savannah.
  - **Savannah**
  - **Bush mouth**
  - **Bush**
  - **Mountain Foot**
  - **Up the Mountain**

Site Type	Village	° North	° West	Area Name	Zone
F	RP	2.9283	59.3053	Nat Tau	Savannah
FS	RP	2.99913	59.34357	Cashew Pond	Savannah
F	RP	2.94491	59.41516	Kwa-Ma-Toon	Bush Mouth
F	RP	2.93878	59.30477	Ma-B-Wau	Bush Mouth
F	RP	2.93713	59.30666	Ma-B-Wau	Bush Mouth

Site Type	Village	° North	° West	Area Name	Zone
F	RP	2.93601	59.31756	Ma-B-Wau	Bush Mouth
F	RP	2.9354	59.30515	Ma-B-Wau	Bush Mouth
F	RP	2.93816	59.30496	Ma-B-Wau	Bush Mouth
F	RP	2.93513	59.31912	Ma-B-Wau Tau	Bush Mouth
F	RP	2.93646	59.31773	Ma-B-Wau Tau	Bush Mouth
F	RP	2.93501	59.31757	Ma-B-Wau Tau	Bush Mouth
F	RP	2.94559	59.33272	Ma-Kur-Pan	Bush Mouth
F	RP	2.93463	59.32426	Music Island	Bush Mouth
F	RP	2.93732	59.32191	Music Island	Bush Mouth
F	RP	2.94173	59.33109	Music Island	Bush Mouth
F	RP	2.93485	59.32139	Music Island	Bush Mouth
F	RP	2.9095	59.43402	O-Lu-Y Tau	Bush Mouth
FS	RP	2.97388	59.34224	John Pop Pond	Bush Mouth
FS	RP	3.00733	59.35441	Kwassiwau Creek	Bush Mouth
FS	RP	3.08219	59.36326	Rap Rap Wau Creek	Bush Mouth
G	RP	3.04471	59.38014	Grass Hopper Creek	Bush Mouth
G	RP	3.01111	59.36203	Kwassiwau Creek	Bush Mouth
G	RP	2.99971	59.33414	O-Mez-Bau	Bush Mouth
G	RP	2.95529	59.35088	Wichi-bai-toon	Bush Mouth
H	RP	3.0316	59.33194	Ameurr Wau	Bush Mouth
H	RP	3.04471	59.38014	Grass Hopper Creek	Bush Mouth
H	RP	2.97359	59.34214	John Pop Wood	Bush Mouth
H	RP	3.06225	59.37932		Bush Mouth
F	RP	2.96255	59.33829	Buru Bau	Bush
F	RP	2.9511	59.34036	Buru Bau	Bush
F	RP	2.94607	59.34066	Buru Bau	Bush
F	RP	2.95431	59.34615	Buru Bau	Bush
F	RP	2.95612	59.32896	Buru-Bau	Bush
F	RP	2.9634	59.33081	Farm Mountain	Bush
F	RP	2.9647	59.33081	Farm Mountain	Bush
F	RP	2.96591	59.32947	Farm Mountain	Bush
F	RP	2.96403	59.32885	Farm Mountain	Bush
F	RP	2.96282	59.32813	Farm Mountain	Bush
F	RP	2.95878	59.33226	Farm Mountain	Bush
F	RP	2.95123	59.32384	Ma-Kur-Pan	Bush
F	RP	2.94989	59.32407	Ma-Kur-Pan	Bush

Site Type	Village	° North	° West	Area Name	Zone
F	RP	2.94722	59.32731	Ma-Kur-Pan	Bush
F	RP	2.9456	59.32808	Ma-Kur-Pan	Bush
F	RP	2.95373	59.3235	Ma-Kur-Pan	Bush
F	RP	2.99522	59.33511	Ma-Pa-Rar	Bush
F	RP	3.01955	59.332	Ma-wer-bau	Bush
F	RP	3.02168	59.33431	Ma-wer-bau	Bush
F	RP	3.02288	59.33451	Ma-wer-bau	Bush
F	RP	3.02125	59.33463	Ma-Wer-Bau	Bush
F	RP	3.02099	59.33478	Ma-Wer-Bau	Bush
F	RP	2.94186	59.32572	Music Island	Bush
F	RP	2.94005	59.32792	Music Island	Bush
F	RP	2.94276	59.32585	music Island	Bush
F	RP	3.00044	59.32929	Omez Bau	Bush
G	RP	2.96179	59.3381	Buru Bau	Bush
G	RP	3.03164	59.33198	Farm Hill	Bush
G	RP	2.96163	59.32883	Farm Mountain	Bush
G	RP	3.02041	59.36832	Grass Hopper Creek	Bush
G	RP	2.97443	59.3424	John Pop Bush	Bush
G	RP	2.95367	59.32501	Ma-Kur-Pan	Bush
G	RP	3.08188	59.3594		Bush
G	RP	3.08033	59.36196		Bush
H	RP	3.03164	59.33198	Farm Hill	Bush
F	RP	2.88704	59.28888	Arrow Mountain	Mountain Foot
F	RP	2.88406	59.27959	Brain Mountain	Mountain Foot
F	RP	2.87372	59.28741	We-we Tau	Mountain Foot
FS	RP	3.05399	59.32883	Kwassi-Wau Fall	Mountain Foot
FS	RP	3.05527	59.32424	Kwassiwau Falls	Mountain Foot
G	RP	3.06003	59.32709	Kwassi wau Mountain	Mountain Foot
G	RP	3.10327	59.30027	Wild Cashew Creek	Mountain Foot
G	RP	3.11016	59.32222		Mountain Foot
H	RP	2.88603	59.29018	Arrow Mountain	Mountain Foot
H	RP	3.11016	59.32222	Dabarri Wau	Mountain Foot
H	RP	3.07179	59.32517	Kwassiwau Creek Head	Mountain Foot
H	RP	3.05527	59.32424	Kwassiwau Falls	Mountain Foot
H	RP	3.10327	59.30027	Lobster Creek	Mountain Foot
H	RP	3.10327	59.30027	Wild Cashew Crk	Mountain Foot

