

Live Through This: Environmental Refugees in the Philippines

c. Nasreen Mahmud 1994

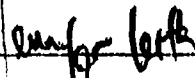
A thesis submitted by Nasreen Mahmud in partial fulfilment
of the requirements for the Master of Arts Degree in
International Development Studies at Saint Mary's
University

August 1994

THESIS APPROVED BY:



Dr. Henry Veltmeyer
(Supervisor)



Ms. Jennifer Leith
(Reader)



Dr. Jerome Barkow
(External Reader)



National Library
of Canada

Acquisitions and
Bibliographic Services Branch

395 Wellington Street
Ottawa, Ontario
K1A 0N4

Bibliothèque nationale
du Canada

Direction des acquisitions et
des services bibliographiques

395, rue Wellington
Ottawa (Ontario)
K1A 0N4

Your file Votre référence

Our file Notre référence

The author has granted an irrevocable non-exclusive licence allowing the National Library of Canada to reproduce, loan, distribute or sell copies of his/her thesis by any means and in any form or format, making this thesis available to interested persons.

L'auteur a accordé une licence irrévocable et non exclusive permettant à la Bibliothèque nationale du Canada de reproduire, prêter, distribuer ou vendre des copies de sa thèse de quelque manière et sous quelque forme que ce soit pour mettre des exemplaires de cette thèse à la disposition des personnes intéressées.

The author retains ownership of the copyright in his/her thesis. Neither the thesis nor substantial extracts from it may be printed or otherwise reproduced without his/her permission.

L'auteur conserve la propriété du droit d'auteur qui protège sa thèse. Ni la thèse ni des extraits substantiels de celle-ci ne doivent être imprimés ou autrement reproduits sans son autorisation.

ISBN 0-315-95868-5

Canada

Name **NABREEN MAHMUD**

Dissertation Abstracts International is arranged by broad, general subject categories. Please select the one subject which most nearly describes the content of your dissertation. Enter the corresponding four-digit code in the spaces provided.

Political Science - General

SUBJECT TERM

0615 U-M-I
SUBJECT CODE

Subject Categories

THE HUMANITIES AND SOCIAL SCIENCES

COMMUNICATIONS AND THE ARTS

Architecture 0729
Art History 0377
Cinema 0900
Dance 0378
Fine Arts 0357
Information Science 0723
Journalism 0391
Library Science 0399
Mass Communications 0708
Music 0413
Speech Communication 0459
Theater 0465

EDUCATION

General 0515
Administration 0514
Adult and Continuing 0516
Agricultural 0517
Art 0273
Bilingual and Multicultural 0282
Business 0688
Community College 0275
Curriculum and Instruction 0727
Early Childhood 0518
Elementary 0524
Finance 0277
Guidance and Counseling 0519
Health 0680
Higher 0745
History of 0520
Home Economics 0278
Industrial 0521
Language and Literature 0279
Mathematics 0280
Music 0522
Philosophy of 0998
Physical 0523

Psychology 0525
Reading 0535
Religious 0527
Sciences 0714
Secondary 0533
Social Sciences 0534
Sociology of 0340
Special 0529
Teacher Training 0530
Technology 0710
Tests and Measurements 0288
Vocational 0747

LANGUAGE, LITERATURE AND LINGUISTICS

Language 0679
General 0289
Ancient 0290
Linguistics 0291
Modern 0401
Literature 0294
Classical 0295
Comparative 0297
Medieval 0298
Modern 0316
African 0591
American 0305
Asian 0352
Canadian (English) 0355
Canadian (French) 0593
English 0311
Germanic 0312
Latin American 0315
Middle Eastern 0313
Romance 0314
Slavic and East European 0314

PHILOSOPHY, RELIGION AND THEOLOGY

Philosophy 0422
Religion 0318
General 0321
Biblical Studies 0319
Clergy 0320
History of 0322
Philosophy of 0469
Theology 0323

SOCIAL SCIENCES

American Studies 0323
Anthropology 0324
Cultural 0326
Physical 0327
Business Administration 0310
General 0272
Accounting 0770
Banking 0454
Management 0338
Marketing 0385
Canadian Studies 0501
Economics 0503
General 0505
Agricultural 0508
Commerce-Business 0509
Finance 0510
History 0511
Labor 0358
Theory 0366
Folklore 0351
Geography 0578
Gerontology 0578
History 0578
General 0578

Ancient 0579
Medieval 0581
Modern 0582
Black 0328
African 0331
Asia, Australia and Oceania 0332
Canadian 0334
European 0335
Latin American 0336
Middle Eastern 0333
United States 0337
History of Science 0585
Law 0398
Political Science 0615
General 0616
International Law and Relations 0617
Public Administration 0814
Recreation 0452
Social Work 0626
Sociology 0627
Criminology and Penology 0938
Demography 0631
Ethnic and Racial Studies 0628
Individual and Family Studies 0629
Industrial and Labor Relations 0630
Public and Social Welfare 0700
Social Structure and Development 0344
Theory and Methods 0709
Transportation 0999
Urban and Regional Planning 0453
Women's Studies 0453

THE SCIENCES AND ENGINEERING

BIOLOGICAL SCIENCES

Agriculture 0473
General 0285
Agronomy 0475
Animal Culture and Nutrition 0476
Animal Pathology 0359
Food Science and Technology 0478
Forestry and Wildlife 0479
Plant Culture 0480
Plant Pathology 0817
Plant Physiology 0777
Range Management 0746
Wood Technology 0306
Biology 0287
General 0308
Anatomy 0309
Biostatistics 0379
Botany 0329
Cell 0353
Ecology 0369
Entomology 0793
Genetics 0410
Limnology 0307
Microbiology 0317
Molecular 0416
Neuroscience 0433
Oceanography 0821
Physiology 0778
Radiation 0472
Veterinary Science 0786
Zoology 0760
Biophysics 0425
General 0996
Medical 0996

Geodesy 0370
Geology 0372
Geophysics 0373
Hydrology 0388
Mineralogy 0411
Paleobotany 0345
Paleoecology 0426
Paleontology 0418
Paleozoology 0985
Palyology 0427
Physical Geography 0368
Physical Oceanography 0415

HEALTH AND ENVIRONMENTAL SCIENCES

Environmental Sciences 0768
Health Sciences 0566
General 0300
Audiology 0992
Chemotherapy 0567
Dentistry 0350
Education 0749
Hospital Management 0758
Human Development 0982
Immunology 0564
Medicine and Surgery 0347
Mental Health 0569
Nursing 0570
Nutrition 0380
Obstetrics and Gynecology 0354
Occupational Health and Therapy 0381
Ophthalmology 0571
Pathology 0419
Pharmacology 0572
Pharmacy 0382
Physical Therapy 0573
Public Health 0574
Radiology 0575
Recreation 0575

Speech Pathology 0460
Toxicology 0383
Home Economics 0386

PHYSICAL SCIENCES

Pure Sciences 0485
Chemistry 0749
General 0486
Agricultural 0487
Analytical 0488
Biochemistry 0490
Inorganic 0491
Nuclear 0494
Organic 0495
Pharmaceutical 0754
Physical 0405
Polymer 0605
Radiation 0986
Mathematics 0606
Physics 0608
General 0748
Acoustics 0607
Astronomy and Astrophysics 0798
Fluid and Plasma 0759
Molecular 0609
Nuclear 0610
Optics 0752
Radiation 0756
Solid State 0611
Statistics 0463

Applied Sciences

Applied Mechanics 0346
Computer Science 0984

Engineering 0537
General 0538
Aerospace 0539
Agricultural 0540
Automotive 0541
Biomedical 0542
Chemical 0543
Civil 0544
Electronics and Electrical 0348
Heat and Thermodynamics 0545
Hydraulic 0546
Industrial 0547
Marine 0794
Materials Science 0548
Mechanical 0743
Metallurgy 0551
Mining 0552
Nuclear 0549
Packaging 0765
Petroleum 0554
Sanitary and Municipal 0790
System Science 0428
Geotechnology 0796
Operations Research 0795
Plastics Technology 0994
Textile Technology 0621
Psychology 0384
General 0622
Behavioral 0620
Clinical 0623
Developmental 0624
Experimental 0625
Industrial 0989
Personality 0349
Physiological 0632
Psychobiology 0451
Psychometrics 0451

PSYCHOLOGY

General 0621
Behavioral 0384
Clinical 0622
Developmental 0620
Experimental 0623
Industrial 0624
Personality 0625
Physiological 0989
Psychobiology 0349
Psychometrics 0632
Social 0451



TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	i
ABSTRACT.....	ii
MAP OF LEYTE.....	iii
MAP OF THE PHILIPPINES.....	iv
INTRODUCTION.....	1
CHAPTER 1: THEORETICAL FRAMEWORKS	
INTRODUCTION.....	8
1.1 THE NEO-CLASSICAL PARADIGM.....	9
1.2 POLITICAL ECOLOGY.....	26
1.2.1 Contextual Sources of Environmental Change.....	28
1.2.2 Conflict Over Access.....	31
1.2.3 Political Ramifications of Environmental Change.....	33
1.3 PROBLEMS WITH THE FRAMEWORKS.....	38
1.3.1 The Neo-Classical Paradigm.....	38
1.3.2 Political Ecology.....	42
1.4 THEORETICAL FRAMEWORK OF THE STUDY.....	43
CHAPTER 2: LITERATURE REVIEW	
INTRODUCTION.....	49
2.1 CONVENTION REFUGEES.....	50
2.2 INTERNALLY DISPLACED PERSONS.....	55
2.3 ENVIRONMENTAL REFUGEES.....	63

**CHAPTER 3: THE CONTEXT OF THE DISASTER AT ORMOC AND THE
GENERATION OF ENVIRONMENTAL REFUGEES
PART 1- THE POLITICAL, SOCIO-ECONOMIC AND
ENVIRONMENTAL BACKGROUND OF THE PHILIPPINES**

3.1 POLIITICAL BACKGROUND.....	77
3.2 ECONOMIC AND SOCIAL BACKGROUND.....	91
3.3 ENVIRONMENTAL BACKGROUND.....	106
3.3.1 Deforestation.....	111
3.3.2 Effects of Deforestation.....	114

CHAPTER 3: PART 2- LEYTE: AN ISLAND PROFILE

INTRODUCTION.....	125
3.5 GENERAL BACKGROUND.....	126
3.6 SOCIAL AND ECONOMIC BACKGROUND.....	128
3.7 ENVIRONMENTAL BACKGROUND.....	133

CHAPTER 4: CAUSES OF THE ENVIRONMENTAL DISASTER

INTRODUCTION.....	140
4.1 POLITICAL FACTORS.....	140
4.2 ECONOMIC AND SOCIAL FACTORS.....	144
4.3 INFRASTRUCTURAL FACTORS.....	147
4.4 NATURAL FACTORS.....	151
4.5 ENVIRONMENTAL FACTORS.....	153
4.6 CONSTELLATION OF FACTORS.....	161

**CHAPTER 5: BASELINE PROFILE OF ENVIRONMENTAL REFUGEES IN
ORMOC CITY**

INTRODUCTION.....	167
5.1 METHODOLOGY.....	168
5.2 UNIVARIATE DATA.....	170
5.3 SUMMARY OF UNIVARIATE DATA.....	200

5.4 BIVARIATE DATA.....	202
5.5 EXPLANATION OF THE DATA.....	234
SUMMARY OF FINDINGS, CONCLUSIONS, INTERPRETATIONS AND IMPLICATIONS.....	247
APPENDIX 1.....	262
APPENDIX 2.....	265
BIBLIOGRAPHY.....	450

Acknowledgements

This thesis would never have been completed without the support and cooperation of many people. I am deeply indebted to the members of my committee, Jennifer Leith, Jerome Barkow and Henry Veltmeyer, who have been both supportive and patient over these long months of research and writing. I am also especially grateful to Gerry Cameron for his support and advice, particularly regarding his guidance in the world of data manipulation.

Along with this academic support, the research itself was made possible by a fellowship from the Environment and Resource Management Project (ERMP) of the School of Resource and Environmental Studies (SRES) at Dalhousie University. This fellowship enabled me to travel to the Philippines for eleven months in 1992-1993. During this time I received logistical and other forms of support from the ERMP field staff in the Philippines, members of the faculty and student body at the Visayas State College of Agriculture (ViSCA) and the field staff of a gtz (German Development Organisation) project. For this they have my most sincere appreciation. Along with these people, countless others in the Philippines spent time with me discussing their work and their hopes for the future. To all these people I am truly grateful and continue to remember our time together with great fondness.

I must also say a word of appreciation to all the members of the displaced community in Ormoc that I met with and interviewed over the course of my time in Leyte. Their patience and willingness to share their experience and understanding has provided me with a much deeper and better understanding of the true importance of development. For this I shall always be thankful.

Finally, I must thank my family without whose support, both financial and emotional, this thesis and in fact this degree would not have been possible.

Live Through This: Environmental Refugees in the Philippines

A thesis submitted by Nasreen Mahmud in partial fulfilment
of the requirements for the Master of Arts Degree in
International Development Studies at Saint Mary's University

August 1994

ABSTRACT: This thesis will argue that the people known as environmental refugees are generated by situations caused by a complex interplay of many factors: political, economic, social, ecological and natural. This thesis was examined within the context of a case study conducted in Ormoc City, Leyte, the Philippines in 1992-1993. On November 5, 1991 a Tropical Storm, codenamed Uring, hit Ormoc City at a speed of 75 km/hr. Because of the torrential rain and flashflooding associated with TS Uring, over 6000 people died within a few hours and thousands of others were injured or displaced. The purpose of the case study was twofold: first, to identify and explore the complex, intertwined causes of this environmental disaster; and second, to create a baseline profile of the displaced population- the environmental refugees.

Chapter One discusses theoretical frameworks. Ecological Economics and Political Ecology are both discussed in detail, however Political Ecology is found to be most relevant to the present discussion. Chapter Two provides a literature review which examines scholarly writing that discusses different forms of involuntary migration. The categories of Convention Refugees and Internally Displaced Persons are discussed briefly to provide a contrast to the main focus of the chapter- environmental refugees. Chapter Three provides a background to situate the discussion and analysis of the following chapters. This chapter describes the recent political, socio-economic and environmental history of both the Philippines in general and Leyte in particular especially as it pertains to the environmental disaster at Ormoc. Chapter Four is the heart of the paper and presents its thesis in the context of the disaster at Ormoc. Chapter Five addresses the second aim of the research, which was to develop a baseline profile of the environmental refugee population.

LEYTE

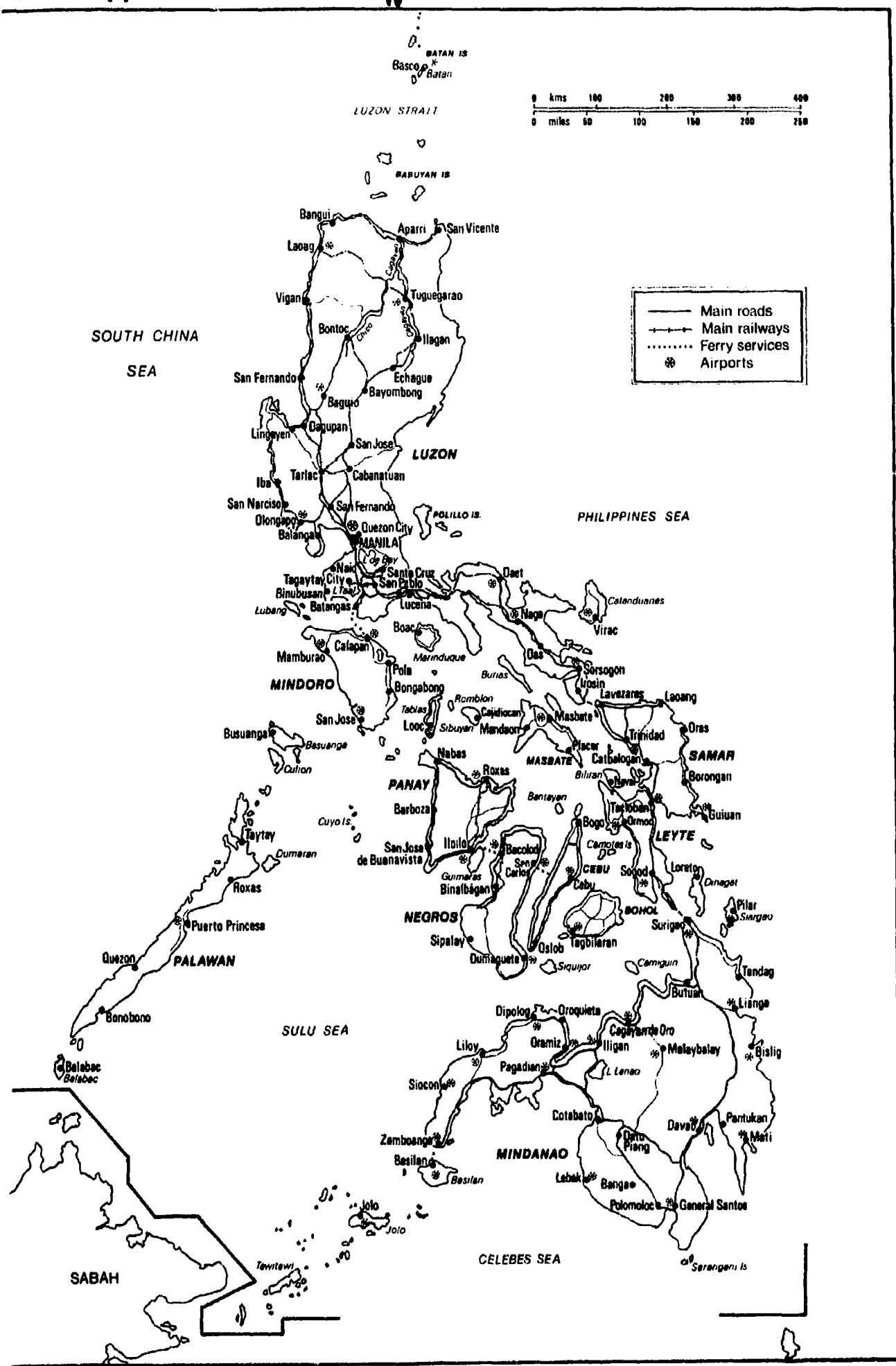
Geographical Features and Surroundings:

- North:** Samar, Catbalogan, Marcos Bridge, San Juanico Strait, Boholton Natural Bridge National Park.
- West:** Kawayan, Maripi I., Agta Point, Gigantagan I., Villalon O., Calubian, San Isidro, Palompon, Isabel, Camotes Is., Bohol.
- South:** Limasawa I., Pintuyan, Francisco, Padre Burgos, Macrohon, Amparo, Maasin, Ubay.
- East:** Leyte Gulf, Tanauan, San Pedro Bay, Red Beach, Palo, Santa Fe, Alangalang, Tunga, Jarro, Tongonan Hot Springs N.P., Milagro Lake N.P., Milagro City, Ormoc City, Albueria, Merida, Leyte Mountain Trail, Kuapnit-Balinsabayao National Park, Hilusig, Abuyog, MacArthur, Mayorga, Dulag, Julita, Burauen, Dagami, Mt. Lobi (1349m), Mahagho Volcano N.P., La Paz, Inopacan, Hindang, Hilongos, Bato, Matalom, Bontoc, Malitbog, Silago, Southern Leyte, Libagon, Hinundayan, Hinunangan, Cabugan Chico I., Cabugan Grande I., San Juan, Cabalian Bay, Panaon I., Mt. Sias.
- Internal Features:** Naval, Culaba, Biliran, Cabugayan, Janabatas Channel, Babatngon, Carigara Bay, Barugo, Carigara, Limon, Villaba, Kananga, Tunga, Jarro, Tongonan Hot Springs N.P., Milagro Lake N.P., Milagro City, Ormoc City, Albueria, Merida, Leyte Mountain Trail, Kuapnit-Balinsabayao National Park, Hilusig, Abuyog, MacArthur, Mayorga, Dulag, Julita, Burauen, Dagami, Mt. Lobi (1349m), Mahagho Volcano N.P., La Paz, Inopacan, Hindang, Hilongos, Bato, Matalom, Bontoc, Malitbog, Silago, Southern Leyte, Libagon, Hinundayan, Hinunangan, Cabugan Chico I., Cabugan Grande I., San Juan, Cabalian Bay, Panaon I., Mt. Sias.

Scale: 0 to 20 km

North Arrow: Located in the bottom right corner.





Introduction

Typhoon Uring, which was later downgraded to Tropical Storm Thelma, hit Ormoc City, Leyte, Philippines on November 5th, 1991. Casualties from this natural disaster totalled over 6000, 1500 people were listed as missing, and 43000 were left homeless. Casualties from this disaster exceeded the combined death toll from the eruption of Mount Pinatubo in June 1991, the Baguio earthquake which measured 7.5 on the Richter scale in July 1990, and the devastating typhoon of June 1991. In fact, the enormous loss of life caused by Tropical Storm Thelma was completely out of proportion to its strength and speed, which was approximately 75 kilometres per hour.

Ormoc, on the Eastern Visayan island of Leyte, and a city with a population of 120 000, was inundated with an estimated rainfall of 150 mm in three hours and by flashflooding caused by two rivers (the Anilao and Malbasag rivers) which broke their banks due to the torrential rain. UNDRO (United Nations Disaster Relief Office) estimated that property damage totalled approximately \$ 27.67 million (US). Of this damage, \$ 19 million (US) was caused in Leyte and nearly \$ 9 million (US) on the neighbouring island of Negros. This damage was not simply the result of the tropical storm; it was the inevitable result of decades of illegal and inappropriate use of the resource base. As UNDRO states:

"The destruction of the trees on the hillsides, which help the earth to absorb water, allowed the rain to cascade down the denuded slopes, eroding the soil as they did so and overwhelming the river channels. The subsequent flash flooding may not be the only result of such illegal logging, for the geothermal deposits in the area are also under threat since their survival depends on water seeping underground through the roots of trees."1

The Filipino national government's response to this devastation was to pledge \$ 1 million (US) in relief assistance for infrastructural repairs and to promise \$ 375 (US) to each family which had lost an immediate family member to the flooding. International aid reported to UNDRO by the end of November 1991 was almost \$ 6 million (US), not including contributions in kind. As well, UNDRO sent two delegates to Ormoc City on November 8th, 1991 which they toured with the resident UNDP representative. These delegates assisted in creating a distribution system of relief aid under the authority of the City Coordinating Council, in cooperation with the national Department of Social Welfare and Development (DSWD), the Filipino Red Cross and the Filipino military.

One view is that the devastation caused by Thelma was due in large part to the unrelenting deforestation of the tree cover surrounding Ormoc City. Concomitantly, the massive death toll and number of displaced people was caused by the desperate poverty and inequitable land distribution

which forced the poor into shantytowns on marginal lands, such as the denuded slopes surrounding Ormoc.

Another viewpoint is that deforestation was not a major cause of the disaster, since deforestation ended decades before the disaster in the Ormoc area. According to this perspective, policy initiatives of the government, in terms of ill-conceived river diversions and land use measures are to blame.

The thesis of this paper is that the causes of this "natural" disaster are far deeper than either of these perspectives acknowledge. The fundamental problem in the area, and in the rest of the Philippines, is the political structure which is rigid and hierarchical and based on feudalism. Feudalism was imported by the Spanish and later reclaimed by the ruling mestizo elite. From this springs the economic structure which is based on land ownership concentrated in the hands of a very small, very wealthy minority. These structures lead to situations in which the majority of people do not own the land they work and have a very precarious relationship with the means of production. The obvious result is an incredibly inequitable distribution of wealth with the marginalised forced onto unproductive lands which are easily degraded. At the same time, the wealthy increase their wealth by almost compulsive timber extraction and cattle grazing, among other unsustainable

activities. It is within this context that a minor tropical storm can wreak almost inconceivable havoc.

Within the context of this natural or environmental disaster, this paper focuses on the issue of environmental refugees or those people most affected by disaster. The term 'environmental refugee' will be explored in depth in Chapter Two of this paper, the literature review. Very briefly, an environmental refugee is an individual who has been forced to leave his or her home, either permanently or temporarily, due to an extreme environmental stress or disruption which can either be natural or artificial, that endangered their existence and/or seriously affected the quality of life.

The research which constitutes the heart of this paper was conducted in the form of a case study in Ormoc City in 1993-1994. The purpose of this research was twofold: first, to identify and explore the complex, intertwined causes of this disaster which led to human displacement on such a massive scale; and second, to create a baseline profile of the displaced population or the "environmental refugees". The main reason that this research was done in the form of a case study was because few secondary sources existed. This is especially true of the literature concerning environmental refugees. Although in recent years this issue has been gaining greater academic attention, few books or articles have been written on the subject. Furthermore, in no source on the subject to date has there been a fieldwork-

based deconstruction of the situation of the displaced population or an in-depth analysis of the causes surrounding a specific displacement. Thus, this study aims to fill a large void in the existing literature.

As mentioned above, this research had two main thrusts: one, to deconstruct the causes of displacement and two, to describe the displaced population. Therefore, there were two research questions. The first question was : what were the factors involved in creating this disaster situation (ie- political, socioeconomic, ecological, infrastructural, natural factors) and what was the interplay among and between them ? The second question was: who are the people who become environmental refugees and do they have defining characteristics which can be compared from one situation to another and that have to be taken into account (and understood) in the design of disaster prevention and containment measures ? These questions and their answers will be discussed in detail in Chapter Four and Five.

Chapter One of this paper presents the Theoretical Framework of the thesis. This chapter explains and contrasts two opposing schools of thought on environmental issues: Ecological Economics and Political Ecology. After discussing both perspectives, both are evaluated in terms of their internal coherence, and in terms of their relevance and utility in reference to the subject of environmental

degradation and environmental refugees. Finally, an explanation is given for the theoretical framework applied to this thesis.

Chapter Two contains the Literature Review. It summarises existing findings on the subject of the thesis and will provide a baseline for the interpretation of findings in this study. Within this chapter the current literature on the subjects of Convention Refugees, Internally Displaced Persons and Environmental Refugees is considered. Although the literature surrounding environmental refugees is the only one which is directly relevant to this thesis, the rest of the review is important in terms of situating the discussion. Because Convention Refugees are the only category of displaced people to be awarded formal recognition, comparisons are important. As well, the discussion of Internally Displaced Persons shows the progression of thought beyond the confines of the traditional Convention Refugee delineations.

Chapter Three provides a background to the situation in the Philippines in general and Leyte province in particular. Part One discusses the political, socio-economic and environmental background of the Philippines while Part Two discusses these same areas in terms of Leyte province. This background is intended to situate the analysis presented in Chapter Four and Chapter Five.

Essentially Chapter Four is Part One of the case study. This chapter identifies and analyses the different causes of the disaster at Ormoc, ie- political structure, socio-economic issues, ecological devastation, infrastructural problems and natural factors, and evaluates their interplay. Chapter Four is based on interviews, discussions, government documents, internal documents of Non-Government Organisations and other organisations, and academic papers.

Chapter Five is Part Two of the case study and is based on a questionnaire administered in the resettlement camps built to house survivors of the flashfloods triggered by Tropical Storm Thelma. Through computer generated data analysis, a profile of the environmental refugees emerges and is examined and evaluated in this chapter.

The conclusion attempts to bring these themes together and to solidify the arguments presented throughout this paper.

CHAPTER ONE: THEORETICAL FRAMEWORK

Introduction

Since the landmark publication of the World Commission on Environment and Development (also known as the Brundtland Commission) report *Our Common Future* in 1987, environmental issues in and environmental aspects of international development have gained greater recognition, and sustainable development has become a much discussed policy buzzword at both the national and international levels. The Brundtland report was perhaps the first document to come out of the United Nations system which acknowledged the inseparability of environmental and development issues and advocated a return to multilateralism as a possible solution. Further, *Our Common Future* recognised the fundamental relationship between poverty, underdevelopment and ecological disruption. In the preface, Mrs. Brundtland wrote:

"[M]any critical survival issues are related to uneven development, poverty, and population growth. They all place unprecedented pressures on the planet's lands, waters, forests and other natural resources, not least in developing countries. The downward spiral of poverty and environmental degradation is a waste of opportunities and of resources. In particular, it is a waste of human resources. These links between poverty, inequality, and environmental degradation formed a major theme in our analysis and recommendations. What is needed now is a new era of economic growth - growth that is forceful and at the same time socially and environmentally sustainable."²

Since the publication of *Our Common Future*, considerable contributions have been made to the literature concerning the relationship between development and the environment. These contributions can be separated broadly into two theoretical frameworks: Ecological Economics on one hand and Political Ecology on the other. These two frameworks will be discussed, compared and analysed in this chapter, and through this discussion the theoretical outlook of this paper will be explained.

Neoclassical Paradigm

Since the 1970s, economists have been focusing increasing attention on the ecological analysis of economic processes. Initially, this attention was on the definition of ecological limits to growth and eventually turned to an investigation of the patterns of flows of energy and materials in the economy. Emphasis was placed on the inter-generational allocation of energy and materials and on the valuation of externalities. However, this synergy of economics and ecology did not begin in the 1970s, on the contrary, it has been studied since 1879 when *The Economy of Oysters* by Mobius was published.³ Nonetheless, it has only been since the publication of *Our Common Future* in 1987 that economics and environmental issues have become mainstream ones in development literature and for this reason this

section will only discuss contributions made since that time.

Within the neoclassical paradigm there are two schools of thought which deal with ecological issues. They are Environmental Economics and Ecological Economics. Both of these approaches grew from shared underlying assumptions and therefore are very similar. Their differences are mainly a matter of degree.

Environmental Economics can be seen as the more conservative of the two frameworks, while Ecological Economics has been labelled as the more extreme or radical approach. Essentially, proponents of environmental Economics are less willing to accept that there are definite ecological limits to economic growth. These writers are optimistic about the possibility of technological fixes and therefore do not insist on the need to decrease resource use. This framework visibly builds on neoclassical economics but has added ecological principles to the production-consumption system.⁴

On the other hand, proponents of Ecological Economics believe that bringing our human ecology back into tune with the ecology of the rest of nature will be the most important and difficult challenge ever faced by our species. Furthermore, these theorists believe that the strong links between collapsing global ecosystems, uneconomic economies, disintegrating communities and spiritual disenchantment are

becoming increasingly difficult to ignore.⁵ There are four principles of Ecological Economics, they are: 1) self-reliant development through a domestic or regional orientation; 2) sustaining and/or creating an ecological balance; 3) solidarity and the equalisation of development opportunities; and 4) the democratisation of the global economy and the protection of human rights.⁶

The breadth of inquiry and policy of both approaches encompasses the following subject range: 1) land, which is often referred to as Natural Capital, and includes the Earth and all its processes; 2) labour, or Cultural Capital, which refers to humans and all our capacities; 3) capital, which encompasses all human manufactures and constructions; and 4) organisation, which includes the evolutionary configuration of all of the above.⁷ As well, there are four defining characteristics of both Environmental Economics and Ecological Economics. First, both approaches share a holistic view of the environment-economy system. Second, both approaches view the economic system as a subset of the natural system of the Earth. Third, in both approaches the primary concern is with natural capital, resources and environmental services. Fourth, both approaches share a greater concern with a wider range of human values than those normally considered by economists, for example the sense of moral obligation towards future generations. ⁸

As was mentioned above, the most telling difference between the two approaches is that Ecological Economics acknowledges physical, temporal and spatial limits to economic activity and growth while Environmental Economics is less certain. Proponents of Ecological Economics maintain that limits to growth encompass habitat, resources and waste. Essentially, this means that these theorists contend that human health requires that we maintain the quality of our habitat into the longterm future; that the rate at which resource inventories are degraded through use and abuse should not exceed the rate at which they are regenerated; and that wastes should not be generated that either contaminate ecosystems or squander resources.⁹

Although there are many theorists currently working within the contexts of Environmental Economics and Ecological Economics, it will not be possible to discuss all of their views in this section. Instead, this section will serve as an overview with the World Bank and the Brundtland Commission representing Environmental Economics and authors such as Lester Brown and David Pearce representing Ecological Economics. Again, both approaches share common ground, therefore some repetition is unavoidable.

One significant contribution made by the Brundtland Commission was in providing a definition for 'sustainable development'. Their definition entails development which ensures meeting the needs of the present without

compromising the ability of future generations to meet their own needs. This, of course, implies limits such as those imposed by the current state of technology, by the impact of social organisations on environmental resources and by the ability of the biosphere to support human endeavour. The concept 'meeting the needs of the present' was further refined by the Commission into meeting everyone's basic needs and providing them with the opportunities to fulfil their aspirations. This is an important point because as the Commission reported, "[a] world in which poverty is endemic will always be prone to ecological and other catastrophes."¹⁰ Within this definition of sustainable development, there must be equity for the poor and the poor must have a greater role in decision-making, both nationally and internationally. Finally, the Commission also identified three other basic requirements for sustainable development: first, a compression of affluent lifestyles in the North; second, a reduction in the population growth rate in the South; and third, increased international cooperation between and among institutions.

As has been mentioned, Ecological Economics and Environmental Economics are approaches rooted solidly within neoclassical economic theory. While adhering to the basic precepts of this school of thought writers such as David Pearce and Lester Brown and some economists within the World Bank attempt to add an environmental dimension. During the

1980s these neoclassical theorists discovered that there were undeniable connections between the global capitalist system and the deteriorating global environment and that steps had to be taken to ensure the survival of the capitalist system within this new reality. From this realisation comes much of the writing which will be discussed in this section. The Brundtland Commission described this heightened awareness in the following way:

"[R]elated changes have locked the global economy and global ecology together in new ways. We have in the past been concerned about the impacts of economic growth upon the environment. We are now forced to concern ourselves with the impacts of ecological stress - degradation of soils, water regimes, atmosphere, and forests - upon our economic prospects. We have in the most recent past been forced to face up to a sharp increase in economic interdependence among nations. We are now forced to accustom ourselves to an accelerating ecological interdependence among nations. Ecology and economy are becoming ever more interwoven - locally, regionally, nationally and globally - into a seamless net of causes and effects."11

The World Bank's World Development Report 1992 focused exclusively on the intertwining of issues of development and the environment. This report neatly summarised the principal thrust of Environmental Economics which is that market friendly development policies are policies which provide and/or encourage superior environmental management. The World Bank identified five areas in which it maintains the prior statement to be true: first, investment in human

resource development through education, health, nutrition and family planning; second, creation of the appropriate climate for enterprise by ensuring competitive markets and by removing market rigidities; third, clarification of legal structures and the provision of infrastructure; fourth, integration with the global economy through promotion of open trade and capital flows; and fifth, macroeconomic stability.¹²

This approach as represented by the World Bank emphasises removing economic and price distortions and securing private property rights. Both Ecological Economics and Environmental Economics maintain that distortions must be removed from prices in general and from subsidised input prices in particular. The contention is that energy subsidies cost developing country governments approximately \$ 230 billion (US) per year, which is four times the total world value of overseas development assistance. Moreover, more than half the air pollution in the former USSR and Eastern Europe is accounted for by these price distortions.¹³ Because polluting inputs are comparatively inexpensive they are used in larger amounts. The World Bank report claims that, "[t]he removal of all energy subsidies - including those on coal in industrial countries - would not only produce large gains in efficiency and in fiscal balances but would sharply reduce local pollution and cut worldwide carbon emissions from energy use by 10

percent."¹⁴ Other distortions mentioned in the report were logging fees in several African countries which ranged from 1 percent to 33 percent of the reforestation costs, irrigation charges in Asia which covered only 20 percent of the total cost, and pesticide subsidies in several developing countries which ranged from 19 percent to 83 percent of total costs.¹⁵ Finally, the World Development Report 1992 posits that distorted incentives are particularly evident in state run firms or agencies; the report states, "[t]he environment can benefit if the managers of state enterprises are made more accountable and are exposed to the same competition as is the private sector".¹⁶ Thus according to this framework, price distortions and competitiveness are linked and both contribute to pollution and other environmental degradation.

In terms of property rights, authors within both approaches contend that when people have open access to resources such as forests, pastureland and fishing grounds they overuse them. Therefore, ecological and environmental economists believe that land titles must be conferred on individuals and in no situation must nationalisation occur, even in the name of conservation, since this results in overuse and degradation.¹⁷ On the issue of public expenditures, these approaches predictably maintain that they have a remarkably negative effect on the environment. These theorists contend that public expenditures, often

supported by development agencies, have often caused ecological decline by failing to take environmental considerations into account or by failing to accurately judge the magnitude of the ecological impact of public projects.¹⁸

The World Bank represents a position which can be seen as the most rigidly neoclassical in terms of economics and therefore can be viewed as pure Environmental Economics. Other positions such as that of Lester Brown of the WorldWatch Institute can be seen as more moderate in this sense and therefore falls within Ecological Economics. Brown identifies poverty as a critical issue in the development-environment discussion and views poverty alleviation as a means of controlling environmental degradation. Furthermore, he writes in *Saving The Planet* that:

"[t]he once separate issues of environment and development are now inextricably linked. Environmental degradation is driving a growing number of people into poverty. And poverty itself has become an agent of ecological degradation, as desperate people consume the resource base on which they depend. Rather than a choice between the alleviation of poverty and the reversal of environmental decline, world leaders now face the reality that neither goal is achievable unless the other is pursued as well."¹⁹

This position differs from that of the World Bank in that it views the alleviation of poverty and the preservation of ecological stability as aims in themselves,

while the World Bank views them as ways to maintain the global economic order.

In Brown's view there are several key areas in which action must be taken to rejuvenate and reform the global capitalist system. These key areas are: energy efficiency, the dismantling of the disposable society, biological protection, the acknowledgement of limits to growth, the establishment of sustainable agriculture and the reduction of the population growth rate. 20 These measures would reform the system by creating a more harmonious relationship between the environment and the economy.

In terms of energy efficiency, Brown believes a move away from oil and coal is in order. He cites many possibilities to replace fossil fuels, for example cogeneration - the combined production of heat and power - and solar energy. A more efficient society is apt to be less congested and polluted and mass transportation is seen as a vital ingredient to this aim. The establishment of more compact communities built on the European and Japanese models can diminish the separation of working and living spaces which drives the wasteful use of energy in North America. These compressed communities may include solar residences to take advantage of sunlight for heat and electricity; furthermore, these ideas could be implemented in developing countries to enable them to leapfrog over the

current situation in the North, especially in North America.

As mentioned above, Brown identifies the disposable culture primarily evident in North America as a major facet of environmental problems. He describes it as follows:

"The throwaway society that has emerged in Western societies during the late 20th century uses so much energy, emits so much carbon and generates so much air pollution, acid rain, water pollution, toxic waste and rubbish that it is strangling itself. Rooted in the industrial concept of planned obsolescence and appeals to convenience at almost any cost, it may be seen by historians as an economic aberration."²¹

Within this societal structure, Brown perceives a hierarchy of options which are: first, to avoid non-essential items; second, to reuse products; third, to recycle material; fourth, to burn waste in order to extract energy if the possibility exists to accomplish this safely; fifth, as a last resort to employ landfill sites.

In terms of protecting the biological base, in *Saving The Planet*, Brown posits that some essential areas should be strictly preserved with minimal human use or interference. However, he also believes that a large proportion of tropical forest, for example, can be safely exploited by the people living in and around them. These areas can be termed 'extractive reserves' and can be used for the harvesting of rubber, resins, fruits and nuts, medicinal substances and

other non-timber products. Still, these areas should not support overcutting or other forms of degradation for lumber yields. If, in fact, forestry is to be practised in these areas, Brown advocates the use of technologies within the "new forestry" which include selective logging, reforestation and agroforestry. These technologies can also be used in rehabilitation of presently degraded resources. Grasslands can be rehabilitated through agroforestry, in that ruminants can be added to be a part of an agroforestry pathway. In terms of the fisheries, first a sustainable yield could be imposed, then human consumption could be encouraged to move down the foodchain while fish farming and other forms of aquaculture are simultaneously fostered.

As with protection of environmental resources, this approach contends that improving the food supply can be accomplished through new agricultural technologies found within agroforestry. For example, the practice of intercropping could increase yields. This would entail, as an illustration, planting legumes and cereals together; since legumes are nitrogen-fixing, their proximity to the cereals would allow the cereals to grow faster. Other examples are overlapping crops, transplanting and using water more efficiently. Other suggestions on this point include terracing for rainfed agriculture, the construction of earthen dams, the adoption of high-yielding varieties of seeds, improved use of fertilisers and nutrient recycling. A

point that must be emphasised is that neither Brown nor the World Bank or any other author working from either Environmental Economics or Ecological Economics believes that any radical change in the economy needs to take place to end poverty. Conversely, Brown maintains that market pricing water would encourage farmers to adopt more water efficient technologies.

