

# **Report on the Edera District Survey South Coast of Irian Jaya**

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## Abstract

This report covers the findings resulting from a survey along three rivers (the Ia, Dumut, and Edera) in the Edera District of Irian Jaya (Papua), Indonesia. Ron Kriens, Myo-Sook Sohn, and Jacqueline Menanti, SIL members, along with Yunita Susanto, from Kartidaya, participated in the survey. Wordlists, sociolinguistic information, and informal observations were recorded. A total of twenty villages were visited, with the focus being on the various speech varieties of Auyu. Further research needs to be done, however, before initiating a language program in Auyu. Besides intelligibility testing, a study of community development needs is also advisable.

## 1. Introduction

This report summarizes the findings of one survey carried out on three rivers in one district, that is, the Edera District in southern Irian Jaya. The survey covered twenty villages in that district, seven villages on the Ia River, eight villages on the Edera River, and three villages on the Dumut River. The remaining two villages were close to Bade, the district capital of Edera. We took wordlists and completed sociolinguistic questionnaires during the survey.

### 1.1. Previous Work

To our knowledge, Father Drabbe did some linguistic work, including work on the Auyu language, in 1954. Boelaars also made a study based on the published and unpublished material collected by Father Drabbe on the languages of the south coast of Irian Jaya.<sup>1</sup>

We also obtained information from people along the Ia River that Father Adrianus Vriens, a Dutch priest, had written down the Auyu dialects spoken in that area.<sup>2</sup> It was reported that he had the ability to communicate with people in various Auyu dialects.

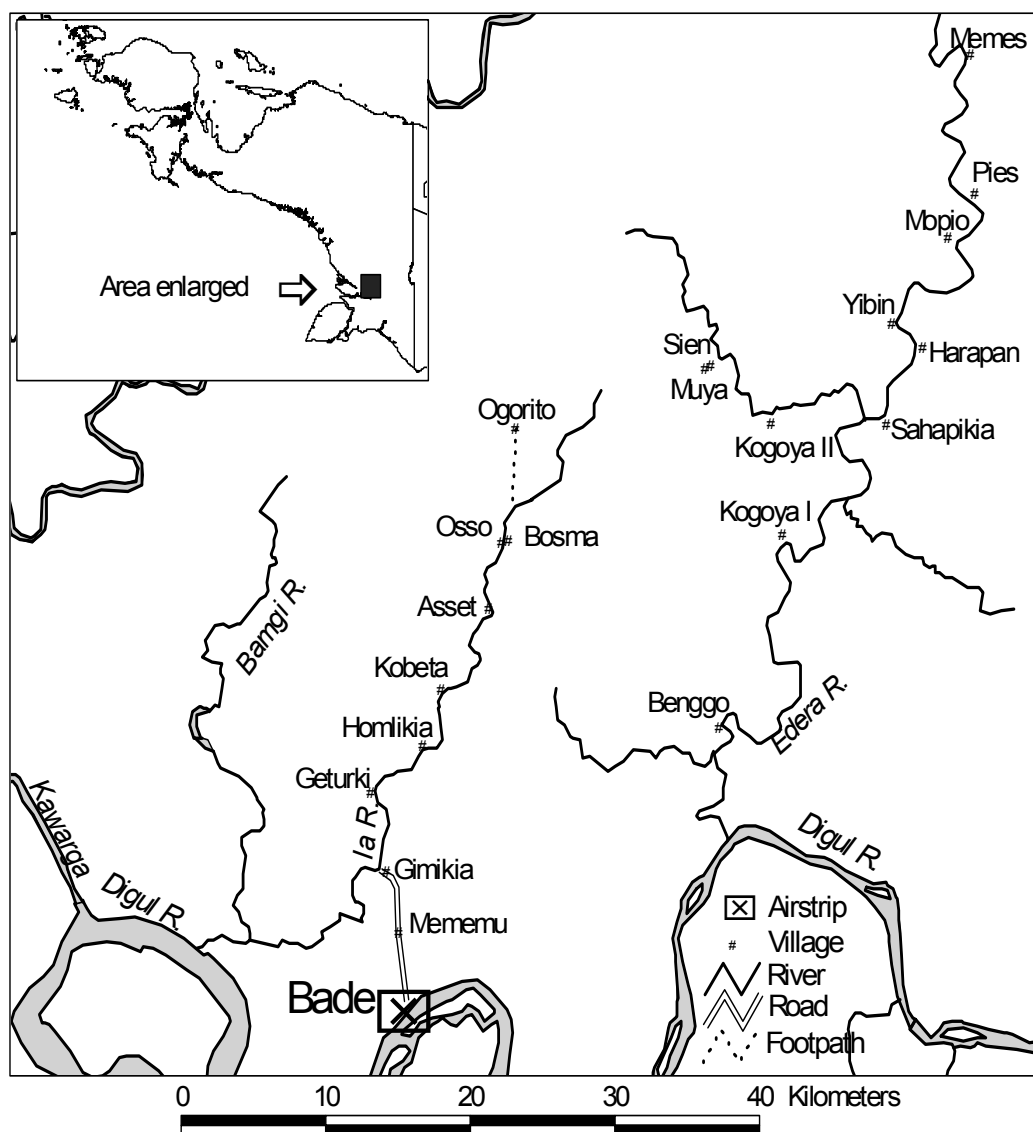
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<sup>1</sup> See Wurm.

<sup>2</sup> His work might be preserved in Holland, since it was not located in the Bishop's library in Merauke City.

## 2. Survey Area

### 2.1. Map of Survey Area



## 2.2. Table of Villages (information from observations and questionnaires)

**Table 1.**

Village	Language(s)	Population	GPS co-ordinates	
Edera District			South	East
Mememu village	Muyu, Mandobo	518	7°08.459	139°35.238
Road to Edera River	-	-	7°06.580	139°35.196
Gimikia village	Auyu	671	7°06.234	139°34.976
Osso village	Auyu	338	6°55.600	139°39.079
Bosma village	Auyu	469	6°55.597	139°39.504
Dock for Ogorito	-	-	6°54.556	139°39.799
Ogorito village	Auyu	>1,000	6°51.974	139°39.626
Old Bosma village	-	-	6°54.868	139°39.869
Asset village	Auyu	598	6°57.709	139°38.613
Kobeta village	Auyu	>600	7°00.305	139°36.828
Homlikia village	Auyu	>700	7°02.065	139°36.128
Geturki village	Auyu	515	7°03.560	139°34.187
Fuel shop in Bade	-	-	7°06.123	139°46.781
Mouth of Edera R.	-	-	7°05.064	139°47.534
Mouth of Dumut R.	-	-	6°51.701	139°52.645
Harapan village	Auyu	>300	6°49.435	139°54.587
Yibin village	Auyu	254	6°48.636	139°53.853
Memes village	Auyu	404	6°44.567	139°56.767
Pies village	Auyu	475	6°45.979	139°55.750
Mopio village	Auyu	202	6°48.714	139°53.665
Sien village	Auyu	370	6°49.984	139°46.897
Muya village	Auyu	318	6°50.111	139°46.674
Kogoya II (Chabisike <sup>3</sup> ) village	Auyu	256	6°51.846	139°49.162
Sahapikia village	Auyu	478	6°51.897	139°53.439
Kogoya I village	Auyu	500	6°50.350	139°49.585
Benggo village	Auyu	200	7°01.468	139°47.183

This table represents the villages we visited in Edera District on this survey.