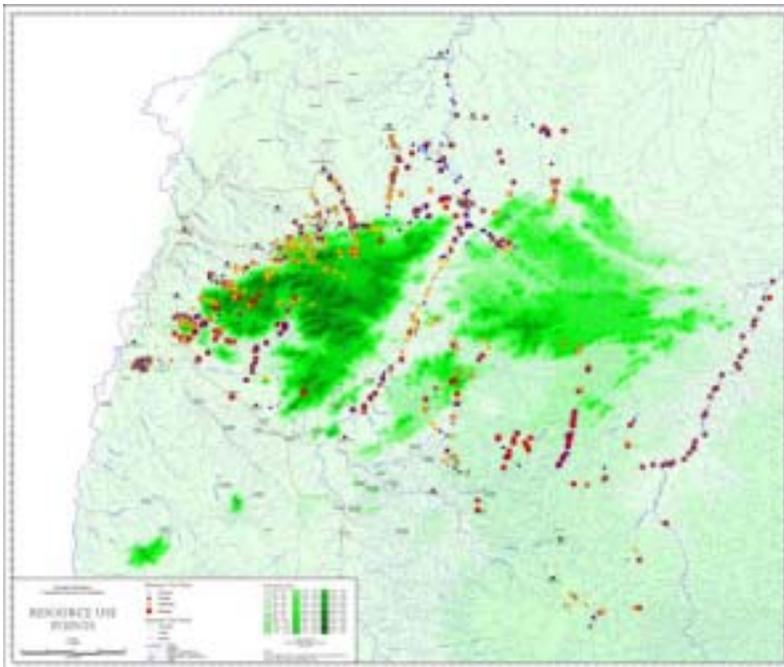
Site Type	Village	° North	° West	Area Name	Zone
FS	RP	3.13145	59.28688	Crab Wood Creek	Up the Mountain
G	RP	3.15188	59.27096	Balata Camp Site	Up the Mountain
G	RP	3.1313	59.28554	Labstar Mountain	Up the Mountain
G	RP	3.16633	59.27958	Meinn Tau	Up the Mountain
G	RP	3.1519	59.27097	Muckru Creek	Up the Mountain
G	RP	3.08444	59.35808		Up the Mountain
H	RP	3.13918	59.28155	Balata Creek	Up the Mountain
H	RP	3.13145	59.28688	Crab Wood Creek	Up the Mountain
H	RP	3.09309	59.33522	Rap Rap Wau Head	Up the Mountain
H	RP	3.09632	59.32876	Shrimp Creek	Up the Mountain
H	RP	2.86915	59.28983	We We Tau	Up the Mountain
F	RP	2.93275	59.31131	Ma-B-Wau Tau	

## THE RESOURCE SITE MAPS

The following maps are digitized, or computer created, representations of the locations of the sites observed during the CRE fieldwork. The locations or “points” appear on a background that shows the area covered during these field trips in each village. This background is based on the official topographic map of Guyana published by the Guyana Lands and Surveys Department in 1964. The positioning of the rivers, creeks, and roads, and many of the place names come from this official map, which is now nearly 40 years old. This is the reason that some of the names on the map may be spelled differently than they are spelled today. Also some other features may have changed, such as the location of roads, or even smaller creeks, which may have changed direction or ceased to flow.

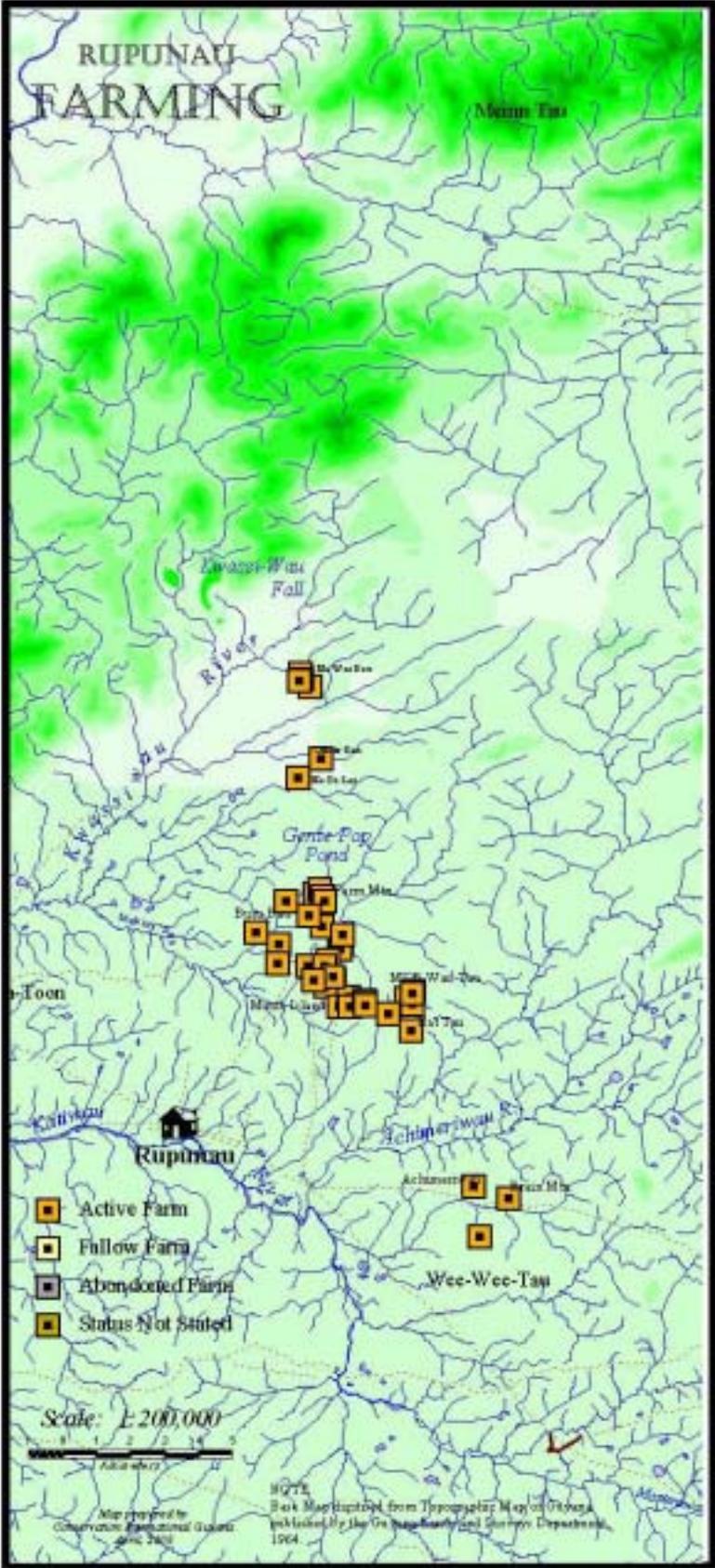
The readings or geo-reference points taken at each site with the Global Positioning Unit (GPS) are transferred to a computer, which also contains the sections of the official map with the information on the Kanuku Mountain area. A computer program called “ArcView” places the points on the map according to the position recorded by the GPS when the bush team members took the reading.