As with every other perspective on environmental change and/or development, Brown maintains that population control is an urgent issue. He writes, "[u]nless the relationship between rapidly multiplying populations and their life support systems can be stabilised, development policies - however imaginative - are bound to fail. Against this backdrop, the time has come for world leaders such as the Secretary General of the United Nations, and the President of the World Bank, to speak out on the population issue, making clear the choice that societies now face."²² As possible solutions Brown advocates improved access to family planning and encouragement of its use, literacy and education campaigns directed at women and active government support for decreased population growth.

In terms of economic principles, this approach maintains that limits to economic growth must be acknowledged. These authors contend that economic reforms must be conducted at both the national and international levels, economic policies must go beyond regulations to sustainable growth.

An example of this could be recasting debt. Brown views Third World debt and the debt crisis of the 1980s as a major factor in environmental degradation. He posits that a:

"[l]ack of capital has in recent years made it all but impossible for developing countries to invest adequately in forest protection, soil conservation, irrigation improvements, more energy efficient technologies, or pollution control devices. Even worse, growing debts have compelled them to sell off natural resources, often their only source of foreign currency. Like a consumer forced to hock the family heirlooms to pay credit card bills, developing countries are plundering forests, decimating fisheries, and depleting water supplies - regardless of the longterm consequences."²³

Furthermore, this position urges the advent of ecologically friendly development aid, a reduction in bilateral or multilateral 'tied' aid and a coherent vision of development strategies within and among the World Bank and other lending or aid agencies. Beyond this Brown suggests that negotiations should take place between governments resulting in the writing off of large amounts of Third World debt in exchange for the adoption of sustainable development programmes. Brown believes that such arrangements have the potential to impel farreaching change in development strategies and guarantee that new loans are used for well thought out development efforts. If this sort of approach was adopted, contends Brown, it would be possible to reduce debt significantly as well as provide

billions of dollars to help more countries onto a more sustainable path.

Other initiatives which are recommended within this framework are environmental taxes and the removal of government incentives for policies which are ecologically destructive. One method that Brown suggests is recalculating the GNP so that it takes account of the depletion and deterioration of forests, fisheries, water supplies, air quality, and other natural assets. He believes that this is a critical step in bridging the growing gap between illusory and real economic gains. Brown is also an advocate of the 'polluter pays' principle (also known as the Perpetrator Pays Principle) implemented through various environmental taxes. In *Saving The Planet* he writes:

"[t]axation is an efficient way to correct [the shortcomings in the present economic system], and a powerful instrument for steering economies towards better environmental health. By taxing products and activities that pollute, deplete, or otherwise degrade natural systems, government can ensure that environmental costs are taken into account in private decisions - whether to commute by car or bicycle, or to generate electricity from coal or sunlight. If income or other taxes are reduced to compensate, leaving the total tax burden the same, both the economy and the environment can benefit."²⁴

Thus, Brown and his colleagues recommend a so-called 'green tax code', a revitalised version of what is currently in place in all developed countries.

David Pearce, in *Blueprint for a Green Economy* and *Blueprint2: Greening the World Economy*, essentially agrees with the positions reviewed above although he discusses issues of the global commons in far greater depth than the previous authors. Pearce, along with Brown and the World Bank contends that the preservation of the global commons must be a major consideration in economic planning and policymaking. On this issue his focus is on both national and international taxation policies, the 'green' taxation discussed above. Specifically, he proposes a carbon tax to control the use of this fossil fuel and other taxes to limit atmospheric trace gasses. Furthermore, Pearce favours resource accounting and the practice of 'pricing' environmental resources. He posits that:

"[t]he proper pricing of environmental resources and functions should cover the full marginal social costs of their use. Correction of government and market failures in developing countries must be a priority where these failures give rise to excessive environmental degradation. The ultimate objective must be to develop appropriate incentives for private decision-makers. Improvements in pricing, or variable incentives, alone - altering input and output pricing, modifying the exchange rate, adjusting middlemen margins, and so on - may not be enough. Incentives focused on individual resource users (such as changes in land and resource rights, increased participation in decisionmaking and improved access to credit) or on the policymaker (such as increased institutional strength and coordination, improving the political climate and decreased corruption) may also prove necessary. The challenge for policy is to design the right combination of incentives

for a given target group of individuals and environments."25

As an example, in terms of tropical deforestation, the total economic value, both market and non-market, that is being surrendered through modification to prevailing natural and managed forest systems must be evaluated. Then, corrections in imbalances and distortions in incentives must be considered. One possibility Pearce suggests is international transfers to countries which sustain tropical forest for conserving them; this would be beneficial to the international community in terms of carbon absorption, for example. As well, cost-benefit analyses of land-use options is suggested ; some other options proposed are: compensatory financing under the forthcoming international climate convention, the establishment of a biodiversity fund, debt-for-nature swaps, and increased use of the World Bank Global Environmental Facility.

From the above discussion of works by the Brundtland Commission, the World Bank, Lester Brown and David Pearce an overview of the Ecological Economics and Environmental Economics approaches emerges. Essentially, these approaches fall within the dominant neoclassical paradigm and are concerned with both the environmental consequences of capitalist policies and the impact of ecological degradation on the capitalist economy. Within this, issues of poverty,

human resource development, population policy and others are discussed.

Political Ecology

The second framework to be discussed in this chapter is Political Ecology. As with Ecological Economics, this framework is a relatively new one. The term Political Ecology can be traced with certainty to the 1970s, when it emerged as a response to the theoretical need to integrate land-use practice with local and global political economy and as a reaction to the growing politicisation of the environment. In the 1980s it emerged as a research agenda.

This framework rests on the supposition that our countries, or even planet, are in ecological crisis. The ecological crisis which now confronts us is not merely an imbalance in the system produced by human activity nor simply a problem of exhausted, misused or dirtied resources. It is a crisis resulting directly from our own social ecology: our economics, technology, science and culture. As Graham Smith wrote in *Our Ecological Crisis* in 1974:

"It is apparent that any thinking about the ecological crisis must be concerned equally with the structure of human society, culture and technology. Man has become a dysfunctional element in the system, and the system is not adaptable. Whether Nature has sufficient ability to purge itself of man's parasitic behaviour is a question for the ecologists; whether the parasite can adapt himself to his host for his own sake is a question for the social theorist and the

political actor. The ecology movement- as a political movement seeking to compel a different allocation of socio-ecological values - thus differs from the conservation movement as the new politics and the new economics differ from traditional models in these disciplines."²⁶

This framework attempts to investigate these ecological considerations by melding them to political economy. The best definition of Political Ecology comes from Piers Blaikie and Harold Brookfield who have collaborated on some of the seminal works within this approach. In *Land Degradation and Society*, they write, "the phrase 'Political Ecology' combines the concerns of ecology and a broadly defined political economy. Together this encompasses the constantly shifting dialectic between society and land based resources, and also within classes and groups within society itself." Furthermore "Third World Political Ecology is understood to be inclusive, sensitive to the interplay of diverse socio-political forces and their relationship to environmental change. This framework aims to unify but through an appreciation of plurality of purpose and flexibility in explanation."²⁷

The following overview of the Political Ecology approach is based primarily on the writings of Piers Blaikie and Harold Brookfield, Raymond Bryant, Richard Peet and Michael Watts and Michael Redclift.

The Framework of Political Ecology

The framework encompasses three critical areas of inquiry: first, the contextual sources of environmental change - these encompass state policies, interstate relations and global capitalism. This element of the framework reflects the growing influence of national and transnational forces on the environment while the world becomes increasingly politically and economically interdependent; second, conflict over access- this element focuses on location specific struggles over resources. It incorporates historical and contemporary dynamics of conflict and illuminates how the so-called powerless fight to protect the environmental foundations of their livelihood; and third the political ramifications of environmental change. This element examines the important effects of environmental change on socioeconomic and political relationships.

Contextual Sources of Environmental Change

Political Ecology posits that there is an inherent, continuing potential for conflict between the State's role as developer and as protector or steward of the natural environment on which its existence ultimately depends. Many regional and thematic studies have been conducted within the framework on this point, however, the role of interstate and intrastate forces has not been fully explored. General

research has been done but there have not been many regional or national oriented analyses. The aspect on which attention is most often centred is that of warfare and how the interaction of sovereign states can militate against longterm environmental stability. The links between international aid and environmental change or international watershed management, for example, have not been adequately investigated.

The third contextual source of environmental change is global capitalism. Many studies have been conducted on this subject, for example: monocropping and drought in Africa; how export cropping intensifies environmental degradation and undermines national food security; capitalism and environmental change in Africa; TransNational Corporations and herbicide resistant crops. Political Ecology contends that if the State is a theatre in which resources, property rights and authority are struggled over, then State policies embody that struggle, often facilitating the interests of powerful economic elites and inculcating both social unrest and ecological degradation. Thus, state policies are an embodiment of societal divisions and struggle and the narrower interests of the State itself. But these policies cannot be understood in isolation. These policies embody conflicting aims and objectives, moreover their fate may concurrently be linked with those of other policies removed from the environmental arena. An illustration of this point

is that forest policies may be aimed at balancing conservation with timber extraction but still within the context of tax, trade and industrial policies. There are also issues of policy implementation such as who gains, who loses, and issues of government corruption: in other words, the political economy of policy implementation.

In terms of interstate relations, conflict and competition between States almost always contributes to environmental modification, either negatively or positively. At times trade can be beneficial as it can be tied to stricter environmental regulations. On the other hand, conflict over access to resources can lead to overuse and exploitation of that resource. As noted earlier, issues of war or nuclear weapons have been addressed but peacetime activities which also have environmental implications have not.

Some important questions which arise in the area of contextual sources of environmental change are: Does the political dependence of one State on another translate into increased environmental degradation ?; May a politically ascendant State avoid such degradation by "exporting" it to client states ?; Do power imbalances among states arise, in part, from differential control over environmental resources?; Can disadvantaged states use internal processes of environmental change - for example tropical deforestation - to strengthen their position in negotiating with other

states ?. This last question refers to the fact that since first world countries have perceived a 'crisis of the commons' they are beginning to consider making economic concessions to maintain third world environmental conservation, concomitantly, terms such as 'debt-for-nature' and 'global bargain' are becoming mainstream international relations catchphrases. These issues were discussed in more detail in the overview of Ecological Economics.

Conflict Over Access

The second critical area of inquiry is Conflict Over Access to resources. The research which has been done in this domain examines the relationship between access rights, local struggle and ecological transformation. Therefore, 'Conflict over Access' is concerned with the constraints and opportunities which face rural labourers and other socially and economically disadvantaged groups in struggles to protect the environmental foundations of their livelihoods. Political Ecology maintains that in attempting to understand contention over access issues, both the historical and contemporary dynamics of struggle must be addressed.

Case studies done on this subject highlight problems which have been imported through colonisation and, through its legacy, continue today. An example of this is peasant-State conflict over control of natural resources. Complexity is added to this by tenurial systems and social

institutions which regulate access, control and use of natural resources. The role of women (as gatherers, hunters, farmers and fishers) is key but has typically been neglected in the literature. As well, to understand current conflicts over access, spatial distinctions between actors at, or near, the conflict site and actors at regional, national or international levels must be drawn. Spatially differentiated actors have different access to strategic resources, for example Trans National Corporations have greater access to information and technology than local villagers. Therefore, how these contextual actors deploy their additional resources in location-specific struggles is an important research question.

As Raymond Bryant writes in his review article, "an examination of the specifics, rather than generalities, of conflict over access, brings into question widely held beliefs about Third World human -environmental interaction. Conflict between poor villagers dependent for their wellbeing on local land, water and forest resources, and various powerful coalitions attempting to deprive them of access to these resources, recurs in the literature. Yet, this dichotomy masks a web of complex power relations." 28 Much work done on this subject, outside of Political Ecology, presupposes that the villagers are an undifferentiated mass, when in fact there may be many differentiating characteristics- for example: different

levels of poverty and power, different interests and objectives over access. Another example is gender based: how does unequal divisions of labour contribute to the complexities of social struggle for land, water and forests ?

Political Ecology also highlights many of the difficulties associated with management of crises over access. One such difficulty is the role of the state in crisis resolution. Although the State is usually involved in crisis resolution there are at least two factors which limit its effectiveness: first, the State is not an impartial observer in these struggles, often it is an active participant; second, the State is often riven by conflicting interests.

Political Ramifications of Environmental Change

The third area of inquiry within the framework of political ecology is the political ramifications of environmental change. It explores the ways that environmental change influence socioeconomic inequalities, and by extension, the political process. Therefore, it acknowledges a frequently overlooked dimension of the issues. Just as political forces contribute to environmental change, the modification of land, water and forests has important political ramifications. To better appreciate those ramifications attention needs to be directed to

socioeconomic impact and political processes. As well, the link between ethnicity, ecological change and political protest awaits adequate exploration.

There are two fundamental questions in the literature on the political ramifications of environmental change and they are: first, to what extent are the costs of environmental change borne by socially disadvantaged groups and how does this unequal distribution of costs mediate existing socio-economic inequalities?; and second, Under what circumstances does unequal exposure to environmental change modify political processes ?

The literature in this area emphasises the vulnerability of the poor to ecological degradation such as soil erosion, desertification and deforestation. The marginalised groups are also threatened by so-called beneficial projects, for example in the case of commercial tree plantations, people must compete for access to a previously open access resource.

On the other hand, in examining the political ramifications of environmental change, the willingness and ability of the poor to contest their plight should not be forgotten. In this vein, Michael Redclift writes that, "the two principle components of environmental movements in the South are of marginal importance to most movements in the developed countries. They are that those who constitute the 'movement' are engaged in a livelihood struggle and,

secondly, that they recognise that this livelihood struggle can be successful only if the environment is managed in a sustainable way."29

The questions asked must therefore have sensitivity toward the social and ecological marginality of the poor. Some questions in this area of inquiry are: How do land managers become spatially and economically marginalised ?; How does this marginality relate to ecological marginality (that is, lands of low and/or erratic capability) ?; How do these forms of marginality interact to produce 'social ecocide' or a downward spiral of human and environmental degradation ?; How can individuals or groups caught in this trap organise resistance ?; Are power relations reinforced by environmental change ?.

Reviews of the work done in this area of political ecology emphasises that environmental change not only exacerbates socio-economic inequalities but it also serves as a catalyst for political protest, especially as manifested in environmental movements.

In analysis of this area of inquiry there is a need to differentiate between socio-economic impact and political process. As well, understanding must be location-specific in terms of physical and biological processes. In reference to environmental change, a broad distinction is made between everyday and episodic change. Everyday degradation would be change such as soil erosion or deforestation and is

cumulative while episodic degradation would be a natural disaster such as a typhoon or volcanic eruption. Of course these two different forms of change are often interrelated. By critically focusing on the relationship between environmental change, socio-economic impact and political processes, this research addresses often neglected issues. It rejects facile assumptions about environmental change and human welfare - for example that ecological degradation is a universal evil befalling rich and poor alike. Rather, it explores how such change is incorporated into concrete political and economic relationships, and the ways that it may then be used to reinforce or challenge those relationships. As such, research into the political ramifications of environmental change constitutes an integral part- along with analyses of conflict over access and the contextual sources of environmental change - of a more general inquiry into the politics of environmental change.

In "Development Theory and Environment in the Age of Market Triumphalism", Richard Peet and Michael Watts discuss several aspects of political ecology which they say "reflect the engagements within and between political economy, poststructuralism, discourse theory and ecological science".³⁰ They identify six such aspects. First, they maintain that there has been a retheorising of political economy and environment at several levels in the past decade. This point

encompasses debates about Marxism and ecology and about whether the labour process is compatible with eco-regulation and the notion of biological limits. This begins from the second contradiction of capitalism in which production conditions are identified (nature, labour power and communal conditions of production) which capital cannot produce for itself as commodities. The state mediates and therefore politicises conflicts around these conditions (resulting in environmental movements, feminism and social movements) in order to maintain capitalist accumulation. As well, attempts are being made to harness concepts from political economy to link the two structures of nature and society. Second, Peet and Watts believe that some authors are beginning to question the absence of a serious treatment of politics in Political Ecology. They especially approve of attempts to integrate political action into questions of resource access and control, as well as gender struggles centred around the environment. Third, the association of Political Ecology and civil society is being brought into focus. On this point, questions raised are: what are the spaces within which these movements develop, and how do they articulate with other organisations and resist the predations of the State? Another facet is how knowledge and practices become part of alternative development strategies, or how it becomes institutionalised or encoded in regulatory agencies. The fourth new direction in Political Ecology is the

construction and deconstruction of sustainable development. The fifth new direction is the study of environmental history which gives depth and breadth to contemporary understanding. The final new direction in Political Ecology as enumerated by Peet and Watts is the 'new' ecology. It is sensitive to rethinking space-time relations to understand the complex dynamics of local environmental relations in the same way that the dialectical biologists rethink the evolutionary dynamics of biological systems.

Problems With The Frameworks

The NeoClassical Paradigm

In traditional neoclassical economics, the environment is viewed primarily as a source of materials for commerce, for example - wood, metal, coal, oil, water, agriculture, plants, land, game, salt, spices, gems, minerals and so on. Thus the environment is the foundation of the global capitalist system. As long as resources are viewed as infinite there is no economic motivation for conservation, in fact the reverse is true: the rationale is to extract as much as possible as cheaply as possible. Of course, the environmental consequences of extraction is high - stripmining, clearcutting, slash-and-burn farming, offshore drilling, damming, flooding, overgrazing, and overfishing result. Another traditional neoclassical view of the environment is as waste depository. Noxious gasses continue

to be pumped into the atmosphere, poisons are dumped into the ocean, and dumping trash onto land is cost-free and considered preferable to paying for waste management. In fact:

"Almost everything about conventional economics has a built in tendency to foster internal growth at the expense of external degradation. Traditional economics is conspicuous for offering a tangible and powerful set of disincentives for environmental stewardship, and it becomes necessary to ask the question: can we provide adequate environmental protection in the context of an economic system that is so thoroughly disinclined to offer it ?"31

Although Ecological Economics is not traditional neoclassical economics it does fall squarely within this paradigm and is, as has been discussed, advocated by the World Bank. Because of its ideological underpinnings of individualism, profit generation at any cost, and unfettered markets it seems unlikely that this approach can compel true (positive) environmental change.

Furthermore, a fundamental question in discussions of sustainable development should be: sustainable development by whom and for whom ?. This approach, especially as expounded by the Brundtland Commission and the World Bank, seems to advocate institutional and private sector business activism. However, the eagerness again seems to be profit-driven. The World Bank has used environmental issues to further promulgate its own agenda. For example, in the World

Development Report 1992, the World Bank contended that granting private property rights is the only way to ensure the productivity of natural resources. Essentially, this is a topdown approach which does not allow room for indigenous knowledge or self-management, a sophisticated location-specific understanding or traditional lifestyles among other things.

Essentially this framework can be termed 'environmental managerialism'. This is not really an option in most Third World countries because they lack the institutional foundation and tradition to sustain it. In the industrialised world, environmental managerialism is usually an initiative of the affluent urban classes and rarely faces political dissent, especially when expressed in terms of improved management or conservation of wilderness. On the other hand, in the South, environmental degradation is intimately linked to rural poverty; a large percentage of the rural population looks to the environment to sustain their livelihoods. As David Goodman and Michael Redclift posit in *Refashioning Nature*:

"[e]nvironmental problems in developing countries can only be realistically understood as the outcome of underdevelopment and poverty. The 'environment' lacks ideological resonance; it is to be 'tamed' or 'conquered', and made to yield economic revenues and livelihoods. Environmental managerialism, without its ideological underpinning which explain its strong cultural appeal in the North, would need to be radically modified to make any impact on

the causes of environmental degradation in the South."³²

Since this framework is based on Northern experience, it can often be prejudicial to the interests of the poor. An example of this is that disputes in the Brazilian Amazon cannot effectively be mediated by international agencies since most Brazilians, both on the left and right, believe these agencies to be more concerned with the quality of life in Northern countries than in the livelihood rights of the local poor. Similarly, campaigns to protect the rainforest can be seen as neo-imperialist. They are often prompted by fears of global warming and a desire to preserve biodiversity not by concern about poor frontier settlers or the social impacts of huge foreign debt.

The most critical drawback of Ecological Economics is that it does not directly address the fact that it is the internal distributions of political and economic power within developing countries that perpetuates inequalities, controls access to certain resources, and structures economic incentives in ways which hold people in situations where resource base depletion is an important and necessary aspect of their daily living. As well, although foreign aid and expertise can be beneficial, it cannot overcome the fact that environmental abuse is entrenched in the South because of much larger and more complex failings of individual

political and economic systems. Very often, environmental degradation at the local level and national strategies for depleting natural reserves represent the most expedient responses to situations which would otherwise require fundamental political and economic reforms.

Political Ecology

The main drawback of this framework is its lack of theoretical coherence or centre. Its greatest strength is in identifying areas of focus: the contextual sources of environmental change, conflict over access, and the political ramifications of environmental change. Authors working within this framework come from diverse disciplines and have differing ideological perspectives although they all employ a broadly defined political economy and class analysis. Some authors working within this framework are Hecht, Brookfield, Bramwell, Stonich, Redclift and Ram Guha. Although the lack of a theoretical centre does cause a certain diversity in research emanating from this framework, it also allows a certain freedom and creativity in analysis which can be considered a positive aspect.

Another identified problem with this framework is the fact that it lacks a rigorous political dimension. The means by which control and access of resources or property rights are defined, negotiated and contested within the political arenas of the household, workplace and the State are not

treated effectively. Although this statement is true of certain works within the framework it does not hold for others. Again there is a diversity of views on the hierarchy of importance of different factors within Political Ecology. As well, in terms of the impact of environmental change on the political process or popular movements on civil society there is indeed a definite focus on politics in Political Ecology. Current writings focus attention on integrating political action into questions of resource access and control.

A final consideration is the suggestion that the ecological perspective within Political Ecology is an old-fashioned and discredited one rooted in stability, resilience and systems theory. This criticism is not really a valid one of post-1980 writings. At this time a shift toward ideas such as chaotic fluctuations, disequilibria and instability occurred. This 'new ecology' is far more sensitive to rethinking space-time relations to understand the complex dynamics of local environmental relations than ecology which rests on the concepts of stability, harmony and resilience.

Theoretical Framework of This Paper

After a review of the literature surrounding both frameworks discussed in this chapter it became clear that the more relevant approach in relation to this paper was

Political Ecology. This will be discussed later in this section, but first a summary of the reasons why the Ecological Economics framework is not applicable.

The most obvious reason why Ecological Economics is inapplicable is because it does not address the issues of this paper which are the intertwining environmental, political, social and economic causes of human displacement. Although it would be possible to view the problem of environmental refugees from this perspective, it has yet to be done satisfactorily. The Brundtland Commission report is one of the few documents to come out of this framework which even touches on the subject of environmental refugees and then only tangentially. Essentially, this perspective places far greater emphasis on economics than ecology and so is focused on methods to make the capitalist system environmentally-friendly. Although it does discuss resource management and property rights it does this as clinically as possible without dealing with the impact of its recommendations on the affected populations. Even though environmental degradation is a key point, this perspective's analysis is centred on the impact of environmental issues on the economy and the economy's impact on the environment.

A related point is that Ecological Economics does not offer analysis beyond the usual neoclassical rhetoric. In most cases it is suggested that the implementation of free market reforms, resource accounting or "pricing", and

individualistic property rights would either slow down environmental degradation or eliminate it altogether. This again illustrates the narrowness of the framework as many crucial factors, such as ecological issues, indigenous cultures and traditions, spatial issues and so on, are not considered. Also because of these reasons, Ecological Economics is unresponsive to individuality in approach and in response to given situations. This framework is not location-specific: it is general and broad and recommends policies from the same family to account for situations in various resources and in different countries. Many suggested policies are the same for both countries in the North and South. In this sense it is fundamentally a top-down approach.

Beyond these criticisms, Ecological Economics provides a perspective which is profit-driven, exploitative and revisionist at its most extreme. As has been mentioned earlier, the ideological concern underpinning this view is the need to revitalise capitalist accumulation; it is a stance designed to aid the private sector to increase profit although in a fashion deemed environmentally sustainable. In this way it is intrinsically exploitative in terms of ownership of resources and access to them. For example, this perspective is philosophically opposed to the concepts of common property and open access resources. When ownership is privatised it is the poor who lose access to their

livelihoods. In terms of revisionism, the World Bank's so-called "green" analysis recreates recent history by suggesting that its own policies have not contributed to current environmental problems when in fact much environmental damage has been caused by attempts to be market friendly. An obvious example of this is the links between World Bank backed timber licensing and deforestation; another example is the link between the encouragement of tourism and environmental degradation. Furthermore, the World Bank claims these same policies are ones which lead countries out of their environmental problems and into environmental stability.

The Political Ecology perspective is far better suited to the aims and direction of this paper. As has been discussed this framework identifies three critical areas of inquiry: contextual sources of environment change, conflict over access, and the political ramifications of environmental change. This paper, dealing as it does with people who are displaced by environmental change (among other factors) fits easily into this third critical area of inquiry. The two fundamental questions posed in the literature on political ramifications are also questions fundamental to this paper. They are: to what extent are the costs of environmental change borne by socially-disadvantaged groups and how does this unequal distribution

of costs mediate existing socio-economic inequalities ?; Under what circumstances does unequal exposure to environmental change modify political processes ?.

Another important factor in choosing this framework was its ability to integrate social sciences and ecology. Within Political Ecology it is possible to meld environmental, political, social and economic factors into a coherent explanation of human displacement and resettlement within a political economy analysis. As well the ecological analysis is a sophisticated one as it pulls together issues of disequilibria, chaotic fluctuations and instability instead of relying on outdated notions of stability, harmony and resilience.

Furthermore, as there is no prescribed ideological stance, there is less rigidity of thought. This is an attraction because it allows freedom of thought from the rhetoric and structure of both neoclassical economics and from classical Marxism. At the same time the framework does utilise a broadly defined political ecology and attempts to integrate questions of the relations of production in a global economy with resource management and environmental regulation.

Finally, because Political Ecology attempts to be location-specific, there is a greater depth of analysis than exists in many other frameworks. Writings within this approach are usually regional or national and understand

that local ecosystems, social traditions and political systems can have a major impact in differences between otherwise similar situations in different areas. Because of this, recommendations coming from their research is tailored to certain areas and problems and far less intrusive.

CHAPTER TWO: LITERATURE REVIEW

Introduction

There are many types of population movement: voluntary, seasonal, forced migration due to political or religious persecution, forced migration due to a lack of economic opportunities, and forced migration due to environmental degradation. The UNHCR (United Nations High Commission for Refugees) delineates between the multiplicity of forced population movements as follows:

"[Migrants] fall broadly into two categories. On one hand, they are generated by the violence of man, by his intolerance towards his fellow human beings, by his efforts to dominate those around him. In this category are the victims of armed conflicts, of violation of human rights, of oppressive regimes which deny their citizens the enjoyment of fundamental rights and liberties. This is the category which produces refugees, people whose lives or liberty would be in danger if forcibly returned to their country of origin. On the other hand, there are the natural calamities, underdevelopment, poverty, socioeconomic problems and ecological disasters which compel people to leave their country simply to survive. They are not refugees in need of asylum. They are human beings in distress and who are in need of assistance."³³

Other authors do not believe that the boundaries between the different categories are as clear-cut as the above quotation indicates. Douglas Stafford maintains that:

"In addition to overt violence, the intractable problems of repression and

poverty continue to fuel increasingly complex mass movements of people. People are on the move for such a mix of reasons that refugee definitions are less and less capable of capturing their experience, which is likely to involve a complicated mix of compulsion and choice. Out of both valid and invalid concerns for the security issues raised by these mass movements, receiving States respond with tighter asylum and immigration policies. They also respond with fear, racism and xenophobia. The international regime of refugee protection, carefully built up over decades, shows signs of unravelling."³⁴

Although there is always academic and governmental interest in voluntary migration, it is surprising how little attention has been paid to the issues of forced migration. This review will not consider the literature on the subject of voluntary migration as it falls outside the parameters of the current study. The different forms of involuntary, or forced migration, will be examined briefly with the heaviest emphasis being placed on the category of environmental refugees since they are the focus of this paper.

Convention Refugees

According to Pierre-Michel Fontaine, there have been five periods of refugee protection in the modern era.³⁵

The first period was from 1917 to 1921 and did not have explicit policies for refugee security; in fact the only reference to refugee security was Article 25 of the Covenant of the League of Nations. In this Article, the

League and the International Red Cross pledged to alleviate suffering throughout the world. The second period was from 1921 to 1938. During this time, the international legal regime developed quickly; the first international convention referring to refugee protection was adopted in 1933, humanitarian norms developed and instruments were approved. Group definitions which emphasised nationality and ethnic origin, lack of protection from the home country and nonacquisition of another nationality were instituted. However, during this period all institutions were temporary since definitions and instruments were evolving rapidly. Since the measures of this period were inadequate to cope with the migrations of the time new instruments were developed. This led to the third period from 1938 to 1950. During this phase an individualised approach was attempted and in 1946 the Constitution of the International Refugee Organisation was written and approved by the international community. This was a significant time because refugees were viewed in the light of the Second World War. Thus the definition of refugee came to be exclusively European in order to deal with the massive dislocation caused by Nazi Germany. Refugee claimants have been viewed through this prism ever since that time although recently the definitions have become less rigid. During the fourth period, from 1950 to 1957, the UNHCR (United Nations High Commission for Refugees) was established and the individualisation of the

refugee definition continued. The fifth period began in 1957 and continues into the present time. New tendencies have emerged during this time, the most important being that in 1957 the United Nation's General Assembly passed Resolution 1167 which allows the High Commissioner to use his/her good offices to help people in refugee-like situations. In 1969 the Organisation of African Unity passed a resolution of its own reinforcing this initiative and the 1984 Cartagena Declaration further enforced it. In 1951 the Convention Relating to the Status of Refugees was passed and in 1967 the Refugee Protocol was adopted into international law. Interestingly, Canada helped draft the Protocol but did not accede to it until 1969. In these documents the United Nations defines Convention Refugees in the following manner:

"Convention Refugee means any person who, by reason of a well-founded fear of persecution for reasons of race, religion, nationality, membership in a particular group or political opinion, (a) is outside the country of his nationality and is unable or, by reason of such fear, is unwilling to avail himself of the protection of that country or (b) not having a country of nationality, is outside the country of his former habitual residence and is unable to return to that country."36

This definition is significant since it limits official refugees to those people who are fleeing provable political persecution. This definition is very definitely rooted in the European experience during the Second World War and therefore excluded many more than it includes. Beyond

geography, it also excludes many people who have well-founded fears about remaining in their country of origin. Finally, it excluded people who are persecuted by their governments, or elements within it, but who are unable to cross a border. From an historical perspective it seems obvious that international refugee law was not intended to deal with the amount of, and different sorts of, involuntary population movements taking place today. These include population movements due to economic, socio-cultural and environmental factors.

Until the 1970s, when large scale migrations from the South to the North began, refugee law had applied almost exclusively to people who were in an ethnic or political sense, "related" to the people of the country of destination. This "relatedness" meant that the refugee population was no real threat to the status quo. In fact, in cases of defection of refugees from the Communist states, refugees were used as political pawns in the propaganda war³⁷ and thus were accorded high status. Therefore, the Cold War was in some sense beneficial to the cause of Convention Refugees. In fact, M.Douglas Stafford contends that:

"The Cold War was characterised by a stultifying and dangerous simplicity. For refugees, the promise of it was that, in a sense, protection and solutions were often relatively easy to obtain. Because they fled from ostracised regimes, refugees benefitted from non-refoulement, usually found asylum, were assisted by the donor governments, and

were granted local integration or resettlement, as voluntary repatriation was considered impossible. The result was the development of and general adherence to a regime of protection for those who crossed borders."³⁸

This section on Convention Refugees is significant because, through a brief review of the literature, it illuminates the standard by which all forms of involuntary migration are measured. It shows that through the five periods described above all officially recognised refugees had to prove political persecution. As has been stated, the concept of refugee was developed in the West (specifically, Europe) over the past century. It would seem that the prerequisite of political flight was not created unthinkingly: if other criteria such as economic plight were considered, far too many migrants would arrive on the European doorstep. Since transportation was not as easy even fifty years ago as it is today, migration was not as prevalent as it is today. Furthermore, the environment and ecological deterioration was not a concern. These factors are still in play, therefore economic migrants are considered immigrants and are processed through the formal process along with everyone else. Environmental refugees are too new an idea for bureaucracy to deal with. This last category are most likely still considered immigrants as immigration laws are being tightened everywhere.

Obviously, the literature on the issue of Convention Refugees is far more extensive than the above commentary reveals. However, for the purposes of this paper, this brief review is adequate in that it touched on the main issues involved in this form of forced migration.

As has been stated, one of the defining characteristics of Convention Refugees is that they cross international borders. However, there is another class of people who endure the same type of persecution as Convention Refugees but who do not leave their home countries; these people are termed 'internally displaced' or 'internal refugees'. The following section will discuss the literature on this category of forced migration.

Internally Displaced Persons

In the literature, the terms 'internally displaced persons' and 'internal refugees' are used interchangeably, and thus will be treated as synonyms throughout this section. In *A Future Without Refugees*, Ed Garcia defines internally displaced persons in the following manner:

"An internally displaced person...is someone who has fled from his home because of civil conflict, violations of human rights or other disasters, but does not qualify as a refugee under international law or mandate because he or she did not cross a border. The various reasons for internal displacement, though, are frequently similar to those which cause people to flee across their borders."³⁹

Another definition provided by the Ecumenical Commission for Displaced Families and Communities (ECDFC) maintains that internal refugee movements are caused by the:

"forced transfer of people from their villages or areas of residence to other areas due to factors or conditions existing in the former which make it very difficult or even dangerous for the people to stay there. Such forced transfers may involve individuals, families or even whole communities. These displaced individuals, families and communities are called internal refugees for they take on the status of refugees, not in other countries, but in their own land."⁴⁰

Another agency (a non-profit Non-Governmental Organisation), the Citizen's Disaster Response Centre, adds that the term 'internal refugee' "refers to persons displaced by war and forced to seek shelter and safety in other parts of the country. The term covers individuals, families and communities who have been uprooted from their habitual residence and livelihood by incidents arising from an armed conflict."⁴¹ It has been estimated that, globally, 20 million people have been displaced within their own countries because of civil war, internal strife or ethnic tensions.⁴² Currently there is no efficient international system to deal with these people who fall under the jurisdiction of their own government even though this same government is often party to the causes of displacement. Most often as one branch of the government (usually the military) is responsible for displacement,

another branch (a department of social welfare) is responsible for resettlement or some form of relief. In better known situations, other governments may intervene and offer relief aid or Non-Governmental Organisations may enter into the picture.

Seven main effects of displacement have been identified by the ECDFC. The first and most obvious effect is the deprivation of the basic needs of the migrants, for example these people lose their shelter, and have limited access to food and clothing. Second, the internal refugees have a decreased capacity to access their former means of livelihood. Even if allowed to return to their homes, often the migrants face problems associated with the original reasons for their flight. The third effect is illness. Epidemics caused by poor food and limited access to shelter and sanitation are common in hastily conceived and constructed resettlement areas. The fourth effect is a marked disruption of family life and family dynamics. The loss of property through flight or through armed conflict is the fifth result of displacement. Sixth, a culture of violence in which young people, and even adults, begin to believe brutality and savagery are answers to their problems begins to emerge. And finally, the psycho-social development of children and young adults is disrupted.⁴³

There are many examples of situations which create internal refugees in the world today. Very briefly this

paper will touch on the circumstances in Afghanistan, Ethiopia, Mozambique and the Philippines to illuminate the variety of situations in which internal refugees are generated. Since very little has been written on this topic, examples serve to clarify the discussion.

In Afghanistan, apart from environmental and economic reasons for displacement, there are three main causes for internal forced migration: civil war and internal strife, ethnic persecution and forcible relocations. Currently, there are approximately 2 million internally displaced people in Afghanistan, whose situation is far worse than that of their fellow citizens who have claimed Convention Refugee Status in Iran and Pakistan because the internal refugees do not have the benefit of the international relief umbrella. In Afghanistan, most internal refugees either move constantly from village to village or back and forth to and from their village of origin. Most of these people would like to join their compatriots in exile but either cannot afford to or have compelling family obligations in Afghanistan.⁴⁴ In the case of Afghanistan, the impetus for movement comes from the people largely as a response to civil war. In Ethiopia, migration was very much a government initiative.

Under the regime of Haile Miriam Mengistu the Ethiopian government used forced resettlement as a tool to suppress rebellion in the northern regions of the country. During the

devastating famines of the 1980s (1984 to 1986, and 1987) Mengistu's government relocated people whom it maintained were supporters of the Eritrean separatists or actual members of the EPLF (Eritrean People's Liberation Front). Approximately 1.5 million people are estimated to have been forcibly moved through this scheme. During this period, the government contended that fuel and trucks, among other necessities, were not available for famine relief operations, and yet were made available for these resettlement programmes. Since no outsiders were allowed to visit relocation sites, all descriptions of them within the literature are based on government statements.

Although a peace accord has recently been signed, the Mozambican civil war endured for 15 years. The civil war affected an estimated one-third of the population of 15 million people, 85 percent of whom were rural peasants. Two million people became internally displaced persons because of the conflict, one million people became Convention Refugees. Renamo (Mozambican National Resistance), the South African backed resistance movement, was directly responsible for the deaths of 900,000 people. 45 Mercedes Sayaguls identifies both the civil war and drought (and the ensuing large-scale loss of crops and livestock, lack of water and a cholera epidemic) as the main causes of the massive displacement. She also maintains that in the southern and central areas of the country, which were experiencing almost

total cereal crop failure, there have reportedly been deaths from starvation and thirst and in some cases women walk all day to find water. In these regions, 3 million people are in need of emergency food relief.⁴⁶

In the Philippines, the situations which lead to internally displaced persons are caused primarily by clashes between government forces and either the New People's Army (NPA), a Communist insurgent group, or the Moro National Liberation Front (MNLF), a Muslim separatist group which campaigns mainly on the island of Mindanao. A secondary cause of internal displacement is logging and land-grabbing operations; TransNational Corporations and their Filipino cronies dispossess farmers and indigenous people of their land. Another secondary cause of displacement is the construction of massive infrastructure projects.

The State imposed relocations which result from these situations can take one of two forms: forced evacuations or strategic hamletting.⁴⁷ Forced evacuations entail the movement of villages or communities regardless of territorial boundaries, geopolitical divisions or the number of people affected, because of counter-insurgency measures being implemented or because of the hostile environment allegedly caused by unexpected killings, abductions or other harassment. Under the policy of strategic hamletting, villages are relocated to counter NPA insurgency. These resettlements are often euphemistically termed 'resource

control centres', 'groupings' and 'live-ins' by the Filipino government. Strategic hamletting is a concept borrowed from the American experience in Vietnam and is meant to isolate "armed revolutionaries, rebels, insurgents and communist terrorists."⁴⁸

According to the Ecumenical Commission for Displaced Families and Communities (ECDFC):

"The problem of displacement in the country is not an isolated phenomenon. It does not exist in a vacuum. It is a deplorable consequence of the country's seemingly ineffective policies to gain social, economic, and political progress and stability, and the outright greediness of a powerful few out to get their selfish ends at all costs. The factors which precipitate evacuation among families and communities tend to show that every Filipino could be a potential internal refugee."⁴⁹

The displacement may be temporary or permanent. In the case of permanent displacement, the affected inhabitants are unable to return to their home village and are thus located in the manner described above. If the displacement is temporary, the residents are allowed to return to their homes after the armed conflict or similar event has passed. According to a 1984 Red Cross report, 11 percent of the total population of the Philippines was displaced between 1972 and 1984. Understandably this report was vehemently denied by the Marcos government.⁵⁰ According to Ed Garcia, between 1980 and 1986, there were 33 incidents of

displacement in Mindanao, 15 in Luzon and 13 in the Visayas; thus in Mindanao 53,294 people were displaced, 5,109 people were displaced in Luzon and 39,645 people were displaced in the Visayas. Between 1987 and 1991, there were 195 incidents of displacement in Mindanao, 60 in Luzon and 95 in the Visayas.⁵¹ Thus, under the Aquino regime, even more people were becoming internal refugees than under Marcos.

Finally, there are many effects of civil conflict which, if they do not directly cause displacement, certainly reinforce the burden of the internal refugees. A recent Filipino government report contended that:

"[t]he use by the military of mortars, howitzers, bombs, heavy artillery and other high powered weapons resulted not only in massive displacement of people but also in heavy damages to crops, livestock and other items of productive value, thereby causing serious disruption in the lives of the affected families."⁵²

The literature on internally displaced people or internal refugees is shockingly brief as the above discussion indicates. Although not a new phenomenon, it is a relatively unexplored one. This may be due, at least in part, to the fact that internal refugees are created by the same processes as Convention Refugees and therefore are often discussed as a footnote in that literature. The term 'internal refugee' is also often used as a catch-phrase or coined term which is evocative but not really researched.