<sup>3</sup> The people in this village spell their village name *Chabisike*—read [xə'beske]. In this report, we will use the name *Kogoya II*.

### 3. Observations

The Edera District is one of eighteen districts in Merauke County with Bade as its capital city. Five rivers flow through this district. They are the Digul River, Ia River, Bangi River, Edera River, and the Dumut River. We started from Bade, traveled up Ia River, came back to Bade, then went on to the Edera and Dumut Rivers.

Following is a general overview of the demographic information and nonlinguistic observations our team made during the survey trip. This information will be useful in the future for SIL teams and others who wish to travel to this region to visit, work, or live. Possible community development needs within this area can also be inferred from these observations.

The survey team collected information through observation, communicating with local people in the villages visited, and a short interview schedule or orally administered questionnaire made specifically for the headmen from the following villages:

- The Ia River: Osso, Bosma, Ogorito, Asset, Kobeta, Homlikia, and Geturki.
- The Edera River: Memes, Pies, Mopio, Yibin, Harapan, Sahapikia, Kogoya I, and Benggo.
- The Dumut River: Sien, Muya, and Kogoya II.

#### 3.1. Basic Demographic Information<sup>4</sup>

According to government sources, the population in Edera District is over 16,000. It consists of thirty villages which are mostly Auyu; only seven villages are non-Auyu.

##### 3.1.1. *Communication and electricity*

- There are single sideband radios (SSBs) only in Bade. They belong to the airport, the local government, the police station, the priest, and the government-run health clinic. None of the villages have either an SSB or a telephone. Bade has local telephone service and a local telephone company office with a satellite connection to the outside world. People from other villages go to Bade for telephone or radio contact.
- Among the villages we visited, only Harapan and Yibin village have electricity from a generator. In Harapan, it belongs to the school, while in Yibin, it belongs to the priest. It is used only when he comes to the village and during Christian celebrations.
- In Bade, the capital of Edera District, there is a post office, telephone services, and electricity, which is turned on from 5:30 pm until 2:00 am.

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<sup>4</sup> This information came from the government source "Data Perkembangan Pelaksanaan UU No. 5 tahun 1979, Kabupaten Merauke Propinsi DATI I Irian Jaya, tahun 1999."

## **3.2. Transportation**

### ***3.2.1. Land transportation***

A paved road stretches from Bade to Mememu village and ends at Gimikia. Taxi service is available within Bade itself, and to Mememu and Gimikia during daylight hours. The rest of the district has no land transportation available. There is one village, Ogorito, which can be reached only by foot. It took about one hour and fifteen minutes to walk from the dock to the village. Villagers told us that a road which branches off near Gimikia will eventually connect with villages along the Edera River.

### ***3.2.2. Water transportation***

Canoes are the main mode of transportation for the local people. Motorized canoes are available either from Bade or Gimikia. They are owned privately and by the government health clinic, the local government, and the priest in Bade. In 2001, the government started a program to give each village in the district a 15-hp motor.

We had no problem reaching all the villages, since they were located along rivers (except Ogorito) which were safe enough for a motor boat to pass through.

### ***3.2.3. Air transportation***

A Merpati plane flies once a week to Bade every Monday. There is sometimes an extra flight on Friday.

Traveling by float plane to villages along the rivers is another option. This is serviced by MAF, but depends on the river conditions.

## **3.3. Health and Medical**

The main diseases reported in villages of the Edera District were malaria, vomiting, and diarrhea. A few reported asthma and skin diseases. We also observed that many people had lost teeth. This was true even of young people. Probable causes are poor eating habits, inadequate nutrition, unclean water, or lack of dental care.

We observed albinos in almost every village, and in many villages along the Ia River, pigs ran freely and left their droppings everywhere.

Most villages use spring water for washing, bathing, and drinking. In one village (Asset), villagers used three wells made of cement, which they call 'dekker'.

A small number of villages we visited had toilets belonging to the priest or teachers.

Most health workers (except in Ogorito) do not like to stay in the villages where they are assigned. Once in a while, a medical team from Bade visits each village. People

usually go to a traditional healer as their first option for medical help. They go to the government-run health clinic in Bade, if they don't get better.

### **3.4. Livelihood, Economy, and Influence of 'Outsiders'**

The main livelihood for the people of the Edera District is gardening and hunting. The staple food for most people is sago. In Bade, quite a lot of people plant rice. In some villages, people plant crops and fruit such as oranges, pomelos, coconuts, bananas, chocolate, and jackfruit trees. The people don't recognize planting seasons. The harvest is mainly to supply their individual needs.

A very small number of people work outside the village, like in Asiki (at the Korindo Lumber Company), Merauke, or the district capital, where they work as civil workers.

Many villages have rubber plantations. However, most people do not find this a worthwhile effort because of the low selling price. This has made the business unproductive.

Four villages (Gimikia, Mememu, Sahapikia, and Kogoya II) have a kiosk which sell canned and other specialty foods, household items, drinks, school supplies, and some medicines.

### **3.5. Religious Situation**

The predominant religion practiced in this region is Catholicism. We visited only one Protestant village (Benggo). Each village has lay religious leaders. Occasionally the priest from Bade visits each village and conducts a service.

### **3.6. Education**

We obtained specific information about education from teacher questionnaires. In the seventeen villages we visited, fifteen teachers were interviewed. In some cases, we were unable to get complete information about grade attendance since the head of the school was not present at that time. Every village has its own elementary school. Typically all children of school age enter school and sometimes complete six years of primary school.

The main problem in education is not enough teachers for each school. Many times we found only two or three teachers teaching six grades. In one village (Sien-Muya), we found one teacher teaching all the classes. Besides a lack of teachers, many were frequently absent from their village.

Bade has three kindergartens, five elementary schools, and two middle schools. The only high school in the area is located in Bade. Harapan village on the Edera River has a middle school. It is reported that most students are not able to continue their education in middle school, mainly because of financial constraints.



### 3.6.1. Class attendance

The following chart summarizes the number of students that attend each grade.

**Table 2.**

	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Total
Osso	11	-	-	-	-	-	~81
Bosma	-	-	-	-	-	-	-
Ogorito	35	30	33	18	17	18	151
Asset	22	21	14	11	7	12	143
Kobeta	32	-	20	-	22	16	>90
Homlikia	26	15	21	-	-	-	126
Geturki	26	38	22	4	36	9	102
Memes	35	30	18	8	11	8	119
Pies	20	13	5	8	2	4	60
Yibin	15	10	10	5	12	8	60
Harapan	20	25	25	12	12	5	99
Sien-Muya	25	30	10	12	12	2	104
Sahapikia	12	13	11	13	9	7	83
Kogoya I	27	11	15	19	10	10	82
Benggo	12	10	10	10	4	-	>46

Table 2 shows that attendance tends to decrease as students go to higher levels. Education is not really in danger since the schools are active; however, education needs to be more developed and to deal with existing problems like the matter of teacher's absenteeism.