There is a separate map for each resource category as well as a combined map that has all the readings taken during the CRE. It is important to remember, when viewing the maps, that they represent only a record of sites observed during specific trips made during the CRE. These maps do not show every area a community uses, but show the sites along the routes chosen by the teams to reach, as far as was possible, the furthest areas of community use, and the most important use areas.



In some cases, flooding prevented access to some areas, especially those normally reached via creeks. In this case, readings were taken at a creek mouth, to record the area, while the use is described in the report. In order to have a complete understanding of the resource use areas, it is important to study the resource sketch maps along with the formal digitized maps. It is the sketch maps that show all the areas recorded by the CRE participants as representing their resource use.

As part of the CRE project, a digitized map of the entire Kanuku Mountain Range was also produced in the same way that the individual village maps were produced. This map shows all the resource point readings (1, 376) taken during all the CRE workshops. Again is important to note that the Kanuku Mountains map is a record of the results of the 47 field trips made during the CREs.



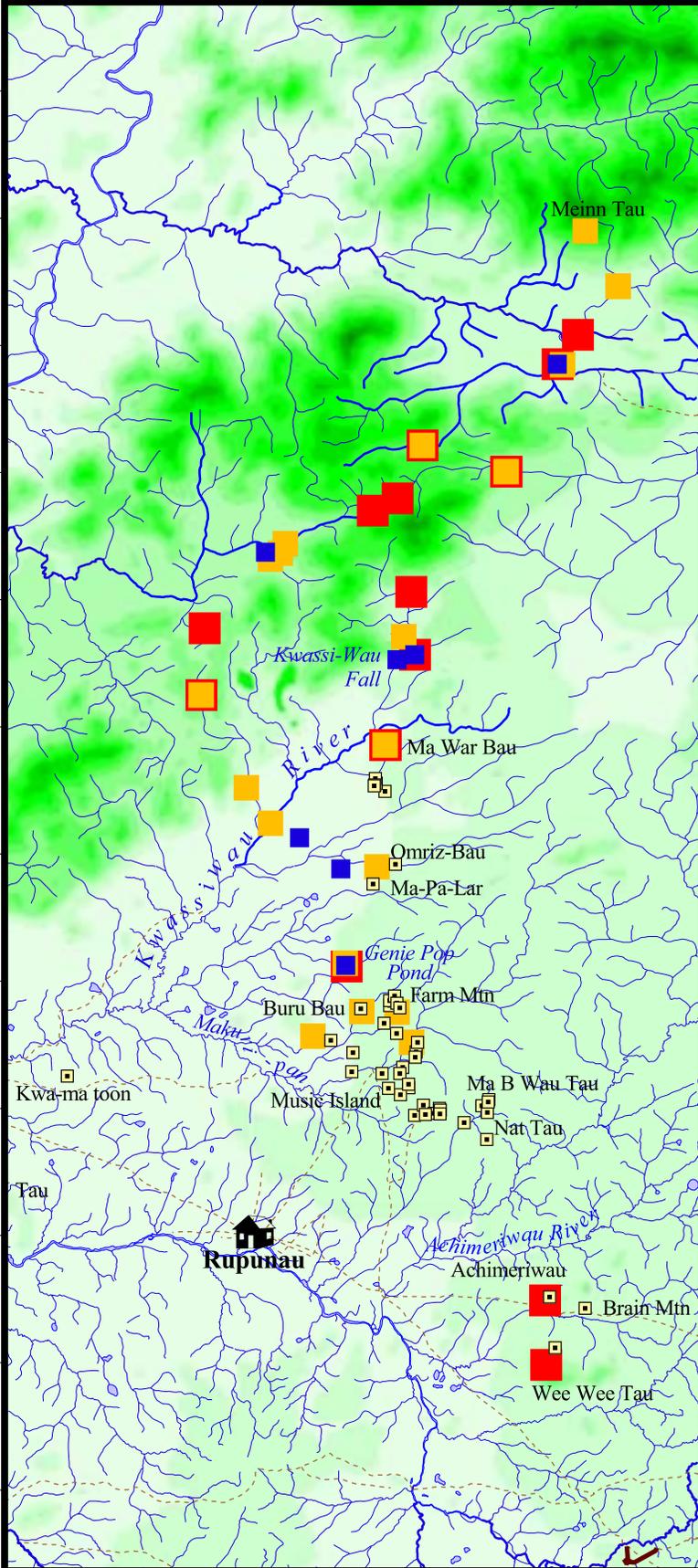






59.43333 59.40000 59.36667 59.33333 59.30000 59.26667

3.20000  
3.16667  
3.13333  
3.10000  
3.06667  
3.03333  
3.00000  
2.96667  
2.93333  
2.90000  
2.86667  
2.83333