Another term for which this is true is 'economic migrant'. Although this term is used in countless journal articles and books there has been no in-depth study of the people in this category or the processes which create economic migrants. In fact, it is debatable whether this category even exists, at least within the framework of involuntary migration.

Environmental Refugees

The term 'environmental refugee' is not one which is officially recognised by state governments, parastatal organisations or international organisations. Yet this term covers a very real, and rapidly growing, phenomenon and is gaining acceptance within both the academic and development communities. High Commissioner Sadako Ogata of the UNHCR (United Nations High Commission for Refugees) in speaking to an UNCED (United Nations Conference on Environment and Development) preparatory committee contended that "environmental degradation has increasingly become a cause and a symptom of population movements...[and] degradation of the environment may lead to displacement and displacement may cause further degradation of the environment."⁵³ A few authors, such as Essam El-Hinnawi, Jodi Jacobson, June Hall, the Independent Commission on International Humanitarian Issues and the International Organisation for Migration (IOM), have used the term and attempted to provide

definitions which will be discussed below. Others, the vast majority, either use the term in a casual way or use different terms to discuss identical issues. However almost all can agree with the following statement from the IOM concerning the rigidity of current refugee definitions:

"Today's refugee definition excludes many people with refugee-like characteristics but who cannot establish individualised persecution. Many of those in the so-called 'grey zone' are fleeing for reasons of poverty, environmental degradation, underdevelopment, or armed conflict, but are not exclusively covered by any specific agency, definition or mandate." 54

Many agencies attempt to provide assistance to those people who fall into this grey zone, although often under the guise of drought migrants, economic refugees or internally displaced persons. Environmental refugees also fall into this grey zone but increasingly researchers are beginning to realise that these people make up a class of their own, and that their problems must be dealt with separately since the reasons (potentially irreversible longterm resource base deterioration) for their flight are becoming more and more prevalent in most developing countries.

Arthur Westing is one author who maintains that there are causes other than political or religious persecution, the traditional preserve of Convention Refugees, for forced migration. He writes,

"[a]nother set of reasons for people to be compelled to leave their home area at least temporarily, derives in a sense from a combination of natural and anthropogenic causes. Basically, this is when the carrying capacity of an area for humans has been exceeded. Lack of opportunity in an area for at least some of its inhabitants to earn an adequate living can lead to human displacement. Indigenous (including pre-modern) groups can be displaced when their required resource base is co-opted for some modern pursuit."55

Environmental refugees are a symptom of ecological decline, and signal the deterioration of the habitability of an area. On the subject of displacement as a reflection of current trends, June Hall posits that "mass population movements and refugee emergencies of unprecedented magnitude and complexity have become a hallmark of the late 20th Century, reflecting not only regional conflict, but also growing economic disparities and the declining state of the world's environment."56

Essam El-Hinnawi has defined environmental refugees as

"those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardised their existence and/or seriously affected the quality of their life."57

As well, he has identified three categories of environmental refugees. The first category includes those people who are temporarily displaced because of an

environmental stress, such as a typhoon, earthquake or industrial accident. Once the disruption is over and rehabilitation has taken place, these people typically return home. The second category consists of those people who have been permanently displaced and resettled elsewhere. This is usually due to artificial changes created in an ecosystem, due to large scale development projects such as the construction of a dam or highway. The third category consists of people displaced because of long term resource base deterioration. Typically, these people migrate, either to other rural areas or to cities. However, El-Hinnawi emphasises that these categories are not mutually exclusive, the causes of the phenomenon of environmental refugees are complex and often a group of people can fall into more than one of these categories. For example, most natural disasters are made much worse because of long term resource base deterioration.

Jodi Jacobson also separates environmental refugees into three categories although she defines them in a slightly different way:

"those displaced temporarily because of a local disruption such as an avalanche or earthquake; those who migrate because environmental degradation has undermined their livelihood or poses unacceptable risks to health; and those who resettle because land degradation has resulted in desertification or because of other permanent and untenable changes in their habitat."58

As well, Jacobson contends that natural disasters are the second leading cause, after land degradation, of the growing number of environmental refugees. More people are now being killed or displaced by typhoons, avalanches, earthquakes and other natural events than ever before, and this strongly suggests that human activity is a major component in the severity of these disasters.

Arthur Westing is another author who contends that there are three different types of environmental refugees. In Westing's framework, the first category includes those cases in which the migration is triggered by an acute event. Examples of what he terms an acute event are drought, flooding, locust outbreaks, typhoons, earthquakes, volcanic eruptions and tsunamis; he believes migration triggered by these events are caused by inappropriate settlement on the part of the victims themselves. Westing also includes incidents of breached dams and industrial accidents in this category as a heuristic device.

The second category involves those cases in which the population movement is precipitated by a gradual worsening of the environmental situation. Examples of this long term resource base deterioration include nutrient losses, soil erosion, deforestation and salinisation. Westing maintains that overpopulation is the main cause of the refugee movements in this category.

The third category presented by Westing includes those cases in which there is a clash of pre-modern and modern cultures. This usually occurs when land is appropriated from indigenous or traditional peoples for modern uses; this occurs when land which was formerly used for subsistence farming, pastoralism or slash-and-burn cultivation is appropriated or redistributed for mechanised agriculture, urbanisation or forms of industrialisation. There is a unifying thread which runs through these categories; in all of these cases the carrying capacity of the region has been overwhelmed.

S.F. Martin, the Director of Policy Research and Programmes at the Refugee Policy Group, maintains that migration due to environmental displacement is not a new phenomenon. She asserts that, "[t]hroughout history natural disasters, civil conflict, wars, persecution, overpopulation - or a combination of these factors - have caused people to flee from their homes temporarily or permanently because the land on which they live can no longer sustain them. Some of these movements are transnational, others internal."⁵⁹

Martin identifies some of the same underlying causes of environmental refugeeism as the above-mentioned authors and yet adds a few more. She contends that some cases of environmental refugeeism are due fundamentally to ecological considerations whereas other cases involve an amalgamation of short-term and long-term concerns such as economic

dislocations, social stress, armed conflict, human rights violations, the strain of economic development, population growth and political persecution.

Martin categorises the causes of the occurrence of environmental refugees into elemental disruptions, slow-onset disruptions, accidental disruptions, development disruptions and environmental warfare. In Martin's model, elemental disruptions include typhoons, volcanic eruptions, earthquakes and other natural disasters; these are rapid-onset events which are prompted by climactic or geological forces. The destructiveness of these occurrences depends on the number of vulnerable people affected, not the inherent severity of the trigger event. Slow-onset disruptions have complex root causes; they involve the interaction of human and ecological activities. The most important geophysical factors involved in these cases are global warming, deforestation, land degradation, erosion, salinity, siltation, waterlogging and desertification. Accidental disruptions are the byproduct of industrialisation; the accidents at Chernobyl and Bhopal are the most commonly cited examples of this type of disruption. What Martin terms development disruptions are development projects which are environmentally unsound. Examples of this include dams or irrigation projects; in India, 20 million people have been displaced by development projects in general and 6.5 million by irrigation projects alone. The last category is

environmental warfare. In battle situations the combatants may engage in activities such as bombing dams, mining agricultural land and so on which lead to longterm habitat destruction. Countries in which this has been known to have happened include Ethiopia, Chad, Sudan, Somalia, Afghanistan, Haiti, Honduras and El Salvador.

In terms of El Salvador, the war has caused almost complete deforestation, increased soil erosion and a concomitant loss of soil fertility. As well siltation threatens the development of hydroelectric power; all these processes threaten the large-scale extinction of animals and plants.

Another example is Haiti which is experiencing the worst soil erosion in the world and which is leading to a massive in-migration to its main city, Port-au-Prince. The population of Port-au-Prince has doubled in the past 10 years. Furthermore, urban degradation is intense, with 1/2 million people living in crowded slums. Thousands of Haitians had fled to the US as 'boatpeople', even before the current problems came to a head.

All authors agree that longterm resource base deterioration is the major underlying cause of environmental refugee movements although as June Hall states, the chain of events that results in this phenomenon may begin with any number or combination of social, political and economic factors. The environmental refugees

are a symptom of deeper and more pervasive processes; the heart of the problem is what Hall terms the poverty-environment-population nexus. The people most adversely affected by natural disasters are usually the poorest members of society who are relegated to the most vulnerable areas. This is often because of a combination of population pressure and an inequitable distribution of land. Hall contends that this "leads to physical changes in ecosystems so that their resilience, sustainability or productivity is reduced. The changes may be widespread and obvious, may reveal themselves only slowly, or they may be more or less hidden until a major force of nature - a disaster- acts as the trigger event which causes enormous dislocation."⁶⁰

El-Hinnawi states that countries experiencing severe deforestation, soil erosion, overcultivation and overgrazing tend to be most seriously affected by natural disasters. He goes on to write that people can alter their environment to make it more susceptible to disaster triggers, as well as making themselves more exposed and vulnerable to disasters. This human activity may be individual, such as denuding an area of necessary forest cover or it may be large scale government sanctioned timber extraction by a transnational corporation. An example of this in the cities of many developing countries would be that the poor live in shanty towns or urban poor settlements which are unable to

withstand strong winds, heavy rains or earth shocks. As well, El-Hinnawi states:

"Land degradation has been the main factor in the migration of subsistence farmers into the slums and shantytowns of major cities, producing desperate populations vulnerable to disease and natural disasters and prone to participate in crime and civil strife. Such exodus from rural to urban areas has exacerbated the already dire urban problems in many developing countries."61

This is not to blame the victims for their situation; most often they are only doing what is necessary to survive.

The Independent Commission on International Humanitarian Issues agrees with El-Hinnawi's assessment. It contends that:

"Recent research has revealed that disasters are not just the wrath of nature. The people and governments of many developing countries are changing their physical environment in a way that makes it more prone to disaster. Rapidly increasing populations are overcultivating and deforesting their land, rendering it susceptible to droughts and floods. Agricultural policies have failed to stimulate food production. Large numbers of people have left the countryside to live in urban areas, inflating the already unmanageable populations of shantytowns."62

The Commission goes on to state that the people most affected by these events, the ones who become environmental refugees, are inevitably the poorest and most powerless members of society, for example subsistence farmers, urban squatters and landless labourers. As the population increases, marginalised people have no other option but to

live in areas which are particularly prone to disaster. As well, the number of victims is highest precisely in those countries where environmental degradation is proceeding at the fastest rates.

Jacobson also acknowledges the correlation between resource base deterioration and natural disasters and population movements. She terms these crisis events 'unnatural' disasters because of the large human component in their severity. She states:

"These unnatural disasters are largely a product of the same kind of land degradation in which financial and population pressures force both farmers and urban dwellers onto marginal lands that soon lose their stability. But in this case the land degradation - while devastating in itself and also to be feared because it is self-reinforcing- inhibits the ability of ecosystems to roll with nature's punches. The result has been that the rare has become commonplace, the extremes of weather that have been endured and survived through the millennia are increasingly turning into full fledged catastrophes on a scale seldom seen before."63

Finally, Jacobson describes some cases of environmental refugee movements which were caused by development strategies which blatantly disregard their environmental impact. She discusses the aftermath of a typhoon in the Philippines in 1983. The typhoon, which might have been expected to affect approximately one hundred people killed thousands. However, the floods accompanying the storm were

no more severe than usual. The difference was that villages were built in marginal areas and that timber extraction had changed the pattern of water run-off.

Westing also notes that, on one hand, the net number of both recognised and unrecognised refugees has been increasingly consistently in the last few years. Globally, the net increase in recognised refugees who cross borders has been approximately 1 million per year, the net increase in unrecognised refugees who cross borders has been approximately 1/2 million per year and the net increase in the number of unrecognised internal refugees has also been 1/2 million per year. On the other hand, the number of wars currently being fought has been holding steady at 30 to 40 and military expenditures have been steadily declining. Furthermore, Westing contends that the human rights and civil liberties situation, although poor in some countries, has not been worsening appreciably. (It is important to note that this article was written in 1992, before the implosion of Somalia and Yugoslavia and the Haitian crisis.) In terms of environmental refugees, Westing writes that:

"Given the apparent lack of increase in underlying military or human rights causes for the generation of refugees, it becomes difficult to explain why the numbers of 'recognised' refugees continues to increase in parallel with the numbers of 'unrecognised' refugees. Thus, it warrants investigation to determine to what extent the numbers of 'recognised' refugees are in fact environmental refugees who are somehow able to satisfy the criteria of flight from

persecution, a despotic regime or military regime."64

As can be seen from the above discussion, the few authors who do write about environmental refugees still do not agree completely when addressing the issue of frameworks or categories. June Hall concludes that:

"The genesis of an environmental refugee is thus far from simple. The chain of events may start with any number of social, political or economic factors. These lead to physical changes in ecosystems so that their resilience, sustainability, or productivity is reduced. The changes may be widespread and obvious (as in the devastated hillsides of Haiti), may reveal themselves only slowly (as in the salinisation of irrigated lands), or they may be more or less hidden until a major force of nature - a disaster- acts as the 'trigger event' which causes enormous dislocation. The severe rainstorm which in the past has only created minor damages now causes catastrophic flooding and landslides; drought quickly leads to famines; quite mild earthquakes cause massive structural damage. Each case has its own unique blend, its own historical, geographical and ecological mix of cause and effect."65

The existing literature on environmental refugees is very sparse, as the above review indicates. As well, although all authors cited agreed on the theoretical causes of environmental degradation and population displacement - poverty, land use mismanagement, inadequate development priorities and actions, deforestation, soil erosion, watershed mismanagement etc.- no studies have been

conducted. In all cases the above mentioned authors relate statistics and secondary or tertiary accounts of displacement.

Another problem with the literature is that there is no attempt made to provide a broader context for the issues raised. That is, it is not known to what extent hill farming is an adaptive response to other (environmental or socio-economic-political) factors, or what push-pull factors are involved in bringing people to homes on marginal land, or to what extent displacement is the outcome of inadequate government planning. Population displacement is neither a cause nor an effect; it is part of a cycle and if this is not recognised, effective preventative measures cannot be taken.

This thesis aims at filling these gaps in the literature by providing specific data on one case study that will contribute to existing knowledge of processes surrounding environmental degradation and population displacement and add to the discussion.

CHAPTER THREE: THE CONTEXT OF THE DISASTER AT ORMOC
AND THE GENERATION OF ENVIRONMENTAL REFUGEES
PART ONE: THE POLITICAL, SOCIO-ECONOMIC AND
ENVIRONMENTAL BACKGROUND OF THE PHILIPPINES

Political Background

In the Philippines, perhaps more so than in other countries, the political culture reflects the general cultural tradition. Specifically this means that kinship bonds are given primacy, particularism and personalism are strong influences, patron-and-client relationships and the concept of reciprocity are very important, there is a special emphasis on smooth interpersonal relations, and finally the effect of pervasive poverty on values and behaviour is obvious. In terms of kinship ties, the extended family is the most important social and economic grouping. Kinship ties bind the families of both the wife and husband. The family is the primary vehicle for socialisation; it is the most important source of emotional and financial support; and it lays first claim to loyalty. In terms of politics, the family provides the foundation for most political organisations and for national or local politics. In fact, the powerful influence of the family unit on politics, economics and society in general is blatant. For example, most businesses are family run therefore most wealth stays within the family; before Marcos came to power, wealth was concentrated in the hands of approximately 400 families. Presently only 60 families control the Filipino

economy. Beyond the obvious implications of the huge disparity in income distribution, this concentration of wealth has obstructed the development of cooperative business organisations and has led to extreme conservatism in economic decision-making. As well, local politics are usually dominated by a small number of wealthy landowning families. Their wealth and political base is provided by their landholdings and tenant farmers and gives them access to local power.

Throughout the past 400 years the importance of the family has been reinforced by the teachings of the Catholic Church and more recently its central place in Filipino society was enshrined by the 1987 Constitution.

Politics in the Philippines is also governed by patron-client relationships and the obligations of reciprocity which arise from the traditional bilateral kinship system overlaid by increasing economic inequality. In Filipino, the national language, the special phrase for this is utang na loob which literally translates as a debt inside oneself, and means a debt which must be repaid. Not to repay this debt would be considered to be walang niya, without face or shameless, the worst possible insult to a Filipino. Thus these reciprocity arrangements create interdependency among individuals and can expand to be obligations between families or even generations. At its worst this tradition

can lead to enforced loyalty and pressured voting out of loyalty to one's patron.

There is a high level of personalism in Filipino politics. In other words, what Western citizens consider to be impersonal - such as routine political, bureaucratic or business transactions - are considered to be intensely personal and usually involve favours or some other form of obligation. Most citizens believe that life-shaping decisions or events are determined by individuals and not by impersonal systems and thus good personal relations must always be maintained. Therefore, a consequence is that there is little public concern with ideologies or institutions. In fact, in the past 25 years only two major distinguishable ideologies have emerged and both became highly personalised: the communist movement represented by Jose Maria Sison and the New Society Movement or authoritarian dictatorship of Ferdinand Marcos. Furthermore, in the 1986 elections, all the problems of the country were personally attributed to the Marcos' and conversely Aquino was invested with the virtues of wisdom, honesty and morality. Another example of the extent of personalism is in the use of government resources. Often when a congressman announces the building of, for example, a bridge in his/her riding, residents are unsure whether the funding came from the government or from the congressman's personal wealth. Regardless, a loyalty bond is strengthened with each such occurrence.

Particularism is very similar to this and as David Timberman explains, "[it] reinforces the expectation of special or preferential treatment for a family member or friend. As a result, different rules apply for different people, undermining the concept of equality under the law. Finally, it has impeded the establishment of a national consensus on most major issues and has retarded the development of a sense of national unity."⁶⁶ Another issue is that the personal and tangible ties between a poor farmer and his/her landlord or between a poor worker and a government official "patron" most often override any sense of class solidarity. These characteristics also have ramifications in terms of political parties. As the Economist Intelligence Unit reports:

"Political parties in the Philippines are based essentially on personalities rather than ideology. All those represented in Congress support the existing political and social structure, espouse a market economy (until it threatens sectoral interests) and are nationalistic, to varying degrees. There is thus a constant shifting in allegiance, with the President attracting a greater following in Congress than the election results would indicate - at least in the early years of the term. In the final years the parties tend to splinter as presidential hopefuls emerge and the President has only limited patronage to offer."⁶⁷

The problems associated with the political culture described above is extremely pertinent to the situation in Leyte which will be discussed in Chapter Four. This

political culture, coupled with the fact that the landed elite controls the political and economic structure in Leyte, was a contributing factor to the disaster associated with Tropical Storm Uring.

Although there are over 85 distinct languages and dialects spoken in the Philippines, among the 90 percent Christian majority cultural cohesion is very strong, more so than in any other SouthEast Asian country. There are two important minority groups: the Chinese and the Muslims. The Chinese are important because of their economic power as a group and because their ancestral homeland is a nearby superpower. The Muslims, who number approximately 3 million, generally reside in Mindanao and the Sulu Archipelago and never were assimilated into the "Filipino Nation". Muslim consciousness intensified in the late 1960s because of a combination of social change, international events, and government policies - primarily those involving land rights.

Thus it would seem that the political system based on blood ties, reciprocal obligations and regional identities intensifies the role of patronage and the tendency toward graft and corruption. An obvious major weakness of the political system is its failure to reflect social divisions, for example - peasant-landlord, labour-capitalist, national-foreign, women's rights-sexism and cultural minorities-the State apparatus.

Another characteristic of the Filipino political tradition is the fact that the entrepreneurial class often has direct access to the policymaking machinery. David Wurfel states that:

"The economy is dominated by a largely indigenous entrepreneurial elite (the distinctly Chinese role declined from the 1950s as assimilation progressed) with legitimate and influential access to the policy process. This weakened state autonomy. Despite past state interventions, for example attempts at land reform and minimum wage laws, wealth and income are more inequitably distributed than elsewhere in SouthEast Asia. In fact, the concentration of wealth has grown in the last generation, which has contributed to growing unrest. Besides being highly inequitable, the Philippines economy is heavily dependent on US trade, investment and credit, a legacy of the colonial period."68

Again, this characteristic of Filipino politics holds true for Leyte in particular as well. A small landed elite controls both the local economy and the island's governmental and political machinery.

Under martial law, Ferdinand Marcos quickly shut down virtually all of the political machinery. Congress was adjourned, opponents of his regime were jailed or killed. Marcos assumed dictatorial powers and effectively ruled by decree. Before this period, the country had had a democratic

tradition imported almost wholesale from the United States and the government was ardently pro-Western.

Corazon Aquino came to power through what has come to be known as the People's Power Revolution. Her political agenda was simple and rested on the following seven principles: first, to increase agricultural productivity and thereby raise rural wages; second, to implement land reform; third, to promote labour-intensive rather than capital-intensive industry; fourth, to reduce the government's role in the economy; fifth, to dismantle the complex network of monopolies and favoured businesses controlled by Marcos' cronies; sixth, to seek but not rely on foreign investment; and finally to renegotiate the country's heavy debt burden rather than default on its loans.

Since the Aquino period began in 1986, populist democratic tendencies have reemerged. However the socioeconomic elite -which has not changed in composition - has reasserted itself through patronage appointments. Mass participation in the political process is greater than it was in the late 1960s, but concomitantly the military presence in government has also increased. As well, political parties have almost no impact on policy. On one hand middle class political participation is increasing, but on the other hand, ideological polarisation is becoming more entrenched. The country continues to host the strongest communist-led insurgency in SouthEast Asia. The movement

began as an anti-Japanese guerrilla force during World War II, after which it was virtually destroyed by a lethal mixture of US military aid, charismatic leadership on the part of the government and a fleeting taste of reform. In the late 1960s the New People's army (NPA) and the Communist Party were revived under a new leader but the Marcos government claimed to have extinguished the movement after the declaration of martial law. In reality, martial law created the proper political climate for the revival of this rural, grassroots movement. By the early 1980s the New People's Army and the National Democratic Front were at their greatest strength - an astonishing achievement considering they had no foreign backing. On the other end of the spectrum, the virulent anti-communism of the military establishment (with US support) had reemerged in full force by 1986.

Aquino's development plan, which was entitled the "Medium Term Plan 1987 - 1992", was executed by NEDA (National Economic and Development Authority). The main aims of this plan were the elimination of structures of privilege and monopolisation of the economy, decentralisation of decision-making and power, and reduction of unemployment and mass poverty. The private sector was targeted as the prime mover of development, thus the government pledged to support private initiative. Some specific goals included the alleviation of poverty, the generation of employment

opportunities, increased awareness of social justice and equity issues, and sustainable economic growth. These goals were to be achieved through far-reaching agrarian reform, a strengthened collective bargaining process, investment in rural labour-intensive infrastructure projects, and increased funding for social services including education and skills training. This was all underpinned by modernisation theory and faith in the model of trickle down economics. The Aquino government initiated market oriented fiscal and monetary policy and a liberal trade policy based on the law of comparative advantage. It also aimed to increase the efficiency of the civil service and law enforcement.

Reviews of Aquinos' term as President have been mixed. Although most commentators admit that she provided a sense of moral leadership and served as a trusted figurehead in a country which had lost faith in its government, they also maintain that most of her initiatives either were not acted on or were watered down to the brink of pointlessness. A major problem associated with her government was its inability to realise its campaign promise of fair land reform. This was a problem with the policy as written, lack of political will, an intractable bureaucracy and vested interests on the part of the landowners. A reason cited for this was that Aquino herself belonged to a rich landowning family whose plantation, the Hacienda Lusita, occupies over

6000 hectares, and thus it was not in her interest to change existing structures. As well, in order to pacify the right-wing of her coalition (most notably the military) she was forced to move further and further to the right as her term in office progressed.

Habu Nagaho writes that "Aquino proved to be a bland leader, and Filipinos are bitterly disappointed over her betrayal of their expectations for a better life for the common people. Ramos is now the leader entrusted with buoying up the national spirit and rejuvenating the nation's economy."⁶⁹ Along the same lines, Nona Granda maintains that:

"While Aquino's government sought to eliminate vestiges of Marcos' 'cronyism' by creating the Presidential Commission on Good Government (PCGG) responsible for recovering the cronies' ill-gotten wealth, Aquino's record is not without blemish. There have been reports that close relatives of the President's are now entrenched in corporations which formerly belonged to Marcos' cronies. Since Aquino came to power, her home province of Tarlac has been a top recipient of government aid. A series of pay increases for the military, given the government's wage freeze policy, has also angered many workers. Although Aquino's patronage is less blatant than that of her predecessor, it seems that the patronage system remains alive and well in Philippine politics."⁷⁰

Fidel Ramos, a former General and Chief of the Armed Forces, who served under Marcos and Aquino, was elected President in 1992. Ramos' party is named Lakas ng Ede or

the National Union of Christian Democrats and was formed in 1992 to support his candidacy. The Christian Democrats won 50 seats in the House of Representatives in the election of June 1992, but by May 1993 their numbers had climbed to 112 through defections from other parties. However, the party has only two supporters in the Senate. During this election, 85 percent of eligible voters turned out and 17205 officials were elected including the President and Vice-President. The election was relatively peaceful and there was no threat of a military coup. Still, 52 election-related deaths were recorded, down from 150 in 1986. It is difficult to predict the direction of Ramos' regime, however fundamental changes are not expected. The Economist Intelligence Unit draws the following comparison between the Aquino and Ramos administration:

"The new medium term development plan drawn up under President Ramos for the period 1993 to 1998 sets a higher target, with average annual GNP growth of 7.5 percent. The previous programme's stress on poverty alleviation, employment generation and overall economic liberalisation has been maintained, with the new objective of achieving NIC status by the end of the plan period."⁷¹

Ramos, like Aquino, is a proponent of what he terms 'people's empowerment'. This approach can be described as a combination of consensus building and gradualism. One practical example of his attempts to integrate the local governments and people of remote areas into the political

process is the fact that he travels extensively - on average two trips per week to different provinces. As well, Ramos has a reputation as a law-and-order president, stemming obviously from his time in the military. In his first year in office, Ramos moved hard on two law-and-order issues: first, he cleaned up the notoriously corrupt Philippine National Police (PNP) and second, he pushed hard to end insurgencies. Ramos legalised the Communist Party as part of this effort.

Paradoxically, Ramos is also viewed as having a lack of resolve and is seen as an ineffectual leader in terms of political issues and administrative problems. One example of this purported ineffectiveness was his inability to have his cabinet nominees approved by Congress until June 1993, nearly one year after having been elected. A more recent example of his lack of resolve was that he backed down on his proposed oil price hike (between 15 and 28 percent) after public outcry. This episode exposed his administration's vulnerabilities on several fronts. First, it seriously damaged his supporters attempts to cultivate an image of him as a decisive president. Second, it showed the strength of opposition to his government from the various activist groups spawned by the Anti-Marcos movement in the early 1980s. The Philippine Left, as represented by the radicalised arm of the Roman Catholic Church, is a good example of this. Third, the oil price hike caused

ideologically diverse and otherwise antagonistic groups to unite - for example, the Catholic Church radicals, RAM (Reform the Armed Forces Movement), and the Trade Union Congress. Fourth, the episode strengthened the hand of the already uncooperative Congress.⁷²

Ramos' biggest problem is the fractious, elite dominated political institutions. The Senate has proven to be a major stumbling block; it represents powerful vested interests, which are extremely resistant to change. Even when legislation is passed, the process is very slow. With an expectedly even more obstructionist Senate after the 1995 elections, Ramos is not anticipated to be able to move ahead with his reform attempts. One important piece of legislation that is expected to pass in the near future is that for a Value Added Tax (VAT) of 10 percent which includes all goods and services and is expected to net P 8.3 billion per year or US \$ 306 million. Many analysts see the passing of this legislation as the last gasp of cooperation between the Congress and the Senate.⁷³

Most likely, Ramos will rule firmly and conservatively, with greater sympathy to the military perspective and respect for the business community. It is expected that he will attempt to foster close ties with Japan and the US as well as with other ASEAN countries. It is not expected that any true land reform will be initiated by the Ramos administration although it is possible that Aquino's CARP

(Comprehensive Agrarian Reform Programme) will continue in its lethargic fashion. There will not be an attempt at income redistribution programmes since Ramos clearly favours the 'unfettered marketplace' model of development. Finally, a major difference between Aquino and Ramos will be his unwillingness to constantly defer to the powerful Catholic Church. As a Protestant, Ramos is under less pressure to capitulate. So far he has implemented a birth control methods component in the Rural Health Clinics mandate and seems to stand firmly behind it despite its unpopularity with Catholic officials.

In summary, most observers of the Filipino political process are hopeful yet cautious of Ramos' administration. As John McBeth writes:

"Despite all the reservations, there is a wide body of opinion that feels Ramos is sincere in his efforts to achieve what he calls the 'spirit of self-discipline and the culture of competitiveness'. Short of mobilising support in the streets, observers are left to wonder just how he hopes to achieve such fundamental change when he is surrounded by the same traditional politicians who have run the Philippines since independence."74

In terms of environmental disaster, and environmental refugees in particular, Ramos' 'hands-off' approach to government has several implications. Ramos' agenda does not include addressing issues of social welfare, poverty alleviation, land reform or social justice directly. Since

these issues are contributing factors to the processes of environmental decline, the processes that are clearly in place now will continue and probably culminate in more environmental disasters.

Economic and Social Background

The issues of poverty and land distribution are key to any discussion of the Philippines economy. It has often been written, and is the opinion of this author, that inequitable land distribution and the traditional hacienda system of landowners and serfs forms the foundation of the economy and entrenches poverty. This section will discuss both poverty and land distribution as well as the huge debt burden acquired in large part by the Marcos administration. The stabilisation and Structural Adjustment Programmes which followed the debt crisis are addressed as is the Aquino government's handling of the economy from 1986 to 1992. Finally a comparison between the Philippines and the rest of ASEAN will be made. This section will provide a background against which the issues discussed in Chapter Four and Five will be projected. These issues are pertinent to an enquiry of environmental refugees since land distribution and poverty are compelling factors in environmental displacement.

The Spanish legacy of large plantations and the concentration of vast amounts of land in the hands of a minute elite as well as the struggle for land reform is at the root of the Philippines' economic malaise. The land-tenure system is at the core of economic problems; the elite constitute only 10 percent of the population and yet own 70 percent of the land. Rural society is made up of large landowners and landless peasants or sharecroppers. As Joseph Collins writes:

"It is bitterly ironic for many Filipinos that their country, one of the richest in natural resources in a region known for its economic dynamism, and the only nation that was once a colony of the great US, is now the poor stepchild. But an agriculture dominated by tenant farming and plantations holds back the entire economy. The grossly inequitable distribution of control over agricultural resources impoverishes the majority of Filipinos, thereby blocking the growth of consumer markets and hindering industrialisation. Land reform is the essential springboard for economic development that could generate desperately needed off-farm employment."⁷⁵

When Aquino came to power, it was widely hoped that she would act on her campaign pledge to reform the landholding system and make fundamental changes to agricultural policy in order to ensure that the poor could prosper from the land. The constitution she helped implement in 1987 did specifically state that land reform was applicable to all lands, including sugarcane and coconut plantations. Although

the Aquino government did write and implement the CARP (Comprehensive Agrarian Reform Programme), this was an extremely watered down attempt at agrarian reform, left many loopholes through which landowners could seek exemption, and disappointed many, especially the poor. Throughout Aquino's administration dissenters claimed that she would not implement thorough land reform because her clan was one of the large landowners of the country. The Mendiola incident of February 1987, in which government troops fired on and killed some demonstrators calling for the free distribution of all agricultural land belied the Administration's true attitude toward land reform.

According to a World Bank report on poverty in the Philippines, more Filipinos are poor today than at any other time in living memory, both in terms of relative and absolute poverty. Until recently, in ASEAN, the Philippines was the only country in which the average standard of living was declining, the number of people living in poverty was increasing and the rate of real wages was dropping. The report states that even if a 6 percent rate of growth was to be achieved and maintained through the end of this century, real wages would still fall about 3 percent from their 1989 levels.⁷⁶ Although farm output achieved a 5 percent annual growth rate during the Marcos regime, the percentage of rural families living in poverty increased from 48 percent in 1967 to 55 percent in 1975 to 64 percent in 1985.

In a May 1987 report the World Bank discussed the rural situation in the Philippines and concluded that "investments and projects intended to increase agricultural productivity have brought few benefits to those not owning land - the landless labourers and tenants."⁷⁷ According to the National Census and Statistics Office (NCSO) in 1986, the last year for which such data was available, 7 million families or 71 percent of the population had below average incomes and 59 percent lived below the poverty line. In the poorest areas, such as Bicol and the Eastern Visayas (which includes Leyte), 73 percent lived below the poverty line.⁷⁸ In practice, this widespread rural impoverishment means that in one of Asia's most fertile countries, and the world's 14th largest food producing nation, 70 percent of the children go hungry.

Under the Marcos administration the chasm between the rich and poor grew at an unprecedented rate. Although one of the pillars of Aquino's political philosophy was the eradication of poverty, the Aquino government was not successful in terms of poverty alleviation either. Karina Constantino-David reiterates that the situation of the Filipino poor has grown worse since 1986. She writes that:

"...it would not be an exaggeration to say that very little has changed with regard to the day to day battles that the poor have to face. Despite improvements in the national economic growth rate, poverty levels have not reduced, in fact there are many who insist that the situation has been aggravated, employment and underemployment remain

formidable problems, and the poor have very limited access even to traditional social services. Apart from data that are obviously analysed for the benefit of the establishment, relatively objective studies from the World Bank to other academic papers all point to the growing number and proportion of poor in the Philippines. On the other hand, for anyone who has worked with or really talked to the poor, an obvious litany of despair is immediately apparent."79

Constantino-David's litany of despair illuminates the problems of the most marginalised segments of Filipino society. These problems are ones that contributed significantly to the disaster at Ormoc.

Poverty in the Philippines, as in other countries, affects the vulnerable most severely. Very often the most vulnerable are the children. According to statistics from the Department of Labour and Employment (DLE), of the 9.5 million Filipinos who work as unwaged farm labour, the vast majority are children. Furthermore, 5 to 7 million children between the ages of 5 and 14 work as hired hands on farms or in factories for approximately 1 peso per day. Although, this is a shockingly small sum, it can be 30 to 60 percent of total family income.

Although these statistics are startling on their own, David Timberman attempts to show poverty in a more immediate and human way than economic or labour statistics have the power to do. His description of Philippine society and economy is as follows:

"[f]or a better picture of the nation's poverty and hardship, consider the following: as of 1985 at least a quarter of the workforce was unemployed or underemployed; 3.5 million pre-schoolers were underweight, with a third suffering from second or third degree malnutrition; 5 million children were working, shelterless or sexually exploited; and some 3.3 million women were classified as 'marginalised or disadvantaged', meaning that they were engaged in involuntary prostitution, physically abused, or victims of illegal job recruitment."⁸⁰

This quotation shows the far-reaching effects of economic disintegration and the ways that poverty affects the population. Ironically, because the economy is weak, people are marginalised in a multitude of ways and this very marginalisation leads to a further weakening of the economy. The extreme poverty illuminated by the above quotation also has far-reaching environmental consequences. For example, abject poverty often leads people to congregate in large numbers on land that is unable to sustain them. Other times the poor are forced to retreat into the forests in search of land and pursue ecologically destructive practices such as slash and burn cultivation or illegal logging.

Structural Adjustment

Basically, a structural adjustment programme means the reform of an economy's macroeconomic structural parameters so that these parameters are supportive of medium term development efforts. Important parameters include the

national savings rate, associated government to GNP ratio, and the current account deficit to GNP ratio. Microeconomic issues in SAP discussions include the trade regime, investment incentives and the tax system. The central relationship within this analytical model is between the rate of growth at the macroeconomic level and the current account deficit (or surplus) in the balance of payments. The current account deficit is an expression of the amount of foreign savings that an economy requires and utilises. A stabilisation programme basically means the reconciliation, in a very drastic fashion between the levels of domestic production.

To the Philippine economy, the debt crisis meant the loss of foreign financing which amounted to approximately 4 percent of GNP (Gross National Product) in the 1970s and 8 percent immediately prior to the crisis. Because of the 1974 oil shock, the cost of imports increased from 15 percent to 21 percent of GNP. The World Bank and the International Monetary Fund (IMF) encouraged foreign funding to make up the shortfall which was made politically possible by the Marcos dictatorship and thus the lack of opposition, either official or societal. Manuel Montes describes the situation in the following way:

"Between 1972 and 1983 the year when the present balance of payments crisis began for the Philippines, foreign debt was increasing by 22 percent per year, while the highest growth the economy achieved in any year was 7 percent. The debt to GNP ratio increased from

33.9 percent to 92.9 percent in 1986. The increase in debt from 1981 reflected the borrowing stance of the Marcos government which increased short term external borrowing to raise payments of debt previously contracted and in 1986 as a result of the restructuring of the debt payments negotiated in connection with the crisis. The debt to exports ratio increased from 174 percent in 1970 to 327 percent in 1987."81

In the case of the Philippines' private debt, the government was forced to accept responsibility for failed loans made to the private sector, even in cases in which no official guarantee was made. In 1983, 45 percent of foreign debt was originated by the government; by 1989 76 percent was the government's responsibility. Because 80 percent of taxes are raised by a regressive indirect taxing system, the responsibility for raising the debt servicing payments has been downshifted from foreigners to Filipinos and from rich Filipinos to the poor.

The Philippines, like most other developing countries, is now paying more to the international community in the form of debt servicing payments than it receives in the form of aid or loans. Again, Manuel Montes explains:

"...[T]he Philippines is scheduled to remit US \$ 20 billion and receive US \$ 4 billion between 1988 and 1992. The expected net transfer of resources for these years is \$ 6 billion or 7.1 percent of GNP which is optimistically projected to grow at 6.5 percent per year. There are proposals from the US for a consortium of countries to increase foreign loans and aid (mostly loans) to a total of \$ 10 billion under the so-called Multilateral Aid Initiative. Even if this were to materialise in a way that would

be beneficial to the Philippines, it would represent only an additional \$ 6 billion, bringing the net transfer down to \$ 10 billion or 4 percent of GNP. Even if the objective were simply to attain the growth targets of the medium term Development Plan, the country would have to find additional financing of \$8.4 billion for its balance of payments."82

The debt was, of course, a major constraint on the government and partially explains its inability to act on issues it had identified as priorities. The Aquino government and now the Ramos administration have maintained a policy of repayment of all loans, both private and public. The debt crisis led the Marcos government to accept an IMF designed and implemented stabilisation and Structural Adjustment Programme in the 1980s.

Most observers agree that despite the fact that the Philippines is endowed with natural resources and a skilled, low cost workforce, economic mismanagement on the part of the Marcos administration led the country into its debt crisis. Agriculture, the economy's most important sector, lost out to an ambitious investment programme launched by Marcos in the early 1980s to develop a capital intensive industrial base. Later, this policy was re-evaluated and emphasis was placed on creating an efficient and relatively autonomous economic structure through agriculture and agribusiness. After the assassination of Benigno Aquino, capital flight began in earnest and the balance of payments

crisis was precipitated. At this time the Peso was devalued by 21.4 percent and an austere Structural Adjustment Programme (SAP) was put in place. Because of this SAP, the economy went into a sharp decline; for example two thirds of the population were living below the poverty line, 15 percent were unemployed and 45 were underemployed, and the external debt rose to US \$ 26.35 billion.⁸³ An IMF imposed stabilisation and Structural Adjustment programme was conducted in 1984 to 1986. In 1984 the current account deficit was 8.1 percent of GNP; the country achieved 0-level for 1985. However, this left the economy so weak that in 1986 there was an account surplus of 3 percent of GNP. Exports fell because credit to facilitate them disappeared. The volume of merchandise exports fell by 2.6 percent in 1984 and again by 4.6 percent in 1986. The value of merchandise exports decreased by 7.5 percent between 1983 and 1985. There was also a drastic decrease in imports between 1983 to 1986; the dollar value of merchandise imports fell by 9.9 percent per year - in 1984 by 18.9 percent and in 1985 by 15.8 percent.⁸⁴

According to Manuel Montes, the stabilisation and Structural Adjustment programmes implemented in the Philippines in the 1980s did not even meet their own stated goals. "In the 1983-1985 experience, exports, in fact, declined, in spite of the temporary but vigorous 8 percent growth in world trade in 1984. The decline in exports

provides the most direct indication that structural adjustment did not accompany the IMF Structural Adjustment Programme of 1984. However, imports declined even faster to generate a current account surplus within a little over a year after the start of the programme and provided the basis for stabilisation."85 Montes posits further that:

"the effect of the drastic decline in investment spending has been a massive deterioration in infrastructure and production facilities, since the initial cuts have been in maintenance. There were widespread bankruptcies in the banking sector and closures of business enterprises in the 'non-tradeable' sector. The adjustment objective of increasing the relative proportion of tradeable production was achieved not through a strong increase in tradeable production but principally through a widespread closure of non-tradeable production activities.