### 3.6.2. Language use in school

The following chart shows the answers teachers gave to various questions regarding language use in school:

**Table 3.**

Village	<i>Language of instruction</i>	<i>Language children use during play at school</i>	<i>Length of time to understand Indonesian</i>
Osso	Indonesian	Indonesian and Auyu	able to understand Indonesian in grade 1
Bosma	Indonesian		able to understand Indonesian in grade 1
Ogorito	Indonesian	Auyu	able to understand Indonesian in grade 1
Asset	Indonesian	Indonesian and Auyu	able to understand Indonesian in grade 1
Kobeta	Indonesian	Indonesian and Auyu	able to understand Indonesian in grade 1
Homlikia	Indonesian	Indonesian and Auyu	able to understand Indonesian in grade 1
Geturki	Indonesian	Indonesian and Auyu	able to understand Indonesian in grade 1
Memes	Indonesian	Indonesian	able to understand Indonesian in grade 1
Pies	Indonesian	Indonesian	able to understand Indonesian in grade 1
Yibin	Indonesian	Indonesian and Auyu	able to understand Indonesian in grade 1
Harapan	Indonesian	Indonesian	able to understand Indonesian in grade 1

Sien-Muya	Indonesian	Indonesian and Auyu	able to understand Indonesian in grade 1
Sahapikia	Indonesian	Indonesian and Auyu	able to understand Indonesian in grade 1
Kogoya I	Indonesian	Indonesian	able to understand Indonesian in grade 1
Benggo	Indonesian	Indonesian	able to understand Indonesian in grade 1

Most teachers were not local people, which is why only Indonesian is used as the language of instruction. They were unable to speak the vernacular language. However, eight teachers from eight villages said that they sometimes try to use the vernacular in the classroom or outside the class, even though they were not from that village.

In most villages, children were able to understand the vernacular, though they were unable to speak it.

Questions about the length of time necessary for a student to comprehend and speak Indonesian were ambiguous. In all villages, students were said to be able to understand and speak Indonesian since first grade.

## **4. Interviews**

### **4.1. Group Questionnaire**

#### **4.1.1. Procedure**

Twenty-one group questionnaires were administered in Osso, Bosma, Ogorito, Asset, Kobeta, Homlikia, Geturki, Memes, Pies, Mopio, Yibin, Harapan, Sien-Muya, Kogoya II, Sahapikia, Kogoya I, Benggo, and Mememu (two groups). We interviewed groups of adult men and women of a variety of ages, all of who were native speakers. Sometimes, one surveyor asked the questions and the other recorded the answers. The interviewer tried to encourage all people to answer, but usually the conversation was dominated by only a few people. We spent an hour completing each questionnaire.

#### **4.1.2. Results**

##### **4.1.2.1. Development**

All leaders (religious, civil, and traditional) in each village we visited were from within the ethnic group, with the exception of teachers and the head of the schools. Change of leadership was by election. Most groups (thirteen out of twenty-one)

reported that the people sought traditional medical help (witch-doctor, herbal remedies, etc.) as the first option instead of professional medical help. For “possession by spirit,” only one village (Asset) mentioned going to the hospital in Bade for first aid, while two villages (Sien-Muya and Benggo) mentioned seeking professional medical help as the second option. One village (Osso) prayed to heal people. The rest went to a traditional healer.

Most villages have a special development committee. Development is organized mostly by an institution called the LKMD which is an extension of the government at the district level.<sup>5</sup> Fourteen groups reported that the LKMD functioned quite well. They organized programs like the renovation of village offices and churches, or assisting people with agricultural needs, etc.

#### 4.1.2.2. Language use

Table 4 shows that both vernacular and the national language are widely used in the home, school, and church. Most churches already have had songs written in the vernacular.

**Table 4. Language Use**

Domain	Osso	Bosma	Ogorito	Asset	Kobeta	Hontikia	Geturki	Memes	Pies	Mopio	Yibin	Harapan	Sien-Muya	Kogoya II	Sahapikia	Kogoya I	Benggo	Mememu (Mandobo)	Mememu (Muvu)
Homes	B	B	B	B	B	B	B	V	V	V	B	B	V	B	B	B	V	B	B
w/Friends	B	V	B	B	V	B	V	V	V	V	B	V	B	V	B	V	V	B	B
Gardens	B	B	V	V	V	B	V	V	V	V	B	V	V	V	V	V	V	V	B
Markets	-	B	B	B	B	B	B	B	B	B	B	B	N	N	B	N	B	B	N
Clinics	B	B	N	B	B	N	B	B	N	N	B	B	N	N	B	N	B	N	N
School Recesses	B	B	B	N	N	N	N	N	N	N	N	N	N	N	N	B	N	N	N
School Instructions	B	N	N	N	N	N	B	N	N	N	N	N	N	N	B	N	N	N	N
School Explanations	B	N	N	N	N	N	B	N	N	N	N	N	N	N	B	N	N	N	N
Feasts	V	V	V	V	B	V	B	V	B	V	-	V	V	V	V	V	V	B	B
Announcements	B	B	V	B	B	B	B	B	B	B	B	B	B	B	B	B	B	N	N
Meetings	B	V	B	N	B	B	B	B	N	B	B	B	N	N	B	B	N	N	N
Public Prayers	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Worship	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sing Hymns	B	V	B	N	B	N	B	B	B	B	B	B	B	B	B	B	N	N	B
Preaching		N	B	B	B	B	B	B	N	B	N	B	B	B	B	B	N	N	N

N=National V=Vernacular B=Both

From the table, it appears that the people are bilingual.

#### 4.1.2.3. Language shift

<sup>5</sup> LKMD stands for *Lembaga Ketahanan Masyarakat Desa*, ‘Village People’s Preservation Institute’.

The reported language usage among young people was very similar in all the villages. No villages reported that they used another language besides the vernacular and Indonesian.

**Table 5. Language Shift**

	<i>Osso</i>	<i>Bosma</i>	<i>Ogorito</i>	<i>Asset</i>	<i>Kobeta</i>	<i>Homlikia</i>	<i>Geturki</i>	<i>Memes</i>	<i>Pies</i>	<i>Mopio</i>	<i>Yibin</i>	<i>Harapan</i>	<i>Sien-Muya</i>	<i>Kogoya II</i>	<i>Sahapikia</i>	<i>Kogoya I</i>	<i>Benggo</i>	<i>Mememu (Mandobo)</i>	<i>Mememu (Muyu)</i>
Do they use other languages more?	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Mix w/other languages?	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Mix w/NL?	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y	n	y
Is that good?	y	y	y	y	n	n	y	y	n	y	y	y	y	n	y	y	y	y	n
Why?	to communicate better	to maintain communication	to get use to it	need to be balanced	need to give priority for something that belongs to the group	vernacular will disappear	good to understand both	to be more clear	balance both otherwise vernacular will disappear	to understand Indonesian better and get more practice	get along better in life	to communicate better with non-Auyu speakers	need both in order to be understood by others	vernacular will disappear	all people can understand	to communicate better	to understand Indonesian better	can tell secrets in vernacular	children don't know how to use the vernacular

The table shows that most young people in every village mixed the two languages. Most groups agreed that it was good to mix the vernacular and Indonesian. The reasons they gave were various, but the basic reason was 'to communicate better with people from outside the group'. Five groups said that it was not good to mix both languages because the vernacular would disappear. According to them, they should preserve it as something which belongs to them. Four groups thought that it was necessary to use both languages for a balance.