59.43333 59.40000 59.36667 59.33333 59.30000 59.26667

## Kanuku Mountains Community Resource Evaluation

### RUPUNAU RESOURCE POINTS

- Farming
- Fishing
- Gathering
- Hunting

- Airstrips
- Trails
- Roads
- River
- Island
- Main Creek/River
- Secondary Creek/River
- Lake

#### Elevation (feet)

200 - 300	1300 - 1400	2400 - 2500
300 - 400	1400 - 1500	2500 - 2600
400 - 500	1500 - 1600	2600 - 2700
500 - 600	1600 - 1700	2700 - 2800
600 - 700	1700 - 1800	2800 - 2900
700 - 800	1800 - 1900	2900 - 3000
800 - 900	1900 - 2000	3000 - 3100
900 - 1000	2000 - 2100	3100 - 3200
1000 - 1100	2100 - 2200	3200 - 3300
1100 - 1200	2200 - 2300	3300 - 3400
1200 - 1300	2300 - 2400	3400 - 3500

Scale: 1:200,000



Map prepared by  
Conservation International Guyana  
April, 2003

NOTE  
Base Map digitised from Topographic Map of Guyana  
published by the Guyana Lands and Surveys Department,  
1964.

## CONCLUSION



**Reviewing the resource points on the small maps, Quarrie.**

This information is now in a database, which is a computer program that organizes information in a way that it can be read and studied. This database of information will be used to help decide about the best type of protected area to propose for the Kanuku Mountains. It is also a valuable tool for the communities to use in communicating their resource use patterns.

In addition to this report, each village will receive a copy of all the data forms filled out on the bush trips, and all the surveys and evaluation forms completed during the CRE and Results workshops. The information will also be available to members of the communities at Conservation International's Lethem field office.

Copies of the village reports will be given to those government entities, and donor agencies involved in the protected areas process in Guyana including:

Environmental Protection Agency  
Lands and Surveys Department  
Forestry Commission  
Minister of Amerindian Affairs  
Regional Democratic Council  
Office of the President  
United States Agency for International Development (USAID)  
The World Bank

The Community Resource Evaluation Workshop was a learning experience for all involved. A great quantity of information was gathered and shared by the community participants. The results of the fieldwork and the draft copies of the resource site maps were returned to community for feedback and verification during a workshop in March 2003. Feedback and corrections were incorporated into the final report.



**Explaining the results of the village survey data, Parikwarinawa.**



**Verifying the seasonal calendar, Rupunau.**



**Reading their CRE reports, Maruranau.**

**APPENDICES**  
**APPENDIX 1**  
**Typical Activity Schedule**

<i>DATE</i>	<i>ACTIVITY(S)</i>
Day 1	<b><u>A.M.</u></b> ☞ Arrival ☞ Meeting with Touchau/Council
Day 2	<b><u>A.M.</u></b> ☞ <b>Public Meeting</b> <ul style="list-style-type: none"> <li>• Defining Concepts</li> <li>• The Protected Area Process</li> <li>• Presenting the CRE</li> </ul> ☞ <b>Participant Meeting</b>
Day 3	<b><u>A.M.</u></b> ☞ Introductions ☞ Community Participation ☞ Creating Resource Focus Groups <b><u>P.M.</u></b> ☞ Creating Resource List: <i>The What</i>
Day 4	<b><u>A.M.</u></b> ☞ Seasonal Resource Use Calendar: <i>The When</i> ☞ The Village Resource Use Sketch Map: <i>The Where</i> ☞ Discussion: Resource Use Methods, Availability and Threats: <i>The How</i> ☞ Group Presentations
Day 5	Activity Break
Day 6	<b><u>A.M.</u></b> ☞ Field Work Preparation <ul style="list-style-type: none"> <li>• Finishing of Maps</li> <li>• G.P.S. Training/ Where am I on the face of the Earth.</li> <li>• Discussion of goals and objectives of fieldwork</li> <li>• Identifying Teams</li> <li>• Mini-Lectures</li> <li>• Planning the fieldwork</li> </ul> <b><u>P.M.</u></b> ☞ Bush Team: Prepare for Departure
Day 7	Village Team: <b><u>A.M.</u></b> ☞ Bush Team Departs ☞ Village Team <ul style="list-style-type: none"> <li>○ Prepare for surveys</li> <li>○ Create Village Map</li> <li>○ Review survey</li> </ul>
Day 8	<b><u>A.M.</u></b> ☞ Village Surveys and stories ☞ Video Show at school and quiz
Day 9	☞ Continue with village surveys and interviews
Day 10	☞ Bush Teams returns ☞ Village Team <ul style="list-style-type: none"> <li>• Compile Interview Results</li> <li>• Prepare Presentations</li> </ul>

## APPENDIX 2

### Team Profile

#### **Vitus Antone (Forest Resource Advisor):**

Vitus is from Lethem. He has been working for CI for one year. Before joining CI he worked at Iwokrama as a forest ranger. He attended both the University of Guyana and the Guyana School of Agriculture.

During the CRE his role was:

Co Facilitator  
Technical Lead on Digital and Video Photography,  
CRE presentations  
Training

Vitus has participated in 8 CREs. His role for Team B includes:

- Co-lead facilitator
- Bush Team Leader
- Focus Group Leader
- Lead responsibility for Bush Team activities
- Technical Lead for photography, video, GPS work

Vitus co-facilitates the team's activities. He holds lead responsibility for all photographic data, including downloading of images, maintenance and identification. He co-designed and implemented the community field leader training as well as delivered training in report writing for the CRE team members.

Vitus has designed and delivered presentations on forestry topics for the student interactions using digital photo presentations and PowerPoint, and has delivered mini-lectures on his experiences while working with Iwokrama. He manages the technical issues for Team B, including GPS training and mapping lectures. Vitus has led 6 Bush Teams with 33 participants over 24 days and 430 miles.

#### **Natalie Victoriano (Macushi Interpreter):**

Natalie is originally from Kumu village. She has worked with CI for two years. Before joining the organization she was the Women's Group Leader, Church Assistant and a Village Councillor.