Overall personal consumption expenditures stopped increasing in the period of the crisis. This macro index is a poor indicator of the effect of the stabilisation on the human population since the income in the Philippines is heavily skewed. Nevertheless, in 1985, when the official IMF programme was in place, demand was so depressed that total real personal consumption expenditures actually exhibited declines."86

Because of the stabilisation programme of 1984 to 1986, unemployment increased significantly. There were 1.1 million unemployed people in 1983; in 1984 this figure rose to 1.5 million and remained at that level in 1985. During this period rural to urban migration increased to 37 percent, the usual figure being 30 percent. Perhaps because of this

migration, urban underemployment was estimated to be 37 percent (underemployment meaning that an individual works less than 65 days per quarter, or earns so little that s/he seeks more work.)

The vast majority of the population that were adjusting to the external shocks were the extremely poor. The adjustment programme of 1984 to 1986 exploited this fact, through dis-employment and inflation. An adjustment programmes from a different perspective may have recognised that losses in income for the poor are never justifiable and would not provide permanent benefits.

There has been major capital flight since 1981 and as has been mentioned, the economy is saddled with a foreign debt of more than US \$ 26 billion. The government was virtually bankrupt by the time Aquino came to power in 1986 and was still being bled by over 300 unprofitable government owned corporations. Partly because of an international economic recovery, by the second half of 1986 economic growth returned. This economic growth was fuelled by government spending and by pent-up consumer demand. The GNP grew by 1.9 percent in 1986, by 5.9 percent in 1987 and by 6.7 percent in 1988. During this time, inflation was under control and the unemployment rate was dropping. Still, per capita income was only 90 percent of 1982 levels. Internationally, oil prices were relatively low, sugar and copra prices were stronger, interest rates were moderate and

significant amounts of bilateral and multilateral loans and grants were made.

The Economist Intelligence Unit reports that in October 1991, the labour force was 25.25 million strong; of this number 45 percent were employed in the agriculture, forestry and fishery sectors. One out of five people was officially estimated to be underemployed, while one third were looking for additional work.⁸⁷ The Aquino government was in the grips of a vicious cycle: the weak state left the economy to the whims of the world market which led to payment crises which brought in the IMF which further weakened the state. As well, it was a cycle which could only be broken by decisive steps to alter the relationship with the world market and increase the government role in the economy. Further, as segments of the economy are easily integrated into the global economy while other sectors concomitantly deteriorate, the result is a three tiered society: 30 percent of the population (in the cities and the export zones) benefit from development, while the rural population (55 percent of the total) and indigenous peoples (15 percent) slide backwards.

Robin Broad and John Cavanagh identify five fundamental problems with the Philippine economy and society under the Aquino government. First, the huge inequalities in control of land, other natural resources and wealth perpetuate

poverty and environmental degradation. The privileged groups which supported Aquino did not believe it would be beneficial to have this issue addressed and thus it was not, at least to any satisfactory degree. Second, corruption is endemic at all levels of government; the government remains unaccountable to the citizenry. No constructive relationship with peasant, worker, urban poor or other organisations were fostered during Aquino's tenure. Third, the population explosion--the Catholic Church held sway over Aquino, as a powerful member of her coalition, but Ramos, a Protestant, has been pushing birth control in rural health clinics. Fourth, the free market philosophy removes the option of a major government role in income distribution, the social safety net or development plan (which is based on agriculture-linked industrialisation). The fifth problem is the shift from private loan dependence under Marcos to dependence on foreign government borrowing. The Filipino economy is still oriented towards the world economy despite wild fluctuations in the prices for the Philippines' major exports. Also through the creation of export zones the country has left itself open to the vacillations of TransNational Corporations.⁸⁸

Ramos has continued with Aquino's macroeconomic policy and has kept inflation and interest rates in check. However, since 60 percent of the government budget was put towards debt servicing and payroll expenditures, there was not an

emphasis on refloating the economy. As well, under Ramos' administration, the electricity, water, telecommunication and transport infrastructure all crumbled; still, these were problems which were inherited from the Marcos and Aquino administration and may now be changing. At the same time, educational standards are dropping.

One area in which Ramos has been more active and efficient than Aquino is that of international trade and investment. According to Rigoberto Tiglao:

"Ramos has been able to attract foreign investment into the country that would otherwise have remained on the sidelines. When the total amount generated by Ramos' trips is difficult to pin down, there is no doubt more money is flowing in. New foreign investments, mostly in the stockmarket in the last 6 months of 1993 amounted to US \$ 1.4 billion or 1.6 times the US \$ 832 million level in the last 6 months of 1992."89

One way Ramos has accomplished this is through extensive foreign travel. Since his inauguration, he has visited Brunei, Thailand, Malaysia, Singapore and Japan, renewing interest in the region and making clear that the 'special relationship' with the U.S. was over.⁹⁰

On the other hand, Ramos has not been able to fulfill his promise of streamlining the bloated bureaucracy. According to Rigoberto Tiglao:

"When one comes down to it, there has not been any significant reforms undertaken on the macroeconomy in the past 6 months of the Ramos administration, says a January 1993 study by a 5 man team of Filipino experts funded by the U.S. Agency for International

Development. This is a conclusion that may well apply to Ramos' full year in office. Adds the study: 'the credibility gap between pronouncements and action is widening'."91

The Philippines has been more dependant for trade, investment, credit and military assistance on one power (the United States) over a longer time than any other SouthEast Asian country. It also has the weakest state structure, in terms of its ability to maintain order, implement decisions and extract resources. In part this is due to the weakness and incompetency of the bureaucracy, the idiot child of patronage politics. Because of the limitations of the bureaucracy, the policy process has been easily infiltrated and affected by the pressures of intra-elite rivalries, organised interests both foreign and domestic, and by politicians, business partners or spouses of these people (the most infamous example being Imelda Marcos).

Environmental Background

The Philippines is an archipelago made up of over 7000 islands. The country is located in SouthEast Asia and within the equatorial Western Circum-Pacific belt of fire. This geographic location places the country in the typhoon belt; in the past five years 20 typhoons have entered the Philippines' area of responsibility. Nine of these typhoons actually hit the country causing deaths and property damage.

Because the topography of the country consists of many plains and valleys, typhoons almost always cause serious flooding. As well, the Philippines' long coastlines make it susceptible to both local and foreign tsunamis and typhoon-induced storm surges. In addition land tornadoes or twisters are common.

The Filipino rainforest has a high level of species diversity. It is estimated that there are 3800 tree species, 8200 plant species, 850 bird species and 225 mammals.⁹² However, since the country is made up of relatively small islands, these species are highly susceptible to extinction because they are unable to reach other hospitable areas if their forest habitat is destroyed. Currently, the indigenous Monkey-Eating Eagle is on the endangered list; there are believed to be a remaining 600 pairs in the wild. The wildlife trade has a lot to do with the endangerment of this species and many others, in 1984 the Bureau of Forest Development (BFD) approved the export of over 140,000 birds, 17,000 monkeys and 380 reptiles.⁹³ One of the major consequences of the loss of these animals is that some food chain systems have been destabilised. The presence of pests has increased because their natural predators have been removed. Many observers now believe that the increase in cases of dengue fever may be linked to forest destruction.

Although biodiversity and more specifically species diversity is often thought to be synonymous with ecological

equilibrium, Philip Hurst argues otherwise, especially in the case of the Philippines.

"Species diversity does not automatically mean ecological stability and these small islands are more easily damaged by deforestation and the subsequent land degradation than larger land masses. An example of this vulnerability is the effect of forest loss in the country's water catchment areas. The majority of the watersheds are only 100 to 150 square kilometres in area. With relatively small land areas controlling the country's water regimes, deforestation even on a small scale can have very serious effects. The problems are compounded by reduced chances of natural forest regeneration because seed dispersal is hampered by the geographical isolation of many islands."94

There are six forest types in the Philippines: dipterocarp, molave, beach, pine, mangrove and mossy forests. Molave is a dry, monsoonal forest found in parts of Central Luzon, Mindoro, and Palawan. It makes up 3 percent of the total forest area. Beach forest no longer exists but used to occur on coastal areas as a transition between mangrove and inland forest. There are two kinds of pine forest - Benguet which is found in Northern Luzon and Mindoro which is found on Mindoro and Western Luzon. Pine forest occupies 2390 square kilometres. Mangrove forest is found on the coastal fringes and tidal flats. The mangrove forest was estimated at 1391 square kilometres in 1888 which was down from 5000 square kilometres at the turn of the

century. This forest type is under pressure because its' wood is valuable for charcoal and cutch production. As well, in many cases mangroves have been converted into fish ponds. Mossy forest is also sometimes called mountain or "cloud" forest. The Forest Management Bureau (FMB) has categorised it as "unproductive forest", as it has no commercial value. Mossy forest is usually found at over 1800 metres above sea level (asl) and is distributed relatively evenly throughout the country. Mossy forest has a primary role in water and soil holding functions. Dipterocarp forest accounts for 90 percent of all commercial forest products.

Land classification is basically designed to determine the public domain areas for forest purposes and to classify such areas according to their various land uses. Under the present land classification system, which is under the authority of the Forestry Management Bureau (FMB) of the Department of the Environment and Natural Resources (DENR), lands with slopes of more than 18 percent are to be retained for permanent forest purposes and to be classified as public domain or forest land. Those with 18 percent or less slope are classified as Alienable and Disposable lands. These areas may be released for non-forest purposes. Land which is not classified may be classified as either Forest land or Alienable and Disposable land at a later date. As of December 1985, approximately 48 percent of the total land area of the Philippines has been classified as A & D land.

This percentage did not change significantly from 1985 to 1990. The island of Leyte with 65 percent of its land mass categorised as A & D land, exceeds the 42:58 ratio. This ratio refers to the estimated minimum amount of forest land necessary to support an ecological equilibrium, 42 percent forest land to 58 percent alienable and disposable land. Since only 40 percent of the Leyte landscape consists of lowland with slopes 18 percent or less, it is obvious that national policy is not always respected.

As well, the categories of "forest land" and "alienable and Disposable Land" can be misleading. As David Kummer writes,

"According to the Philippines-German Forest Inventory (1988) of the 15.9 million hectares of official forest land in 1987, only about 40 percent was covered with forests. This means that the FMB is technically in charge of 55 percent of the total land area of the Philippines although forest covers less than 25 percent of the total area. Since the sizes of the forests and A & D categories have changed continuously since 1950 as forest lands have been reclassified as A & D, it is impossible to trace changes in forest cover over time for the two land classifications. Forest cover on forest lands for two separate dates can be compared, but the real extent of the forest land category would most likely have changed in the intervening time period. In effect, forests on forest land could have been lost through actual deforestation or through reclassification into A & D land."95

Deforestation

This section will discuss the causes of deforestation in the Philippines. First, a definition of forest cover and deforestation is necessary. David Kummer provides the following explanation.

"Myers (1980) defines deforestation as the change from primary closed-canopy forest to any other use; the Food and Agricultural Organisation/ United Nations Environment Programme (FAO/UNEP) (1982) defines deforestation as the change of any type of closed forest to any other land use; and the FAO (1980) defines deforestation as the transformation of forest land where forest land is a more general category than primary closed forest or closed forest and includes land under agroforestry and shifting cultivation."96

According to different sources even within the government, the rate of deforestation in the Philippines varies. Statistics cited by the Natural Resource Accounting Department of the DENR, Filipino forests are being destroyed at an alarmingly fast pace. They claim that from 1950 to the late 1970s, the annual rate of deforestation was 204,000 hectares, and from 1978 to 1988 the rate of deforestation was 119,000 hectares per year or 14 hectares per hour. They maintain that until 1993 forest resources destruction and the accompanying environmental degradation continue unabated.97

On the other hand, the Forest Economics Division of the Forest Management Bureau of the DENR claims that the rate of deforestation has been gradually declining and is currently

less than 100,000 hectares per year. This Division attributes this accomplishment to the vigorous campaign implemented by the Ramos government to eradicate illegal and destructive logging as well as to the cooperation of NGOs, Local Government Units (LGUs), religious organisations and the communities themselves.⁹⁸

The same study maintains that although over half the territory of the country is classified as forest land, this area is mostly devoid of forest vegetation. It estimated, based on the results of the second national forest resources inventory conducted from 1978 to 1988, that 6.16 million hectares of forests resources remained in 1990. This is 20.53 percent of the country's total land area. Furthermore, only 1.97 of the forested area is covered by virgin forest, including mossy forest.⁹⁹

Four main causes of deforestation in the Philippines can be discerned. Firstly, there is illegal logging which accounts for approximately 25 to 30 percent of the legal harvest. Officially, legal logging is selective - only trees above a predetermined diameter breast height are allowed to be cut, and there is residual stocking for 35 to 40 years. Often, there is careless or premature logging. Secondly, there is illegal occupancy. This is common in logged over areas as there are already roads. Sometimes the occupants are encouraged to migrate for seasonal employment with the loggers or because of ease of access to transportation.

Thirdly, there is conversion. The population pressure becomes so intense that people move to the forest to become slash and burn cultivators. This category also includes the conversion of mangroves into fish or prawn ponds. Finally there are forest fires which are accidental but quite common in young forest plantations.¹⁰⁰

Deforestation in the Philippines is the culmination of many problems and issues at various levels, the basic issues are poverty, lack of other alternatives, and an exploding population growth rate. These issues are not confined to the Philippines as David Kummer describes below.

"A clearcut summary of the causes of tropical deforestation is not possible. The major problem is that deforestation is the end result of a process which occurs at many levels and there are numerous connections between and within the various levels... the four main agents of forest destruction, on a worldwide basis, are agriculturalists, ranchers, loggers and fuelwood collectors. These four groups are the ones who actually cut down the trees. It is important to note that all four agents of deforestation require access to the forest and in almost all cases this is provided by road networks. In short, it appears logical to expect roads networks to be part of the deforestation process."¹⁰¹

Another important factor in deforestation and environmental degradation in the Philippines is the type of development that has been pursued. Unrelenting industrialisation strategies are partially responsible for the decline to 22 percent of the forest cover instead of the

54 percent necessary to have a stable functioning ecosystem. There has been a 50 percent reduction in the fisheries production in the 1980s due to dynamite and cyanide fishing, siltation and mangrove destruction. Many rivers, lakes and bays are either now dead or dying because of toxic wastes being dumped by industry, domestic waste, saltwater intrusion and siltation aggravated by mine tailings. According to Ibon DataBank, 40 rivers, including all the rivers in the Metro Manila area are now considered biologically dead due to pollution. A total of 480,802 hectares of freshwater areas are affected by saltwater intrusion. Among the most pollutive firms are the Trans National Corporations, who save on costs by not treating wastes or not installing expansive pollution control devices.¹⁰²

Effects of Deforestation

There are three major direct environmental effects of deforestation. The first is soil erosion on the sites which have been deforested. This effect is two-fold, onsite there is serious land degradation and offsite there is sedimentation of rivers. Because of sedimentation, hydroelectric dams experience a shortening of their productive life, irrigation systems are no longer effective, floods grow worse, river flow in the dry season has decreased, and coral reef siltation has occurred. The rich

but fragile resources of the coastal zone which provide food and livelihoods for major settlements are suffering severe degradation because of upland deforestation, new agricultural technologies used in the lowlands and industrial or urban pollution. Because the upland, basin and coastal zones are interrelated and not discrete, no resource can be exploited without affecting the others. Upland deforestation allows rapid runoff from the rains associated with tropical storms to cause serious erosion and siltloads on the coastal plains. Concomitantly, annual flooding damages crops and property on the agricultural plains. When the floodwaters, which contain suspended silt, reach the estuaries they destroy homes, kill aquatic life, scour riverbeds, destroy fish traps and pens and deposit more silt. This turbid water lessens sunlight's ability to penetrate and thus reduces productivity. If this was to occur in moderation, the eroded soil nutrients would provide necessary materials and energy to sustain mature estuarine, mangrove and coral communities. However, when heavy silt loads inundate these ecosystems, their tolerance is exceeded and severe deterioration results. Additionally, fertiliser, pesticide and herbicide runoff from croplands combine with industrial pollutants, urban effluent and oil spills and place these ecosystems under even greater susceptible to damage from high winds and turbulent seas caused by violent tropical storms.¹⁰³ Even the World Bank maintains that

soil erosion is currently the most serious environmental problem in the country. Philip Hurst writes in Rainfall Politics that:

"In 1985 the [DENR] estimated that one-third of the land area of the Philippines was 'severely eroded'. Thirteen provinces have 'severe erosion' over 51 percent to 87 percent of their land area; an additional 12 have between 40 and 50 percent of their land in a similar condition. The same ministry claims that at least 75 percent of the Philippines suffers from erosion problems of some kind. This displaces an estimated 500 million tons of topsoil from the archipelago annually. Erosion on this scale can lead to fullscale desertification. Most soil loss studies agree that erosion rates for grassland are around 100 tonnes even under secondary or poorly stocked forest. These poor rates for open grassland are typical of areas where cattle ranching is prevalent. The cost to local communities and central government has never been seriously estimated. In the rainy season terracing, roads, bridges and even compete villages are washed away.¹⁰⁴

The second direct effect of deforestation is the loss of wildlife and thus the disequilibria of ecosystems. Already, more than twenty species are considered either threatened or endangered, including the Monkey Eating Eagle and the Tamarin. Many plant species, some of which may be unknown to science, have also vanished as forests have been lost. The third effect is the loss of secondary forest products such as rattan, gums and resins.

There are many other negative effects of deforestation which may be termed social and economic. The following are

three examples of this. Commercial logging and the spread of agriculture have led to the destruction of many ethnic and cultural groups who live traditionally in the forest. The upland cultural minorities, who number approximately one million in 1978, depend on forest fruits, tubers and wildlife to supplement their harvests of yams, vegetables and other annual crops. Their survival is now threatened by the loss of the forest habitat. As well, there is the strong possibility of a timber famine in the Philippines by the year 2000. This would lead to the implosion of the forestry industry and the massive dislocation of workers in a country where many are already underemployed or unemployed. Finally, the profits from deforestation have made a small elite group very wealthy and led to massive corruption in the forestry sector. Porter and Ganapin maintain that deforestation in the Philippines since World War II has helped produce a degraded environment and an impoverished social and economic system.

Several studies have been done on the severe environmental problems in the Philippines, especially in the regions of the Ilocos, Central and Bicol regions of Luzon, Cebu, Bohol and Mindanao. On the island of Cebu which has a population of 3 million, critical shortages of potable water are common. Flooding is frequent and results in loss of lives, property, livestock and important infrastructure. A study of watershed management by UN organisations in 1982

reported that flooding in the typhoon belt of the Philippines has increased remarkably due to watershed degradation (ie-deforestation).¹⁰⁵ As well in the past five years, parts of Luzon and Mindanao (the two largest islands in the archipelago) have been affected by increasingly severe droughts which hampered the cultivation of cash crops and worsened the already precarious position of many poor cultivator families. The minor dust storms and advancing sand dunes of the Ilocos region have also been linked to the loss of tree cover.¹⁰⁶ As has been discussed earlier, the loss of tree cover has caused serious soil erosion which decreases the productivity of the uplands and increases the sedimentation of rivers, creeks and streams leading to problems with hydroelectric reservoirs, irrigation facilities and other expensive infrastructure.

On the island of Luzon alone the three largest and most important reservoirs has lost approximately half of their lifespan to increase sedimentation. Also on Luzon, many rivers and streams have either dried up or have become irregular in their flows. An example of this erratic functioning is the Agro River. During the rainy season this river routinely overflows its banks onto neighbouring cropland, turning them into riverbeds. However, during the dry season, the river's flow is greatly reduced and only a small portion of the riverbed is used. The irregularity affects the neighbouring cropland and also the lowlands

which lie downstream and rely on the Agno for irrigation. Fish and other aquatic life have become scarce or disappeared altogether. Thus the rural people who depended on the fisheries of the Agno are left without livelihoods and a source of food.¹⁰⁷

In 1981, the Marcos government proclaimed 39 watersheds to be vital to the maintenance of the Philippines' environment. By 1986 the Aquino government considered 15 of the 39 to be unreliable sources of water. In the areas surrounding these 15 watersheds, a cycle of flashfloods followed by drought quickly became permanently established. this cycle is compounded by the siltation of flood channels and dams.

An example of this is the situation of the Agusan River in Northern Mindanao in 1981. Silt washing off the hills formed a 200 metre spit across the mouth of the Agusan. The river had previously been deep enough to accommodate oceangoing vessels, even on the site of the spit. During the rains of 1981, a flood wave rushed towards the mouth of the river. However, finding the immediate outlet closed, the wave reversed itself and flooded thousands of hectares of productive cropland to a maximum depth of 22 feet. The official estimate of deaths was 283 with a further 41 missing; over 140,000 people were injured and it has been estimated that the flood seriously affected the lives of 500,000 local people.¹⁰⁸

It is often assumed that most agricultural expansion takes place in secondary forests. This assumption seems valid for at least three reasons. First, logic would indicate that it is far less time and energy consuming to clear secondary forest as opposed to primary forest. Second, degraded forests are more likely to be penetrated by road networks than primary forests and these roads facilitate migration. As Cruz and Gibbs state:

"Once roads are built, most forest lands become effectively open access because neither the timber concessionaires nor the government have the resources to police these lands. The result has been high migration and population growth rates in forest lands. The latest official estimates of detected squatters in the forest zone was about one million in 1986 (DENR 1980) when total population was 56 million. This grossly underestimates upland population, implying that only 2 percent of the population inhabit more than half of the country's 30 million hectares. In fact, it has been shown with census data that in 1987 close to 18 million, 30 percent of the Philippines' population, are in the uplands, with 8.5 million occupying forest lands."109

Third, many observers of the Philippines' environment have discussed the spread of agriculture in the secondary forest and logged over areas. They also agree that most of the destruction of the primary forests has been caused by logging; almost all deforested land has been converted to agriculture and most of the expansion of agriculture has occurred in former selectively logged areas as a generally

accurate statement regarding changing land use in the Philippines.¹¹⁰

Finally, when discussing environmental degradation, whether caused by deforestation, industrial pollution or something else, in the Philippines an obvious conclusion is that the consequences of environmental degradation fall most heavily on the poor. The poorest segments of society tend to be marginalised near polluting industries, public waste sites and other extremely polluted areas of the city. Usually, they are crowded into small areas which contain little or no room for storing garbage within households. Further, the waste they produce is "unprofitable", even to scavengers, and city governments fail to provide garbage, or other environmental management related, services.¹¹¹

Both the Aquino and Ramos governments have realised the extent of the problem and have tried to minimise the damage. The Department of Environment and Natural Resources (DENR) has been especially active under Ramos, this department has developed six strategies to mitigate environmental decline. They are: 1) the training of more field operatives with a target figure of 85 percent of total staff; 2) the modernisation of equipment; 3) a strategy of "transparency" or public awareness of, and access to, the DENR; 4) the encouragement of NGO participation in forest management and community development; 5) to encourage LGUs to participate

in policymaking and programme planning and 6) to develop a stronger political will to formulate a "pro-people policy".

In terms of forest renewal and rehabilitation, the DENR also has several approaches. Through contract reforestation they aim to create a team, made up of private corporations, NGOs, communities and families, to establish, maintain and protect forest plantations. Another approach is the reforestation trust fund; timber licenses are required to make a deposit in reforestation - from P 10,000 to P 12,500 per hectare. Another approach is the industrial forest plantation, through this plan less-than-commercial rate loans are made to groups or individuals to establish tree farms or bamboo or rattan plantations. The final option is the Social Forestry Programme which aims to improve the social and economic situation of upland farmers and have them participate in government projects. This approach combines the ideas of communal tree farming, forest occupancy management and the family approach to reforestation. Currently, there are 2715 Social Forestry Programmes on 525,619 hectares with 204,999 family participants.¹¹²

Although these measures may seem positive or at least harmless, there are two significant problems associated government intervention in the forestry sector in the Philippines. The first problem is structural constraints. This includes administrative corruption and the inability to

enforce regulations due to the underdevelopment of administrative organs. The government's central infrastructure does not reach throughout the country, especially not in the remote areas where most logging takes place. However, even with an extremely strong central government it would not be possible to impose a legislative solution on the problem of shifting cultivation or on fuel and land hungry lowlanders. While it is technically possible to regulate the logging industry through legislation and because it has longer term interests which depend on environmental health and government cooperation, it is not possible to regulate millions of landless peasants who have nothing to lose. Undeniably, until the underlying causes of rural population growth, landlessness and lack of alternative energy sources are mitigated, the rural sector will continue to exert pressure on the environment.¹¹³

The other problem is that in the Philippines, constitutional or legislative guarantees have little relation to environmental action. The country has had extensive pollution regulations based on those of California since 1967. Despite this and despite the claims of the 1960s and 1970s of success in environmental management, the Filipino environment suffered the worst environmental decline in SouthEast Asia. Essentially, the Philippines imported the US model of environmental management wholesale and attacked their problems from a technocratic and

legalistic perspective instead of a socioeconomic perspective.

CHAPTER THREE-PART TWO: LEYTE-AN ISLAND PROFILE**Introduction**

This section is intended as a backdrop for a later discussion of population displacement in Leyte. In many ways the situation in Leyte is very similar to that of the Philippines as a whole, and thus, to a certain extent, the major themes of the preceding sections will be repeated. In Leyte, as in the rest of the Philippines, the issue of land ownership is a pressing one and has serious implications for the economy which is primarily agricultural. The industrial sector is poorly developed and ownership of the means of production is concentrated in the hands of the landed political elite. The majority of the population is rural, poor and landless. In terms of the environment, land degradation, soil erosion, deforestation, coral reef destruction and other processes of ecological deterioration are obvious and have a relentless influence on the economy and social fabric of the island in the same way that these processes are effecting the standard of living at the national level. In this section social, economic and environmental data will be examined to provide a context for the issues addressed in Chapter Four and Chapter Five.

General Background

Leyte island is the eighth largest island in the Philippine archipelago and is the heart of Region 8, also known as the Eastern Visayas. Leyte is bounded on the north by the San Juanico Strait and Carigara Bay, on the west by the Visayas and Camotes Seas, on the south by the Surigao Strait and Bohol Sea, and on the east by the San Pedro Bay and Leyte Gulf. In July 1960 the island, which had formerly been known as the province of Leyte, was divided into two provinces: Leyte and Southern Leyte. This paper is concerned only with the province of Leyte, therefore data relevant to Southern Leyte will not be discussed in detail. Leyte occupies 626,826 hectares. It has one subprovince, Biliran, two cities, Tacloban and Ormoc, 49 municipalities and a total of 1435 registered barrios. Tacloban City is the provincial capital city 114 (see maps).

According to 1990 census data, Leyte has a population of 1,486,522, which is an increase of 183,874 over 1980 figures. Thus in terms of population, Leyte ranks eighth among the 73 provinces and comprises 48.66 percent of Region 8. Leyte's population density is 237.15 people per square kilometre; while the province's annual population growth rate between 1980 and 1990 was 1.33 percent, the lowest since 1960. In 1980, 52 percent of the population was between the ages of 15 and 64, 43 percent was below the age

of 15 and 3 percent was over the age of 65. The male-female ratio was 102:100.

Table 3-1: 1990 Census Data

1990 population: 1,486,522 Leyte has the 8th largest population of the 73 provinces of the Philippines.	1980 population: 1,302,648 Leyte has 48.66 percent of the population of Region 8.
Population Density: 237.15 people per square kilometre	Population growth rate between 1980-1990: 1.33 %
In 1980, 52 % of the population was between the ages of 15 and 64. 1990 male/female ratio: 102:100	In 1980, 43 % of the population was younger than 15, 3 % was older than 65. 1990 Literacy Rate: 76.5 %
1975-1978 outmigration: 58,014 people	1975-1978 immigration: 19,276 people
1990 Linguistic Group breakdown: Cebuano 50 %, Waray 48.9 %, Tagalog 0.3 %	

The total outmigration between 1975 and 1980 was 58,014 people and total immigration was 19,276 people thus the total depopulation over this period was 38,738. Leyte's literacy rate in 1990 was 76.5 percent, which was 6 percent below the estimated national average. Finally, approximately half of Leyte's citizens speak Cebuano, 48.9 speak Waray and 0.3 are native Tagalog speakers. 115

Social and Economic Background

Leyte province has remained basically a poor and underdeveloped area despite its seeming economic abundance and natural resources. Leyte's economy is composed primarily of two sectors: a market oriented agricultural sector and an underdeveloped industrial sector which produces raw materials for the international market. Leyte's manufacturing sector consists mainly of cottage industries and a few small scale industries which are concentrated in the north of the province. Cottage industries include bamboo and rattancraft, fibercraft, hat weaving, cigarmaking, loomweaving, metalcraft, needlecraft, woodcraft or toy craft. The smallscale industries manufacture shoes, bags and clothing. Medium and large scale manufacturing concerns are involved in processing Leyte's major export cash crops: coconut and sugarcane. The NIDC is the island's only coconut processing plant and it has two functions, both extremely labour intensive: the extraction of coconut oil from copra, and converting coconut "meat" into a highly nutritious animal feed. There are two central sugarcane processing plants in Leyte, HEDECO and OSCO, which produce molasses and refined sugar.¹¹⁶ These two plants are located in Ormoc City, where an estimated 50 percent of the citizens are sugarworkers, earning an average of between P 12 and P 35 (P= Philippines Peso) per day (between 48 cents and \$ 1.40 US, based on 1993 conversion rates).¹¹⁷ In the rural

sector, the majority of people are employed in agriculture, forestry, fisheries and/or in microenterprises. As Jimenez and Francisco write:

"[t]he common economic characteristics of the [rural] groups are landlessness, utilisation of traditional technology, low production, low income, multiple sources of income as a major survival strategy, the active involvement of women and children in farming and fishing related activities, lack of capital and lack of access to credit facilities (depending on middlemen for crop or product disposal) and poor access to roads and transportation services."¹¹⁸

Most of the rural poor in Leyte are landless; most farmers have agreements under a variety of tenancy or leaseholding arrangements. A growing number of landless and jobless rural workers are being forced to either move to the cities or to the uplands.

From 1971 to 1980, the total of farms rose by 39 percent while the total area under cultivation grew by 19 percent. In 1980, there was a total of 123,733 farms and the total land area devoted to farming was 306,862 hectares. At this time, farms of less than one hectare were 26 percent of the total number of farms; 49 percent of farms were between one and 3 hectares; 14 percent were between 3 and 4.99 hectares; and 10.5 percent of farms were larger than 5 hectares. Finally, between 1971 and 1980 land devoted to permanent crops rose by 41 percent; land devoted to

temporary crops rose by 8 percent. Land under permanent meadows or pastureland decreased by 21 percent, forestland decreased by 11 percent and land lying idle decreased by 12 percent.¹¹⁹ From these numbers one can see that approximately three-fourths of Leyteno farms are under 3 hectares and are most likely owned by families or individuals. As well, it is obvious that in their quest for new agricultural land, these small farmers are cultivating land that was previously under pasture or forest. The occurrence of vast numbers of these small farms is a consequence of land inheritance in large families as well as a more general land pressure. Many rural dwellers are compelled to search for new land to cultivate which is increasingly likely to be found in the uplands or other marginal areas. The ecological repercussions are well known: deforestation and soil erosion are common and lead to further degradation and infertility.

Rice is the primary crop of Leyte - it is extensively grown and dominates production. The second most important consumption crop is corn; other important crops are rootcrops, fruits and nuts. Leyte's chief export crops are coconut, sugar and abaca. In fact, 31 percent of the population of Leyte depends, directly or indirectly, on coconut growing.

The fishery is another major domestic industry. However, Leyte is not self-sufficient because of a lack of

storage facilities and an inefficient distribution system. As well, in recent years there has been a decrease in resources because of overfishing, dynamite and cyanide fishing.

Mining is a growing sector in northern Leyte. There are deposits of magnetite ore (which is necessary in steel production), bentonite clay, phosphate rock, limestone and sand and gravel.

Table 3-2: Poverty in Leyte

40 % of rural families lived below the poverty line.
20 % of urban families lived below the poverty line.

In 1989, the rural wage was at 40 % of urban levels.

In 1970, the rural wage was at 60 % of urban levels.
In 1975, the rural wage was at 75 % of urban levels.

4/5 of households in the lowest 30 % lived in rural areas.

The study conducted by Jimenez and Francisco found that Leyte registered an extremely high level of employment: 94.3 percent. However, it is important to realise that most of the workforce, 71 percent, is concentrated in agriculture, forestry or fishery.¹²⁰ Most of the rural workers are either self-employed or unpaid family workers. This latter group probably figures prominently in the underemployed category. The other 29 percent of the employed can be found in the service sector or in industry. The Leyteno Department

of Agriculture (DA) reported in 1989 that poverty is extreme in the rural areas. They found that more than 40 percent of rural families live below the poverty line compared to 20 percent of urban families. Furthermore, they found that rural wages are declining at a much faster rate than urban wages. In 1989, the average rural family income was 40 percent of the urban income level in contrast to 60 percent in 1970 and 75 percent in 1975. Another finding was that four/fifths of households in the lowest 30 percent of the income scale were in the rural areas.¹²¹

The Department of the Environment and Natural Resources (DENR) breaks down the occupations of the lowest 30 percent in the following manner:

"[t]he major sources of income of the families belonging to the bottom 30 percent are crop farming, fishing and gardening, and earnings from agricultural and non-agricultural activities. Families who derive their income from crop farming and gardening are usually upland farmers cultivating marginal lands or tenants of lowland farms in rainfed areas. Landless farmworkers comprise the bulk of agricultural wage and salary earners."¹²²

Finally, for 1988, the last year for which such data is available, Leyte had a favourable domestic balance of trade. In 1988 that was a 50 percent drop in coastwise domestic import from 1987. The province imported only 466 million kilograms of assorted goods valued at P 2.6 billion compared to 982.5 million kilograms valued at P 6 billion in 1987.

However, domestic exports performed well in 1988. Leyte registered a 15.88 percent increase in quantity of exports and a 33.65 percent increase in terms of value.

Leyte's Environmental Background

Leyte is traversed by the Philippine Fault Zone and is located in the immediate vicinity of the Philippine Deep. Both these structures greatly influence the geology of all the islands in the archipelago. The main tectonic line of the Philippine Fault Zone extends through the entire length of the island of Leyte while the Philippine Deep is a submarine trench which follows the island's eastern coast.¹²³

Leyte's geological structure consists of a base level of what is mainly pretertiary basic igneous and metamorphic rocks which are exposed discontinuously in several parallel high belts. The central mountain range is formed through a thick accumulation of andesitic volcanics ranging from the Miocene to the present. These volcanics are generally fractured and jointed due to movement along the Fault Zone. West of the volcanics, thick, folded Miocene and Pliocene marine sedimentary rocks are exposed. The sedimentary rocks are characterised by extreme variations in thickness and lithology within short distances and by poor sortings. The NorthWest section of the island is fringed by uplifted corals dating from the Quaternary Age and wide alluvial

plains are present on both the Northwest and the Northeast sections of Leyte.¹²⁴ These plains developed as a result of the deposition of weathered sedimentaries by big rivers from the adjoining uplands. Leyte's rolling hills are underlain with tertiary sedimentary rocks with limestone ridges which trend prominently North to NorthWest.

In terms of topography, the island is characterised by relatively flat costal areas and a mountainous interior region. The Amandewing, a huge mountain range, stretches the entire length of the island, cutting both provinces into Western and Eastern portions. Due to its larger land mass, Leyte province has extensive agricultural plains with rich, volcanic topsoil. Southern Leyte, on the other hand, has the smallest amount of arable flat land in Region 8. Most of the province is rugged and mountainous apart from limited areas along the seacoast. Both provinces have numerous inland rivers and mountain springs.¹²⁵

The island is richly endowed with natural resources. In Leyte province there are vast lands suitable for agriculture, tracts of thick woodlands (although little or no primary forest), fishing grounds and abundant mineral reserves. Metallic minerals such as magnetite sand, nickel and copper and nonmetallic reserves of peat and clay are found in commercial quantities.¹²⁶ There are also gold, iron, manganese, guano and rock phosphate, bentonite, gypsum, marbleised limestone, rock asphalt, sulfur and pyrite

resources.¹²⁷ Finally, there is also a geothermal power capability which is being exploited for islandwide consumption and may be expanded to meet the power needs of the rest of the country.

Leyte's drainage system exemplifies a modified trellis pattern, except in the cases of both the Anilao and Malbasag rivers which form the Ormoc watershed area. The relief of the central highlands is relatively high, due to the mountains which are prominent throughout the length of the island. In some areas the elevation rises from sea level to 1200 metres above sea level (asl) within five kilometres. The central highlands are dissected by deeply incised streams with high gradients and by numerous waterfalls. During heavy downpours most often associated with tropical storms, mass wasting is prevalent in areas along the Philippine Fault Line. The total groundwater storage ability of the Leyte basin is estimated to be 17,407 million cubic metres per year. The inflow to the groundwater reservoir system is approximately 1,714 million cubic metres per year. Thus if a fifty year term of groundwater mining is permitted, a total of 2,063 million cubic metres is available, however, if the total groundwater exploitation is set at safe yield levels a total of 1,714 million cubic metres is recommended by the DENR.¹²⁸

Of the total area of Leyte (626,826 hectares), the DENR estimates that 147,000 hectares are covered with mossy

forest, 107,000 hectares with old growth forest, 434,000 hectares with second growth forest and 37,000 hectares with mangrove forest. These numbers are questionable however as satellite pictures of the island are very old and as other groups claim that there is no primary (or old growth) forest left on the island.¹²⁹ Again according to the DENR, 51.8 percent of land in Region 8 is under extensive land uses, for example upland agriculture and coconut or sugarcane plantations; 26.5 percent is used for intensive agriculture or for human settlements.

The DENR maintains that prime virgin forest exists in the upper reaches of the mainland and on the subprovince of Biliran and describe it in the following way:

"the untouched forests are characteristically dominated by the dipterocarps which provide the umbrella of the three tiered canopy. The dipterocarps form its natural plant association/subtype within the canopy...as to the non-dipterocarp forest, there is also the appearance of pure Amaciga in isolated patches."¹³⁰

Within Region 8 it has been found that there are 201 species of trees representing 52 families and 127 genera. Of the 201 species, 187 are endemic, 14 are introduced, 49 are rare, 49 are vanishing, 21 are endangered, 84 are commercially used and 69 are abundant and widely cultivated. Understorey species include rattan, palms, herbs, shrubs and woody llanas. The forest undergrowth is made up of ferns, lower gymnosperms, orchids and other species.¹³¹

Of the total land area of Leyte, in 1986 407 thousand hectares (65 percent) were considered alienable and disposable land while 220 thousand hectares (35 percent) were certified as forest lands. The amount of land certified as Alienable and Disposable fell by 2.1 percent, from 416 thousand hectares in 1985, while the amount of forest land increased by 4 percent. The increase in forest land area has been accounted for by the establishment of timberland which increased by 21 thousand hectares from the previous year. Of the Forest land in 1986, 91 percent was established timberland, 9 percent was established forest reserve and the remaining 0.5 percent was comprised of national parks and military or naval reservations.¹³² According to groups outside the government, ie- NGOs or university groups, the above numbers are highly misleading. These groups claim that the forest in Leyte is currently being denuded and the above figures do not take into account that much of the "forestland" does not support forest vegetation. The following is a quotation from a conference of Leyteno environmental groups:

"We are losing our forest to illegal logging of not only small but bigtime loggers. In Leyte, probably 70 percent of our forests has been lost due to logging by bigtime loggers. They were given licences. There is carabao logging. Forest products are smuggled from Leyte to Cebu. That is why Leyte has no more forests, even in the PNOC [Philippine National Oil Corporation] reservation and in Lake Danao [in the upper reaches of the island]."¹³³

Finally, upland migration, as well as indiscriminate logging, in Leyte poses a grave problem to watershed management. A watershed is an area of land which is drained either by a stream or another fixed body of water and its tributaries having a common outlet for surface runoff. It is not only a physical unit but is a complete ecosystem as well. Watershed resources are multifarious, interrelated and interdependent. In Leyte, as in the rest of the Philippines, population growth coupled with migration, both in the lowlands and the uplands, has created a conflict between upland and lowland resources. The need for sound watershed management is highlighted by extensive soil erosion in the uplands, downstream siltation, migration, hydroelectric needs and lack of potable drinking water. The need for clean drinking water and the general deterioration of the upland environment has brought watershed management to the attention of other sectors and forced their involvement.