## 4.1.2.4. Language preservation

Table 6. Language Preservation

	<i>Oso</i>	<i>Bosma</i>	<i>Ogorito</i>	<i>Asset</i>	<i>Kobeta</i>	<i>Homikia</i>	<i>Geturki</i>	<i>Memes</i>	<i>Pies</i>	<i>Mopio</i>	<i>Yibin</i>	<i>Harapan</i>	<i>Sien-Mtaya</i>	<i>Kogoya II</i>	<i>Sahapikia</i>	<i>Kogoya I</i>	<i>Benggo</i>	<i>Mememu (Mandobo)</i>	<i>Mememu (Muyu)</i>
Marry which other ethnic groups?	Muyu, Mapi, Marind	no restrictions	Kei, Java	Muyu, Mapi	Muyu, Marind	Yaqay, Muyu, Marind, Serui, Makassar	Muyu, Marind, Mapi, Makassar, NTT, Batak	Auyu	Marind, Muyu, Maluku, Java, Biak, Tanimbar	Marind, Asmat	Yaqay, Asmat, Muyu	Yaqay, Asmat, Muyu	Muyu, Yaqay, Java, Makassar, Marind	Marind, Central Sulawesi	Asmat, Muyu, Mapi, Marind	Mapi, Muyu, Marind	Muyu, Marind	Auyu, Muyu, Aya-maru, Java	Auyu, Mandobo, Manokwari, Java
Restrictions?	religion	religion	n	n	religion	n	n	n	religion	religion	religion	religion	custom	n	religion	n	n	n	religion
Graduates stay in town?	y	y	n	y	y	n	-	y	n	y	y	y	n	y	y	n	y	y	y
Why?	town is more developed	town is busier	not used to it	town is more developed	town is more interesting	depends on individual	depends on individual	to get a job	city life is expensive	city is busier	city is busier	city is busier	financial problems	to get job	no - body cares for them in the city	financial problems	get used to it	more interesting	easier to get job and more comfortable
Migrants?	1 hh	-	3 p	-	4 hh	3 hh	2	2 hh	3 p	2 hh	3 p	-	1	4	5 p	1 hh	2 p	y	1 hh
Why here?	teachers	-	medical worker teacher	-	marriage, teacher	teachers	marriage	teachers	teachers	teachers	teachers, medical worker	-	marriage	marriage, teachers	marriage, teachers	teacher	teachers	-	teacher
From where?	Flores	Marind, Muyu, Mandobo, Paniai, Yaqay	Muyu	-	Fak-fak, Marind, Muyu	Marind, Muyu, Yaqay	Batak, Bugis	Kei, Senta ni	Mandobo, Muyu, Marind	Biak, Kei, Ambon	Kei, Muyu, Ki-maam	Java, Kei, Toraja, Biak	Yaqay	Marind, Central Sulawesi, Yaqay, Fak-fak	Muyu, Yaqay, Asmat, Kei	Kei, Muyu	Biak, Marind	-	Makassar, Java
What l. used to talk with them?	Indonesian	Indonesian	Indonesian	-	Indonesian, VL	Indonesian	Indonesian	Indonesian	Indonesian	Indonesian	Indonesian	Indonesian	Indonesian	Indonesian	Indonesian, VL	Indonesian	Indonesian	-	Indonesian
Learning VL?	y	y	y	-	y	y	y	n	y	y	y	y	y	y	y		y	-	y
Is that good?	y	y	y	-	y	y	-	-	y	y	y	y	y	y	y		y	-	-
Why?	to communicate better	to communicate better	to adjust to the people	-	better communication	-	to communicate better	-	to know what people are talking about	for students' sake	to know what people are talking about	to communicate better	to communicate better	to be more experienced	they can learn VL very fast		to communicate better	-	-

hh = household

p = people

Virtually every village had migrants living in the midst of the people. Most of them were either teachers or had stayed because of marriage. Most were learning the local language. In two villages (Kobeta and Sahapikia), the villagers were using the vernacular to speak with migrants.

Other factors influencing language preservation such as marriage to outsiders, movement of students to the city, and migrants living among them, are displayed in table 6. Although the people most frequently marry within their ethnic group, there are no restrictions on whom one may marry. The most frequent answers to which ethnic groups had married in or out were the Muyu, Marind, and Yaqay.

#### 4.1.2.5. Dialectology

**Table 7. The dialectology among Auyu villages in Edera District**

	<i>Osso</i>	<i>Bosma</i>	<i>Ogorito</i>	<i>Asset</i>	<i>Kobeta</i>	<i>Homlikia</i>	<i>Geturki</i>	<i>Memes</i>	<i>Pies</i>	<i>Mopio</i>	<i>Yibin</i>	<i>Harapan</i>	<i>Sien-Muya</i>	<i>Kogoya II</i>	<i>Sahapikia</i>	<i>Kogoya I</i>	<i>Benggo</i>	<i>Mememu (Mandobo)</i>	<i>Mememu (Muyu)</i>
Osso		E	E									D				D			
Bosma	E		E									D				D			
Ogorito	E	E										D				D			
Asset					E							D				D			
Kobeta				E							D	D				D			
Homlikia							E					D				D			
Geturki						E						D				D			
Memes									E		D				SD	D	D		
Pies								E			D				SD	D	D		
Mopio											E		E	SD	SD				
Yibin										E		SD	E	SD	SD	SD			
Harapan											SD				SD	SD			
Sien-Muya										E	E				SD	SD			
Kogoya II										SD	SD		SD		SD	E	SD		
Sahapikia								SD	SD	SD	SD								
Kogoya I										SD	SD		SD	E	SD		SD		
Benggo									D										
Gimikia						D	E	D											
Bade				E	E														
Tagaimon Karome	E	E	E																
Ogotho	E	E	E									D							
Sibi	E	E	E									D							
Mememu Mandobo																			
Mememu Muyu																			
Meto									E										
Anggai									E										
Kaliwin									E										
Yare									SD										
Hamko									SD										
Hellu									SD										
Sohokanggo									SD										
Ikisi									SD										
Kowo									SD										
Gaa									SD										
Amk									D		D						SD		
Yame									D		SD						SD		

Baitate (Kahavi)										E	E	SD	E						
Nohon												E							
Kotiak												SD							
Bagaram												SD							
Gayu								D										SD	
Uni																		D	
Fefero																		D	
Aifo																		D	
Kanggewot																			E
Waropko																			E
Amuan																			E
Kanggim																			E

E = Same dialect

SD = Slightly different dialect

D = Very different

We occasionally face difficulties during surveys in identifying which people speak the same language. Often when people consider themselves as one ethnic group, such as Auyu, they would claim that they speak the same language. However, we have discovered that sometimes people would have no idea what villagers said in different Auyu villages!