Initial Role: Macushi Interpreter

Current Role: Interpreter

Facilitator  
Lead Village Team Activates  
Asst. Purchasing Manager

Natalie has participated in 10 CREs. Her role in the team includes:

- Interpreter

- Facilitator
- Focus Group Leader
- Lead Facilitator Village Team
- Kitchen Manager

Natalie assists Margaret Gomes in purchasing supplies, taking responsibility for all medical/first aid supplies. She assists in supply inventories and maintains supply list and menus on the computer using MS Word. During the activity Natalie managed the kitchen and the preparation of over 300 meals and all rations for the bush teams. As Village Team leader, Natalie facilitates all Village Team Activities, including:

- The village sketch map
- Village survey
- Preparation of participants for the student and public meeting presentations
- Student interactions

Natalie has also lead Bush Teams for the Katoka Pilot and the Maruranau CRE.

**Richard Wilson (Indigenous Knowledge Advisor):**

Richard Wilson has worked with CI- Guyana for two years. He is originally from Rupunau Village where he was once a Touchau.

His role in the CRE included acting as an:

- Interpreter
- Facilitator
- Bush Team Leader

Richie has completed 10 CREs. His role on the team includes:

- Wapishana Interpreter
- Facilitator
- Bush Team Leader
- Focus Group Leader

Richie assists in logistics for launching the CRE activity. He provides interpretation CRE activities in Wapishana communities. As Bush Team leader, he assists in training participants in GPS use and data collection. Richie has lead 9 Bush Team trips covering approximately 440 miles over 37 days, training 46 participants. Richie has acquired skills in digital photography, GPS, and operation of audio/visual equipment.

**Sebastian Tancredo (Bush Team Leader):**

Sebastian is from Nappi village. Sebastian was involved with the Primate Group in Nappi where he received some GPS training from 2000 – 2001. Prior to the beginning of the CRE in Parishara he received an extensive one-week training on the GPS and fieldwork.

Sebastian then proceeded to participate in four CRE activities as a Bush Team Leader. His responsibilities included:

- Giving basic training on the GPS
- Leading a team

- Choosing routes
- Gathering data
- Report writing

In addition Sebastian also contributed to the workshop by: co-facilitating, interpreting and assisting the team where necessary.

**Esther McIntosh (CRE Facilitator):**

Esther is from Georgetown. She has been working with CI-Guyana for over a year as the CRE Facilitator and has participated in 8 CRE exercises. She worked on the CRE as a lead facilitator for the team.

Her responsibilities during the CRE include:

- Facilitator
- Village Team leader
- Logistics
- Management
- Reporting

Esther was lead facilitator for the team and lead for the Village team and student activities. She was also instrumental in implementation of the overall CRE project, designing methodology, capacity building, training and reporting.

Date <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%; text-align: center;">Month</td> <td style="width:33%; text-align: center;">Day</td> <td style="width:33%; text-align: center;">Year</td> </tr> <tr> <td style="border: 1px solid black; width: 33px; height: 20px;"></td> <td style="border: 1px solid black; width: 33px; height: 20px;"></td> <td style="border: 1px solid black; width: 33px; height: 20px; text-align: center;">2002</td> </tr> </table>	Month	Day	Year			2002	<b>Point Identification</b> Code <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:25%; text-align: center;">GPS Unit</td> <td style="width:25%; text-align: center;">Village</td> <td style="width:25%; text-align: center;">Feature</td> <td style="width:25%; text-align: center;">Waypoint</td> </tr> <tr> <td style="border: 1px solid black; width: 25%; height: 20px;"></td> <td style="border: 1px solid black; width: 25%; height: 20px;"></td> <td style="border: 1px solid black; width: 25%; height: 20px;"></td> <td style="border: 1px solid black; width: 25%; height: 20px;"></td> </tr> </table>	GPS Unit	Village	Feature	Waypoint					<b>Coordinates</b> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%; text-align: center;">North</td> <td style="width:50%; text-align: center;">West</td> </tr> <tr> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> <td style="border: 1px solid black; width: 50%; height: 20px;"></td> </tr> </table>	North	West		
Month	Day	Year																		
		2002																		
GPS Unit	Village	Feature	Waypoint																	
North	West																			
Group <input style="width:100%; height: 20px;" type="text"/>	<b>Area Identification</b> Name <input style="width:100%; height: 20px;" type="text"/>																			
Feature Codes: Farming=F; Hunting=H; Fishing=P; Gathering=G	Use Zone Savannah <input type="checkbox"/> Bush Mouth <input type="checkbox"/> Bush <input type="checkbox"/> Mountain Foot <input type="checkbox"/> Up the Mountain <input type="checkbox"/>																			

## HUNTING

Type of Site	Site Use Status	Species Hunted	Methods Used	Frequency of Use
Feeding Area <input type="checkbox"/>	Active <input type="checkbox"/>	Bush Cow <input type="checkbox"/>	Bow & Arrow <input type="checkbox"/>	Daily <input type="checkbox"/>
Track <input type="checkbox"/>	Inactive <input type="checkbox"/>	Deer <input type="checkbox"/>	Hunting Dogs <input type="checkbox"/>	2-4 times/week <input type="checkbox"/>
Drinking Pond <input type="checkbox"/>		Bush Hog <input type="checkbox"/>	Guns <input type="checkbox"/>	Monthly <input type="checkbox"/>
Nesting Area <input type="checkbox"/>		Powis <input type="checkbox"/>	Traps <input type="checkbox"/>	4-6 times/year <input type="checkbox"/>
Other <input style="width:100%; height: 20px;" type="text"/>		Others <input style="width:100%; height: 20px;" type="text"/>	Others <input style="width:100%; height: 20px;" type="text"/>	1-2 times/year <input type="checkbox"/>
				Other <input style="width:100%; height: 20px;" type="text"/>