The data presented above will be important to note while considering the arguments made in the next chapter. The preceding discussion provides the background to understanding of the intertwined factors which contributed to the environmental disaster in Ormoc. In economic terms, the majority of the people are employed in the agricultural sector, either as farmers, fishers or as plantation labour. The urban population is mainly poor, working either in some form of microenterprise or as waged labour in the industrial

sector. The low individual productivity in both the urban and rural settings causes widespread and intense poverty. This poverty leads to upland migration which is increasingly blamed for many environmental problems. The upland migrants most often become slash-and-burn cultivators known in the Filipino situation as kaingineros and do cause a certain amount of deforestation and the subsequent soil erosion. Because of a large and growing population base and a lack of fertile lowland farms people have no choice but to convert pasture or forest land into cultivatable plots. However, most deforestation is caused by large landowners who clear the forest for cattle grazing pasture or for plantations. As well, both illegal and legal logging has been occurring for decades and is responsible for substantial ecological destruction. Because of the clout of the landowning elite, land has been reclassified from forest land to alienable and disposable land. Finally, there is official forest land which does not host forest vegetation. The preceding discussion also shows that because of Leyte's volcanic origin, its soils are porous and easily degraded. These economic, political and ecological circumstances play an integral role in the long term resource base deterioration which culminated in the disaster of November 1991.

CHAPTER FOUR: CAUSES OF THE ENVIRONMENTAL DISASTER

Introduction

The disaster at Ormoc which resulted in the displacement or death of over 5000 people in November 1991 was caused by a complex interaction of environmental degradation, social, economic and political factors combined with a catastrophic "trigger event" - Tropical Storm Uring. The different factors presented in this chapter must be considered against the political, social, economic and environmental backdrop presented in Chapter 3 for true insight. This section will discuss each of these factors separately in order to illuminate the scope of the issues which culminated in mass dislocation and will provide a sense of the wide ranging issues which must be addressed to prevent such a calamity from reoccurring. The following discussion is based on official government reports, personal observation and discussion, NGO reports and academic work.

Political Factors

There are ten large landowning families who are politically and economically dominant in NorthWest Leyte and Ormoc in particular. Members of these families have been Mayors of Ormoc for the past one hundred years and are owners of most medium and large scale industry in the area - the rest is owned by the state. There is, and has been, a high level of documented and undocumented corruption

surrounding this group as they grant each other political favours and economic concessions. An example of this is reported by a local citizen's NGO:

"At the height of the infrastructure projects of the Marcos Administration (bridges and housing projects) in NorthWest Leyte, the landlords connived with lumberyard owners pushing further illegal logging to supply the material requirements of the government's infrastructure projects as well as for their personal use: residential houses, rest houses, bodies of delivery trucks and furnitures [sic]. The biggest sugar landlords are the Larrazabels while the comprador lumberyard owners are the Codillas and Chilos; incidentally the incumbent mayor of Ormoc is a member of the former clan."134

Furthermore, the police detachment is used, to some extent, as a private army and as agents of vote-buying during election campaigns. Although these activities are known and apparent to many people, there is a sense, rooted both in tradition and in reality, that the poor cannot effect change by virtue of their poverty and alienation from the political process. In recent years, the political elite has used CAFGU units to maintain this impression. These units are community groups which are armed and mandated by the government to capture or kill members of the NPA (New People's Army) and their supporters. Obviously, there is much flexibility within this mandate.

There is no local force which can contain the activities of the elite as they are either aligned with or form the government in Ormoc City and in Tacloban City (the

provincial capital and seat of power). The elite has almost always been aligned with the national government but regardless, Manila is too far away to be able to regulate local behaviour. Thus, this group is responsible for most environmental destruction in NorthWest Leyte through logging (both legal and illegal), cattle ranching in the Anilao-Malbasag watershed, and through the establishment of coconut and sugarcane plantations and has been for decades. The following quotation will illuminate the historical perspective:

"Research conducted by the Task Force Ormoc Disaster showed that from 1925 to 1930, a logging company owned by Joven Pongos was operating in the south and west part of the municipality of Capocan. In the years 1935 to 1960, the Serificas owned a logging company operating in the mountains of Kananga, Capocan and Carigara. In 1960 also, LEDECO and a Chinese-Japanese logging company owned a logging concession in barangay Canbantog, Danao, Gaas and Kabigtan [all in Ormoc City]. All these logging companies did not implement any reforestation programme, an essential component of any logging concession. In 1960-1967 under the administration of Marcos and Mayor Inaki Larrrazabel Senior of Ormoc City, illegal logging was rampant in Ormoc. This lasted until November 1991. In the year 1969-1970, slash and burn type of land preparation was implemented by the farmers in the lands left by illegal loggers because of the massive expansion of the sugar hacienda in the elevated rolling hills occupied by the farmers."135

Finally, the politically and economically dominant group is also responsible for having land reclassified from

Forest Land to Alienable and Disposable Land. This relabelling means that they are able to exploit resources previously considered necessary to the functioning of the ecosystem.

Apart from the report by the Organised Citizens coalition, there is no documentation on the subject of political corruption and the entrenched feudal system or landownership which results in the establishment of sugarcane or coconut haciendas in Leyte. However, reports and books have been written studying these issues in other parts of the country, most notably in nearby Negros Occidental. Personal observation shows that the views expressed and conclusions reached are equally applicable to the situation of Leyte. In *Fire On the Rim*, Joseph Collins writes that although approximately 70 percent of the Filipino population is rural, 7 out of 10 filipinos who depend on farming as a livelihood do not own the land they work. Collins estimates that more than one-third of the land-deprived peasants are tenant farmers; because they are obligated to give two-thirds of their agricultural output to absentee landlords or to pay steep cash rents, they are locked into a cycle of poverty. Furthermore, they face credit, farm supply and produce markets monopolised by merchants, moneylenders or landlords. Even more desperate are day-labourer who are paid one-third of the government's official minimum wage - that is if they can find work at

all.136 While discussing Negros Occidental specifically, Collins makes a statements that describes conditions in Leyte admirably:

"Negros is an exaggerated microcosm of the whole Philippine archipelago. It is rural, the agricultural land is fertile (the well watered coastal plains carpeted with deep volcanic soils make for farmland as good as it comes), the economy is geared to production for export, and the disparities between rich and poor are enormous. Even blase tourists in Negros talk about the ostentatious wealth beside the cruel poverty: the dark windowed Mercedes Benzes driving by listless, emaciated children. To experience Negros is to experience the explosive economic and political inequities that affect the entire Philippine nation."137

Economic and Social Factors

As was discussed in the previous chapter, poverty can be extreme in Leyte, particularly in the rural areas but also in the urban and semi-urban areas. Poverty played a large role in the disaster in Ormoc, both as a cause of the extent of the destruction and as a cause of environmental decline. Rural poverty has led to mass immigration to the city and, in most cases, into the urban poor ("squatter") settlements. Typically these settlements were on the most marginal, least valuable and most high risk lands in terms of flooding. Specifically, the urban poor settlements in Ormoc are found along the riverbanks and on a sandbar in the river known as Isla Verde. During the tropical storm, approximately 90 percent of the inhabitants of Isla Verde

drowned.¹³⁸ A report by the Japanese Development Institute cites these urban poor settlements as an indirect cause of the disaster:

"[an indirect cause was the] dwelling by many poor people in dangerous dry riverbed areas. Many poor people were living on the dry riverbed of Anilao River (Isla Verde district and Don Felipe district) and, as their homes, were built of light construction materials, they were easily washed away. In turn, it is possible that these collapsed homes reduced the discharge capacity of the river, pushing up the water levels. According to an urban planning officer of the city, some parts of the dry riverbed became privately owned in the 1940s and farmers gradually began to live there. At the time of the disaster, some 3000 families, including squatters are believed to have been living in these dry riverbed areas."¹³⁹

The population most severely affected by Tropical Storm Uring were mostly peasants - farm workers and sugarworkers-fisherfolk and the urban poor. Of this group, 124,810 families or 748,860 individuals were considered "seriously affected" while 7,181 families became homeless. In Ormoc City, it is estimated that over half the population, or over 60,000 individuals were displaced to some degree.¹⁴⁰

According to the Ormoc City Rehabilitation Plan, because of the debris in the floodwater from the urban poor settlements, the flood became "artificially constructed" and this resulted in a damming effect upstream. They contend that it is possible that this caused the three metre high wall of water to rip through the city.

In any event, the extreme poverty of the victims of the Ormoc flashfloods is obviously an important factor in the number of lives lost. Their poverty caused them to live in the most dangerous areas, to work for very low wages, to be dispossessed by their government and to be ostracised by the rest of the community.¹⁴¹

The second way that poverty was a cause in the Ormoc disaster was through environmental degradation. Although most environmental destruction is caused by cattle ranching, illegal logging and establishing sugarcane or coconut plantations, a significant portion is caused by kaingin - slash and burn cultivation. Because of a lack of employment opportunities, lack of available land and increasing population pressure, many lowlanders are forced to move to the uplands to farm. The lowland migrants clear the forest and plant their crops. However the land is only productive for approximately five years and thus the cycle continues. Although there are no reliable estimates for the number of lowland migrants currently in the uplands, anecdotal evidence and personal observation show that numbers are increasing as is the damage caused by the migrants. As well, there are indigenous upland cultivators, but their existence does not pose a significant problem as their numbers are small and their farming techniques (swiddening, etc.) are highly adaptive to their environment. The ViSCA-gtz (Visayas State College of Agriculture- German Development Service)

project agrees that kaingin in the mountains has contributed to the problems of the watershed:

"Intensive agricultural land use has led to severe reduction of the timberland of Leyte, particularly in Ormoc. This condition coupled with a highly erodible and poor soil cover (due to sugarcane monocropping and overgrazing of open grassland) have been identified as the major culprits in the Ormoc City flashflood which caused the enormous loss of lives and property last November 1991."142

Infrastructural Factors

The most important problem in terms of the Ormoc disaster is the constriction and possible diversion of the Anilao and Malbasag rivers. Although several reports by various government agencies143 mention this as a contributing factor, the local offices of government (the City Council, Department of Public Works, DENR) claim that no diversion ever took place.144 However, the Anilao river does make a seemingly unnatural 90 degree turn in the middle of the city. Romeo Acosta, the former head of the provincial DENR maintains that, "[t]he manmade constriction, and possibly diversion of the natural channel of the Anilao River resulted in the very rapid rise of water in the city; this was aggravated by the damming of Anilao Bridge with flood debris and structures from Isla Verde swept by the

rampaging floodwater."145 Furthermore, the Department of Agriculture reports that:

"[i]n 1950, Malbasag River had two separate outlets, one joined the Anilao River, the other flowed through the channel below where the Malbasag Bridge is now located. During the investigation, one outlet could not be found. [Finally it was located and is now a small culvert] which is insufficient to discharge the former capacity of the channel before joining the Anilao River. This additional volume of water may have been overlooked in the design of the Anilao Bridge."146

The Department of Agriculture also contends that the constriction of the esteros of the Anilao and Malbasag Rivers due to construction along their banks, insufficient river control measures and an insufficient length span of the Anilao Bridge to discharge the maximum flood levels were contributing factors to the disaster.147 Finally, the DENR maintains that the Anilao and Malbasag rivers' concrete flood walls and levees were not properly aligned and that the water channels below the bridges were too easily constricted.148

Another infrastructural or governmental factor was that zoning or urban and rural land use laws were inadequately implemented. The most obvious example of this is the inhabitation of Isla Verde. The sandbar was located in a high risk zone where human settlements should not have been allowed. Although laws concerning urban land use had been

passed by the legislature they were not enforced. Since this ban would have involved creating an alternative property or settlement, Isla Verde was densely populated by low income urban poor families with nowhere else to live. Isla Verde was not the only settlement in the high risk zone; many settlements along the riverbanks of the Anilao and Malbasag Rivers also qualified. In July 1993, almost two years after the disaster new, stricter laws had not yet been read in front of the legislature. One reason for this is that these laws are nearly unenforceable unless there is other available housing or land.

The final governmental factor in the Ormoc disaster was the lack of an effective early warning system. The Japanese Development Institute states that:

"There was also a human cause of the disaster, ie- a lack of alertness on the part of residents vis-a-vis the possible danger posed by the typhoon. This can be partly explained by the fact that only a Public Storm Warning Signal # 2 was issued by the PAGASA, and therefore, the public took the situation lightly. In addition, the fact that the CDCC [City Disaster Coordinating Council] lacked a local disaster monitoring and advance warning system contributed to the inappropriate understanding of the critical situation at the time when the CDCC meeting was held, resulting in the failure to issue an evacuation order to residents."149

Although the Philippines has a seemingly large, complex and efficient disaster prevention, mitigation and

rehabilitation system in theory, practically it does not function well at all. Theoretically, there is a National Disaster Coordinating Council (NDCC) which representatives from the Office of Civil Defence (OCD), the Department of Social Welfare and Development (DSWD) and other relevant agencies. There are similar councils at the regional, provincial, city and barangay levels; these councils are charged with all tasks surrounding disaster prevention, mitigation and rehabilitation. In practice in the case of Ormoc, the disaster mitigation measures were as follows: "1. the issuance of alert notices/ advices in areas likely to be affected; 2. preparations were made by the members of the different service committees; 3. issuance of precautionary measures to the public through the broadcast and print media."150 The alert notices issued were for a relatively mild disturbance, most members did not attend the CDCC meeting, either because they were not informed or because the weather was uncooperative and the precautionary measures went unheard by most since they do not possess televisions or regularly read the (english language) newspapers.

The overarching problem with the NDCC system is that it was it was borrowed from the advanced industrialised countries. Obviously many assumptions and implications which are suited to the North are not to the Philippines. For example, it is a system requiring a high level of funding, a

sophisticated system of public communication and elaborate training for the members of the coordinating councils.

Natural Factors

On November 5, 1991 a flood spawned by a passing tropical storm hit Ormoc City killing approximately 5000 Ormocanons. It also destroyed an estimated P 360 million worth of crops, livestock, properties and government infrastructure. In the city, the flashflooding occurred when, following the torrential rain, both the Anilao and Malbasag rivers broke their banks. The floodwaters destroyed houses built along and on the floodplains and carried dead bodies out to sea; the returning tide carried many bodies back onto the beaches and streets of Ormoc City. Further upland, landslides and gullies were evident both in the mountain slopes and on the sugarcane plantations. Along the riverbanks, severe streambank erosion was observed, measuring as wide as two metres on the first fourth span from the upstream of the river length to as wide as 15 to 20 metres on the last fourth span in both the Anilao and Malbasag rivers approaching Ormoc City.¹⁵¹ The direct natural cause of the Ormoc tragedy was the extraordinary amount of rain and the intensity of the rainfall which PAGASA estimates occurs once in 50 years. Coupled with insufficient forest cover, the unusually high and intense rainfall concentration triggered landslides in several

points in a short span of approximately three hours, especially in the upper slopes of the watershed. Eventually, the landslide debris aggravated the chaos created by the floodflow. There is no doubt that the destruction in Ormoc was triggered by the weather constellation but since Ormoc has no rain gauge, no precipitation data exists for the night 4th to 5th of November. Many reports give data recorded by PAGASA in Tacloban (100 kilometres from Ormoc) - 148.2 mm in 3 hours - as the closest possible estimate. However, a closer approximation is available through the data recorded at ViSCA which is 30 kilometres south of Ormoc. Within a period of 8 hours, 288 mm were recorded. Still, it is a safe assumption that rainfall in the mountains was distinctly higher.

According to Romeo Acosta, "under 'normal' precipitation rates and qualitatively 'good' soil cover, the time of concentration (the time required for water to travel from the most distant point of the watershed to the watershed outlet) would range from 5.6 days for the Anilao River, and 3.6 days for Malbasag River. In actual fact, the water reached the watershed outlet (Ormoc) within one hour after the peak of the rainfall in the headwaters (at about 12 noon of November 5th)."152

The extremely high rate of precipitation over the Anilao-Malbasag watershed and Tongonan, a nearby barangay, was the result of the 'abnormal' route taken by Tropical

Storm Uring. There were three contributing factors for this phenomenon. First, the tropical storm occurred late in the typhoon season, when the Northern cold front was in the lower latitudes, that is to the north of Luzon Island. Second, the speed of movement of the typhoon was SouthWest at 11 kilometres per hour. The third contributing factor was the presence of a high mountain range in its path - Mount Alto Peak - which is more than 1000 metres above sea level.

Environmental Factors

Of all the factors discussed in this chapter, the environmental causes are the most important because they are the only ones that can be changed or contained within the current political-social-economic context of the Philippines. This section will discuss the physical characteristics of the Ormoc watershed and the natural and artificial (human-caused) factors in its environmental decline.

Ormoc City is situated at the confluence of two river systems which form the Anilao-Malbasag watershed. Ormoc is the common floodplain through which both rivers drain out to Ormoc Bay. In total the watershed basin has an area of 4,501 hectares and a large part of this lies within the Geothermal Reservation of the Philippine National Oil Corporation (PNOC). Of the watershed, 96.7 percent is classified as Alienable and Disposable land and 3.3 percent is classified

as Forest land.¹⁵³ The aggregate length of live rivers within the watershed is 37 kilometres, while the aggregate length of all rivers and their tributaries is 64.38 kilometres. Specifically, Anilao River is 13.8 kilometres long and Malbasag River is 10.42 kilometres.¹⁵⁴ The drainage density of the river systems is 14.3 metres per hectare. The water channels are deep and narrow (in a V-shape) and have steep to very steep banks. These features are indicators of the high soil erodibility in the watershed.¹⁵⁵ The drainage system is dendritic. The headwaters of the Anilao River flow down from a volcanic cone which is topped by the Lake Danao crater lake.

In general, the terrain of the watershed ranges from moderate to rough and very rugged. Its slopes range from 3 percent in relatively flat areas to more than 60 percent in steeply sloping places.¹⁵⁶ The slope characteristics are as follows: 70 percent of the area has slopes of 3 to 8 percent; 5 percent of the area has slopes of 9 to 18 percent; 10 percent has 19 to 30 percent slope; and 15 percent has slopes greater than 50 percent.¹⁵⁷ Slopes of all angles are very susceptible to soil erosion because of the lack of trees and other forest cover which prevent direct impact of rainfall on the ground. Furthermore, the areas which possess slopes of more than 50 percent are situated in the riverbanks or tributaries. This contributes a great deal to the landslides and streambank erosion. The

slope angle influences erosion due to runoff velocity; the capacity to remove soil material increases as slope angle increases.¹⁵⁸ Topsoil is absent in the steeply sloping areas, indicating an extreme level of erosion. Most soil is devoted to pasture or sugarcane cultivation; in extreme cases in which rock outcrops are evident, cultivation is not attempted.¹⁵⁹

Table 4-1: Watershed Characteristics

from Romeo Acosta:

68 % of the area for sugarcane plantations

18 % of the area for coconut plantations

13 % of the area was grassland

from the Department of Agriculture:

52.8 % of the area for sugarcane plantations

5.49 % of the area for banana plantations

16.22 % of the area for coconut plantations

6.62 % of the area for rice cultivation

9.44 % of the area was grassland

4.04 % of the area was shrubland/woodland

1.16 % of the area for human settlements

4.22 % of the area was occupied by rivers

The dominant vegetation of the Anilao-Malbasag watershed is made up of agricultural crops such as sugarcane, coconut and rice. The non-agricultural areas are mostly either open grasslands and shrublands which are used either as grazing land or are maintained under fallow.

Second growth and the vestiges of old growth forest are confined to the very highest parts of the watershed - mainly on the mountain peaks. According to Acosta, 86 percent of the watershed is under agricultural land uses and 13 percent is under grasslands or shrubland. Agricultural lands are planted to sugarcane -68 percent- and coconut -18 percent. The Department of Agriculture breaks these figures down further. They estimate that 52.8 percent of the land area of the watershed is used for sugarcane plantations, 5.49 percent for growing bananas, 16.22 percent for coconut plantations, 6.62 percent for growing rice, 9.44 percent is used as grassland, 4.04 percent is either shrubland or woodland, 1.16 percent is used for human habitation and the major rivers occupy 4.22 percent of the area.¹⁶⁰ The city government of Ormoc has petitioned President Ramos for the conversion of agricultural land within the watershed to forest land, but as yet no action has been taken on this matter.

As has been mentioned, only very little marginal land is still covered with secondary growth forest. The irrigated lowland rice fields are established for the most part near the major rivers. Almost all the remaining land which is suitable for agricultural use is under industrialised sugarcane production. Even unsuitable slopes, up to 600 metres above sea level are converted into sugarcane fields and this exposes the topsoil to the erosive power of

rainfall. Coconut trees are less abundant than sugarcane and, in fact, are often undercropped with sugarcane.

The upper reaches of the watershed area can be divided into four categories: cogon deserts, kaingin fields, secondary forest and primary forest. Within the cogon desert saccharum uliginosum and imperata cylindrica are the predominant grasses. Their appearance indicates the final stage of vegetational degradation which is aggravated through rout and soil changes and which is caused by overpopulated and unskilled cattle raising. Kaingin farming is a form of cultivation practised by lowland migrants and to an extent by indigenous uplanders and involves slash and burn techniques. This type of farming takes place mainly in the upper most reaches of the watershed and is increasingly destroying remaining uphill forests. Secondary forest is almost completely absent because of land-hunger and the migration of the slash and burn cultivators. Land pressure is very strong and the kaingineros cannot afford to allow a sufficient amount of regrowth of vegetation after a few years of cultivation and thus move on to another forested area. This intense land use further enhances soil erosion. Finally, very little primary forest still remains and is located in the steeper mountain ridges. However, selective illegal logging (there is now a total log ban in effect) can still be witnessed. As well, the kaingineros continue to move further upland into this primary forest. Although this

area lies within a National Park there is no evidence of protection or conservation measures.¹⁶¹

Using LandSat photographs provided by the Swedish Space Cooperation Agency, land use data shows that changes to the vegetative cover of the watershed through human exploitation has occurred in a maximum period of 14 years - from 1973 to 1988. During this time the primary forest was reduced to 13.5 percent of Leyte's total landmass.¹⁶²

According to Elke Eller, a geographer studying the region:

"Since the slopes are deforested the existing soils have become more and more degraded and eroded. Infiltration rate of the skeleton soils is reduced, hence most of the incoming water drains down to the valley. Higher rainfall cause land and slopeslides which transport material down to the lower portion of the mountains, where deeper soil profiles are found. Personal observations have shown that most of the landslides, which were not present in the area before November 5, 1991 are located East and SouthEast of Ormoc at an elevation of about 600 metres above sea level. No landslides were observed in areas covered in primary forest."¹⁶³

From the above discussion it is apparent that deforestation, inappropriate land use in the watershed area, naturally erodible volcanic soil and soil erosion played a major role in the Ormoc disaster. All observers, government officials and others, agree that the loose characteristic of the volcanic soil leaves it very vulnerable to erosion, especially when vegetative cover has been removed. It is

also unsuited to the intense agricultural uses which were applied to it. Thus, during a very heavy rainfall - such as the one associated with Tropical Storm Uring - the soil could not hold and landslides were a result. River channels became clogged with soil and flood debris, this in turn caused temporary damming in the acute and narrow bends of the water channels. Therefore, it is apparent that the lack of sufficient water retention capacity in the catchment area contributed to the severity of the flooding.

Apart from the soil's natural high erosivity, it is of poor quality for anthropogenic reasons such as cattle grazing, sugarcane monocropping, kaingin farming and tree cover removal, and because of a lack of appropriate soil conservation practices. Surface soil disturbances also occur due to intensive slope cultivation, the construction of roads and trails and clearing for human settlements. Thus the land use to which the watershed has been subjected for a long time has drastically reduced its capacity for rainfall absorption and percolation.

UNDRO (United Nations Disaster Relief Office) summarises the importance of environmental considerations to the Ormoc disaster in the following way:

"[T]he enormous loss of life caused by Tropical Storm Uring was out of proportion to its strength (approximately 75 kilometres per hour)...[the] disaster was caused by deforestation of the hills which tower above Ormoc. The destruction of the trees on the hillsides, which help the earth to absorb water, allowed the rains to cascade down the

denuded slopes, eroding the soil as they did so and overwhelming the river channels. The subsequent flashflooding may not be the only result of such illegal logging, for the geothermal deposits in the area are also under threat since their survival depends on water seeping underground through the roots of trees."164

As this quotation mentions, the PNOC's geothermal deposits may be under threat because of deforestation and other forms of environmental destruction but ironically, the PNOC itself is responsible for much of the degradation of the watershed. In fact, the extent of ecological destruction brought about by the exploration activities of the PNOC is quite extensive considering the limited forest cover left. One of the PNOC's most damaging activities is its earth moving operations in road-building -this comes to 15 kilometres multiplied by 8 to 10 metres. The shoulder erosion associated with these roads is very severe. Moreover, 5000 square metres are levelled at every drilling area. Finally, the PNOC's activities has led to the establishment of organised communities, such as barangays and sitios, in the national park and watershed area. For the most part these houses are built using tree products and are the dwellings of the slash and burn cultivators.

Finally, the Department of Agriculture maintains that in 1928 Ormoc City experiences the same flooding with approximately the same amount of rainfall and the same rainfall intensity. However, in 1928, minimal property

damage occurred and no lives were lost. The Department of Agriculture (DA) believes that this is the case because at the time deforestation in the watershed was negligible and because there were no urban poor settlements either on the riverbanks or on Isla Verde.

Constellation of Factors

The factors discussed above are intertwined and in constant interaction. To be fully understood, these factors must be viewed through the framework of Political Ecology (discussed in Chapter 2), specifically its sub-category of 'the political ramifications of environmental change'. There are two reasons why this framework provides clarity. First, both the framework and this case study take an individualised, location-specific approach. This is important because although underlying causes may be similar in different situations, each case is unique and must be treated as such to gain true understanding. Second, the framework integrates social science and ecology to explain the synergy of politics and the environment. This thesis takes this approach to present a coherent explanation of human displacement due to Tropical Storm Uring.

The political context of Leyte - a pragmatist government controlled by the landed elite - provides the foundation for the chain of causes which resulted in mass displacement and deaths of over 5000 people in Ormoc City on

November 5th, 1991. As has been discussed, the ancient feudal hacienda system in place in the large coconut and sugarcane plantations surrounding the city leads to large groups of people working the land for extremely low wages and to land grabbing by the landlords. As population pressure and land-hunger become more intense fewer people actually own the land they till and the production of food crops for island wide consumption decreases. Those people without land to work either move to the uplands, which cannot support them, or move to the cities, in most cases to live in the urban poor settlements. A small minority leave the island, heading for Cebu, Manila, Mindanao, or increasingly the Middle East, in search of better opportunities.

The second link in the chain of causes is the social and economic situation in Leyte. Obviously these factors are inextricably interwoven with the political context, and have been discussed broadly above. Other factors which have not yet been discussed are the rapid population growth and the role of the Church. Because people often think of their children as their only source of wealth it is not surprising to find many families with as many as ten or more children. As well, because of malnutrition, lack of health care and sanitation facilities child mortality is high and families have more children to offset their inevitable losses. The Roman Catholic Church, which is dominant in Leyte, feeds

into this line of reasoning by opposing all forms of artificial contraception. The Church also supports the status quo by preaching that "it is God's will" that certain people are poor and others wealthy. In reference to the Ormoc floods, the Church's position was that the floods were God's way of killing the sinners and sending a message to the survivors. There is no evidence of any sort of liberation theology which is said to be gaining ground in other areas of the archipelago. In fact most priests, at least in the Ormoc-Baybay region, seem to be vehemently anti-NPA (New People's Army) and pro-landlord.¹⁶⁵

The third link is the ongoing environmental degradation, both in the Anilao-Malbasag watershed and throughout the island. Again, since environmental destruction is caused by human activities, there is a significant interaction between environmental issues and political and socio-economic factors. In the Ormoc area, damage is (and has been) caused by the PNOC's (Philippine National Oil Corporation) activities in the pursuit of geothermal power, the establishment and maintenance of sugarcane and coconut plantations and cattle ranches, illegal and legal logging, and the slash and burn cultivation practised by upland migrants. Almost by definition, these activities require deforestation to take place. As has been discussed at length, deforestation leads to an elimination of protective vegetative cover and

subsequent soil erosion. The soil in the watershed area is not suited to intensive use and erodes easily due to its natural characteristics. Although some reforestation programmes have been implemented in the watershed area, most observers do not believe they are successful.¹⁶⁶ Kaingin patches can be observed in almost all areas and within the patrolled PNOC reservation illegal logging is said to be rampant.

Thus with this basis prepared, a relatively mild (75 kilometre per hour in the case of Tropical Storm Uring) tropical disturbance can cause unprecedented destruction. Although the Disaster Coordinating Council was ill-prepared for a typhoon, there would not have been much that could have been done regardless of training measures, better equipment, better lines of communication etc. The disaster at Ormoc, though triggered by the rainfall associated with Tropical Storm Uring was not caused by it. The disaster was caused by inequitable land distribution, poverty, deforestation and soil erosion. The island of Leyte is located within the typhoon belt of a typhoon prone country and yet, ironically, the worst devastation was not caused by one of the dozens of typhoons that enter into the Philippine Area of Responsibility every year but by a minor, unremarkable tropical storm.

An important question within the Political Ecology framework is: to what extent are the costs of environmental

change borne by marginalised groups and what impact does environmental change have on existing socio-economic inequalities? From the research presented in this chapter it becomes evident that long term resource base deterioration has a profound effect on the poor, while it leaves the more affluent relatively unscathed. The urban poor of Ormoc City were the most affected in that thousands of people living in squatter communities in high risk areas were drowned during the flashflooding while hundreds of others were displaced and later relocated in resettlement camps. The existing socio-economic disparities were further exacerbated by the displacement in many ways, especially in terms of the living standards of the environmental refugees after resettlement. These issues will be revisited in Chapter 5.

The second central question within the Political Ecology framework is: under what circumstances does unequal exposure to environmental change modify political processes? From this research it seems that the political process was not changed a great deal, mainly because the current system is so firmly established and works to the benefit of the powerful. However, some important changes have occurred in Leyte in the past three years. First, a total logging ban has been put into effect in the Ormoc watershed. This was achieved through the efforts of grassroots community based groups which were formed or strengthened in the aftermath of

the disaster. These community based groups have begun to take on other issues and the whole movement has led to an empowerment of the dispossessed. Second, the relocated population has also begun to organise itself into citizens' groups and these groups are, in some cases, effectively lobbying the politicians and governments for improvements they deem necessary. Since the disaster at Ormoc became an international news story, the government is reticent to be seen as immobilised on issues concerning resettlement camp residents. A third modification is that the affluent plantation owners have become aware of the environmental consequences of their actions and some are taking steps to have their plantations become more ecologically friendly. Several owners have taken steps to move their operations out of the most fragile watershed areas. Other owners have begun to implement various agroforestry techniques on their land.

Although these advances are welcome and crucial, the underlying structure of the political, economic and social structures in Ormoc City and in the rest of Leyte have not changed. For a true improvement to occur, much more must be done.

CHAPTER FIVE: BASELINE PROFILE OF ENVIRONMENTAL REFUGEES IN ORMOC

Introduction

This chapter attempts to provide a baseline profile of the people displaced by the constellation of factors described in Chapter Four. Populations similar to this one have been termed environmental refugees by other authors, as explained here in Chapter Two (The Literature Review). This profile will continue utilising similar terminology. The following profile is based on research conducted by the author in Ormoc City, Leyte, the Philippines in 1992-1993. The principal objective of the inquiry was to build a descriptive profile of the displaced population since this is an element that is missing from all other writing on the subject of environmental refugees (see Literature Review). A subsidiary goal was to determine whether or not a quantifiable change occurred in the lives of the sample population after the disaster. Both elements of the profile are important components of this thesis since they provide insight into the factors existing in peoples' lives which make them vulnerable to displacement. Furthermore, this section attempts to reinforce the arguments presented in Chapter Four, especially in terms of the social, political and economic status of the environmental refugees.

This chapter will have the following structure: first, the methodology used to gather the data will be described;

second, the methodology used to analyse the data will be explained; third, the data itself will be examined; finally, the importance of the data will be discussed.

Methodology

This research was conducted in the form of a household survey administered in the resettlement camps for survivors of Typhoon Uring surrounding Ormoc City, Leyte, the Philippines. These resettlement camps were: the Red Cross Village, Ipil, Linao, San Pablo, the Tent City and Tambulilid. The survey was administered to a random sample of 20 percent of the population of each of these resettlement camps. This research was conducted with the aid of a Cebuano speaking interpreter.

An actual copy of the research tool can be found in Appendix 1. Some questions asked on the questionnaire were open-ended while others were close-ended. The questions addressed the following categories: sex of respondent; age of respondent; civil status; spouse's age; number of children; number of other dependents; religion; ethnic group; linguistic group; educational level of respondent; educational level of spouse; pre-resettlement occupation of respondent; pre-resettlement income of respondent; pre-resettlement occupation of spouse; pre-resettlement income of spouse; amount of credit available; source of credit; other income before resettlement; income from children

before resettlement ; pre-resettlement total income; former home; pre-resettlement shelter type; pre-resettlement house status; pre-resettlement land status; pre-resettlement access to health care; pre-resettlement access to education; pre-resettlement access to sanitation; pre-resettlement access to electricity; pre-resettlement staple food; pre-resettlement fuel source; perceptions of the causes of the disaster; distance between former home and resettlement camp; post-resettlement occupation; post-resettlement income; post-resettlement occupation of spouse; post-resettlement income of spouse; post-resettlement other income; post-resettlement total income; post-resettlement access to education; post-resettlement access to health care; post-resettlement access to sanitation; post-resettlement access to electricity; post-resettlement staple food; post-resettlement fuel source; intentions regarding remaining in the camp; number of family members killed in the flood; government compensation; whether they received aid while living in the resettlement camp; relations between the resettlement camp and the neighbouring villages.

Not all of these questions or categories were used in the analysis presented in this chapter. Some of the categories have been collapsed, for example 'income of respondent', 'income of spouse', 'other income', and 'income from children' have been collapsed into the category 'total income'. Other categories were eliminated from analysis for

the present profile, for example 'number of dependents' and 'linguistic group' were not used as this information could be gleaned from other variables.

Once the survey had been completed, the responses were converted into spreadsheet form using the Quattro-Pro spreadsheet programme. The data was then recoded for SPSS and analysed using that statistics package. Descriptive statistics were applied to the univariate data mentioned above and then crosstabulations were performed on selected variables. The data from each camp was initially treated separately. However, since no significant differences were found, the data was aggregated and analysed collectively. Raw data from the SPSS manipulations can be found in Appendix 2.

It is important to note that many other statistical manipulations could have been performed but were not, because they fall outside the scope of the following profile. The purpose of this profile is to provide a description, based on selected indicators, of the environmental refugee population in Leyte, the Philippines.

Univariate Data

The following section will discuss the results of the generation of descriptive statistics for each variable for which these manipulations were performed.

Sex of Respondent

Of the 401 respondents, 288 (72 percent) were women, while only 112 (28 percent) were men. Since most of the respondents were married (see below), this does not mean that there was a gender bias in the population of these resettlement camps. In my opinion, it is probable that the women were more likely, within the context of Filipino society, either to be unemployed or involved in income generating activities that permitted them to remain in or near the home. It is because of this that the women were at home when the survey was being conducted.

Age of Respondent and Age of Spouse

Table 1: Age of Respondent and Age of Spouse

average age of respondent:	38 years old
median age of respondent:	36 years old
68 % of the population (respondent):	between 25 and 51 years old
95 % of the population (respondent):	between 12 and 64 years old
minimum age of respondent:	15 years old
maximum age of respondent:	80 years old
average age of spouse:	33.5 years old
median age of spouse:	35 years old
68 % of the population (spouse):	between 17.5 to 49.5 years old
95 % of the population (spouse):	between 1.5 to 65.5 years old

minimum age of spouse:	19 years old
maximum age of spouse:	79 years old

From Table 1 it can be seen that the mean age of the respondents was 38, while the median, or the most frequently given response, was 36. The mode response was 33. The standard deviation of this variable was 12.666 while its variance was 160.427. From these statistics we see that the average age for respondents was 38 years old, while the most reported age was 36. Through the standard deviation we see that 68 percent of the respondent population falls between the ages of 25 and 51, while 95 percent of the population falls between the ages of 12 and 64.

The mean response for age of spouse was 33.5 and the median response was 35. The standard deviation of this variable was 16.255 while its variance was 264.215. From these statistics we see that the average spouse's age was 33.5 years old while the most frequently reported age was 35. Through the standard deviation we see that 68 percent of the population falls between the ages of 17.5 and 49.5, while 95 percent of the population falls between the ages of 1.5 and 65.5.

Generally, it seems apparent that the respondents were older than their spouses. This is interesting on its own as it suggests that the women of the sample married men younger than themselves, which is rather odd considering the male-

dominated patriarchal structure of Filipino society. On the other hand, it may be that the male respondents married women much younger than themselves and this resulted in the generation of the above numbers.

The age structure of the camp population was vital to this inquiry as it provided insight into which segments of society were most at risk of displacement. Table 1 shows that the average and median age for both respondents and spouses was in their thirties. Therefore the population was neither unusually young nor old. Since the respondents (and spouses) were relatively young and in the prime of life, one interpretation of the data is that environmental disruptions affect all age groups and do not only displace the very young or the very old. Another interpretation is that the very young and very old were killed during the flooding, and the survivors were the healthy, relatively young inhabitants of the resettlement camps. These interpretations are not incompatible: although all age groups were negatively affected (as is witnessed by their displacement) the more vulnerable (ie-the old and very young) age groups were more likely to have been killed.

Civil Status

Table 2: Civil Status

single:	6 respondents (1 %)
married:	350 respondents (87 %)

widowed: 32 respondents (8 %)
 separated: 13 respondents (3 %)

As Table 2 illustrates, of the respondents 1 percent were single, 87 percent were married, 8 percent were widowed and 3 percent were separated. Since divorce is not legal in the Philippines, this category was not used. The variable, Civil Status, was one that was devised primarily to provide general information on the lives of the environmental refugees. The fact that the overwhelming majority (87 %) of respondents were married shows that in this sense at least the camp population was similar to the larger Filipino society.

Number of Children

Table 3: Number of Children

Number of Children	Reported Cases	Percentages
0	24	6 %
1	51	13 %
2	82	20 %
3	66	16 %
4	55	14 %
5	51	13 %
6	28	7 %
7 or more	44	11 %
		total: 99.1%

For this variable the mean response was 3.5 and the median response was 3. The standard deviation for 'Number of Children' was 2.331 and its variance was 5.434. The minimum response was 0 and the maximum response was 12.

From these statistics we see that the average number of children was 3.5, while the most frequently reported number of children was 3. Through the standard deviation we see that 68 percent of the population had between 1 and 6 children, while 95 percent of the population had between 0 and 8 children. The minimum number of children per respondent was 0, while the maximum number of children was 12. It is important to note that these figures include children killed in the flooding, although they do not include children who died before the disaster.

From Table 3, one can see that 49 percent of the population had between 1 and 3 children, while 45 percent had 4 or more children. An additional 6 percent had no children. These are interesting figures since they show that the majority of respondents, 55 percent, had 3 or less children. Initially this finding seems to go against conventional wisdom, which believes that the poor continue to have large families as a form of insurance policy. Still, this can be explained by the fact that the residents of the resettlement camps were members of the urban poor, not rural workers or farmers, and therefore did not have the same need for extra labour. At the same time, 45 percent of

respondents did report having 4 or more children which is more in line with conventional wisdom.

Religion

Table 4: Religion of Respondent

Religion	Number	Percent -ages
Catholic	353	88 %
Protestant	3	0.7 %
7th Day Adventist	5	1 %
Jehovah's Witness	1	0.2 %
Born Again Christian	15	4 %
Muslim	5	1 %
Mormon	1	0.2 %
Iglesia ni Kristo	9	2 %
Church of the Nazarene	5	1 %
Assembly of God	2	0.4 %
Baptist	1	0.2 %
no religion	1	0.2 %
	total:	99.7 %

As Table 4 shows Catholic was the most frequently given response. In fact, 353 respondents out of 401, or 88 percent, claimed to be Catholics. This variable was chosen to provide basic background information concerning the camp population. From the responses, it seems that this group reflects the same religious leanings as that of the general Filipino society. As with the variable 'Civil Status', this

variable serves to explode the commonly held belief among Ormocanos that the urban poor who lived on Isla Verde were consumed with depravity.¹⁶⁷ Both these variables show that in terms of religion and marriage, the residents of the resettlements were within the mainstream.

Ethnic Group

Table 5: Ethnic Group

Ethnic Group	Number	Percent -tage
Ormocano	325	81 %
Cebuano	49	12 %
Davaoenos	8	2 %
Waray-waray	13	3 %
Visayan	4	1 %
Tagalog	2	0.5 %
	total:	99.5 %

Table 5 shows that the most frequently given response was Ormocano. In fact, 325 respondents, 82 percent, described themselves as Ormocanos (natives of Western Leyte). The other responses are summarised in the above table. The issue of ethnic group was raised to contribute to the description of the camp population. Another motivation was to determine whether local people or migrants were more likely to have been displaced by the disaster. From the above data, it is clear that larger numbers of local people were displaced. This is for two reasons. First, because

Leyte forms part of Region 8, which is one of the poorest regions in the Philippines, large scale in-migration does not occur. Thus, there were simply larger numbers of Ormocanos in the vicinity than anyone else. Second, those who had migrated to Leyte were more likely to have been attracted by skilled labour positions and thus would not have been living in the urban poor settlements.