On this survey, we asked three similar questions to people:

1. In what villages do people speak exactly the same as you do, i. e., not different at all?
2. In what villages do people speak slightly different than you do, but you can still easily understand them? (Sometimes we asked follow up questions like: How well do you understand what they say? Can you understand a sermon in their dialect? Can you understand when they speak long sentences? Can you understand only simple utterances? Can you also use their dialect?)
3. Where do people speak so differently that you can hardly understand them?

See table 7, The dialectology among Auyu Villages in Edera District. When people said that they speak the same dialect, it meant that they considered the language of the other village to be the same dialect as theirs. If the dialect is only slightly different, they can still easily understand each other. If it is considered 'different', it may be a different language. According to the table, we found that most answers were reciprocal from one village to another, though there were exceptions

#### 4.1.2.5.1. Auyu Language

Based on reported data summarized in the table, we posit the Auyu dialects as the following :

- Dialect I<sup>6</sup> : Bade, Asset, and Kobeta. They belong to Gyaban subtribe.
- Dialect II : Ogorito, Osso, Bosma, Ogotho, Tagaimon Karome, and Sibi. They belong to Sahame subtribe.

<sup>6</sup> For the purpose of dialect classification in this report, we used roman numerals. It was based on peoples' thoughts about which village speaks exactly the same as or different than they do.



- Dialect III : Homlikia and half Geturki. They belong to Uwe and Senohoi subtribes.
- Dialect IV : Gimikia and half Geturki. They belong to Abohoi subtribe.
- Dialect V : Pies and Memes.
- Dialect VI : Mopio, Yibin, and Sien-Muya. Subtribe Gyahaban.
- Dialect VII : Harapan. The people are Maki subtribe.
- Dialect VIII : Sahapikia. It belongs to Kyawi subtribe.
- Dialect IX : Kogoya I and II.
- Dialect X : Benggo.

People along the Ia River can understand each other quite well. They claim to understand the dialect spoken along the Bamgi River. However, they do not appear able to speak each other's dialects; they only use their own dialect to communicate to people from other villages. Little children who have never been to other dialect-speaking villages can understand the speech. It is reported that they start to understand other dialects when they are teenagers because then they get to know more people from other villages.

People along the Edera and the Dumut Rivers are also able to communicate with each other by using their own dialect. However, most groups reported little comprehension of the dialect spoken in Memes, Pies, and Benggo.

The group in Harapan said that they speak exactly the same dialect as people in Nohon on the Pasue tributary of the Wildeman River (Kriens 2001).

People in Memes and Pies said that they speak a slightly different dialect than people in Hellu, Ikisi, Yare, and Kowo on the Mapi River (Susanto 2000).

The dialect spoken in Benggo seems to be an isolated dialect. It is different from any other dialect.

#### *4.1.2.5.2. Muyu Language*

When we visited the village of Mememu, we found the language situation very confusing. Two languages, Muyu and Mandobo, are spoken by the people who live in this village. They came to Mememu from various villages in 1964, when the government moved them from their homeland.

The people we spoke with were from both North Muyu and South Muyu and were representative of several dialects from these areas.

These people provided us with information about the language situation in their homeland. People in Amuan village (South Muyu in Mindiptanah District) speak exactly the same as people in Kanggewot, Kanggim, and Woman, while people from Waropko (North Muyu in Waropko District) speak exactly the same as people in Upkim and Amukkim.

#### 4.1.2.5.3. *Mandobo Language*

The group of Mandobo people in Mememu reported that they speak exactly the same dialect as people in Kampung Baru village and in the Kelapa Lima neighborhood in Merauke city. They also stated that they were unable to comprehend the language spoken in Uni, Fefero, Aifo, Wanggemalo, Boma, and Sohokanggo.

#### 4.1.2.6. *Language Attitude*

It appears that there has never been a vernacular literacy program in any of these villages except Harapan, which used curricula in the local language MULOK at school.<sup>7</sup> In Osso, teachers started a MULOK program at school, but it was only related to the local culture in terms of dance and traditional art, not reading and writing in the local language. All villages along the Ia River reported that Father Adrianus Vriens had, at one time, written down some of the Auyu dialect spoken along the river.

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<sup>7</sup> MULOK stands for *Muatan Lokal* 'Local Curriculum', the government-approved local program using a specialized curriculum. In Irian Jaya, MULOK usually consists of an indigenous culture or vernacular literacy.

Table 8. Language Attitude

	<i>Oso</i>	<i>Bosma</i>	<i>Ogorito</i>	<i>Asset</i>	<i>Kobeta</i>	<i>Hontikia</i>	<i>Geturki</i>	<i>Memes</i>	<i>Pies</i>	<i>Mopio</i>	<i>Yibin</i>	<i>Harapan</i>	<i>Sien-Muya</i>	<i>Kogoya II</i>	<i>Sahapikia</i>	<i>Kogoya I</i>	<i>Benggo</i>	<i>Mememu (Mandobo)</i>	<i>Mememu (Mayu)</i>
Ever had a literacy program?	n	n	n	n	n	n	n	n	n	n	n	MULOK	n	n	n	n	n	n	n
Write VL?	Vriens	Vriens	Vriens	Vriens	Vriens	Vriens	Vriens	n	n	n	n	personal letter	Arnoldus Nawi	n	n	n	n	n	Personal letter
Write books?	-	songbook, dictionary, translated books	-	-	-	dictionary	-	-	-	-	-	-	songs	-	-	-	-	-	-
You want to read/write?	y	y	y	y	y	y	y	y	y	y	n	y	y	y	y	y	y	y	y
Why?	it's our own language	VL won't disappear	it's our heritage	VL won't disappear	it's our own lg	VL and national lg should go together	VL has priority and NL is a support lg	it's our own lg	to communicate better and keep sth secret	to understand better	not necessary since it already belongs to them	VL talks to the heart	to train children to speak VL is important	for children to know the VL	to increase knowledge	need a good leader since people already know the VL	already accustomed to VL	VL is identity of the ethnic group	to develop traditional resources
What book?	prayer, culture, history, religion, story	Bible, prayer, health	agriculture, health, story	Bible, story, health, education	any kind of books	any kind of books	religion, story, education	Bible, health, education	Bible, prayer, primers	any kind of books	prayer	Bible	Bible, prayer, health, story, agriculture, songs	Bible, prayer, story, health	Bible, prayer, traditional culture, story, agriculture	folktales, songs, prayer	Bible, agriculture	dictionary, story	songs
What villages provide?	produce, work, money (if available)	work	-	produce	produce, work, money	produce, work, money	produce, work, money	money	produce, work, money	work	money	money, work	work	work	money, work	produce	money	produce, work, money	work
Community ready for program?	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans	lit & trans
How many?	whole village	~20–30 people/ whole village	5 hh	whole village	whole village	depends on individual	whole village	many	whole village	almost whole village	need consensus	depends on how many people needed	whole village	almost whole village	many	many	almost whole village	whole village	~30–40 people
You learn	V/N	V/N	V/N	V/N	V	V/N	V/N	N/V	N/V	V/N	V/N	V/N	N/V	N/V	N/V	N/V	N/V	V/N	N/V
Kids learn	V/N	N	V/N	V/N	V	V/N	V/N	N/V	V	V/N	V/N	V/N	N/V	N/V	N/V	N/V	N/V	V/N	V

All respondents affirmed that they wanted to learn to read and write in the VL. Reasons given ranged from the obvious (“in order to read and write our language” and “because it’s in our language”) to the more carefully thought-out (“we can understand it better,” “it will help keep our language from disappearing,” “it talks to the heart,” “it’s our identity,” “to train children to speak it,” “to develop traditional wealth,” and “to communicate better and to keep something secret”).