Amount of Catch	Use of Catch	Threats to Site	Condition of Resource	
Less than 3 <input type="checkbox"/>	Domestic Consumption <input type="checkbox"/>	Over-hunting <input type="checkbox"/>	Excellent <input type="checkbox"/>	Good <input type="checkbox"/>
4-10 <input type="checkbox"/>	Sale Outside of Village <input type="checkbox"/>	Mining <input type="checkbox"/>	Poor <input type="checkbox"/>	Very Poor <input type="checkbox"/>
10-20 <input type="checkbox"/>	Both <input type="checkbox"/>	Poaching <input type="checkbox"/>	Notes	
20-50 <input type="checkbox"/>	% Amount sold <input style="width:50%; height: 20px;" type="text"/>	Logging <input type="checkbox"/>		
More than 50 <input type="checkbox"/>	outside village	Other <input style="width:100%; height: 20px;" type="text"/>		

## FISHING

Type of Site	Site Use Status	Species Fished	Methods Used	Frequency of Use
River <input type="checkbox"/>	Active <input type="checkbox"/>	Huri <input type="checkbox"/>	Hook and line <input type="checkbox"/>	Daily <input type="checkbox"/>
Creek <input type="checkbox"/>	Inactive <input type="checkbox"/>	Yarou <input type="checkbox"/>	Poisoning <input type="checkbox"/>	2-4 times/week <input type="checkbox"/>
Pond <input type="checkbox"/>		Lukunani <input type="checkbox"/>	Seine/ Cast Net <input type="checkbox"/>	Monthly <input type="checkbox"/>
Other <input style="width:100%; height: 20px;" type="text"/>		Patwa <input type="checkbox"/>	Bow and Arrows <input type="checkbox"/>	4-6 times/year <input type="checkbox"/>
		Others <input style="width:100%; height: 20px;" type="text"/>	Others <input style="width:100%; height: 20px;" type="text"/>	1-2 times/year <input type="checkbox"/>
				Other <input style="width:100%; height: 20px;" type="text"/>

Amount of Catch	Use of Catch	Threats to Site	Condition of Resource	
Less than 3 <input type="checkbox"/>	Domestic Consumption <input type="checkbox"/>	Over-fishing <input type="checkbox"/>	Excellent <input type="checkbox"/>	Good <input type="checkbox"/>
3-10 <input type="checkbox"/>	Sale Outside of Village <input type="checkbox"/>	Mining <input type="checkbox"/>	Poor <input type="checkbox"/>	Very Poor <input type="checkbox"/>
10-20 <input type="checkbox"/>	Both <input type="checkbox"/>	Poaching <input type="checkbox"/>	Notes	
20-50 <input type="checkbox"/>	% Amount sold <input style="width:50%; height: 20px;" type="text"/>	Poisons <input type="checkbox"/>		
More than 50 <input type="checkbox"/>	outside village	Other <input style="width:100%; height: 20px;" type="text"/>		

Month <input type="text"/> Day <input type="text"/> Year <input type="text" value="2002"/> <b>Date</b>	<b>Point Identification</b>			<b>Coordinates</b>	
<b>Group</b> <input type="text"/>	GPS Unit <input type="text"/>	Village <input type="text"/>	Feature <input type="text"/>	Waypoint <input type="text"/>	North <input type="text"/>
<b>Area Identification</b>					
<i>Feature Codes: Farming=F; Hunting=H; Fishing=P; Gathering=G</i>					
<b>Name</b> <input type="text"/>			<b>Use Zone</b> Savannah <input type="checkbox"/> Bush Mouth <input type="checkbox"/> Bush <input type="checkbox"/> Mountain Foot <input type="checkbox"/> Up the Mountain <input type="checkbox"/>		

## GATHERING

Site Use Status	Species Collected	Methods Used	Frequency of Use	Amount Collected
Active <input type="checkbox"/>	Palm Leaves <input type="checkbox"/>	Cut and Carry <input type="checkbox"/>	Daily <input type="checkbox"/>	<input type="text"/>
Inactive <input type="checkbox"/>	Wild Fruits <input type="checkbox"/>	Tapping <input type="checkbox"/>	2-4 times/week <input type="checkbox"/>	
	Muckru <input type="checkbox"/>	Picking <input type="checkbox"/>	Monthly <input type="checkbox"/>	
	Medicine <input type="checkbox"/>	Pork-knocking <input type="checkbox"/>	4-6 times/year <input type="checkbox"/>	
	Others <input type="text"/>	Others <input type="text"/>	1-2 times/year <input type="checkbox"/>	
			Other <input type="text"/>	

Use of Collection	Threats to Site	Condition of Resource	Notes
Domestic Consumption <input type="checkbox"/>	Over-Harvesting <input type="checkbox"/>	Excellent <input type="checkbox"/> Good <input type="checkbox"/>	Notes
Sale Outside of Village <input type="checkbox"/>	Mining <input type="checkbox"/>	Poor <input type="checkbox"/> Very Poor <input type="checkbox"/>	
Both <input type="checkbox"/>	Poaching <input type="checkbox"/>		
%Amount sold outside village <input type="text"/>	Logging <input type="checkbox"/>		
	Other <input type="text"/>		

## FARMING

<b>Farmer's Name</b> <input type="text"/>			Site Use Status	Age of Farm	Persons Fed
Active <input type="checkbox"/> Fallow <input type="checkbox"/> Abandoned <input type="checkbox"/>			<input type="text"/>	<input type="text"/>	<input type="text"/>

Method of Extension	Size of Farm	Soil Type	Main Crops Planted
Shifting <input type="checkbox"/> Extension <input type="checkbox"/>	< 1 acre <input type="checkbox"/> 1 acre <input type="checkbox"/>	Gravelly <input type="checkbox"/> Sandy <input type="checkbox"/>	Cassava <input type="checkbox"/> Banana <input type="checkbox"/>
Rotation <input type="checkbox"/>	2-5 acre <input type="checkbox"/> > 5 acre <input type="checkbox"/>	Clayey <input type="checkbox"/> Peggasse <input type="checkbox"/>	Peanuts <input type="checkbox"/> Mixed <input type="checkbox"/>
Other <input type="text"/>		Loamy <input type="checkbox"/>	Other <input type="text"/>