Educational Level of Respondent and of Spouse

Table 6: Educational Level Of Respondent and of Spouse

average level of education:	grade 7
median level of education:	grade 7
68 % of the population:	between grade 4 and 2nd year of college
95 % of the population:	between grade 1 and 3rd year of college
minimum level of education:	0 years
maximum level of education:	graduated college
average level of education:	grade 6
median level of education:	grade 6
68 % of the population:	between grade 2 and 1st year college
95 % of the population:	between no education and graduated college
minimum level of education:	0
maximum level of education:	graduated college

From the statistics presented in Table 6, we see that the average educational level of respondents was grade 7 and

this was also the most frequently given response. From the standard deviation, we see that 68 percent of the sample population had between 4 and 11 years of schooling, while 95 percent of respondents had between 1 and 13 years of schooling.

As well, we see that the average educational level of the respondent's spouse was grade 6; this was also the most frequently given response. From the standard deviation, we see that 68 percent of this population had between 2 and 10 years of schooling, while 95 percent had between 0 and 14 years of schooling.

Occupation of Respondent Before and After Resettlement

Table 7: Pre-Resettlement Occupation of Respondent and Post-Resettlement Occupation of Respondent

pre-resettlement occupation of respondent...

Occupation	#	%	Occupation	#	%
unemployed	137	34 %	fish vendor	12	3 %
raised pigs	4	1 %	laundrywoman	28	7 %
fisher	2	0.5 %	matmaker	1	0.2 %
labourer	24	6 %	beautician	4	1 %
gardener	1	0.2 %	vendor	41	10 %
farmer	2	0.5 %	buy and sell	13	3 %
tailor	8	2 %	sari-sari	48	12 %
mechanic	3	1 %	housepainter	1	0.2 %
carpenter	8	2 %	gambler	1	0.2 %
driver	6	1.5 %	babysitter	3	1 %

projector operator	1	0.2 %	nipamaker169	2	0.5 %
porter	1	0.2 %	contractor	1	0.2 %
security guard	4	1 %	student	2	0.5 %
mason	4	1 %	collector	1	0.2 %
surveyor	1	0.2 %	watchman	1	0.2 %
foreman	2	0.5 %	barangay official170	1	0.2 %
sugermill operator	1	0.2 %	policeman	2	0.5 %
barber	1	0.2 %	government employee	3	1 %
port engineer	1	0.2 %	teacher	3	1 %
welder	2	0.5 %	jeepney171 conductor	1	0.2 %
jeweller	1	0.2 %	bus dispatcher	1	0.2 %
cook	2	0.5 %	private employee	1	0.2 %
vulcaniser	1	0.2 %	salesclerk	4	1 %
tuba-maker172	1	0.2 %	helper	1	0.2 %
NFA retailer173	1	0.2 %	cafgu174	1	0.2 %
pensioner	2	0.5 %			
post-resettlement occupation of respondent...				Total	98.6%
Occupation unemployed	#	%	Occupation raised pigs	#	%
	273	68 %		3	0.7 %
foreman	1	0.2 %	vendor	18	4 %
buy and sell	6	1 %	sari-sari	43	11 %
painter	1	0.2 %	labourer	14	3 %
sugarmill operator	1	0.2 %	babysitter	4	1 %
nipamaker	1	0.2 %	watchman	1	0.2 %
tailor	7	2 %	welder	2	0.5 %

barangay official	1	0.2 %	helper	5	1.2 %
mechanic	1	0.2 %	jeweller	1	0.2 %
policeman	2	0.5 %	porter	1	0.2 %
carpenter	7	2 %	tuba maker	1	0.2 %
government employee	1	0.2 %	Cafgu	1	0.2 %
driver	6	1 %	Total: 98.3%		

Table 7 provides an interesting and detailed breakdown of the types of occupations pursued by the displaced population before and after resettlement. The above categorisation lends credence to earlier descriptions of the population as the urban poor and as economically marginal. The occupations can be collapsed into five broad groupings: resource-users, for example fishers and labourers; traders, such as sari-sari store owners and vendors; low-level unskilled workers, such as carpenters and laundrywomen; low-level government employees, for example policemen and barangay officials; and low-level white collar workers, such as salesclerks and collectors. It is salient that even before resettlement, the level of unemployment was high, at 34 percent.

From Table 7 it is also plain that the variety of occupations pursued do not change after resettlement. However, the unemployment level doubles, to 68 percent. As well, most jobs begin to be performed within the camps because of the distance between the camps and the former

workplaces as well as the prohibitively high cost of transportation. Because the camp economies are weak and cash-poor, this does not seem to be supportable over the medium or long term. Thus, after resettlement the unemployment rate was high and incomes were low.

Occupation of Spouse Before and After Resettlement

Table 8: Pre-Resettlement Occupation of Spouse And Post-Resettlement Occupation of Spouse

pre-resettlement occupation of spouse...

Occupation	#	%	Occupation	#	%
unemployed	104	26 %	farmer	8	2 %
raised pigs	3	0.7 %	cocowood cutter ¹⁷⁵	1	0.2 %
driver	26	6 %	mason	4	1 %
barber	1	0.2 %	welder	4	1 %
chemist	1	0.2 %	butcher	2	0.5 %
utilityman	1	0.2 %	fish vendor	5	1 %
vendor	32	8 %	sari-sari	12	3 %
nipamaker	2	0.5 %	canteen owner	1	0.2 %
barangay official	1	0.2 %	teacher	4	1 %
jeepney conductor	3	0.7 %	messenger	1	0.2 %
helper	5	1 %	construction worker	1	0.2 %
pumpboy ¹⁷⁶	1	0.2 %	tupperware dealer	1	0.2 %
bookkeeper	1	0.2 %	HEDECO employee ¹⁷⁷	2	0.5 %
security guard	9	2 %	musician	1	0.2 %

labourer	60	15 %	slaughterer	1	0.2 %
gardener	2	0.5 %	tailor	6	1.4 %
projector operator	1	0.2 %	foreman	4	1 %
port engineer	1	0.2 %	cook	4	1 %
technician	2	0.5 %	shoemaker	1	0.2 %
tuba-maker	2	0.5 %	laundrywoman	7	2 %
buy and sell	11	3 %	painter	1	0.2 %
latero178	2	0.5 %	paper bag maker	1	0.2 %
government employee	2	0.5 %	PNOC employee	1	0.2 %
bus dispatcher	1	0.2 %	private employee	1	0.2 %
porter	5	1 %	deliveryman	1	0.2 %
factory worker	1	0.2 %	businessman	1	0.2 %
secretary	1	0.2 %	accounting clerk	1	0.2 %
healer	1	0.2 %	NGO employee	1	0.2 %
mechanic	3	0.7 %	carpenter	16	4 %
sugarmill operator	4	1 %	electrician	3	0.7 %
autobody builder	4	1 %	beautician	7	0.7 %
gambler	2	0.5 %	crab trap maker	1	0.2 %
NAWASA employee179	1	0.2 %	salesclerk	2	0.5 %
bus conductor	1	0.2 %	Coke retailer	1	0.2 %
Cafgu post-resettlement	1	0.2 %	Total: 94.75 %		
occupation of spouse...					

Occupation	#	%	Occupation	#	%
unemployed	138	34 %	gambler	1	0.2 %
fisher	2	0.2 %	babysitter	1	0.2 %
labourer	52	13 %	nipa maker	2	0.5 %

gardener	2	0.5 %	latero	1	0.2 %
farmer	5	1 %	crab trap maker	1	0.2 %
cocowood cutter	1	0.2 %	barber	1	0.2 %
slaughterer	1	0.2 %	barangay official	1	0.2 %
tailor	5	1 %	teacher	5	1 %
mechanic	3	0.7 %	jeepney conductor	1	0.2 %
carpenter	21	5 %	private employee	6	1 %
driver	20	5 %	deliveryman	1	0.2 %
mason	4	1 %	factory worker	1	0.2 %
foreman	2	0.5 %	secretary	1	0.2 %
welder	4	1 %	accounting clerk	1	0.2 %
cook	3	0.7 %	security guard	9	2 %
electrician	3	0.7 %	pensioner	1	0.2 %
technician	1	0.2 %	Cafgu	1	0.2 %
butcher	2	0.5 %	musician	1	0.2 %
shoemaker	1	0.2 %	HEDECO employee	1	0.2 %
autobody builder	4	1 %	port engineer	1	0.2 %
utilityman	1	0.2 %	government employee	2	0.5 %
makes tuba	1	0.2 %	PNOC employee	1	0.2 %
fish vendor	5	1 %	messenger	2	0.5 %
sugarmill operator	6	1 %	helper	6	1 %
laundrywoman	5	1 %	porter	5	1 %
beautician	2	0.5 %	pumpboy	1	0.2 %
vendor	28	7 %	businessman	1	0.2 %
buy and sell	10	2 %	sari-sari	13	3 %
Total:				97.5%	

From Table 8 we see that the varieties of occupations are slightly different from those presented for respondents in Table 7, however, these occupations still fall within the same five groupings. These groupings are: resource-users, traders, low-level unskilled workers, low-level government employees; and low-level white collar workers.

There is a high level of unemployment among the spouses of respondents, however not as high as for the respondents themselves: 26 percent compared to 34 percent.

Again, after resettlement the variety of occupations pursued does not change although the unemployment rate rises to 34 percent. Perhaps the post resettlement unemployment rate for this variable is lower than that of the respondents because this category is made up in large part by men, who are the traditional breadwinners and who must generate income.

As well, most jobs, apart from those in the government sector began to be plied within the camps. The results presented in Table 8 again speak to the marginal economic position of members of the sample population.

Access To Credit

From the descriptive statistics generated, we see that the average amount of credit available to the respondent was P 183 per month. However, the median response was none, which means that most respondents answered that they had no

access to credit facilities. The minimum amount of credit available was also zero and the maximum amount was P 7501. Because one respondent claimed such a high amount of available credit, many descriptive statistics such as kurtosis or skewness were not meaningful.

Most credit was accessed in small amounts from the local sari-sari stores, and only for use at that store, or from neighbours. The impact of this on traders and others is plain: these people could not expand their businesses and therefore continued to operate at the subsistence level. This lack of access to credit or other borrowing facilities is a further indication of the poverty and economic marginalisation endured by the respondents and their alienation from the mainstream.

Total Family Income Before and After Resettlement

Table 9: Pre-Resettlement Total Family Income and Post-Resettlement Total Family Income

average total family income before resettlement:	P 2402 per month
median total family income before resettlement:	P 1800 per month
68 % of the population (before resettlement):	between 0 and P 6054
95 % of the population (before resettlement):	between 0 and P 9706
minimum income (before resettlement):	0

maximum income (before resettlement): P 61000

average total family income after resettlement: P 1837 per month

median total family income after resettlement: P 1500 per month

68 % of the population (after resettlement): between 0 and P 4035

95 % of the population (after resettlement): between 0 and P 6433

minimum reported income (after resettlement): 0

maximum reported income (after resettlement): P 30666 per month

From the statistics presented in Table 9, we see that the average pre-resettlement total family income was P 2401.756 per month. The most frequently given response was P 1800 per month. Through the standard deviation we see that 68 percent of incomes fell between none and P 6054 per month; 95 percent of incomes fell between none and P 9706. The minimum reported income was 0 and the maximum reported income was P 61000. Because one respondent reported an unusually high income (P61000), the kurtosis and skewness showed that the incomes were skewed to the right.

From these statistics we see the average total family income after resettlement was P 1837 and the most frequently reported income was P 1500. From the standard deviation we see that 68 percent of the population had incomes between 0 and P4035 per month; 95 percent of the population had

incomes between 0 and P 6433 per month.

When converted into American dollars, we see that the average monthly income of the respondents was equal to \$96 and the median monthly income was equal to \$72. These figures are another indication of the economic marginalisation of the sample population. After resettlement the average monthly income fell to the equivalent of \$73 and the median monthly income fell to \$60. Thus resettlement had an obvious negative impact on the income level of the sample population. This decline in wages is tied to the fact that, after resettlement, most people became employed in the cash-poor camp economy which could not support them all. Still, the camp residents did not have many alternatives since they could not afford transportation costs to their former workplaces.

Aspects of Housing

Shelter Type

Table 10: Shelter Type

Shelter Type	#	%
temporary	307	77 %
semi-permanent	85	21 %
permanent	9	2 %
Total:		100 %

The majority of respondents reported living in temporary housing; in fact 307 respondents, or 77 percent,

lived in temporary housing. The results of the manipulations of this variable again speak to both the physical and economic marginality of the sample population. The physical marginality, reflected in the fact that such a large majority of respondents reported living in temporary housing, shows that these sorts of dwellings make them more vulnerable to natural disaster-like events such as flooding. The economic marginality of the population is reflected in the reality that they could not afford better, sturdier, more substantial housing.

Housing and Land Status

Table 11: Housing and Land Status

Housing Status	#	%
Squat	263	65 %
Rent	98	25 %
Own	36	9 %
Total:		99 %
Land Status	#	%
Squat	222	55 %
Rent	156	39 %
Own	19	5 %
Total:		99 %

From Table 11 we see that, in terms of housing, of the total respondents, 65 percent or 263 reported squatting. Of the rest, 98 or 24.3 percent reported renting and 36 or 8.9

percent reported owning their homes. Squatting is defined in this paper as living in a house or on land that the individuals neither own nor rent, assuming that no alternative arrangement has been made with the owner. Squatting in a home is clearly and indicator of economic marginality and vulnerability. This is especially true, in that squatters are under constant threat of being moved.

In terms of occupying the land, of the total respondents, 55 percent or 222 reported squatting. Of the rest, 156 or 38.6 percent reported renting. Nineteen or 4.7 percent reported owning the land their homes were built on. The majority of respondents reported squatting. In the context of land, this means they either lived on public land or private land, both of which have different implications. If the individuals were living on public land, they were either living on Forest Land, which would contribute to deforestation and leave them susceptible to landslides, or they were living on land officially recognised as 'high-risk' which would leave them exposed to dangers such as floods. If the individuals were squatting on private land, it was usually due to land hunger and the fact that since owners were not forced to submit to land reform, the squatters had literally nowhere else to go. This sort of land shortage can be attributed to the political and economic factors described in Chapter 4.

Quality of Life Indicators

Access to Health Care Before and After Resettlement

Table 12: Access to Health Care Before and After Resettlement

Access Before Resettlement	#	%
Yes	400	99.8 %
No	1	0.2 %
	Total:	100 %
Access After Resettlement	#	%
Yes	391	98 %
No	10	2 %
	Total:	100 %

Almost 100 percent of respondents (400) had access to health care before resettlement since health care is a government provided service in the Philippines. As well, the majority of respondents, 98 percent, did have access to the health care system after resettlement, although the numbers were down by almost 2 percent. Although respondents reported having 'access' that simply means that the respondent was able to go to the health clinic if such a trip was warranted. However, it does not mean that the individual was able to afford medicine, other treatment or transportation.

In the context of this variable and for the other variables

presented in this 'Quality of Life' section, access means that the respondent had the ability and opportunity to avail him or herself of various services if they were applicable.

Access to Education Before and After Resettlement

Table 13: Access to Education Before and After Resettlement

Access Before Resettlement	#	%
Yes	267	66.1 %
No	10	3 %
Does Not Apply	124	31 %
Total:		100 %
Access After Resettlement	#	%
Yes	233	58 %
No	32	8 %
Does Not Apply	136	34 %
Total:		100 %

Education is another service provided by the government and as Table 13 shows, the majority of respondents had access to education before resettlement. Only 2.5 percent of respondents reported that they were unable to access the educational system.

After resettlement the majority of respondents did retain access to the educational system. However 8 percent claimed they were unable to access the system. This decline

can be attributed to the cost of transportation and the cost of school supplies and school uniforms. On the whole, education is greatly valued among Filipinos so sacrifices would have been made to send children to school. On the other hand, while some respondents claimed to have access to education, their children were evident during the interviews.

Access to Sanitation Before and After Resettlement

Table 14: Access to Basic Sanitation Before and After Resettlement?

Access Before Resettlement	#	%
Yes	266	66 %
No	135	34 %
	Total:	100 %
Access After Resettlement	#	%
Yes	377	94 %
No	24	6 %
	Total:	100 %

Basic sanitation is defined as having access to clean drinking water and a functioning toilet. Using a common toilet or shared water facilities is considered as having access. As table 14 reveals, the majority of respondents, 66 percent, did have access to basic sanitation before

resettlement. However, this figure is not really very substantial considering the problems associated with the lack of these facilities, for example cholera and other diseases or intestinal parasites.

After resettlement, the percentage of respondents who gained access to basic sanitation rose dramatically to 94 percent. This can be explained by the fact that the houses in the camps were built to foreign NGO standards, which included toilets and shower facilities. In this regard, there was a definite improvement in the quality of life among the displaced population.

Access to Electricity Before and After Resettlement

Table 15: Access to Electricity Before and After Resettlement

Access Before Resettlement	#	%
Yes	226	56 %
No	175	44 %
	Total:	100 %
Access After Resettlement	#	%
Yes	62	15 %
No	339	85 %
	Total:	100 %

Although this variable is not central to the basic needs of the population, it does give an understanding of the lives of the respondents. Table 15 reveals that a small majority of respondents, 56 percent, had access to electricity before resettlement. This low level of electrification, especially in an urban setting, reinforces the portrait of poverty presented in this profile. After resettlement there was a definite drop in the level of electrification; in fact 84 percent of respondents reported that they did not have access to electricity. This is an indication of life in the resettlement camp: although basic needs are met, other slightly less essential desires are not.

Staple Food Before and After Resettlement

Table 16: Pre-Resettlement and Post-Resettlement Staple Food

Staple Food Before Resettlement	#	%
rice	286	72 %
corn	11	3 %
rice and corn combination	94 4	24 % 1 %
Total:		100 %
Staple Food After Resettlement	#	%
rice	292	73 %

corn	9	2 %
rice and corn	95	24 %
combination	4	1 %
Total:		100 %

Within Filipino cuisine, rice is the most common staple food. The consumption of corn, rice and corn mix, or a combination of rootcrops, rice and corn are rarer and signify extreme poverty. As table 16 shows, the majority of respondents, 72 percent, reported rice as their staple food before resettlement. However, this still indicates that 28 percent of the sample population was eating rice and corn, corn, or some other combination before resettlement.

Most respondents, 73 percent, reported that their post-resettlement staple food was rice. Considering the plunging of incomes after resettlement, it would seem plausible that more people would turn to eating corn. However, this was not the case, and can be explained, at least in part, by the fact that rice was donated in large quantities as aid. As well rice was the chosen form of payment in many food-for-work schemes.

Fuel Source Before and After Resettlement

Table 17: Pre-Resettlement and Post-Resettlement Fuel Source

Fuel Source Before Resettlement	#	%
------------------------------------	---	---

buy wood	185	46 %
collect wood	46	11 %
gas	64	16 %
buy and collect wood	50	12 %
combination	37	9 %
Total:		94 %
Fuel Source After Resettlement	#	%
buy wood	163	41 %
collect wood	38	9 %
gas	95	24 %
buy and collect wood	29	7 %
combination	47	12 %
Total:		93 %

As shown in Table 17, the majority of respondents, 73 percent, reported buying wood as their primary fuel source before resettlement. This excessive use of wood has serious implications for the environment, especially in terms of deforestation and is tied to the ecological factors described in Chapter 4. After resettlement, most respondents again reported buying wood as their primary fuel source although the percentage fell to 57 percent. There are several possible reasons for this: first, the use of gas stoves was promoted by aid workers in the camps; second, gas was donated as aid; third, after the disaster a heightened awareness of the consequences of deforestation was born.

Results of the Disaster**Family Members Killed****Table 18: Family Members Killed**

average number of family members killed:	0.4
median number of family members killed:	0
68 % of the population:	0 to 1
95 % of the population:	0 to 2
minimum number:	0
maximum number:	8

From the statistics presented in Table 18 we see that most families surveyed did not lose any family members to the disaster. Since many people were killed, it can be assumed that entire families were wiped out. The standard deviation shows that 68 percent of families lost between 0 and 1 family members, 95 percent lost between 0 and 2 family members. The minimum number of family members killed during the disaster was 0, while the maximum was 8.

Did You Receive Government Compensation if Any of Your Family Members Were Killed ?

This variable was based on the question: "Did you receive government compensation if any of your family members were killed during the disaster ?". Most people had not lost family members. Of those to whom this question was

applicable, 84 said yes, and only 1 said no.

Aid ?

Most respondents, 351, or 88 percent, reported receiving aid from some official source while living in the resettlement camps. Only 50 respondents, or 12 percent, reported not receiving any official assistance.

Status: Do You Plan To Remain In Or Leave The Camp ?

Table 19: Do You Plan To Remain In Or Leave The Resettlement Camp?

Status	#	%
remain	347	87 %
leave	35	9 %
unsure	19	4 %
Total:		100 %

From Table 19, it can be seen that the majority of respondents, 87 percent, planned to remain in the resettlement camps. Even though the economic situation in the camps was wretched, the residents were given ownership of their homes and the land they were built on for their lifetimes. This means that they were unable to sell their homes, but they had the right to live in them and bequeath them to their children.

Summary of Univariate Data

Sex	288 women (72 %), 112 men (28%)
Age	average 38, median 36, 95 % between the ages of 12 and 64
Civil Status	87 % married
Age of Spouse	average 33 1/2, median 35, 95 % between 1 1/2 and 65 1/2
Number of Children	average 3.5, median 3, 95 % had between 0 and eight children
Religion	predominately Catholic
Ethnic Group	predominately Ormocano
Educational Level	grade 7
Spouse's Educational Level	grade 6
Credit	average P 183 / per month median: 0
Total Income	average P 2402/ per month median P 1800
Shelter Type	77 % live in temporary (semi-disposable) housing
House Status	majority (65 %) squat
Land Status	majority (55 %) squat
Pre-resettlement access to health care	99.8 % had access to health care
Pre-resettlement access to education	66.1 % had access to education
Pre-resettlement access to sanitation	66 % had access to sanitation
Pre-resettlement access to electricity	56 % had access to electricity
Pre-resettlement staple food	predominately rice
Pre-resettlement fuel source	predominately buying wood

Post-resettlement total income	average P 1837, median P 1500
Post-resettlement access to education	57.7 % had access to education
Post-resettlement access to health care	98 % had access to health care
Post-resettlement access to sanitation	94 % had access to sanitation
Post-resettlement access to electricity	85 % did not have access to electricity
Post-resettlement fuel source	41 % buy wood
Post-resettlement staple food	73 % eat rice
Status	87 % plan to remain
Family Members Killed	average 0.4; median 0
Government Compensation	99 % received compensation
Aid ?	88 % received aid

Bivariate Data: Crosstabulations

For the previous section, descriptive statistics were generated for most of the variables constructed from data collected in the resettlement camps of Ormoc City, Leyte, the Philippines. For this section, certain variables were selected for crosstabulation. These crosstabulations can be separated into four categories: those run against age; those run against sex; those run against income; and those run against shelter type. These crosstabulations were generated in order to gain further insight into the diversity of the sample population.

Age

The variables Pre-Resettlement Occupation, Pre-Resettlement Occupation of Spouse, Post-Resettlement Occupation, and Post-Resettlement Occupation of Spouse were crosstabulated against Age to determine whether different age groups were clustered into separate occupation. For these crosstabulations, the variable 'Age' was collapsed into five categories: 15 to 25 years old, 26 to 35 years old, 36 to 45 years old, 46 to 60 years old, and 61 to 100 years old. The following four tables show the results of these crosstabulations.

Table 20: Pre-Resettlement Occupation of Respondents by Age

Age Group	Occupation	#	%	Total
-----------	------------	---	---	-------

15 to 25	unemployed	41	10 %	60 (15%)
	tuba maker	1	0.2 %	
	fish vendor	1	0.2 %	
	laundrywoman	3	0.7 %	
	beautician	1	0.2 %	
	vendor	3	0.7 %	
	matmaker	1	0.2 %	
	sari-sari	7	0.3 %	
	salesgirl	1	0.2 %	
	student	1	0.2 %	
Age Group	Occupation	#	%	Total
26 to 35	unemployed	52	13 %	121 (30%)
	labourer	8	2 %	
	mechanic	1	0.2 %	
	driver	1	0.2 %	
	projector operator	1	0.2 %	
	mason	2	0.5 %	
	barber	1	0.2 %	
	welder	1	0.2 %	
	jeweller	1	0.2 %	
	teacher	1	0.2 %	
	bus dispatcher	1	0.2 %	
	salesclerk	3	0.7 %	
	security guard	3	0.7 %	
	fish vendor	4	1 %	
	laundrywoman	9	2 %	
	beautician	1	0.2 %	
	vendor	13	3 %	
	buy and sell	2	5 %	

	sari-sari	10	2 %	
	painter	1	0.2 %	
	babysitter	1	0.2 %	
	nipa maker	1	0.2 %	
	government employee	1	0.2 %	
	messenger	1	0.2 %	
	helper	1	0.2 %	
Age Group	Occupation	#	%	Total
36 to 45	unemployed	29	7 %	121 (30%)
	raised pigs	3	0.7 %	
	labourer	10	2 %	
	tailor	7	1.7 %	
	mechanic	1	0.2 %	
	carpenter	4	0.5 %	
	driver	4	0.5 %	
	mason	1	0.2 %	
	beautician	1	0.2 %	
	buy and sell	3	0.7 %	
	gambler	1	0.2 %	
	nipa maker	1	0.2 %	
	watchman	1	0.2 %	
	policeman	1	0.2 %	
	jeepney conductor	1	0.2 %	
	porter	1	0.2 %	
	surveyor	1	0.2 %	
	foreman	1	0.2 %	
	sugarmill operator	1	0.2 %	
	welder	1	0.2 %	
	cook	2	0.5 %	

	vulcaniser	1	0.2 %	
	fish vendor	6	1 %	
	laundrywoman	8	2 %	
	vendor	9	2 %	
	sari-sari	14	3 %	
	babysitter	2	0.5 %	
	collector	1	0.2 %	
	barangay official	1	0.2 %	
	teacher	1	0.2 %	
	private employee	1	0.2 %	
	NFA retailer	1	0.2 %	
	contractor	1	0.2 %	
Age Group 46 to 60	Occupation	#	%	Total
	unemployed	7	2 %	70 (17%)
	raised pigs	1	0.2 %	
	gardener	1	0.2 %	
	tailor	1	0.2 %	
	driver	1	0.2 %	
	foreman	1	0.2 %	
	laundrywoman	8	2 %	
	vendor	13	3 %	
	sari-sari	13	3 %	
	government employee	2	0.5 %	
	security guard	1	0.2 %	
	fisher	1	0.2 %	
	labourer	4	1 %	
	farmer	1	0.2 %	
	carpenter	4	1 %	
	mason	1	0.2 %	

	fish vendor	1	0.2 %	
	beautician	1	0.2 %	
	buy and sell	5	1 %	
	policeman	1	0.2 %	
	teacher	1	0.2 %	
	pensioner	1	0.2 %	
Age Group	Occupation	#	%	Total
61 to 100	unemployed	8	2 %	25 (6%)
	labourer	2	0.5 %	
	mechanic	1	0.2 %	
	matmaker	1	0.2 %	
	buy and sell	2	0.5 %	
	pensioner	1	0.2 %	
	fisher	1	0.2 %	
	farmer	1	0.2 %	
	port engineer	1	0.2 %	
	vendor	3	0.7 %	
	sari-sari	4	1 %	
		Total:	98 %	

Table 21: Occupation of Spouse by Age

Age Group	Occupation	#	%	Total
15 to 25	unemployed	8	2 %	61 (15%)
	labourer	12	3 %	
	farmer	1	0.2 %	
	mechanic	1	0.2 %	
	driver	4	1 %	
	welder	2	0.5 %	
	electrician	1	0.2 %	

	autobody builder	4	1 %	
	vendor	3	0.7 %	
	sari-sari	1	0.2 %	
	government employee	1	0.2 %	
	NAWASA employee	1	0.2 %	
	private employee	2	0.5 %	
	porter	1	0.2 %	
	pumpboy	1	0.2 %	
	businessman	1	0.2 %	
	security guard	1	0.2 %	
	raised pigs	1	0.2 %	
	gardener	1	0.2 %	
	slaughterer	1	0.2 %	
	carpenter	1	0.2 %	
	sugarmill operator	1	0.2 %	
	cook	1	0.2 %	
	shoemaker	1	0.2 %	
	fish vendor	1	0.2 %	
	buy and sell	1	0.2 %	
	nipa maker	1	0.2 %	
	teacher	1	0.2 %	
	jeepney conductor	1	0.2 %	
	salesclerk	1	0.2 %	
	bus conductor	1	0.2 %	
	factory worker	1	0.2 %	
	cafegu	1	0.2 %	
Age Group	Occupation	#	%	Total
26 to 35	unemployed	16	4 %	116
	fisher	1	0.2 %	(29 %)

farmer	2	0.5 %
carpenter	7	2 %
mason	2	0.5 %
sugarmill operator	1	0.2 %
cook	3	0.7 %
utilityman	1	0.2 %
laundrywoman	2	0.5 %
buy and sell	3	0.7 %
painter	1	0.2 %
nipa maker	1	0.2 %
raised pigs	1	0.2 %
labourer	23	6 %
cocowood cutter	1	0.2 %
driver	9	2 %
foreman	1	0.2 %
port engineer	1	0.2 %
technician	2	0.5 %
makes tuba	2	0.5 %
vendor	10	2 %
sari-sari	4	1 %
gambler	1	0.2 %
latero	2	0.5 %
security guard	3	0.7 %
accounting clerk	1	0.2 %
secretary	1	0.2 %
coke retailer	1	0.2 %
messenger	1	0.2 %
private employee	1	0.2 %
salesclerk	1	0.2 %
helper	5	1 %

	porter	2	0.5 %	
	construction worker	1	0.2 %	
	deliveryman	1	0.2 %	
Age Group	Occupation	#	%	Total
36 to 45	unemployed	17	4 %	109 (27%)
	labourer	16	4 %	
	tailor	4	1 %	
	carpenter	4	1 %	
	mason	1	0.2 %	
	sugarmill operator	2	0.5 %	
	electrician	1	0.2 %	
	fish vendor	2	0.5 %	
	beautician	3	0.7 %	
	buy and sell	3	0.7 %	
	gambler	1	0.2 %	
	barangay official	1	0.2 %	
	PNOC employee	1	0.2 %	
	bus dispatcher	1	0.2 %	
	porter	1	0.2 %	
	bookkeeper	1	0.2 %	
	security guard	4	1 %	
	NGO employee	1	0.2 %	
	fisher	2	0.5 %	
	farmer	2	0.5 %	
	mechanic	1	0.2 %	
	driver	10	2 %	
	foreman	3	0.7 %	
	welder	2	0.5 %	
	butcher	2	0.5 %	

	laundrywoman	3	0.7 %	
	vendor	10	2 %	
	sari-sari	3	0.7 %	
	crab trap maker	1	0.2 %	
	teacher	1	0.2 %	
	jeepney conductor	2	0.5 %	
	private employee	2	0.5 %	
	tupperware dealer	1	0.2 %	
	HEDECO employee	2	0.5 %	
	musician	1	0.2 %	
Age Group	Occupation	#	%	Total
46 to 60	unemployed	8	2 %	55 (14%)
	labourer	9	2 %	
	farmer	2	0.5 %	
	mechanic	1	0.2 %	
	driver	3	0.7 %	
	barber	1	0.2 %	
	chemist	1	0.2 %	
	laundrywoman	2	0.5 %	
	buy and sell	2	0.5 %	
	canteen owner	1	0.2 %	
	raised pigs	1	0.2 %	
	gardener	1	0.2 %	
	tailor	2	0.5 %	
	carpenter	4	1 %	
	projector operator	1	0.2 %	
	electrician	1	0.2 %	
	fish vendor	1	0.2 %	
	vendor	4	1 %	
	sari-sari	4	1 %	

	paper bag maker	1	0.2 %	
	government employee	1	0.2 %	
	teacher	1	0.2 %	
	private employee	1	0.2 %	
	porter	1	0.2 %	
	security guard	1	0.2 %	
Age Group	Occupation	#	%	Total
61 to 100	unemployed	1	0.2 %	12 (3%)
	farmer	1	0.2 %	
	vendor	5	1 %	
	teacher	1	0.2 %	
	mason	1	0.2 %	
	fish vendor	1	0.2 %	
	buy and sell	1	0.2 %	
	healer	1	0.2 %	
	Total: 88 %			

Table 22: Post-Resettlement Occupation by Age

Age Group	Occupation	#	%	Total
15 to 25	unemployed	48	12 %	61 (15%)
	makes tuba	1	0.2 %	
	beautician	1	0.2 %	
	sari-sari	6	1 %	
	carpenter	1	0.2 %	
	laundrywoman	1	0.2 %	
	vendor	2	0.5 %	
	helper	1	0.2 %	
Age Group	Occupation	#	%	Total

26 to 35	unemployed	73	18 %	122 (30%)
	labourer	4	1 %	
	carpenter	1	0.2 %	
	driver	2	0.5 %	
	projector operator	1	0.2 %	
	beautician	1	0.2 %	
	buy and sell	2	0.5 %	
	painter	1	0.2 %	
	government employee	1	0.2 %	
	bus dispatcher	1	0.2 %	
	helper	2	0.5 %	
	mason	1	0.2 %	
	jeweller	1	0.2 %	
	fish vendor	2	0.5 %	
	laundrywoman	4	1 %	
	matmaker	1	0.2 %	
	vendor	6	1 %	
	sari-sari	13	3 %	
	nipa maker	1	0.2 %	
	teacher	1	0.2 %	
	messenger	1	0.2 %	
	security guard	2	0.5 %	
Age Group	Occupation	#	%	Total
36 to 45	unemployed	58	14 %	122 (30%)
	raised pigs	1	0.2 %	
	labourer	8	2 %	
	tailor	8	2 %	
	carpenter	3	0.7 %	
	driver	4	1 %	

	mason	1	0.2 %	
	surveyor	1	0.2 %	
	sugarmill operator	1	0.2 %	
	welder	2	0.5 %	
	security guard	1	0.2 %	
	fish vendor	2	0.5 %	
	laundrywoman	3	0.7 %	
	vendor	3	0.7 %	
	barangay official	1	0.2 %	
	policeman	1	0.2 %	
	teacher	1	0.2 %	
	jeepney conductor	1	0.2 %	
	helper	2	0.5 %	
	porter	1	0.2 %	
	cafgu	1	0.2 %	
	buy and sell	2	0.5 %	
	sari-sari	16	4 %	
	babysitter	1	0.2 %	
	watchman	1	0.2 %	
Age Group	Occupation	#	%	Total
46 to 60	unemployed	36	9 %	70 (18%)
	tailor	1	0.2 %	
	laundrywoman	5	1 %	
	buy and sell	2	0.5 %	
	policeman	1	0.2 %	
	pensioner	1	0.2 %	
	raised pigs	1	0.2 %	
	carpenter	2	0.5 %	
	beautician	1	0.2 %	
	sari-sari	7	2 %	

	teacher	1	0.2 %	
	labourer	2	0.5 %	
	foreman	1	0.2 %	
	vendor	5	1 %	
	babysitter	2	0.5 %	
	security guard	1	0.2 %	
Age Group	Occupation	#	%	Total
61 to 100	unemployed	17	4 %	25 (6%)
	raised pigs	1	0.2 %	
	babysitter	1	0.2 %	
	mechanic	1	0.2 %	
	matmaker	1	0.2 %	
	pensioner	1	0.2 %	
	vendor	5	1 %	
	sari-sari	1	0.2 %	
	Total:		99.7 %	

Table 23: Post-Resettlement Occupation of Spouse

Age Group	Occupation	#	%	Total
15 to 25	unemployed	10	2 %	61 (15%)
	labourer	12	3 %	
	gardener	1	0.2 %	
	cook	1	0.2 %	
	fish vendor	1	0.2 %	
	nipa maker	1	0.2 %	
	jeepney conductor	1	0.2 %	
	porter	1	0.2 %	
	businessman	1	0.2 %	
	slaughterer	1	0.2 %	

mechanic	1	0.2 %
carpenter	2	0.5 %
shoemaker	1	0.2 %
vendor	4	1 %
government employee	1	0.2 %
messenger	1	0.2 %
pumpboy	1	0.2 %
security guard	2	0.5 %
driver	4	1 %
sugarmill operator	1	0.2 %
welder	2	0.5 %
autobody builder	4	1 %
sari-sari	1	0.2 %
teacher	1	0.2 %
private employee	2	0.5 %
factory worker	1	0.2 %
cafegu	1	0.2 %

Age Group	Occupation	#	%	Total
26 to 35	unemployed	28	7 %	122
	labourer	21	5 %	(30%)
	farmer	2	0.5 %	
	cocowood cutter	1	0.2 %	
	carpenter	7	2 %	
	driver	8	2 %	
	mason	2	0.5 %	
	foreman	1	0.2 %	
	sugarmill operator	2	0.5 %	
	port engineer	1	0.2 %	
	cook	2	0.5 %	

	electrician	1	0.2 %	
	technician	1	0.2 %	
	utilityman	1	0.2 %	
	makes tuba	1	0.2 %	
	fish vendor	1	0.2 %	
	laundrywoman	1	0.2 %	
	vendor	9	2 %	
	buy and sell	3	0.7 %	
	sari-sari	3	0.7 %	
	babysitter	1	0.2 %	
	nipa maker	1	0.2 %	
	latero	1	0.2 %	
	messenger	1	0.2 %	
	private employee	1	0.2 %	
	helper	6	1 %	
	porter	2	0.5 %	
	deliveryman	1	0.2 %	
	secretary	1	0.2 %	
	accounting clerk	1	0.2 %	
	security guard	2	0.5 %	
Age Group	Occupation	#	%	Total
36 to 45	unemployed	27	7 %	122
				(30%)
	tailor	4	1 %	
	driver	6	1.5 %	
	sugarmill operator	2	0.5 %	
	butcher	2	0.5 %	
	beautician	2	0.5 %	
	sari-sari	6	1.5 %	
	barangay official	1	0.2 %	
	private employee	2	0.5 %	

	security guard	4	1 %	
	fisher	2	0.5 %	
	mechanic	1	0.2 %	
	mason	1	0.2 %	
	welder	2	0.5 %	
	fish vendor	1	0.2 %	
	vendor	11	3 %	
	gambler	1	0.2 %	
	teacher	2	0.5 %	
	porter	1	0.2 %	
	musician	1	0.2 %	
	labourer	14	3 %	
	carpenter	7	2 %	
	foreman	1	0.2 %	
	electrician	1	0.2 %	
	laundrywoman	2	0.5 %	
	buy and sell	3	0.7 %	
	crab trap maker	1	0.2 %	
	PNOC employee	1	0.2 %	
	HEDECO employee	1	0.2 %	
Age Group	Occupation	#	%	Total
46 to 60	unemployed	18	4 %	70
	labourer	5	1 %	(18%)
	gardener	1	0.2 %	
	sugarmill operator	1	0.2 %	
	fish vendor	1	0.2 %	
	buy and sell	2	0.5 %	
	teacher	1	0.2 %	
	security guard	1	0.2 %	
	farmer	2	0.5 %	

	tailor	1	0.2 %	
	mechanic	1	0.2 %	
	barber	1	0.2 %	
	laundrywoman	2	0.5 %	
	sari-sari	3	0.7 %	
	private employee	1	0.2 %	
	pensioner	1	0.2 %	
	carpenter	4	1 %	
	driver	2	0.5 %	
	mason	1	0.2 %	
	electrician	1	0.2 %	
	vendor	2	0.5 %	
	government employee	1	0.2 %	
	porter	1	0.2 %	
Age Group	Occupation	#	%	Total
61 to 100	unemployed	5	1 %	25 (6%)
	fish vendor	1	0.2 %	
	teacher	1	0.2 %	
	farmer	1	0.2 %	
	vendor	2	0.5 %	
	carpenter	1	0.2 %	
	buy and sell	1	0.2 %	
	Total: 99.7 %			

From these tables, it can be seen that there is a homogeneity of occupations across age lines. Although there are several teacher and policemen in the sample, most respondents reported other, more marginal, occupations. It

must be noted that within the Filipino economic structure, neither teacher nor policeman is a well paid profession. Most respondents, across age lines, report occupations typically viewed as those of the urban poor. From these tables it can be seen that there is no significant difference in occupation by age group. All age groups in this population of environmental refugees are clustered in low-skill (or no skill) low technology, low income semi-urban occupations. Finally, there is no change in occupations before and after resettlement; many more respondents being unemployed, and individuals have changed jobs but the actual range of occupations does not change.