The people responded that they were willing to give up something in exchange for books. Work was the most common response (7x); also money (4x), and produce (2x) were mentioned. Six villages were willing to give up those three things. One village didn’t give any response to this question.

All villages stated that they thought the people of the village were ready for some kind of language program which would develop the use of the vernacular. They agreed to both literacy and translation. Most groups estimated that the whole village would likely participate in such a program. Three villages estimated the number of villagers that they thought might participate, 15–40 people. A small number of villages said that their decision would depend on the individual and the program offered.

Although people stated they wanted a language program in their village, more surveys need to be done in order to make sure that they understand what is involved and what their felt needs are.

The people seemed to consider a vernacular literacy program as something appropriate for adults. Twenty-four villages wanted to learn to read and write in both the vernacular and national language. Only one village preferred to have only a vernacular literacy program for adults.

Regarding their children, fifteen groups would prefer to have their children learn to read and write in both the vernacular and the national language, nine would give priority to the vernacular first. Four villages preferred the vernacular only, while one responded “national.”

#### *4.1.2.7. Language Death*

Most groups hold the belief that people will speak the same language in twenty years as they do today. For them, the language will not become extinct, even though nowadays, children use Indonesian more than the vernacular. However, six villages estimated that their language would be different in 20 years. Most of them realized that they need to do something to maintain it, otherwise they will lose it.

## **4.2. Individual Questionnaires**

We filled out only two individual questionnaires from Gimikia village. Both interviewees represented two generations: a young man and a middle-aged lady. The young man mostly used Indonesian in all domains. He rarely used the vernacular. On

the other hand, the middle-aged lady reported that she habitually used both the national language and the vernacular.

Both reported that they were able to understand the language spoken along the Ia River. However, the lady said that it was difficult to understand people from Kobeta village.

Both people said that they would like to learn to read and write in the vernacular. They also would like to have books written in their own language, like health, farming, prayers, and the Bible. The young man stated that he would like to have his children and himself learn to read and write in Indonesian. The lady responded that she would like to learn to read and to write in both the national language and the vernacular.

Neither of these people thought that the villagers would use the same language in 20 years.

## 5. Wordlists

We took ten full wordlists (239 words) in the following Auyu-speaking villages: Bosma, Asset, Homlikia, Geturki, Pies, Benggo, Mopio, Kogoya II, Harapan, and Sahapikia; however, we only took short wordlists (50 words) in Osso, Ogorito, Kobeta, Mememu, Memes, Sien-Muya, Yibin, Kogoya I, and Bade. The full wordlists were typed into *Wordsurv*<sup>8</sup> and grouped into lexically similar groups not only based on Blaire's principles given in *Survey on a Shoestring*,<sup>9</sup> but also on the modified rules for Irian Jaya languages.<sup>10</sup>

### 5.1 Percentage of Lexical Similarity

The following matrix shows the lexical similarity percentages among ten Auyu villages.<sup>11</sup>

Auyu/Kogoya II									
74	Auyu/Sahapikia								
66	71	Auyu/Harapan							
70	67	65	Auyu/Mopio						
38	43	38	40	Auyu/Geturki					
37	40	40	37	65	Auyu/Homlikia				
39	42	39	36	59	63	Auyu/Asset			
39	40	37	35	55	57	66	Auyu/Bosma		
53	55	51	47	46	42	43	39	Auyu/Benggo	
39	46	49	42	31	32	32	30	36	Auyu/Pies

<sup>8</sup> *Wordsurv* is a computer program which is used to analyze the lexical similarity of languages.

<sup>9</sup> See Blair 1990.

<sup>10</sup> For further details, see appendices I and II.

<sup>11</sup> The analysis was done by Myo Sook Sohn.

According to this matrix, there are two main dialects along the three rivers, Ia, Edera, and Dumut.<sup>12</sup> Following is a summary of each dialect group:

1. Four villages, Geturki, Homlikia, Asset, and Bosma, along the Ia River show dialect chaining. The relationship between Geturki and Homlikia, Homlikia and Asset, and Asset and Bosma are closer than those among the others. The matrix just presented indicates that the relationships among the four villages are from 55 percent to 66 percent. However, I would add more than 5 percent to the figures listed on the matrix due to synonyms and lack of equivalent words in Indonesian.<sup>13</sup> Considering these reasons, it could be said that there is a dialect group along the Ia River. The follow-up survey needs to research how the dialect chains are working among these villages and needs to do intelligibility tests in those locations.

The comparison of the five shorter wordlists consisting of 50 words (done by hand) shows that Bosma has some very high percentages of shared words with Osso and Ogorito. Asset is also very close to Kobeta and Bade. Geturki uses almost the same dialect as Gimikia.

2. According to the matrix presented, there are three dialect groups along the Edera and Dumut Rivers. One dialect group consists of Kogoya II, Sahapikia, Harapan, and Mopio, since the percentages of lexical similarity are high (65 percent to 74 percent).

Some shorter wordlists were taken in several villages along the Edera and Dumut Rivers. Mopio shares high percentages of lexical similarity with Yibin and Sien-Muya. Kogoya II has a very close relationship with Kogoya I. However, two villages, Benggo and Pies, located along the Edera River, have low percentages of lexical similarity with the other villages. Benggo has somewhat high counts of 51 percent to 55 percent with Kogoya II, Sahapikia, and Harapan, while Pies has relatively low percentages of lexical similarity with the other villages (less than 49 percent). Pies is located at the top of the Edera River. Several language helpers from Memes claimed that it has a different dialect than Pies. Therefore, we took over 130 words in Memes, to compare to Pies. However, a percentage matrix in section 5.3.1. indicates that both villages can be considered as the same dialect group (75 percent).

## 5.2. Major and Minor Language Groupings

<sup>12</sup> There are many ways of defining the term *dialect*. At this point, we use the term *dialect* to designate a matrix of lexical similarity as more than 60 percent. However, we recognise the need to do intelligibility testing in follow-up surveys.

<sup>13</sup> For example, when asked for interrogative pronouns ‘where’, ‘when’, ‘what’, ‘how many’, and ‘who’, the people in the Auyu-speaking villages did not answer with a word, but rather explained these words with other words. Some words also have synonyms. A surveyor might have two or three different words in different villages, though their meanings would be the same.