Yield per Acre	Threats to Site	Pest and Diseases	Notes
<input type="text"/>	Over-farming <input type="checkbox"/>	Deer <input type="checkbox"/>	Notes
	Mining <input type="checkbox"/>	Caterpillar <input type="checkbox"/>	
	Wildlife <input type="checkbox"/>	Acoushi Ants <input type="checkbox"/>	
	Logging <input type="checkbox"/>	Hogs <input type="checkbox"/>	
	Other <input type="text"/>	Other <input type="text"/>	

Use of Produce	Threats to Site	Pest and Diseases	Notes
Domestic Consumption <input type="checkbox"/>	Over-farming <input type="checkbox"/>	Deer <input type="checkbox"/>	Notes
Sale Outside of Village <input type="checkbox"/>	Mining <input type="checkbox"/>	Caterpillar <input type="checkbox"/>	
Both <input type="checkbox"/>	Wildlife <input type="checkbox"/>	Acoushi Ants <input type="checkbox"/>	
% Amount sold outside village <input type="text"/>	Logging <input type="checkbox"/>	Hogs <input type="checkbox"/>	
	Other <input type="text"/>	Other <input type="text"/>	

## Copy of Bush Data Summaries

### Farming Summary

**Village**<sup>RP</sup>

**Total Number of Points**46

#### Use None

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain			
1	15	26	3	0			

#### Use Status

Active	Fallow	Abandoned	No Response				
45	0	0	0				

#### Method of Extension

Shifting	Extension	Rotation	Other	No response			
1	18	1	0	2			

#### Size of Farm

< 1 Acre	1 Acre	2-5 Acre	> 5 Acre	No Response			
1	18	26	0	0			

#### Soil Type

Gravelly	Sandy	Clayey	Peggasse	Loamy	No Response		
0	38	0	0	4	3		

### Main Crops Planted

Cassava	Banana	Peanuts	Mixed	Other	No Response		
2	0	0	43	0	0		

### Use of Produce

Dom. Consmt.	Sale	Both	No Response				
45	0	0	0				

### Threats to Site

Over-Farming	Mining	Wildlife	Logging				
0	0	0	0				

### Pest and Diseases

Deer	Caterpillar	Acoushi Ants	Crickets	Hogs	Monkeys	Birds	Agouti
44	44	42	0	35	10	0	31

# Hunting Summary

**Village**<sup>RP</sup>

**Total Number of Points** 16

## Use None

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain			
0	4	1	6	5			

## Type of Site

Feeding Area	Track	Drinking Pond	Nesting Area	Combined			
3	5	3	2	3			

## Use Status

Active	Inactive						
16	0						

## Species Hunted

Bush Cow	Deer	Bush Hog	Powis	Armadillo	Turtles	Labba	Acouri
13	15	12	13	1	1	4	0

## Methods Used

Bow and Arrows	Hunting Dogs	Guns	Traps				
16	16	5	6				

## Frequency of Use

Daily	2-4X/week	monthly	4-6 X /year	1-2 X /year			
2	5	2	1	6			

Amount of Catch

< 3	3 to 10	10 to 20	20 to 50	> 50	No Response		
13	0	0	0	0	3		

Use of Catch

Dom. Consumpt	Sale	Both	No Response				
13	0	0	3				

Threats to Site

Over-Hunting	Mining	Poaching	Logging				
0	0	0	0				

Condition of Resource

Excellent	Good	Poor	Very Poor	No Response			
8	5	0	0	3			

## Fishing Summary

*Village*<sup>RP</sup>

**Total Number of Points** 7

### Use None

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain					
1	3	0	2	1					

### Type of Site

River	Creek	Pond	Other						
0	5	2	0						

### Use Status

Active	Inactive								
7	0								

### Species Fished

Arapima	Tiger Fish	Lukunani	Baira	Hour	Yarrow	Patwa	Piaba	Haimara	Kassi
0	0	1	0	7	7	6	3	0	5

### Methods Used

Hook and Line	Poisoning	Cast Net/Seine	Bow and Arrows						
5	0	5	7						

### Frequency of Use

Daily	2-4X/week	Month	4-6 X /year	1-2 X /year	No Response				
2	1	1	0	2	1				

Amount of Catch

< 3	3 to 10	10 to 20	20 to 50	> 50	No Response				
0	0	2	4	0	1				

Use of Catch

Dom. Consumpt	Sale	Both	No Response						
6	0	0	1						

Threats to Site

Over-Fishing	Mining	Poaching	Poisons						
0	0	0	1						

Condition of Resource

Excellent	Good	Poor	Very Poor						
5	2	0	0						

## Gathering Summary

**Village**RP

**Total Number of Points**20

### Use None

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain			
0	4	8	3	5			

### Use Status

Active	Inactive						
20	0						

### Species Collected

Palm Leaves	House Poles	Muckru	Nibbi	Wild Fruits			
3	0	6	2	17			

### Methods Used

Cut and Carry	Tapping	Picking	Pork knocking				
17	0	12	1				

### Frequency of Use

Daily	2-4 times /week	Monthly	4-6 Times /year	1-2 Times /year			
3	3	3	0	11			

### Use of Collection

Dom. Consumpt	Sale	Both					
17	0	3					

Threats to Site

Over-Harvesting	Mining	Poaching	Logging				
0	0	0	1				

Condition of Resource

Excellent	Good	Poor	Very Poor				
15	5	0	0				

Age:  
# of dependants:  
Gender:

## **Conservation International Guyana**

### **COMMUNITY RESOURCE EVALUATION VILLAGE SURVEY**

#### **FARMING**

- (1) How many farms do you have?
- (2) Where are your farm(s) located (savannah, bush mouth, up the mountain etc.)?
- (3) How big is your farm(s)?
- (4) How do you get to your farm (bicycle, walking, boat etc.)?
- (5) How far away is your farm (hours/minutes)?
- (6) How often do you go to your farm?
- (7) How much of your produce do you sell and where?
- (8) What are the threats that affect your farm?
- (9) What do you think is the biggest threat to your farm?
- 10) How do you solve these problems?
- (11) What has changed?