Sex

The following variables were crosstabulated against Sex to investigate differences based on gender: Occupation, Occupation of Spouse, Shelter, Educational Level, Educational Level of Spouse. 180

Occupation by Sex, Occupation of Spouse by Sex

The first crosstabulations performed in this section were Occupation by Sex and Occupation of Spouse by Sex. These manipulations were performed in order to establish whether or not there was a difference in occupations due to gender. Through these crosstabulations it was established that there were definite differences based on the

traditional sexual division of labour¹⁸¹. For example, many women held jobs in the low-skilled, low income informal sector. These women were employed as vendors or laundrywomen. Others ran small convenience stores known as 'sari-sari' stores. On the other hand, many men held jobs as labourers, carpenters and drivers. Furthermore far more women than men reported being unemployed; the breakdown of unemployed women was 168 while it was 19 for men. However, it is interesting to note that after resettlement the level of unemployment remained constant for men, at 5 percent, while the unemployment rate for women dropped from 45 percent to 39 percent. The results of these crosstabulations are presented in the following tables.

Table 24: Occupation by Sex

Occupation	men	%	women	%	Occupation	men	%	women	%
unemployed	6	5	131	45	projector operator	1	0.9	0	0
vulcaniser	0	0	1	0.3	raised pigs	0	0	4	1
mason	4	4	0	0	makes tuba	1	0.9	0	0
fisher	2	2	0	0	surveyor	1	0.9	0	0
fish vendor	3	3	9	3	labourer	23	21	1	1
foreman	2	2	0	0	laundrywoman	0	0	28	10
gardener	0	0	1	0.3	sugarmill operator	1	0.9	0	0

matmaker	0	0	1	0.3	farmer	0	0	2	0.7
barber	1	0.9	0	0	beautician	1	0.9	3	1
tailor	3	3	5	2	port engineer	1	0.9	0	0
vendor	7	6	34	12	mechanic	3	3	0	0
welder	2	2	0	0	buy and sell	7	6	5	2
carpenter	8	7	0	0	jeweller	1	0.9	0	0
sari-sari	5	4	43	15	driver	5	4	1	0.3
cook	0	0	2	0.7	painter	0	0	1	0.3
gambler	1	0.9	0	0	babysitter	0	0	3	1
nipa maker	0	0	2	0.7	collector	0	0	1	0.3
watchman	1	0.9	0	0	barangay official	1	0.9	0	0
policeman	2	2	0	0	government employee	3	3	0	0
teacher	0	0	3	1	jeepney conductor	1	0.9	0	0
bus dispatcher	1	0.9	0	0	messenger	1	0.9	0	0
private employee	0	0	1	0.3	salesclerk	0	0	4	1
helper	1	0.9	0	0	porter	1	0.9	0	0
NFA retailer	1	0.9	0	0	contractor	1	0.9	0	0
CAFGU	1	0.9	0	0	security guard	4	4	0	0
pensioner	2	2	0	0	student	0	0	2	0.7

Table 25: Occupation of Spouse by Sex

Occupation	men	%	women	%	Occupation	men	%	women	%
			-en					-en	

unemployed	13	5	37	39	raised pigs	1	0.3	2	2
fisher	3	1	0	0	labourer	60	23	0	0
gardener	2	0.7	0	0	farmer	8	3	0	0
cocowood cutter	1	0.3	0	0	slaughter- er	1	0.3	0	0
tailor	4	1.5	2	2	mechanic	3	3	0	0
carpenter	16	6	0	0	driver	25	10	1	1
projector operator	1	0.3	0	0	mason	4	1.5	0	0
foreman	4	1.5	0	0	sugarmill operator	4	1.5	0	0
barber	1	0.3	0	0	port engineer	1	0.3	0	0
welder	4	1.5	0	0	cook	3	1	1	1
elect- rician	3	1	0	0	chemist	1	0.3	0	0
technician	2	0.7	0	0	butcher	2	0.7	0	0
shoemaker	1	0.3	0	0	autobody builder	4	1.5	0	0
utilityman	0	0	1	1	makes tuba	2	0.7	0	0
latero	2	0.7	0	0	bus dispatcher	1	0.3	0	0
fish vendor	1	0.3	4	4	canteen owner	0	0	1	1
messenger	1	0.3	0	0	laundry- woman	0	0	7	7
makes paper bags	0	0	1	1	private employee	6	2.3	0	0
beautician	0	0	3	3	crab trap maker	1	0.3	0	0
salesclerk	1	0.3	1	1	vendor	14	5	18	19
barangay official	0	0	1	1	helper	5	2	0	0
buy and sell	8	3	2	2	government employee	2	0.7	0	0

porter	5	2	0	0	sari-sari	4	1.5	8	8
teacher	1	0.3	3	3	construction worker	1	0.3	0	0
painter	1	0.3	0	0	PNOC employee	1	0.3	0	0
delivery-man	1	0.3	0	0	gambler	2	0.7	0	0
NAWASA employee	1	0.3	0	0	bus conductor	1	0.3	0	0
nipa maker	2	0.7	0	0	jeepney conductor	3	1	0	0
pumpboy	1	0.3	0	0	factory worker	1	0.3	0	0
tupperware dealer	0	0	1	1	business-man	1	0.3	0	0
coke retailer	1	0.3	0	0	bookkeeper	0	0	1	1
secretary	0	0	1	1	HEDECO employee	2	0.7	0	0
accounting clerk	1	0.3	0	0	CAFGU	1	0.3	0	0
security guard	9	3	0	0	healer	1	0.3	0	0
musician	1	0.3	0	0	NGO employee	1	0.3	0	0

Sex by Shelter Type

Table 26: Sex by Shelter Type

Shelter Type	men	women
temporary	66%	80%
semi-permanent	30%	18%
permanent	4%	2%

This crosstabulation was generated to establish whether

there was a difference in the number of men and women who lived in temporary, semi-permanent and permanent housing before the flood. From the above table, it is apparent that there was a significant difference. While controlling for the fact that there were more than twice the amount of women than men in the initial survey, there is still a larger amount of women (80 percent of women compared to 66 percent of men) who reported living in temporary housing. Furthermore, again keeping the sexual imbalance in mind, the numbers for those living in semi-permanent and permanent housing show that more men than women reported renting (30 percent to 18 percent) and owning (4 percent to 2 percent).

Educational Level By Sex and Educational Level of Spouse by Sex

Table 27: Educational Level by Sex

Educational Level	men	%	women	%
no schooling	1	1	8	3
elementary school				
grade 1	4	4	2	0.7
grade 2	5	5	7	2
grade 3	3	3	9	3
grade 4	5	5	27	9
grade 5	3	3	25	8
grade 6	22	19	78	26
high school				
grade 7	6	5	20	6

grade 8	11	10	31	10
grade 9	9	8	14	5
grade 10	25	21	35	11
1st year college	6	5	7	2
2nd year college	3	3	11	4
3rd year college	4	4	8	3
graduated college	4	4	14	5

Table 28: Educational Level of Spouse

Educational Level	men	%	women	%
no schooling	4	4	3	1
elementary school				
grade 1	1	1	5	2
grade 2	1	1	12	5
grade 3	6	6	14	5
grade 4	7	7	21	8
grade 5	4	4	17	6
grade 6	23	24	71	27
high school				
grade 7	7	7	11	4
grade 8	7	7	25	9
grade 9	4	4	16	6
grade 10	18	19	44	17
1st year college	1	1	5	2
2nd year college	7	7	6	2
3rd year college	0	0	3	1
graduated college	7	7	11	4

From both Table 29 and Table 30, gender based themes emerge. Although the general curve of both tables is

similar, there are also differences. The following is an analysis of educational level of respondent by sex. Although the percentages are low, more women than men have no education; in grades 1 and 2 there are more boys than girls. In grade 3, both sexes are represented equally, however in grades 4 to 6 there are more girls. In high school, grades 7 through 10, there are more boys than girls. In the first year of college there are more boys than girls, while through the rest of college the ratio is even.

According to these numbers, more boys than girls are sent to school but are removed through elementary school, perhaps for work purposes. Perhaps parents feel that girls only need an elementary school education because their numbers decline through high school. Alternatively, maybe these girls drop out to get married or have children. In terms of college, more men enrol but the numbers of men and women even out after the first year.

Table 30 shows some differences from Table 29. First, it shows that more boys than girls have no education (4 percent to 1 percent). Throughout the rest of the educational progression, girls and boys are relatively equally represented. However, there are four exceptions to this: in grade 2 there are more girls than boys (5 percent to 1 percent); in grade 7 there are more boys (7 percent to 4 percent); in second year of college there are more boys (7 percent to 2 percent); and for those who graduated from

college there were more boys (7 percent to 4 percent). Generally, this table shows there are more girls than boys earlier in the educational progression and more boys at the more advanced levels.

Income

The following two crosstabulations focus on total family income. The crosstabulations are: Occupation by Total Income and Total Income by Occupation².

Occupation by Total Income

Table 29: Occupation by Total Income

Occupation	0 to P1500	P1501 to P3000	P3001 to P5000	P5001 to P10000	P10001 to P61000
unemployed	19%	13%	2%	0.2%	0.2%
raised pigs	0.2%	0.7%	0%	0%	0%
fisher	0.4%	0.7%	0%	0%	0%
labourer	2%	0%	0%	0%	0%
gardener	0.2%	0%	0%	0%	0%
farmer	0.2%	0.2%	0%	0%	0%
tailor	0.7%	0.5%	0.7%	0%	0%
mechanic	0.2%	0.5%	0%	0%	0%
carpenter	1%	1%	0%	0%	0%
driver	0.5%	0.7%	0.2%	0%	0%
projector operator	0.2%	0%	0%	0%	0%
mason	0.2%	0.2%	0.5%	0%	0%
surveyor	0%	0%	0%	0.2%	0%

foreman	0%	0%	0.2%	0.2%	0%
sugarmill operator	0%	0.2%	0%	0%	0%
barber	0.2%	0%	0%	0%	0%
port engineer	0%	0%	0.2%	0%	0%
welder	0.2%	0%	0.2%	0%	0%
jeweller	0%	0.2%	0%	0%	0%
cook	0.2%	0.2%	0%	0%	0%
vulcaniser	0%	0%	0%	0%	0.2%
makes tuba	0.2%	0%	0%	0%	0%
fish vendor	1%	1%	0.2%	0%	0%
laundrywoman	3%	2%	0.7%	0%	0.2%
matmaker	0.2%	0%	0%	0%	0%
beautician	0.2%	0.5%	0.2%	0%	0%
vendor	3%	3%	3%	0.2%	0%
buy and sell	1%	0.5%	0.5%	0.7%	0%
sari-sari painter	3%	4%	3%	1%	0.7%
	0.2%	0%	0%	0%	0%
gambler	0%	0.2%	0%	0%	0%
babysitter	0%	0.7%	0%	0%	0%
nipamaker	0%	0%	0.2%	0.2%	0%
collector	0%	0%	0%	0.2%	0%
watchman	0%	0.2%	0%	0%	0%
barangay official	0%	0.2%	0%	0%	0%
policeman	0%	0.2%	0.2%	0%	0%
government employee	0.2%	0.5%	0%	0%	0%
teacher	0%	0%	0.5%	0.2%	0%
jeepney conductor	0.2%	0%	0%	0%	0%

bus dispatcher	0.2%	0%	0%	0%	0%
messenger	0%	0.2%	0%	0%	0%
private employee salesclerk	0%	0%	0.2%	0%	0%
helper	0.2%	0.5%	0.2%	0%	0%
porter	0%	0.2%	0%	0%	0%
NFA retailer contractor	0%	0.2%	0%	0%	0%
CAFGU	0.2%	0%	0%	0%	0%
security guard pensioner	0%	0.5%	0.5%	0%	0%
student	0.5%	0%	0%	0%	0%
	0.2%	0.2%	0%	0%	0%
	total: 56% (217)	total: 33% (130)	total: 8% (31)	total: 2% (8)	total: 1% (4)

Table 36 attempts to illustrate the income levels associated with the occupations reported by respondents. As is obvious from the table and from earlier discussion, regardless of occupation most respondents, 78 percent, fell into the P0 to P 1500 or P 1501 to P 3000 categories.

Post-Resettlement Occupation by Total Post-Resettlement Income

Table 30: Occupation2 by Total Income2

Occupation	0 to P1500	P1501 to P3000	P3001 to P5000	P5001 to P10000	P10000 to P61000
------------	---------------	-------------------	-------------------	--------------------	------------------------

unemployed	36%	20%	3%	0.2%	0.2%
raised pigs	0.5%	0.2%	0%	0%	0%
labourer	2%	1%	0%	0%	0%
tailor	1%	0.7%	0%	0%	0%
mechanic	0%	0.2%	0%	0%	0%
carpenter	1%	0.5%	0.2%	0%	0%
driver	1%	0%	0.2%	0%	0%
projector operator	0.2%	0%	0%	0%	0%
mason	0%	0.5%	0%	0.2%	0%
surveyor	0%	0%	0%	0.2%	0%
foreman	0%	0%	0.2%	0%	0%
sugarmill operator	0%	0%	0.2%	0%	0%
welder	0.2%	0.2%	0%	0%	0%
jeweller	0%	0.2%	0%	0%	0%
makes tuba	0.2%	0%	0%	0%	0%
fish vendor	0.7%	0.2%	0%	0%	0%
laundrywoman	3%	0.5%	0%	0%	0%
matmaker	0.5%	0%	0%	0%	0%
beautician	0.2%	0.5%	0%	0%	0%
vendor	3%	2%	0.5%	0%	0%
buy and sell	0.7%	0.5%	0.2%	0%	0%
sari-sari	4%	3%	2%	1%	0.5%
painter	0%	0.2%	0%	0%	0%
babysitter	1%	0%	0%	0%	0%
watchman	0%	0.2%	0%	0%	0%
barangay official	0.2%	0%	0%	0%	0%
policeman	0%	0.2%	0.2%	0%	0%
government employee	0%	0.2%	0%	0%	0%

teacher	0%	0.2%	0.2%	0.2%	0%
jeepney conductor	0.2%	0%	0%	0%	0%
bus dispatcher	0.2%	0%	0%	0%	0%
messenger	0%	0.2%	0%	0%	0%
helper	0.7%	0.2%	0%	0%	0.2%
porter	0%	0.5%	0.5%	0%	0%
CAFGU security guard	0.2% 0%	0% 0.5%	0% 0.5%	0% 0%	0% 0%
pensioner	0.5%	0%	0%	0%	0%
	total: 56% (217)	total: 33% (130)	total: 8% (31)	total: 2% (8)	total: 1% (4)

As with the previous crosstabulation summarised in Table 36, this manipulation attempts to show the income levels of respondents in conjunction with their reported occupations. Table 37 shows that most respondents, 89 percent, reported incomes in the P 0 to 1500 or P1501 to 3000 categories. From these two tables we see that the percentage of respondents who had a total family income of P3000 (US \$120) or less jumped from 78 percent before resettlement to 89 percent after resettlement.

Shelter

The following three crosstabulations focus on the issue of type of shelter. They are: Shelter Type by Family Members Killed, Shelter by House Status, and Shelter by Land Status.

Shelter Type by Family Members Killed

Table 31: Shelter Type by Family Members Killed

	0	1	2	3	4	5	6	7	8	
Temporary	62%	8%	3%	1%	1%	0.2%	0.5%	0%	0.1%	76%
Semi-Permanent	15%	2%	2%	1%	0%	0.5%	0%	0%	0%	21%
Permanent	2%	0.2%	0%	0%	0%	0%	0%	0%	0%	2.2%

From Table 38 it can be seen that the majority of respondents, 79 percent, did not have any family members killed in the flooding that devastated Ormoc City. However, it can also be seen that of those that did lose family members, 69 percent lived in temporary shelter. Of the rest, 29 percent lived in semi-permanent housing and only 1 percent lived in permanent housing. From the table we can see that a very strong correlation exists between type of shelter and the number of family members killed in the flooding.

Shelter by House Status

Table 32: Shelter by House Status

	Squat	Rent	Own	Total
Temporary	52%	19%	6%	77%
Semi-Permanent	13%	6%	2%	21%
Permanent	1%	0.5%	0.7%	2.2%

From the table it is apparent that the vast majority of

respondents (97.8 percent) lived in either temporary or semi-permanent housing. It is also evident that the majority (92 percent) either squatted in or rented their homes; 52 percent of respondents squatted in temporary housing, 13 percent squatted in semi-permanent housing, 19 percent rented temporary housing and 6 percent rented semi-permanent housing. This is not a surprising finding but it does support the assumption that members of the sample population lived in marginality before the flood and therefore were more prone to displacement than the general population.

Shelter by Land Status

Table 33: Shelter by Land Status

	Squat	Rent	Own	Total
Temporary	44%	29%	3%	76%
Semi-Permanent	11%	9%	2%	22%
Permanent	0.7%	0.1%	0.2%	1%

As with the Table 39, Table 40 indicates that the vast majority of respondents, 76 percent, lived in temporary housing before resettlement. The numbers are different between house status and land status because in the Philippines it is possible to rent a house without renting the land and vice versa. Still, of 401 respondents, 55 percent were squatters while another 39 percent rented the land they lived on. Again, these results indicate the marginal existence of most of the respondents.

Explanation of the Data

There were 288 women in the sample compared to 112 men. As was explained earlier, this is not a reflection on the gender composition of the sample population or on the larger population of the resettlement camps. Instead, this gender bias can be explained by the fact that many more women were either unemployed or involved in income generating activities, for example raising pigs or doing laundry, that could be done in or around the home and thus were available to be interviewed. As well, because of the traditional nature of Filipino society, women are considered the primary caregivers of their children and homemakers and this societal position also provides an explanation for their being at home.

The respondents were relatively young, the average age was 38, and the median age was 36. Because one respondent was 80 years old the sample was skewed to the right (ie older ages). The average age for spouses of the respondents was a little lower, at 33 1/2 years old. This is an interesting finding because it suggests that the husbands were slightly younger than their wives, a situation which is not very common in this male dominated patriarchal society. The ages are also interesting because they show that these environmental refugees were neither very young or very old and therefore their ages did not make them more vulnerable to disaster. This would indicate that all age groups are

equally at risk of environmental displacement. This finding may also imply that the very young and very old died during the disaster.

The vast majority of respondents (350 out of 401) were married. This is another indicator of the traditional nature of Filipino society and the hold of Catholicism in the region. In fact, 353 out of 401 identified themselves as Catholic. Other religions were represented as well and this can be explained by two factors: migration and poverty. For example, the Muslims in the sample were migrants from the southern island of Mindanao which has a large Muslim population. In terms of poverty, some people were vulnerable to conversion to religions like the 7th Day Adventists and Mormons because of the financial, educational and social benefits they offer.

Most of the respondents (325 out of 401) identified themselves as Ormocanos, meaning that they and their families were indigenous inhabitants of Leyte island. This is not unusual. What is interesting is that only 13 respondents identified themselves as Waray-Waray, the ethnic group of the eastern portion of Leyte. There were far more respondents from other islands in the Visayan region. This can be explained by the fact that the Ormocanos and other Visayans all speak Cebuano while the Waray-Waray do not. Still, due to physical proximity it is logical to suppose that the numbers of Waray-Warays would be higher.

The average educational attainment of respondents was grade 7 while that of their spouses was grade 6. From this we can see that the population is literate, but undereducated. Since education is government funded in the Philippines, the fact that this group, on average, did not avail themselves of it would suggest that certain trade-offs were made. That is, it was perceived as more important to generate income than to pursue further education. This point speaks to the economic and social marginalisation of the environmental refugee population.

The occupations of both men and women were characterised by being low income, low skilled informal sector types of jobs which can be tied to their low level of education. Many respondents reported manual labours jobs, micro-entrepreneurship and low level white collar jobs. Again, this is indicative of the social and economic position of the environmental refugee population within their society. When occupation was crosstabulated against income it was found that the vast majority of respondents had jobs with salaries of less than P 3000 per month (\$ 120 US). They live and work at the margins of society and have a very tenuous relationship with the means of production.

From the crosstabulations performed it is apparent that there was no real difference in occupations by age group: in all age groups people were clustered into the marginal occupations described above. There was a definite gender

difference in occupations by sex. Occupations were divided along traditional sex lines. Men were more likely to hold manual labour jobs such as factory worker, carpenter and labourer and other positions such as driver. Men were also more likely to have low level white collar jobs. Women were likely to have informal sector jobs such as laundrywoman or vendor or to be engaged in income generating activities such as raising pigs or babysitting. As well, many more women than men were unemployed both before and after resettlement.

Most respondents reported not having any access to credit. Of those that could access credit, the average amount was P 183 per month. This is roughly equal to \$ 7.30 US per month. Obviously, this is a negligible amount, useful to tide one over from paycheque to paycheque but not enough to invest at even the lowest level. This lack of credit is another indicator of the tenuous economic position of this population. The average total pre-resettlement income was P 2404 (\$ 96.00 US) per month while the median income was P 1800 (\$ 72.00 US). The numbers serve as reinforcement for the fact of the economic reality of this group's existence.

Another indicator of the marginality of the lives of these environmental refugees is that 77 percent of respondents reported living in temporary shelter. This form of shelter is defined as housing made of cardboard, nipa (a form of thatch) and other assorted debris. Obviously,

temporary shelter is insecure and dangerous and that the respondents lived in this type of shelter played a large role in their displacement. Of the other respondents, 21 percent lived in semi-permanent housing which is defined as housing similar to temporary but with some concrete or perhaps with a galvanised iron roof; the final 2 percent of respondents lived in permanent housing.

In keeping with housing issues, 65 percent of respondents reported squatting in their homes, while 55 percent reported squatting in terms of the land. There was no gender difference in the numbers of people who were squatters or who rented or owned their homes and land. Squatting is defined as living somewhere without having title to the property or without paying rent to the owner of the property. Many people constructed their homes out of various forms of debris and plantlife on land owned by the government (Public Land). This land is Public Land for one of two reasons: first, it is a high-danger area, for example on a floodplain; or second, it is considered a protected area, for example forest land. Thus many of the respondents were living in temporary housing on high-risk land. This again, speaks to the extreme marginality of this population. On the other hand, squatting on private land also has distinctive ramifications. In this situation, squatters are likely to live tenuously, constantly under threat of being forcibly removed.

From the crosstabulation of LandStatus and Shelter Type, it was found that 44 percent of respondents were squatters who lived in temporary housing, 29 percent rented the land beneath their temporary shelter and 11 percent squatted in semi-permanent housing. Furthermore, from the crosstabulation of HouseStatus and Shelter Type it was found that 52 percent of respondents squatted in temporary shelter, 19 percent rented temporary shelter, 13 percent squatted in semi-permanent housing and 6 percent owned their temporary shelter. These figures are significant because they illustrate the physical marginality of the environmental refugee population. These people are more exposed to displacement by virtue of their homes.

Although these people were marginalised by society, they were still able to access basic services provided by the government. In terms of health care, before the disaster, 400 out of 401 respondents claimed to be able to access the health care system. In general this access consisted of being able to go to the hospital in times of emergency or having occasional home visits by barrio midwives. Similarly, only 2.5 percent of those surveyed said they did not have access to the educational system. Since education is provided by the government essentially this is true. However, many respondents could not afford the transportation costs, school supplies or uniforms necessary. These items were not included in their thoughts on access

however.

In terms of basic sanitation, 266 out of 401 respondents, or approximately 60 percent, did affirm that they had access. Since sanitation facilities within the home are the responsibility of the individual, this figure is much lower than the previous two. Considering the alternatives to having sanitary facilities, 60 percent of the population is a low figure, especially in terms of public health concerns.

In terms of access to electricity, 56 percent of respondents reported that they had access while 44 percent reported that they had none. While electricity is not an absolute necessity, that such a large percentage of the sample population did not have access to it is again indicative of the general economic position of this population. Of those who did have electricity in their homes, most agreed that it had been illegally spliced.

The pre-resettlement staple food of the sample population was rice by a large majority (72 percent); the second most common dietary staple was a mixture of corn and rice (24 percent). That rice was the staple food is not unusual in the Filipino context, as it seems that everyone is always eating rice. However, the corn and rice mixture does indicate poverty since corn is less expensive than rice and eating it is considered a symbol of lower class status.

The pre-resettlement fuel source of the largest group (46 percent) was wood which was bought from others. This is interesting on several levels. First, this dependence on wood was one of the factors, through deforestation, involved in causing the destruction associated with Typhoon Uring. Second, inhalation of smoke during cooking or boiling water can cause serious health problems. Third, the use of wood means that the cook, most often the woman, must spend far more time in food preparation and therefore her other activities would be seriously curtailed.

At this point we move to the post-resettlement situation. The post-resettlement total family income was, on average, P1837 per month (\$ 73.00 US) while the median income was P1500 per month (\$ 60.00 US). It must be noted that these figures represent total family income meaning that income of respondent, income of spouse, other income and income from children are all included and yet the numbers are wretched low. A comparison of pre-resettlement total income and post-resettlement total income was made. The results showed that the average family income fell from P 2402 per month to P 1837 per month, a drop of P 565 or \$ 23.00 US. This is a considerable sum considering the low income levels we are discussing.

In terms of post-resettlement access to education, the vast majority of respondents still enjoyed access to the

educational system. There was no gender difference in access to education after resettlement. The percentage of those who did not have access rose to 7.9 percent. This was due mainly to a lack of affordable transportation and the cost of school supplies. An important note is that the resettlement camps were all located some distance from the city centre where almost all respondents had previously lived. This distance was a factor in the inability to access education and other services as well as in the high unemployment in the camps.

Most respondents also continued to have access to health care but again the number of those who did not rose, to 2 percent. This is not a large percentage and applied to only one camp which at the time lacked a health clinic-type facility. There was no gender difference in access to health care.

The lot of most respondents improved after resettlement in terms of basic sanitation. Since their new homes were built by a variety of aid agencies to certain specifications, sanitary facilities were built into each house. Out of 401 respondents, 94 percent reported having access to basic sanitation after resettlement. Although most people gained access to sanitation after resettlement, women outnumbered men 8 to 1 for those who did not have access to sanitation after resettlement.

In terms of electricity, access diminished after

resettlement. Out of 401 respondents, 85 percent did not have access to electricity after resettlement. Although there were a few generators, in most cases the power lines had not been set up to the camps. Most respondents agreed that even if the power lines were installed they would not be able to afford access to electricity, at least legally. Most people lost access to electricity after resettlement.

Wood remained the post-resettlement fuel source although because of heightened awareness of deforestation and the perils of firewood many turned to gas stoves. There was a gender difference in fuel use before and after resettlement: it was the women who reported using gas in place of wood. The reason could be that women are the ones who cook the food and they found that using gas was far less time-consuming and arduous than wood. Another reason for this transformation was that aid agencies were giving gas stoves to many camp dwellers.

Rice and the rice and corn mixture continued to be the staple food of choice in the resettlement camps. Of the respondents, 73 percent ate rice while another 24 percent ate the rice and corn mix. There was no gender difference in terms of staple food. Although rice is the traditional dietary staple, since the standard of living was reduced so dramatically after resettlement one might assume that the camp population would turn in larger numbers to rice and corn or simply to corn. This was not the case and one reason

for this may be that rice was provided as aid on a semi-regular basis by various relief agencies and because rice was the payment in several food-for-work schemes.

Of the 401 respondents to the questionnaire, 87 percent asserted that they planned to remain in the camps permanently. Most often this response was given accompanied by the explanation that they had nowhere else to go.

Another question asked was whether the respondent had family members killed in the flooding. The responses ranged from zero to eight, with the median answer being zero. Since many (over 5000) people were killed in the flooding, it is safe to assume that entire families were wiped out. When the variable Family Members Killed was crosstabulated against Shelter Type it was found that 69 percent of families that had lost a member lived in temporary housing, while 29 percent lived in semi-permanent housing and 1 percent lived in permanent housing.

A related question was if a family member was killed, did the respondent receive the promised government compensation. The response to this was overwhelmingly positive: 84 had received compensation, while only 1 had not.

The final question was whether the respondent had received any official aid from a relief agency while living in the resettlement camp. Of the respondents, 86 percent reported that they had received aid, most often in the form

of clothing, food, blankets and bibles.

From the above summary, it would seem that the environmental refugee population made certain trade-offs both in terms of living in the urban poor communities before the disaster and in the resettlement camps afterwards. Briefly, while living on or near Isla Verde the people had a higher level of income, were closer to their workplaces or customers, had access to electricity, health care, and education. Concomitantly, of course, they were far more vulnerable to disaster. After resettlement, the incomes of the displaced population plunged, they were separated from their traditional homes and extended families, and in many cases lost their jobs. However, in return they were awarded ownership of their homes and land; and had improved access to basic sanitation. Their access to other basic services remained constant. Finally, they were moved from a high-risk environment.

In almost every aspect (apart from gaining access to sanitation), the quality of life of the displaced population fell after resettlement. Still, regardless of the serious drawbacks most respondents were prepared to remain in the resettlement camps because of a lack of alternatives and because of the security of land ownership.

The information presented in this chapter serves as reinforcement for the conclusions reached in Chapter Four. Chapter Four argued that the large scale human displacement

witnessed in Ormoc City was caused by a chain of factors: political, socio-economic, ecological and natural. This chapter shows that the displaced population was uprooted by these same components although they are viewed from a different perspective. These components were intertwined; because of their political, economic and social marginality which has been established through a variety of variables in this chapter, the sample population was far more prone to displacement. These people were the urban poor, they lived at the subsistence level, had a low social standing and virtually no political power. Because of their lack of political clout, land reforms were not carried out and they were physically marginalised in high risk areas. Because of the factors which were examined in this chapter at the micro-level, the disaster at Ormoc was an accident waiting to happen.

SUMMARY OF FINDINGS, CONCLUSIONS, INTERPRETATIONS AND IMPLICATIONS

The thesis that this paper presents is that the people known as environmental refugees are generated by situations caused by a complex interplay of many factors: political, economic, social, ecological and natural.

This thesis was examined within the context of a case study conducted in Ormoc City, Leyte, the Philippines in 1992-1993. On November 5th, 1991 a Tropical Storm codenamed Uring hit Ormoc City at a speed of approximately 75 kilometres per hour. Because of the torrential rain and flashflooding associated with Tropical Storm Uring, over 6000 people lost their lives within a few hours and thousands of others were injured or displaced. Surrounding this environmental disaster were many theories of its root causes. These ranged from the view that the devastating flooding was caused by relentless logging of the mountainsides and watershed area surrounding Ormoc City to the view that policy initiatives on the part of the government (ie- ill-conceived river diversions and land use measures) were to blame.

The purpose of the case study was two-fold: first, to identify and explore the complex, intertwined causes of this disaster which led to human displacement on such a massive scale; and second, to create a baseline profile of the displaced population - the environmental refugees.

The theoretical framework which underpins this paper is that of Political Ecology. This framework was discussed in Chapter One. While other frameworks, most notably Ecological economics, were considered none were found to be as relevant to the ideas and content of this paper as Political Ecology. This framework combines the concerns of ecology and a broadly defined political economy. Political Ecology was attractive for three reasons: first, it integrates social science and ecology to gain practical knowledge; second, it is location-specific in outlook and analysis; and third, since there is no doctrinaire ideology attached to it, it demands less rigidity of thought than frameworks based either on neo-classical economics or classical Marxism.

There are three areas of emphasis within Political Ecology: 1) the contextual sources of environmental change; 2) conflict over access to resources; and 3) the political ramifications of environmental change. It is this third area of emphasis which is relevant to the concerns of this paper. Within 'the political ramifications of environmental change' are two questions that are fundamental to exploration of the ways that environmental change influences socioeconomic equalities and therefore the political process. They are: 1) to what extent do the marginalised groups in society bear the consequences of environmental change and how does this exacerbate existing socioeconomic inequalities ?; and 2) under what circumstances does unequal exposure to

environmental change modify political processes ? Both these questions were acutely relevant to the aims of the case study, and to the thesis question. This is true both in terms of the causes of the situation which generated the population of environmental refugees and in terms of the consequences of this generation. Furthermore, this theoretical framework was suited to the thesis of this paper since it acknowledged that issues of environmental change, including the issue of human displacement caused primarily by environmental disruption, can only be fully understood through a merging of ecology and social science.

Chapter Two, the Literature Review, examined scholarly writing which discussed different forms of involuntary, or forced, migration. Within the framework of involuntary migration the categories of Convention Refugees and Internally Displaced Persons were discussed briefly. This was done to provide a contrast to the main focus of the chapter: Environmental Refugees. As was discussed in Chapter Two, the literature on environmental refugees is neither lengthy nor particularly rich. Authors all agree on the fundamental issues although they phrase their insights in various ways. A basic definition for the term 'environmental refugee' is: those people who have been forced to leave their established homes or communities, either temporarily or permanently, because of a marked environmental disruption (either natural or anthropogenic) which jeopardised their

quality of life or very existence. Furthermore, these people can be separated into three rough, and often interactive, categories: 1) those who have been temporarily displaced, typically by an earthquake, typhoon or industrial accident; 2) those who have been permanently displaced and officially resettled elsewhere, usually due to a development project such as the construction of a dam or highway; and 3) those permanently displaced because of long term resource base deterioration.

In terms of this paper, it is apparent that these categories are not mutually exclusive. The thesis of this paper is that the environmental refugee population of Ormoc City was displaced because of the interplay of ecological, political, social and economic factors but was triggered by a tropical storm. This is an important distinction because often the trigger event is not the underlying cause of displacement and policy initiatives must reflect this.

All authors discussed in Chapter Two also agree that the generation of environmental refugees is a symptom of ecological decline and signals the deterioration of the habitability of an area. Essentially human displacement caused by environmental factors shows that the carrying capacity of an area for humans has been exceeded.

The literature review was an integral component of this paper because it provided a context and a history for later chapters. As well, it defined terminology and showed the

range of ideas and writing on this form of involuntary migration.

Chapter Three provided a background to situate the discussion and analysis of Chapter Four and Chapter Five. This chapter described the recent political, socioeconomic and environmental history of both the Philippines in general and Leyte in particular especially as they pertain to the environmental disaster at Ormoc.

A key point in discussions of Filipino politics is that there is a high level of personalism and particularism in this system. A consequence of this is that often people vote for a candidate based on his or her persona and not on his or her platform. Often citizens can be persuaded to vote for a candidate for instant material benefits. Another consequence is rampant corruption at higher levels. Another distinguishing feature of Filipino politics is that the entrepreneurial class has direct access to the policymaking machinery.

In terms of political leaders, Fidel Ramos, who was elected in 1991 has the paradoxical image of being seen as both the law-and-order President and as an ineffectual leader. Watchwords of his administration are consensus-building and gradualism. Furthermore, Ramos is viewed as firm and conservative; he is sympathetic towards the military perspective and respectful of the business community. Ramos favours what he terms the "unfettered

marketplace", therefore his agenda does not include income redistribution or land reform. Ramos has initiated reforms on several fronts, but confronted with an obstructionist Congress and Senate, it is not anticipated that he will be able to move ahead on them.

This approach has serious implications for the environment: Ramos' administration is not concerned with bringing government machinery to bear on questions of ecological decline. Without this intervention the existing problems will continue and grow more severe the longer they are ignored.

In terms of the social and economic situation in the Philippines, poverty, land distribution and the debt burden are key issues. Of course, these concerns are also political ones. Under Aquino, people's empowerment was useful rhetoric both in terms of the economy and social welfare. While Ramos also discusses the quality of life of the citizenry, his focus is on keeping inflation rates and interest rates low, not on refloating the economy. Therefore, social welfare, poverty alleviation and the equitable distribution of land are not priorities. Under Ramos, the country's infrastructure continues to deteriorate and educational standards continue to drop. Since poverty and the inequitable distribution of land play such large roles in environmental displacement, the lack of government policies to confront these problems ensures the continuation and

worsening of the current situation.

Deforestation is a major problem in the Philippines and one of the most pressing environmental concerns. Deforestation has four principal causes: illegal logging; illegal occupancy; conversion of timber land to agricultural land; and forest fires. Removal of tree cover is the result of poverty, lack of alternatives, a sky-rocketing population growth rate and inappropriate development strategies. The consequences of deforestation are threefold and are fairly alarming. They are: soil erosion, loss of biodiversity and the loss of secondary forest products. As well, deforestation was a major contributing factor in the environmental disaster in Ormoc and similar situations throughout the Philippines.

In sum, all these points are important as they have a direct bearing on the disaster at Ormoc. The political style described above and its attendant cronyism and corruption is evident in Ormoc; the lack of social welfare and land reform is a pressing concern; poverty is rampant; infrastructure is deteriorating; and deforestation was certainly a factor in the disaster.

In Part Two of Chapter Three, the same themes were revisited, albeit on a smaller scale, in terms of Leyte Province. Essentially, Leyte is one of the poorest areas in the Philippines and has an underdeveloped economy. Its economy is controlled by a small landed elite which also

controls the local political structure. The economy is made up of two sectors: a market oriented agricultural sector and an underdeveloped industrial sector. The major cash crops are coconut and sugarcane which are grown on large plantations. This is accompanied by constant land pressure for new areas to cultivate these cash crops as well as subsistence crops. Furthermore, Leyte is seriously deforested: upland migration and logging present a grave problem for watershed management.

Chapter Four is the heart of this paper and presents its thesis in the context of the disaster at Ormoc. The thesis is that environmental refugees are generated by a complex chain of political, economic, social, environmental and natural factors. In terms of the case study, the anchor of this chain is the political situation in Leyte in general and Ormoc in particular. Essentially, the small landed elite control the government structure and the local economy. This elite controls the power structure through the hacienda system in which they own most of the land and use it for export crop plantations and for cattle grazing as well as through their other economic activities. Members of this group also form the government. This group produces the mayors, councillors, congressmen and governors and has for generations. Because of the cronyism described in Chapter Three, members of the landed families fill virtually all positions of authority, such as Chief of Police, newspaper

publishers and so on. The second link in the chain is the social and economic situation. Because of the hacienda system and the concomitant stranglehold the landed families have on the local economy, large groups of people work the land or in factories for extremely low wages. As land hunger and population pressure become more intense, fewer people actually till their own land and food crop production for local consumption decreases. The landless poor often migrate to the uplands which are unable to support them, or move to the cities to live in urban poor settlements which are usually found in high-risk areas. The third link is the ongoing environmental degradation: deforestation in the watershed area. In the Ormoc watershed deforestation and the accompanying soil erosion and species loss is caused by PNOC (Philippines National Oil Corporation) activities in the pursuit of geothermal power, the establishment and maintenance of sugarcane and coconut plantations, cattle ranching, illegal and legal logging operations and slash-and-burn cultivation. It was with this chain established that the trigger event, a small almost insignificant tropical storm could lead to such unprecedented destruction. From this research, presented in full in Chapter Four, it becomes clear that the causes of environmental displacement are complex and interlinked. It is also clear that in this case, human displacement was not caused by a natural disaster or an act of God but by long term resource base

deterioration precipitated by the political and socio-economic situation.

This chapter also speaks to the two fundamental questions posed in the Political Ecology framework. In terms of the first question, it is clear that the poor or marginalised segment of the population are far more seriously affected by both long term resource base deterioration and by environmental disaster than the more affluent. In Ormoc, the poor lived in squatter communities in high risk areas and thus were drowned by the thousands during the flooding. At least two thousand others were displaced and countless others were injured. Although the disaster did have an impact on the lives of the affluent, the impact was temporary and far less severe. The existing socioeconomic disparities were further exacerbated after the disaster, especially in terms of the living standards of the environmental refugee population after resettlement. On the other hand, many of the wealthy and politically connected made a financial profit from the international relief effort.

In terms of the second question, the political process was modified to a certain extent by the unequal exposure to environmental change. Because of the disaster, the awareness and consciousness of many people was raised both in relation to environmental issues and to economic disparity. Community groups were formed or strengthened in the aftermath of the

disaster and through their pressure a total logging ban was imposed for the Ormoc watershed. Although some grassroots organisations existed before the disaster, generally people lacked the sense that they could affect change against the wishes of the landed elite. These newly active groups also took on other issues; through these efforts a sense of empowerment was cultivated among the poor and dispossessed. Citizens' movements were also formed in the resettlement camps with the intention of improving their lot. Through these groups political and environmental awareness was heightened and a sense of community and political power was developed.

Chapter Five addresses the second aim of the research, which was to develop a baseline profile of the environmental refugee population. The profile was important because, as has been noted elsewhere, the literature does not contain a community-level baseline study of the individuals or situations on which it comments. One of the central aims of this paper was to fill this gap in the literature through the case study. The data on which the profile was based was collected using a household questionnaire in the resettlement camps around Ormoc City. The responses were then reconfigured into spreadsheet form. Later the data was manipulated using SPSS, a statistical package. Descriptive statistics were generated for all variables, and crosstabulations were run for selected combinations. From

the examination of the affected population from the micro-level, their economic, political, social as well as geographical marginalisation was revealed. Thus, this chapter strengthened the arguments presented in Chapter Four. This chapter further explored the second question posed in 'the political ramifications of environmental change' within the Political Ecology framework through the examination of quantifiable changes in the lives of the displaced population.