**Table 9. The dialect groupings of villages in Edera District based on lexical similarity**

Major Grouping	Dialects Included	Villages	Approx. Population
Auyu	Ia River (one or two dialects); dialect chains exist	Ogorito, Bosma, Osso, Asset, Bade, Kobeta, Homlikia, Geturki, Gimikia	5,000
Auyu	Dialect 1	1. Pies, Memes	890
	Dialect 2	2. Benggo	200
	Dialect 3	3. Harapan, Kogoya II, Sahapikia, Mopio, Yibin, Sien-Muya, Kogoya I	2,700
Muyu	North and South Muyu	Mememu	518
Mandobo	-	Mememu	

### 5.3. Auyu Language Wordlist Results<sup>14</sup>

#### 5.3.1. Percentage of lexical similarity

During three surveys, we took 23 full wordlists of 239 words in the following Auyu-speaking villages: the Mapi River Survey, the Wildeman River Survey, and the Edera District Survey. The following is the percentage matrix of lexical similarity among these villages.

Auyu/Nohon																						
78	Auyu/Taim																					
69	69	Auyu/Kowo I																				
67	64	71	Auyu/Sohokanggo																			
59	55	61	74	Auyu/Somi																		
59	65	68	53	52	Auyu/Suwiyo																	
57	62	63	54	49	63	Auyu/Yare																
54	57	64	57	53	58	78	Auyu/Ikisi															
65	59	60	55	54	52	50	48	Auyu/Keta														
47	47	48	42	38	51	46	42	45	Auyu/Hellu													
43	45	45	39	37	47	42	38	43	81	Auyu/Kaime												
47	43	45	44	39	47	37	36	55	52	44	Auyu/Busiri											
27	28	30	27	27	28	28	26	27	33	30	31	Auyu/Karome										
35	35	36	33	33	38	38	36	31	35	31	32	36	Auyu/Kogoya II									
36	38	38	36	37	41	39	34	35	34	30	33	38	74	Auyu/Sahapikia								
39	39	41	36	34	42	42	37	35	39	34	36	37	66	71	Auyu/Harapan							
37	39	40	36	31	44	42	39	35	37	33	36	34	70	67	65	Auyu/Mopio						
29	30	34	27	27	30	31	28	30	34	30	31	57	38	43	38	40	Auyu/Geturki					
29	30	33	30	28	30	31	28	29	37	33	32	58	37	40	40	37	65	Auyu/Homlikia				
25	27	31	27	25	29	28	26	29	32	29	31	55	39	42	39	36	59	63	Auyu/Asset			
24	27	29	25	24	28	27	26	27	33	33	31	61	39	40	37	35	55	57	66	Auyu/Bosma		
32	32	36	32	33	35	36	34	32	36	32	32	37	53	55	51	47	46	42	43	39	Auyu/Benggo	
30	32	33	26	30	37	37	35	29	29	28	27	25	39	46	49	42	31	32	32	30	36	Auyu/Pies

This matrix indicates that there are several dialects groups. The following is a summary of each of them:

<sup>14</sup> See Report on the Mapi River Survey, by Yunita Susanto and Report on the Wildeman River Survey, by Ronald Kriens.

1. Nohon, Taim, Kowo I, and Sohokanggo have higher percentages of lexical similarity (64 percent to 78 percent). Nohon, Taim, Sufio, Yare, and Keta are closer to one another (59 percent to 65 percent).
2. Kowo I, Somi, Ikisi, and Keta have close relationships. Generally speaking, Nohon, Taim, Sohokanggo, Somi, Sufio, Yare, Ikisi, and Keta have fairly close relationships (57 percent to 78 percent). Research is needed to determine how dialect chains, or networks, are working in these areas.
3. Hellu and Kaime have a high count of 81 percent.
4. Karome shows low percentages of lexical similarity with other dialects.
5. Busiri has no high relationship with the other dialects of the Auyu language. The closest is with Keta (55 percent).
6. Four villages, Bosma, Asset, Geturki, and Homlikia, along Ia River can be grouped to a dialect group, though the percentages of shared words in the matrix are above 55 percent to 66 percent. Dialects are chaining in these villages.
7. Benggo, on the Edera River, has a low relationship with the other dialect groups.
8. Pies and Memes also have low counts of less than 49 percent of shared words with the other dialect groups.
9. Kogoya II, Sahapikia, Harapan, and Mopio along the Edera and Dumut Rivers have medium counts of lexical similarity (65 percent to 74 percent).

**5.3.2. Major and minor language groupings of the Auyu area from the Mapi River, the Wildeman River, and the Edera District Surveys**

**Table 10. The Dialect Groupings of the Auyu Area Based on Lexical Similarity**

Major Grouping	Dialects Postulated	Villages	Approx. Population
Auyu	Dialect 1	1. Nohon, Taim, Kowo I, Sufio , Sohokanggo, Yare, Keta	>2,300
	Dialect 2	2. Kowo I, Sufio, Kowo II, Ikisi, Keta	1,600
	Dialect 3	3. Hellu, Kaime	>300
	Dialect 4	4. Busiri (and Keta)	328
	Dialect 5	5. Karome	478
	Dialect 6	6. Ogorito, Bosma, Osso, Asset, Bade, Kobeta, Homlikia, Geturki, Gimikia	>4,300
	Dialect 7	7. Pies, Memes	880
	Dialect 8	8. Benggo	200
	Dialect 9	9. Harapan, Kogoya II, Sahapikia, Mopio, Yibin, Sien-Muya, Kogoya I	2,700



## 6. Conclusions And Recommendations

### 6.1. Survey Methods

The questionnaires and interviews were very helpful and did not consume too much of our time. This made it easy for the survey team, as well as the people from whom we obtained the information.

We found that it was very helpful to ask people about dialectology by using the term ‘dialect’ (*logat/rem*) instead of the term ‘language’. By asking this question, we could get more precise answers related to dialectology among the ethnic groups. We were prepared with follow-up questions to probe more in-depth if they were not specific or if we needed to determine if the villagers were able to understand a discourse in another dialect as opposed to understanding only words.

It is also important to get the proper pronunciation and spelling of village names, not only for reports, but also for maps.

### 6.2. Linguistic Situation

From the wordlist, we inferred that comprehension testing is still needed, no matter what the percentage showed. Further research must be done to determine if those speech varieties are dialects of the same language or different, distinct languages.

### 6.3. Sociolinguistic Situation

- It was evident that the people were proud of their own language. Those that speak it do so in all familiar domains (home, family, and friends). However, in some villages, the children do not know how to speak the vernacular; they use Indonesian instead. This is increasing, since most schools do not allow the children to speak the vernacular in the school environment. In addition, most teachers are not local people, so they do not speak the local language.
- There are positive attitudes toward the use of Indonesian. When there is contact with people from other villages, if they do not speak the same language, they choose to communicate in Indonesian.
- Basically, the villagers think that it is necessary for them to learn to read and write in both the national language and the vernacular. Both are important for adults and children. They want to get along better in life by mastering Indonesian, but they also want to preserve their own language since it shows their identity and is part of their heritage.
- All people we interviewed have a strong desire to preserve their own language. They said that they would like to participate in any literacy program and translation in their own language.

#### **6.4. Community Development Possibilities**

Community development projects could be helpful in the areas of education, transportation, communication, health, and economy.

Rubber plantations are widespread in this district, but the people feel that the price is too low. In most villages, people do not harvest their trees. Community development might be able to help them find a better market for rubber, as well as chocolate and other crops.