#### **HUNTING AND FISHING**

- (1) Where do you go to hunt / fish?
- (2) How often do you go there to fish/hunt?
- (3) What are the methods that you use (e.g. hook and line, seine etc.)?
- (4) Do you sell any of the fish or game that you catch (in the village, Lethem etc.) and how much of it do you sell?
- (5) What are the threats that affect your hunting/fishing resources?
  
- (4) Do you have to go further to fish or hunt than you did in the past?
- (5) How much further do you have to go (time)?

(6) Is the fish or game as available as it used to be in the past?

(7) Is there any animal/fish that is not there anymore?

(8) What has changed?

### **GATHERING**

(1) Where do you go to gather materials?

(2) How often do you go to gather materials?

(3) Do you sell any of the materials that you gather (in the village, Lethem etc.) and how much do you sell?

(4) What are the threats to the resources that you gather?

(5) Are the resources that you gather, as available as in the past?

(6) Do you have to go further than you did before?

(7) How much further do you have to go (time/miles)?

(8) Is there any material that you used to gather that is not there anymore?

(9) What has changed?

**Copy of Village Survey Results Summary**

**Farming Village Summary**

**Village** Rupunau

**Total Number of Points** 27

**Age**

No Response	15-28	29-40	41-55	Above 55			
0	5	6	9	7			

**Gender**

Male	Female	No Response					
9	18						

**Number of Dependants**

Average	Variance	Maximum	Minimum				
5.26	4.28	9	1				

**Number of Farms**

Average	Variance	Maximum	Minimum				
1.7	1.29	6	1				

### Size of Farm

< 1 Acre	1>2 Acre	2-4 Acre	5 Acre and more	Other	No Response		
4	7	15	1				

### Farming Zone

Savannah	Bush	Bush Mouth	Deep Bush	Mountain Foot	Up the Mountains	Other	No Response
	1	15			9	2	

### Methods of Transportation

Walking	Bicycle	Bullock Cart		Other	No Response		
16	13	4		3			

### Frequency of Use

Daily	2 x wk	3 x wk	4 x wk	5 x wk	Weekly	2 x mth	No Response
8	1	3	4	1	8		1

### Use of Produce

Dom. Consmt.	Sale	Both	No Response				
10		16	1				

Threats to Farms

Wild animals	acoushi ants	weather	caterpillar	domestic animals	monkey	other	No Response
15	24		1	7	1	2	

Biggest Threat

Wild animals	acoushi ants	weather	caterpillar	domestic animals	monkey	weed	fire
5	23			2			

## Hunting Summary

*Village* Rupunau

*Total Number of Points* 8

### Age

No Response	15-28	29-40	41-55	Above 55			
0	0	3	2	3			

### Gender

Male	Female	No Response					
4	4						

### Number of Dependants

Average	Variance	Maximum	Minimum				
4.75	3.07	7	2				

### Frequency of Use

Daily	2 x wk	3 x wk	4 x wk	5 x wk	Weekly	Monthly	Other
0	0	0	0	0	3	3	2

Methods Used

Arrow & Bows	Guns	Dogs	Other	No Response			
4	1			3			

Hunting Zone

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain	Deep Bush	Other	No Response
3			1	1	2		1

Hunting Site

Feeding area	Track	Pond	Creek	Nesting area	Combined	No Response	
					8		

Use of Catch

Dom. Consumpt	Sale	Both	No Response				
8							

Threats to Site

Over-Hunting	Mining	Weather	New_Methods	Fire	Population	Tiger	Other

0	0	0	0	0	6	0	2
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Do you Fish Further?

Yes	No	No Response					
7	1						

Change In Resource availability

Yes	No	No Response					
5	1						

Extinct or Scarce Species

deer	amadillo	labba	turtle	bush hog			
	3		2				

## Fishing Summary

**Village**    Rupunau

**Total Number of Points**    17

### Age

No Response	15-28	29-40	41-55	Above 55			
0	2	6	5	4			

### Gender

Male	Female	No Response					
8	9						

### Number of Dependants

Average	Variance	Maximum	Minimum				
5.35	3.24	8	2				

### Frequency of Use

Daily	2 x wk	Weekly	Monthly	Seasonally
2	0	6	3	1

Other	No Response
5	0

### Fishing Zone

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain	Deep Bush	Other	No Response
13			1	1			2

### Fishing Site

River	Creek	Pond	Falls	Combined	No Response		
1	9			7			

### Use of Catch

Dom. Consumpt	Sale	Both	No Response				
15		2					

### Methods Used

Hook and Line	Poisoning	Cast Nets	Bow and Arrows	Seine	New Methods	No Response	
15		7	5	13	1	1	

### Threats to Site

Over fishing	Weather	Poison	Population	New Methods	Outsiders	Other	No Response

0	0	3	9	0	0	4	1
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Do you Fish Further?

Yes	No	No Response					
15	1	1					

Change In Resource availability

Yes	No	No Response					
10	2	5					

Extinct or Scarce Species

Turtle	Tiger Fish	Arawana	Other				
3	2	2	1				

## Gathering Summary

**Village** Rupunau

**Total Number of Points** 12

### Age

No Response	15-28	29-40	41-55	Above 55			
0	2	3	5	2			

### Gender

Male	Female	No Response					
7	5						

### Number of Dependants

Average	Variance	Maximum	Minimum				
5.33	3.22	8	2				

### Frequency of Use

Daily	3 xwk	Weekly	Yearly	Every 2 yrs	Every 5 yrs	Other	No Response

0	0	0	0	2	1	9	0
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### Gathering Zone

Savannah	Bush Mouth	Bush	Mountain Foot	Up The Mountain	Deep Bush	Other	No Response
	2	3	2	4	1		

### Use of Catch

Dom. Consumpt	Sale	Both	No Response				
11			1				

### Threats to Site

Over-Harvesting	Weather	Population	Fire	Woodants	Overlap res	Other	No Response
1	0	4	0	0	1	1	5

### Do you Gather Further?

Yes	No	No Response					
6	1	5					

Change In Resource availability

Yes	No	No Response					
8	4						

Extinct or Scarce Species

House Materials	Cedar	Red Wood	Other				
	1	1	3				

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