In the area of health, people along the Ia River should be taught how to make a pigpen to prevent pigs from running around the village, which would help with hygienic conditions.

#### **6.5. Translation Possibilities**

As a large ethnic group with several dialects spoken, Auyu might be a potential project for translation. Each village showed great interest in having their language written. This would not only preserve their language and culture, but also could help them to assimilate information from the outside. If successful, it could inspire other groups to begin language development. It might be possible to start more than one language program or to allocate a macro team in the Auyu area because of the many related speech varieties.

#### **6.6. Future Research**

More research needs to be done in the Edera District. It should include information about community development needs, as well as linguistic information about other speech varieties of Auyu in the area. The team recommends that intelligibility testing be done.

# **Appendix I** **Rules for Lexical Similarity Decisions**

Number of phonetic segments in the longer of the two words being considered	Exact C Similar V	Similar C Other V pairs	Dissimilar C C or V with no pair
Word Length	Category I (A)	Category II (B)	Category III (C)
Two	2	0	0
Three	2	1	0
Four	2	1	1
Five	3	1	1
Six	3	2	1
Seven	4	2	1
Eight	4	2	2
Nine	5	2	2
Ten	5	3	2
Eleven	6	3	2
Twelve	6	3	3

Phonetically Similar Consonants (Cat II)	Phonetically Similar Vowels (Cat I)
p - b - m	i - y - ɪ - ʏ - e - ø - ε
p - b - ɸ - p <sup>h</sup> - p <sup>w</sup> - p <sup>j</sup> - m <sup>p</sup> - m <sup>b</sup> - b <sup>j</sup> - m <sup>b</sup> j	i - ʉ - ə - ɐ - ɜ
v - f - ɸ - ɸ <sup>ɸ</sup> - β, β - b - m, p - ɸ - ɸ <sup>ɸ</sup>	e - ø - ε - œ - æ
t - d - n - ɬ - ɬ <sup>ɬ</sup> - ɳ - ɬ - d <sup>ɬ</sup> - t <sup>w</sup> - d <sup>j</sup> - d <sup>w</sup> - c - ɟ	i - y - ɪ - ʏ - i - ʉ - ə
t - s, d - z, d - r, s - ʃ - z - ʒ	i - ʉ - ə - ʊ - u - ʊ
ʃ - s - s <sup>j</sup> - s <sup>ɸ</sup> - ʃ - z - z <sup>ɸ</sup> - ʒ - ʒ - j - ʒ - ʒ - ʃ - ʃ	ʊ - u - ʊ - ʏ - o - ɔ
t - tʃ, d - dʒ, tʃ - dʒ, z - dʒ,	ʏ - o - ɔ - ʌ
c - ɟ - k - g - ɳk - g - k <sup>h</sup> - k <sup>w</sup> - g <sup>w</sup> - q - q <sup>w</sup> - ɟ <sup>ɟ</sup> - ɳ	æ - œ - a - ɜ - e - ʌ - ɑ - ɒ
g - ɣ - ɣ <sup>w</sup> - ɣ, ɣ <sup>b</sup> - ɣ <sup>w</sup> - g - b	
ɣ - j - x - ɣ - ɣ - ɣ - ɣ - ɣ - ɣ - ɣ <sup>j</sup>	
c - ɣ, ɟ - j, k - x, g - ɣ, q - ɣ, ɣ - ɣ	
m - n - ɳ - ɳ - ɳ - ɳ - m <sup>j</sup> - m <sup>w</sup> - n <sup>ɸ</sup> - n <sup>w</sup> - n	
r - r - l - l - ɾ - ɾ - ɾ - ɾ - ɾ - ɾ	
ʔ - h - ø	
w - ɥ - j, j - j	

## Appendix II

### Criteria of rules for lexical similarity decisions of Irian Jaya (Papuan) wordlists

Wordlists that the survey teams elicited in the South Coast indicate that Irian languages in the South Coast are different from Austronesian languages. We were able to discover some features of Papuan languages through eliciting sentences informally. We found that those languages have more complicated affixes on verbs and nouns than Austronesian languages. Therefore, the survey team decided to modify the criteria presented by Blaire in his book, *Survey on a Shoestring*, although, we tried to follow his principles as much as possible.

Here are the modified rules:

1. Initial, medial, and final glottal stops are sometimes considered as C and sometimes as null. Lengthened vowels are sometimes considered as VV, but sometimes as V. Since a researcher does not know how the glottal stop and lengthened vowel will be interpreted before linguistic work is done in each language, the survey team decided to interpret glottal stop as C or null and lengthened vowels as V or VV.

2. Phonetically similar segments which occur consistently in the same position in several word pairs are grouped together. For example, in CVC and CV syllables in the language below, if the initial CV is the same, the survey team ignored the final C and grouped them together, as in:

No. 14	‘he’	[juβ] and [ju]
No. 42	‘I’	[n e] and [n ε r] (examples: Tsaukambo language)

Auyu and Yaqay have the same features in the analyzed and nonanalyzed vowels. [ō] and [ǎ] are considered the same as analyzed vowels and velar nasals, like [ōŋ], [ǎŋ]:

No. 21	‘blood’	[gō] and [gōŋ]
No. 189	‘know’	[nɛ'φē] and [nɛ'fəŋ]

3. Affixes are ignored. However, affixes (prefixes, infixes, or suffixes) in Papuan languages are difficult to identify, especially in verbs, as Papuan languages sometimes have the subject, object, tense, or aspect embedded in the verb. For example, when the words are grouped together, what appears to be roots becomes more evident as follows:

No. 187	‘see’	[ʼeta]
		[ɛtaɣo]
		[ɛtoɣo]
		[ʼiʼtaɣoŋ]
		[ iʼtoɣoj] (from Auyu)

4. Affricates ( $\text{tʃ}$ ,  $\text{dʒ}$ ,  $\text{dʒ}$ ) and modifications ( $^mb$ ,  $d^j$ ) can be considered as one or two segments, depending on the comparison being made.
5. Diphthongs can be considered one or two segments, depending on the comparison being made.
6. In phrases, the most similar words are compared. This generally occurs with numbers, prepositional adverbs, adjectives, and interrogative pronouns, as follows:

No. 174	‘bad’	[jeme]	
		[jamah]	
		[ja'ma nep <sup>h</sup> ]	
		[jamam bek']	(from Yaqay)

In addition, words that look like compounds, especially nouns and pronouns, are grouped together, even if lexically they do not match exactly.

No. 2	‘hair’	[xabajon]	
		[hebejō]	
		[xebejon]	
		[jōŋ]	(from Auyu)

7. The following segments are considered exact matches: [u = w] and [i = j].
8. Consistent sound changes, which occur in some languages, are considered exact matches as follows:

In the Auyu language, [f] and [ϕ], [j] and [ɖʒ] are the same.

No. 233	‘name’	[fi] and [ϕ i]
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In Yaqay, [k<sup>h</sup>] and [x] are the same.

No. 142	‘cold’	[kox] and [kok <sup>h</sup> ]
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9. Unreleased consonants, accents, and nasalized vowels are ignored.

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