The conclusion that environmental refugees are propagated by an interplay of political, socioeconomic, ecological and natural factors has important consequences for policy development and implementation. Presently, situations such as the one in Ormoc City are treated as natural disasters or 'Acts of God' for which preparation is not possible and for which no one can be blamed. However, from the analysis presented in this paper, it is clear that the natural trigger event - the tropical storm - was the least important factor. In fact, if Tropical Storm Uring had not occurred eventually another event would have triggered similar carnage. It is the root causes, the political, socioeconomic and environmental issues at which attention must be focused. Although some advances have been made in terms of deforestation and other environmentally-unfriendly activities in Leyte, further action must be taken to ensure

effective watershed management, effective reforestation and afforestation. Soil erosion must be halted and reversed which can be done through agroforestry, reforestation and education. Finally, logging, both illegal and legal must be curtailed, at least in high risk areas.

Although it is imperative that efforts to restore the ecological balance must not be neglected, these efforts will still not address the deeper problems which cause environmental destruction or population displacement. Most environmental destruction is precipitated because of poverty, an inequitable distribution of land and a general lack of other alternatives. These issues must be confronted by the government, and by other groups, and a concerted effort must be made to meet the needs of the low income segments of the population as well as those of the entrepreneurial and landowning classes. However, as was discussed in Chapter Three, these issues were not adequately addressed by the Aquino government and are not priorities for the Ramos administration. While poverty alleviation and land redistribution are pressing social justice concerns in their own right, when coupled with environmental crises in an ecologically unstable country they become even more immediate. A true land reform would certainly lessen the land hunger which drives people to slash-and-burn cultivation in the uplands. As well, by dismantling ecologically nightmarish cash crop plantations to return the

land to subsistence farming, the environment would benefit as would the human population. Finally, poverty alleviation and social welfare programmes would facilitate in keeping people from living in high risk urban poor settlements and may provide them with skills to pursue better economic opportunities.

Another conclusion that came out of this research is that the disaster preparedness system in the Philippines is woefully out of touch with the needs of the community. Although appropriate disaster prevention could not have played a large role in terms of the disaster at Ormoc, in other situations it could save hundred of lives. The present system was imported wholesale from the United States and is completely unsuited to the Philippines. A less expensive, grass roots approach needs to be developed. Since Leyte and the rest of the Philippines is typhoon-prone, shelters should be established to prepare for worst case scenarios. However, prevention should be emphasised. This could be done by eliminating settlements in high risk areas (and concomitantly providing alternative areas), providing construction materials for those living in temporary housing, tree-planting and other fairly low cost, low-tech measures.

A final conclusion that comes from this paper is that ecological disruptions and environmental stress are compelling motivations for involuntary migration. Ecological

factors play a role in many population movements today and are the sole motivators in many other situations. Furthermore, from the literature, and from reports in the mainstream media, it seems that environmental refugees are a fast growing category of the involuntarily displaced. This must be recognised by governments and international agencies which deal with forced migration. The case in the Philippines is different, since there are no international borders to cross and therefore the environmental refugees must be dealt with by their own government. In many other instances, those people displaced because of ecological disintegration do cross borders and are dealt with by aid agencies or host governments as a 'population with refugee-like characteristics'. International agencies, the United Nation High Commission For Refugees in particular, must show foresight and develop criteria and strategies to manage these population flows which do not seem to be abating, but increasing. Of course, ideally the causes of human displacement due to ecological factors should be identified and resolved before population movement occurs.

Appendix One

Survey of Resettlement Camps In and Around Ormoc

Respondent #:

Resettlement:

General Information

- 1) Respondent's Age: _____
- 2) Civil Status: _____
- 3) Spouse's Age: _____
- 4) Number of Children: _____
 - 4a) Ages: _____
 - 4b) Gender: _____
- 5) Number of Dependents (not including your children): _____
 - 5a) Relationship: _____
- 6) Religion: _____
- 7) Ethnic/Linguistic Group: _____
- 8) Educational Attainment: _____
 - 8a) Of Spouse: _____

Before Resettlement:

- 9) Occupation of Respondent: _____
 - 9a) -- access to credit ? _____
 - 9b) -- source of credit ? _____
- 10) Other Income Generating Activities: _____
- 11) Income Contributed By Spouse: _____
- 12) Income Contributed By Children: _____
- 13) Income Level: _____
- 14) Where did you live before resettlement ? _____
- 15) Why did you migrate there ? _____
- 16) What kind of shelter ? Permanent Semi-Permanent
Temporary
- 17) Was ownership of the house secure ? Yes No Explain: _____

Was ownership of the land secure ? Yes No Explain: _____
- 18) Did you have access to health care ? Yes No Explain: _____
- 19) Did you have access to education ? Yes No Explain: _____
- 20) Did you have access to basic sanitation ? Yes No
Explain: _____

- 21) Did you have access to electricity ? Yes No
 22) What was your staple food ? Rice Corn
 Other: _____
 23) Source of fuel: _____
 24) What do you perceive the reasons for displacement to be ? _____
 26) How far is the camp from your previous home ? _____

Since Resettlement:

- 27) Number of people in one tent: _____
 28) New Occupation: _____
 29) Other Income Generating Activities: _____
 30) Income Contributed By Spouse: _____
 31) Income Contributed By Children: _____
 32) Income Level: _____
 33) Do you have access to education ? Yes No Explain: _____
 34) Do you have access to health care ? Yes No Explain: _____
 35) Do you have access to basic sanitation ? Yes No
 Explain: _____
 36) Do you have access to electricity ? Yes No
 37) What is your staple food ? Corn Rice
 Other: _____
 38) Source of fuel: _____
 39) do you plan to remain in the resettlement or return to
 your previous area ?
 Why ? _____

40) Were any of your immediate family members killed in the
 flash flooding of November 1991 ?

41) Did you receive government compensation (\$ 375 US)
 because of this? Yes No

42) Are you currently receiving aid from: the Filipino
 government local NGOs foreign NGOs Other: _____
 D e s c r i b e a s s i s t a n c e :

43) Would you describe relations between the Tent City and
 the neighbouring barrios as negative or positive ?
 Explain: _____

4) Where do your relatives live ? _____

crosstab child# by edlvl.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 129

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

Page 1 of 12

CHILD#	Count	EDLVL							Row Total
		.0	1.0	2.0	3.0	4.0	5.0	6.0	
.0					1	1	1	3	24 6.0
1.0		2			1	4	2	11	51 12.7
2.0		1		2		5	3	24	82 20.4
3.0		1	1	1	3	5	3	11	66 16.5
Column Total		9	6	12	12	32	28	100	401
(Continued) Total		2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 130

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

Page 2 of 12

CHILD#	Count	EDLVL							Row Total
		7.0	8.0	9.0	10.0	11.0	12.0	13.0	
.0		3	5		7	2			24 6.0
1.0		1	8	2	8	1	4	1	51 12.7
2.0		2	9	9	17	2	3	1	82 20.4
3.0		6	9	5	9	3	5	3	66 16.5
Column Total		26	43	23	60	13	14	8	401
(Continued) Total		6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

Page 131

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

CHILD#	Count	EDLVL		Row
		14.0	66.0	Total
.0	1			24 6.0
1.0	5	1		51 12.7
2.0	4			82 20.4
3.0	1			66 16.5
Column		14	1	401
(Continued)	Total	3.5	.2	100.0

Page 132

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

CHILD#	Count	EDLVL							Row
		.0	1.0	2.0	3.0	4.0	5.0	6.0	Total
4.0	2	2	2	1	5	5	16		55 13.7
5.0	1		4	3	5	8	12		51 12.7
6.0			2	1	4	3	5		28 7.0
7.0	1	1	1	1	2		6		16 4.0
Column		9	6	12	12	32	28	100	401
(Continued)	Total	2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 133

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

CHILD#	Count	EDLVL							Row
		7.0	8.0	9.0	10.0	11.0	12.0	13.0	Total
4.0	5	5	4	5	11	1			55 13.7

		9	6	12	12	32	28	100	401
(Continued)	Column Total	2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 136

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

		EDLVL							Page 8 of 12
		Count							
			7.0	8.0	9.0	10.0	11.0	12.0	13.0
CHILD#									Row Total
	8.0	1			1			1	12
									3.0
	9.0	1	1	1	1				11
									2.7
	10.0		1						2
									.5
	11.0								1
									.2
	Column Total	26	43	23	60	13	14	8	401
(Continued)	Total	6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

Page 137

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

		EDLVL		Page 9 of 12
		Count		
			14.0	66.0
CHILD#				Row Total
	8.0			12
				3.0
	9.0			11
				2.7
	10.0			2
				.5
	11.0			1
				.2
	Column Total	14	1	401
(Continued)	Total	3.5	.2	100.0

Page 138

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

CHILD#	Count	EDLVL						Row Total
		.0	1.0	2.0	3.0	4.0	5.0	6.0
12.0			1					1
	Column	9	6	12	12	32	28	100
(Continued)	Total	2.2	1.5	3.0	3.0	8.0	7.0	24.9
								401
								100.0

Page 139

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

CHILD#	Count	EDLVL							Row Total
		7.0	8.0	9.0	10.0	11.0	12.0	13.0	
12.0									2
									.5
	Column	26	43	23	60	13	14	8	401
(Continued)	Total	6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

Page 140

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

CHILD#	Count	EDLVL		Row Total
		14.0	66.0	
12.0				2
				.5
	Column	14	1	401
	Total	3.5	.2	100.0

Number of Missing Observations: 3

Page 141

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 6:35:36
variable labels child# "number of children of respondent",
variable labels edlvl "educational level of respondent",
set printer off.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 303 SPSS/PC+ Studentware+ 7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

Page 304 SPSS/PC+ Student Manual 7/6/94

ETHGRP ethnic group of respondent by EDUCL educational level of respondent

```
count = 0
while True:
    print('Enter a number: ', end='')
    line = input()
    if line == 'done':
        break
    value = float(line)
    count = count + 1
    sum = sum + value
    print('Sum: ', sum, 'Count: ', count)
```

		Row		
		14.0	66.0	Total
ETHGRP				
	1.0	13	1	325
ormocano				81.0
	2.0			49
cebuano				12.2
	3.0	1		8
davaoenos				2.0
	4.0			13
waray				3.2
Column		14	1	401
(Continued)	Total	3.5	.2	100.0

Page 305 SPSS/PC+ Studentware+ 7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

Page 4 of 6

		EDLVL							Row
Count		.0	1.0	2.0	3.0	4.0	5.0	6.0	Total
ETHGRP									
	5.0		1					2	4
visayan									1.0
	6.0						1		2
tagalog									.5
Column		9	6	12	12	32	28	100	401
(Continued)	Total	2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 306 SPSS/PC+ Studentware+ 7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

Page 5 of 6

		EDLVL							Row
Count		7.0	8.0	9.0	10.0	11.0	12.0	13.0	Total
ETHGRP									
	5.0							1	4
visayan									1.0
	6.0				1				2
tagalog									.5
Column		26	43	23	60	13	14	8	401
(Continued)	Total	6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

Page 307 SPSS/PC+ Studentware+ 7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

Count

Row

14.0 66.0 Total

ETHGRP

5.0

4

visayan

1.0

6.0

2

tagalog

.5

Column

14

1

401

Total

3.5

.2

100.0

Number of Missing Observations: 3

Page 308

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 6:51:35
 variable labels ethgrp "ethnic group of respondent".
 variable labels edlvl "educational level of respondent".
 value labels ethgrp 1 "ormocano" 2 "cebuano" 3 "davaoenos"
 4 "waray" 5 "visayan" 6 "tagalog" 7 "chinese".
 set printer off.

```

variable labels elec "pre-resettlement access to electricity".
variable labels elec2 "post-resettlement access to electricity".
value labels elec 1 "yes" 2 "no".
value labels elec2 1 "yes" 2 "no".
crosstabs elec by elec2.

```

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 331

SPSS/PC+ Studentware+

7/6/94

ELEC pre-resettlement access to electricity
by ELEC2 post-resettlement access to electricity

Page 1 of 1

	Count	ELEC2		Row Total
		yes	no	
ELEC	1.0	51	175	226
	2.0	11	164	175
Column Total		62	339	401
		15.5	84.5	100.0

Number of Missing Observations: 3

Page 332

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 7:05:15
set printer off.

variable labels sanitn "pre-resettlement access to sanitation".
 variable labels sanitn2 "post-resettlement access to sanitation".
 value labels sanitn 1 "yes" 2 "no".
 value labels sanitn2 1 "yes" 2 "no".
 crosstabs sanitn by sanitn2.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

SANITN pre-resettlement access to sanitation
 by SANITN2 post-resettlement access to sanitation

		SANITN2		Page 1 of 1
Count		yes	no	
		1.0	2.0	Row Total
SANITN	yes	251	15	266 66.3
	no	126	9	135 33.7
Column Total		377	24	401
		94.0	6.0	100.0

Number of Missing Observations: 3

This procedure was completed at 7:01:54
 set printer off.

crosstabs fuelsrc by fuelsrc2.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source

Page 1 of 4

Count		FUELSRC2					Row Total
		buy wood -1.0	collect wood 1.0	gas 2.0	buy and collect 3.0	4.0	
FUELSRC	-1.0	19					19 4.7
buy wood	1.0	6	118	8	32	8	185 46.1
collect wood	2.0		9	25	3	4	46 11.5
gas	3.0	1	8		47	3	64 16.0
Column Total		29	163	38	95	29	401
(Continued)	Total	7.2	40.6	9.5	23.7	7.2	100.0

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source

Page 2 of 4

Count		FUELSRC2		Row Total
		combinat ion 5.0		
FUELSRC	-1.0			19 4.7
buy wood	1.0	13		185 46.1
collect wood	2.0	5		46 11.5
gas	3.0	5		64 16.0
Column Total		47		401
(Continued)	Total	11.7		100.0

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source

		FUELSRC2					Row Total
Count		buy wood -1.0	collect wood 1.0	gas 2.0	buy and collect 3.0	buy and collect 4.0	
FUELSRC	4.0	2	16	5	5	13	50
buy and collect							12.5
combination	5.0	1	12		8	1	37
							9.2
Column		29	163	38	95	29	401
(Continued) Total		7.2	40.6	9.5	23.7	7.2	100.0

Page 357

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source

		FUELSRC2		Row Total
Count		combinat ion 5.0		
FUELSRC	4.0	9		50
buy and collect				12.5
combination	5.0	15		37
				9.2
Column		47		401
Total		11.7		100.0

Number of Missing Observations: 3

Page 358

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 3:13:20
variable labels fuelsrc "pre-resettlement fuel source".
variable labels fuelsrc2 "post-resettlement fuel source".
value labels fuelsrc 1 "buy wood" 2 "collect wood" 3 "gas"
4 "buy and collect wood" 5 "combination".
value labels fuelsrc2 1 "buy wood" 2 "collect wood" 3 "gas"
4 "buy and collect wood" 5 "combination".
set printer off.

crosstabs health by health2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

HEALTH pre-resettlement access to health care
by HEALTH2 post-resettlement access to health care
Controlling for..
SEX sex of respondent Value = -1.0

		HEALTH2		Page 1 of 1	
Count		yes		Row	Total
HEALTH		1.0			
	yes	1.0	1	1	100.0
Column		1		1	
Total		100.0		100.0	

HEALTH pre-resettlement access to health care
by HEALTH2 post-resettlement access to health care
Controlling for..
SEX sex of respondent Value = 1.0 male

		HEALTH2		Page 1 of 1	
Count		yes	no	Row	Total
HEALTH		1.0	2.0		
	yes	1.0	106	6	112
Column		106	6	112	
Total		94.6	5.4	100.0	

HEALTH pre-resettlement access to health care
by HEALTH2 post-resettlement access to health care
Controlling for..
SEX sex of respondent Value = 2.0 female

		HEALTH2		Page 1 of 1	
Count		yes	no	Row	Total
HEALTH		1.0	2.0		
	yes	1.0	283	4	287
Column		283	4	287	
Total		99.7	.3	100.0	

Column	284	4	288
Total	98.6	1.4	100.0

Number of Missing Observations: 3

Page 439 SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 7:22:53
 variable labels health "pre-resettlement access to health care".
 variable labels health2 "post-resettlement access to health care".
 variable labels sex "sex of respondent".
 value labels health 1 "yes" 2 "no".
 value labels health2 1 "yes" 2 "no".
 value labels sex 1 "male" 2 "female".
 set printer off.

variable labels sanitn " pre-resettlement access to sanitation".
 variable labels sanitn2 "post-resettlement access to sanitation".
 variable labels sex "sex of respondent".
 value labels sanitn 1 "yes" 2 "no".
 value labels sanitn2 1 "yes" 2 "no".
 value labels sex 1 "male" 2 "female".
 crosstabs sanitn by sanitn2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

SANITN pre-resettlement access to sanitation
 by SANITN2 post-resettlement access to sanitation
 Controlling for..
 SEX sex of respondent Value = -1.0

		SANITN2		Page 1 of 1	
		yes		Row	
		1.0	Total		
SANITN	yes	1.0	1	1	100.0
	Column	1	1		
		Total	100.0	100.0	

SANITN pre-resettlement access to sanitation
 by SANITN2 post-resettlement access to sanitation
 Controlling for..
 SEX sex of respondent Value = 1.0 male

		SANITN2		Page 1 of 1	
		yes	no	Row	
		1.0	2.0	Total	
SANITN	yes	74	6	80	71.4
	no	31	1	32	28.6
		Column	105	112	
		Total	93.8	6.3	100.0

SANITN pre-resettlement access to sanitation
 by SANITN2 post-resettlement access to sanitation
 Controlling for..
 SEX sex of respondent Value = 2.0 female

		SANITN2		Page 1 of 1	
		Count			

		yes	no	Row
		1.0	2.0	Total
SANITN	yes	176	9	185
				64.2
no	2.0	95	8	103
				35.8
Column		271	17	288
Total		94.1	5.9	100.0

Number of Missing Observations: 3

Page 513

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 7:27:5
set printer off.

variable labels elec "pre-resettlement access to electricity".
 variable labels elec2 "post-resettlement access to electricity".
 variable labels sex "sex of respondent".
 value labels elec 1 "yes" 2 "no".
 value labels elec2 1 "yes" 2 "no".
 value labels sex 1 "male" 2 "female".
 crosstabs elec by elec2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

Page 37 SPSS/PC+ Studentware+ 7/6/94

ELEC pre-resettlement access to electricity
 by ELEC2 post-resettlement access to electricity
 Controlling for..
 SEX sex of respondent Value = -1.0

		ELEC2		Page 1 of 1	
Count		no		Row	
		2.0		Total	
ELEC	yes	1.0	1	1	100.0
	no				
Column		1	1		
Total		100.0	100.0		

Page 38 SPSS/PC+ Studentware+ 7/6/94

ELEC pre-resettlement access to electricity
 by ELEC2 post-resettlement access to electricity
 Controlling for..
 SEX sex of respondent Value = 1.0 male

		ELEC2		Page 1 of 1	
Count		yes	no	Row	
		1.0	2.0	Total	
ELEC	yes	1.0	17	51	68
	no	2.0	5	39	44
Column		22	90	112	
Total		19.6	80.4	100.0	

Page 39 SPSS/PC+ Studentware+ 7/6/94

ELEC pre-resettlement access to electricity
 by ELEC2 post-resettlement access to electricity
 Controlling for..
 SEX sex of respondent Value = 2.0 female

		ELEC2		Page 1 of 1	
Count					

		yes		Row Total
		1.0	2.0	
ELEC	yes	34	123	157 54.5
	no	6	125	131 45.5
Column Total		40 13.9	248 86.1	288 100.0

Number of Missing Observations: 3

Page 40

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 7:37:40
set printer off.

variable labels fuelsrc "pre-resettlement fuel source".
 variable labels fuelsrc2 "post-resettlement fuel source".
 value labels fuelsrc 1 "buy wood" 2 "collect wood" 4 "buy and collect wood"
 3 "gas" 5 "combination".
 value labels fuelsrc2 1 "buy wood" 2 "collect wood" 3 "gas"
 4 "buy and collect wood" 5 "combination".
 value labels sex 1 "male" 2 "female".
 crosstabs fuelsrc by fuelsrc2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

Page 56

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..
 SEX sex of respondent Value = -1.0

		FUELSRC2		Page 1 of 1	
Count		gas		Row	
		3.0		Total	
FUELSRC					
buy wood	1.0	1	1	100.0	
Column		1	1		
Total		100.0	100.0		

Page 57

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..
 SEX sex of respondent Value = 1.0 male

		FUELSRC2					Page 1 of 4	
Count								
		buy wood	collect wood	gas	buy and collect	Row		
		-1.0	1.0	2.0	3.0	4.0	Total	
FUELSRC								
-1.0	16						16	14.3
buy wood	1.0	1	31	3	11	1	50	44.6
collect wood	2.0		3	9	1	1	14	12.5
Column		17	43	12	23	7	112	
(Continued)	Total	15.2	38.4	10.7	20.5	6.3	100.0	

Page 58

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..

SEX sex of respondent Value = 1.0 male

		FUELSRC2	Page 2 of 4	
Count		combinat ion	5.0	Row Total
FUELSRC				
	-1.0			16 14.3
buy wood	1.0	3		50 44.6
collect wood	2.0			14 12.5
Column		10		112
(Continued)	Total	8.9		100.0

Page 59

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source
Controlling for..
SEX sex of respondent Value = 1.0 male

		FUELSRC2					Page 3 of 4	
Count								
		buy wood collect gas buy and						
		wood wood 2.0 3.0 4.0						
FUELSRC		-1.0	1.0	2.0	3.0	4.0	Row	Total
gas	3.0		4		7	2	14	
buy and collect	4.0		1		1	2	8	
combination	5.0		4		3	1	10	
Column		17	43	12	23	7	112	
(Continued)	Total	15.2	38.4	10.7	20.5	6.3	100.0	

Page 60

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source
Controlling for..
SEX sex of respondent Value = 1.0 male

		FUELSRC2	Page 4 of 4	
Count		combinat ion	5.0	Row Total
FUELSRC				
gas	3.0	1		14 12.5

buy and collect	4.0	4	8
			7.1
combination	5.0	2	10
			8.9
Column Total		10	112
		8.9	100.0

Page 61

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source
Controlling for..
SEX sex of respondent Value = 2.0 female

		FUELSRC2					Page 1 of 4
Count							
		buy wood	collect wood	gas	buy and collect	Row Total	
		-1.0	1.0	2.0	3.0	4.0	
FUELSRC	-1.0	3					3
							1.0
buy wood	1.0	5	87	5	20	7	134
							46.5
collect wood	2.0		6	16	2	3	32
							11.1
Column Total		12	120	26	71	22	288
(Continued)	Total	4.2	41.7	9.0	24.7	7.6	100.0

Page 62

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source
Controlling for..
SEX sex of respondent Value = 2.0 female

		FUELSRC2		Page 2 of 4
Count				
		combinat ion	Row Total	
		5.0		
FUELSRC	-1.0		3	
			1.0	
buy wood	1.0	10	134	
			46.5	
collect wood	2.0	5	32	
			11.1	
Column Total		37	288	
(Continued)	Total	12.8	100.0	

Page 63

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..
 SEX sex of respondent Value = 2.0 female

		FUELSRC2					Page 3 of 4
Count							
		buy wood collect gas buy and					Row
		wood 2.0 3.0 collect 4.0					Total
FUELSRC		-1.0	1.0	2.0	3.0	4.0	
gas	3.0	1	4		40	1	50
							17.4
	4.0	2	15	5	4	11	42
buy and collect							14.6
	5.0	1	8		5		27
combination							9.4
Column		12	120	26	71	22	288
(Continued) Total		4.2	41.7	9.0	24.7	7.6	100.0

Page 64 SPSS/PC+ Studentware+ 7/6/94

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..
 SEX sex of respondent Value = 2.0 female

		FUELSRC2		Page 4 of 4
Count				
		combinat		Row
		ion		Total
FUELSRC		5.0		
gas	3.0	4		50
				17.4
buy and collect	4.0	5		42
				14.6
combination	5.0	13		27
				9.4
Column		37		288
Total		12.8		100.0

Number of Missing Observations: 3

Page 65 SPSS/PC+ Studentware+ 7/6/94

Page 66 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 7:43:50
 set printer off.

variable labels cvlsts "civil status of respondent".
 variable labels edlvl "educational level of respondent".
 value labels cvlsts 1 "single" 2 "married" 3 "widowed" 4 "separated".
 crosstabs cvlsts by edlvl.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 75 SPSS/PC+ Studentware+ 7/6/94

CVLSTS civil status of respondent by EDLVL educational level of respondent

Page 1 of 3

		EDLVL							Row Total
Count		.0	1.0	2.0	3.0	4.0	5.0	6.0	
CVLSTS									
single	1.0						1		6 1.5
married	2.0	6	2	11	10	28	23	94	350 87.3
widowed	3.0	3	3	1	1	4	2	3	32 8.0
separated	4.0		1		1		2	3	13 3.2
Column Total		9	6	12	12	32	28	100	401
(Continued)		2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 76 SPSS/PC+ Studentware+ 7/6/94

CVLSTS civil status of respondent by EDLVL educational level of respondent

Page 2 of 3

		EDLVL							Row Total
Count		7.0	8.0	9.0	10.0	11.0	12.0	13.0	
CVLSTS									
single	1.0	1			2		1		6 1.5
married	2.0	19	38	20	53	12	12	8	350 87.3
widowed	3.0	5	4	2	3	1			32 8.0
separated	4.0	1	1	1	2		1		13 3.2
Column Total		26	43	23	60	13	14	8	401
(Continued)		6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

Page 77 SPSS/PC+ Studentware+ 7/6/94

CVLSTS civil status of respondent by EDLVL educational level of respondent

		EDLVL		Row Total
Count		14.0	66.0	
CVLSTS	1.0		1	6
	single			1.5
	2.0	14		350
	married			87.3
	3.0			32
widowed				8.0
	4.0			13
	separated			3.2
Column		14	1	401
Total		3.5	.2	100.0

Number of Missing Observations: 3

Page 78 SPSS/PC+ Studentware+ 7/6/94

Page 79 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 7:52:48
set printer off.

variable labels religion "religion of respondent".
 variable labels child# "number of children of respondent".
 value labels religion 1 "catholic" 2 "protestant" 3 "7th day adventist"
 4 "jehovah's witness" 5 "born again christian" 6 "muslims" 7 "mormons"
 8 "iglesia nni kristo" 9 "church of the nazarene" 10 "assembly of god"
 11 "baptist".
 crosstabs religion by child#.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

RELIGION religion of respondent by CHILD# number of children of respondent

Count

CHILD#

Page 1 of 6

RELIGION	.0	1.0	2.0	3.0	4.0	5.0	6.0	Row Total
catholic	1	24	42	11	6	46	1	35
protestant			1		1			
7th day adventis			2			1	2	1.
Column Total	24	51	82	66	55	51	28	40
(Continued)	6.0	12.7	20.4	16.5	13.7	12.7	7.7	10

RELIGION religion of respondent by CHILD# number of children of respondent

Count

CHILD#

Page 2 of 6

RELIGION	7.0	8.0	9.0	10.0	11.0	12.0	Row Total
catholic	15	9	10	1	1	2	353
protestant				1			3
7th day adventis							5
Column Total	16	12	11	2	1	2	401
(Continued)	4.0	3.0	2.7	.5	.2	.5	100.0

RELIGION religion of respondent by CHILD# number of children of respondent

Page 3 of 6

RELIGION	Count	CHILD#						Row Total
		.0	1.0	2.0	3.0	4.0	5.0	
jehovah's witnes	4.0						1	1
born again chris	5.0			1	2	5	3	15
muslims	6.0			1			1	5
mormons	7.0			1				1
(Continued) Column Total		24	51	82	66	55	51	401
		6.0	12.7	20.4	16.5	13.7	12.7	100.0

RELIGION religion of respondent by CHILD# number of children of respondent

Page 4 of 6

RELIGION	Count	CHILD#					Row Total
		7.0	8.0	9.0	10.0	11.0	
jehovah's witnes	4.0						1
born again chris	5.0	1	2				15
muslims	6.0		1	1			5
mormons	7.0						1
(Continued) Column Total		16	12	11	2	1	401
		4.0	3.0	2.7	.5	.2	100.0

RELIGION religion of respondent by CHILD# number of children of respondent

Page 5 of 6

RELIGION	Count	CHILD#						Row Total
		.0	1.0	2.0	3.0	4.0	5.0	
	8.0		3	1	1	3		9

iglesia nni kris								2.2
9.0			1		2	2		5
church of the na								1.2
10.0		1					1	2
assembly of god								.5
11.0		1						1
baptist								.2
Column Total	24	51	82	66	55	51	28	401
(Continued)	6.0	12.7	20.4	16.5	13.7	12.7	7.0	100.0

Page 96 SPSS/PC+ Studentware+ 7/6/94

RELIGION religion of respondent by CHILD# number of children of respondent

Page 6 of 6

Count	CHILD#						Row Total
	7.0	8.0	9.0	10.0	11.0	12.0	
RELIGION							
8.0							9
iglesia nni kris							2.2
9.0							5
church of the na							1.2
10.0							2
assembly of god							.5
11.0							1
baptist							.2
Column Total	16	12	11	2	1	2	401
	4.0	3.0	2.7	.5	.2	.5	100.0

Number of Missing Observations: 3

Page 97 SPSS/PC+ Studentware+ 7/6/94

Page 98 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 7:58:50
set printer off.

variable labels religion "religion of respondent".
 variable labels child# "number of children".
 value labels religion 1 "catholic" 2 "protestant" 3 "7th day adventist"
 4 "jehovah's witness" 5 "born again christian" 6 "muslim" 7 "mormon"
 8 "iglesia ni kristo" 9 "nazarene" 10 "assembly of god" 11 "baptist".
 crosstab religion by child#.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 131

SPSS/PC+ Studentware+

7/6/94

RELIGION religion of respondent by CHILD# number of children

Page 1 of 6

		CHILD#							Row Total
Count		.0	1.0	2.0	3.0	4.0	5.0	6.0	
RELIGION									
	.0		1						1 .2
catholic	1.0	24	42	77	62	44	44	22	353 88.0
protestant	2.0		1		1				3 .7
7th day adventis	3.0		2			1		2	5 1.2
Column (Continued) Total		24 6.0	51 12.7	82 20.4	66 16.5	55 13.7	51 12.7	28 7.0	401 100.0

Page 132

SPSS/PC+ Studentware+

7/6/94

RELIGION religion of respondent by CHILD# number of children

Page 2 of 6

		CHILD#						Row Total
Count		7.0	8.0	9.0	10.0	11.0	12.0	
RELIGION								
	.0							1 .2
catholic	1.0	15	9	10	1	1	2	353 88.0
protestant	2.0				1			3 .7
7th day adventis	3.0							5 1.2
Column (Continued) Total		16 4.0	12 3.0	11 2.7	2 .5	1 .2	2 .5	401 100.0

Page 133

SPSS/PC+ Studentware+

7/6/94

		CHILD#							Page 3 of 6
Count		.0	1.0	2.0	3.0	4.0	5.0	6.0	Row Total
RELIGION									
	4.0						1		1
	jehovah's witnes								.2
	5.0			1	2	5	3	1	15
	born again chris								3.7
	6.0			1			1	1	5
	muslim								1.2
	7.0			1					1
	mormon								.2
	Column Total	24	51	82	66	55	51	28	401
(Continued)		6.0	12.7	20.4	16.5	13.7	12.7	7.0	100.0

RELIGION religion of respondent by CHILD# number of children

		CHILD#						Page 4 of 6
Count		7.0	8.0	9.0	10.0	11.0	12.0	Row
RELIGION								Total
jehovah's witnes	4.0							1.2
born again chris	5.0	1	2					3.7
muslim	6.0		1	1				1.2
mormon	7.0							.2
Column		16	12	11	2	1	2	401
(Continued) Total		4.0	3.0	2.7	.5	.2	.5	100.0

RELIGION religion of respondent by CHILDB# number of children

[illegible]

nazarene	9.0			1		2	2		5
									1.2
assembly of god	10.0		1					1	2
									.5
baptist	11.0		1						1
									.2
Column		24	51	92	66	55	51	28	401
(Continued) Total		6.0	12.7	20.4	16.5	13.7	12.7	7.0	100.0

RELIGION religion of respondent by CHILD# number of children

Page 6 of 6

Count	CHILD#							Row
		7.0	8.0	9.0	10.0	11.0	12.0	Total
iglesia ni krist	8.0							9
								2.2
nazarene	9.0							5
								1.2
assembly of god	10.0							2
								.5
baptist	11.0							1
								.2
Column		16	12	11	2	1	2	401
Total		4.0	3.0	2.7	.5	.2	.5	100.0

Number of Missing Observations: 3

This procedure was completed at 21:55:12
set printer off.

variable labels cvlsts "civil status of respondent".
 variable labels child# "number of children".
 value labels cvlsts 1 "single" 2 "married" 3 "widowed" 4 "separated".
 crosstabs cvlsts by child#.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 115

SPSS/PC+ Studentware+

7/6/94

CVLSTS civil status of respondent by CHILD# number of children

Page 1 of 2

		CHILD#							Row Total
Count		.0	1.0	2.0	3.0	4.0	5.0	6.0	
CVLSTS	1.0	3	2						6
	single								1.5
	2.0	18	41	75	57	51	48	26	350
	married								87.3
widowed	3.0	3	5	4	5	4	2	1	32
									8.0
separated	4.0		3	3	4		1	1	13
									3.2
Column (Continued) Total		24 6.0	51 12.7	82 20.4	66 16.5	55 13.7	51 12.7	28 7.0	401 100.0

Page 116

SPSS/PC+ Studentware+

7/6/94

CVLSTS civil status of respondent by CHILD# number of children

Page 2 of 2

		CHILD#						Row Total
Count		7.0	8.0	9.0	10.0	11.0	12.0	
CVLSTS	1.0		1					6
	single							1.5
married	2.0	14	9	8	1	1	1	350
								87.3
widowed	3.0	2	2	2	1		1	32
								8.0
separated	4.0			1				13
								3.2
Column Total		16 4.0	12 3.0	11 2.7	2 .5	1 .2	2 .5	401 100.0

Number of Missing Observations: 3

Page 117

SPSS/PC+ Studentware+

7/6/94

variable labels stplfd "pre-resettlement staple food".
 variable labels staple2 "post-resettlement staple food".
 variable labels sex "sex of respondent".
 value labels stplfd 1 "rice" 2 "corn" 3 "rice and corn" 4 "combination".
 value labels staple2 1 "rice" 2 "corn" 3 "rice and corn" 4 "combination".
 value labels sex 1 "male" 2 "female".
 crosstabs stplfd by staple2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

Page 102

SPSS/PC+ Studentware+

7/6/94

STPLFD pre-resettlement staple food
 by STAPLE2 post-resettlement staple food
 Controlling for..
 SEX sex of respondent Value = -1.0

		STAPLE2		Page 1 of 1	
Count		rice and corn	3.0	Row Total	
STPLFD					
	3.0	1		1	
rice and corn				100.0	
	Column	1		1	
	Total	100.0		100.0	

Page 103

SPSS/PC+ Studentware+

7/6/94

STPLFD pre-resettlement staple food
 by STAPLE2 post-resettlement staple food
 Controlling for..
 SEX sex of respondent Value = 1.0 male

		STAPLE2				Page 1 of 2	
Count		rice	corn	rice and corn	combinat ion	Row Total	
		1.0	2.0	3.0	4.0		
STPLFD							
	1.0	72		6	1	79	
rice						70.5	
	2.0		2	1		3	
corn						2.7	
	3.0	7	1	17		25	
rice and corn						22.3	
	Column	84	3	24	1	112	
(Continued)	Total	75.0	2.7	21.4	.9	100.0	

Page 104

SPSS/PC+ Studentware+

7/6/94

STPLFD pre-resettlement staple food
 by STAPLE2 post-resettlement staple food
 Controlling for..
 SEX sex of respondent Value = 1.0 male

Page 2 of 2

		STAPLE2				Row Total
Count		rice	corn	rice and corn	combination	
		1.0	2.0	3.0	4.0	
STPLFD						
combination	4.0	5				5
						4.5
Column		84	3	24	1	112
Total		75.0	2.7	21.4	.9	100.0

Page 105

SPSS/PC+ Studentware+

7/6/94

STPLFD pre-resettlement staple food
by STAPLE2 post-resettlement staple food
Controlling for..
SEX sex of respondent Value = 2.0 female

Page 1 of 2

		STAPLE2				Row Total
Count		rice	corn	rice and corn	combination	
		-1.0	1.0	2.0	3.0	4.0
STPLFD						
	-1.0		1			1
						.3
rice	1.0	1	188	2	16	207
						71.9
corn	2.0		1	4	3	8
						2.8
Column		1	208	6	70	288
(Continued) Total		.3	72.2	2.1	24.3	100.0

Page 106

SPSS/PC+ Studentware+

7/6/94

STPLFD pre-resettlement staple food
by STAPLE2 post-resettlement staple food
Controlling for..
SEX sex of respondent Value = 2.0 female

Page 2 of 2

		STAPLE2				Row Total
Count		rice	corn	rice and corn	combination	
		-1.0	1.0	2.0	3.0	4.0
STPLFD						
rice and corn	3.0		17		50	1
						68
						23.6
combination	4.0		1		1	2
						4
						1.4
Column		1	208	6	70	288
Total		.3	72.2	2.1	24.3	100.0

Number of Missing Observations: 3

variable labels educ "pre-resettlement access to education".
 variable labels educ2 "post-resettlement access to education".
 variable labels sex "sex of respondent".
 value labels educ 1 "yes" 2 "no" 99 "dna".
 value labels educ2 1 "yes" 2 "no" 99 "dna".
 value labels sex 1 "male" 2 "female".

crosstabs educ by educ2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

EDUC pre-resettlement access to education
 by EDUC2 post-resettlement access to education
 Controlling for..
 SEX sex of respondent Value = -1.0

Count

EDUC2

Page 1 of 1

		yes		Row
		1.0		Total
EDUC				
	1.0	1		1
yes				100.0
	Column	1		1
	Total	100.0		100.0

EDUC pre-resettlement access to education
 by EDUC2 post-resettlement access to education
 Controlling for..
 SEX sex of respondent Value = 1.0 male

Count

EDUC2

Page 1 of 1

		yes	no	dna	Row
		1.0	2.0	99.0	Total
EDUC					
	1.0	63	7	10	80
yes					71.4
	2.0		4	1	5
no					4.5
	99.0	2	1	24	27
dna					24.1
	Column	65	12	35	112
	Total	58.0	10.7	31.3	100.0

EDUC pre-resettlement access to education
 by EDUC2 post-resettlement access to education
 Controlling for..

SEX sex of respondent Value = 2.0 female

Page 1 of 1

	Count	EDUC2			Row Total
		yes	no	dna	
		1.0	2.0	99.0	
EDUC					
yes	1.0	157	15	14	186 64.6
no	2.0	1	4		5 1.7
dna	99.0	9	1	87	97 33.7
	Column Total	167 58.0	20 6.9	101 35.1	288 100.0

Number of Missing Observations: 3

This procedure was completed at 21:39:31
set printer off.

crosstab child# by edlvl.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

CHILD# number of children of respondent
by EDLVL educational level of respondent

Page 1 of 12

CHILD#	Count	EDLVL							Row Total
		.0	1.0	2.0	3.0	4.0	5.0	6.0	
.0					1	1	1	3	24 6.0
1.0		2			1	4	2	11	51 12.7
2.0		1		2		5	3	24	82 20.4
3.0		1	1	1	3	5	3	11	66 16.5
Column (Continued) Total		9 2.2	6 1.5	12 3.0	12 3.0	32 8.0	28 7.0	100 24.9	401 100.0

CHILD# number of children of respondent
by EDLVL educational level of respondent

Page 2 of 12

CHILD#	Count	EDLVL							Row Total
		7.0	8.0	9.0	10.0	11.0	12.0	13.0	
.0		3	5		7	2			24 6.0
1.0		1	8	2	8	1	4	1	51 12.7
2.0		2	9	9	17	2	3	1	82 20.4
3.0		6	9	5	9	3	5	3	66 16.5
Column (Continued) Total		26 6.5	43 10.7	23 5.7	60 15.0	13 3.2	14 3.5	8 2.0	401 100.0

CHILD# number of children of respondent
by EDLVL educational level of respondent

Page 3 of 12

CHILD#	Count	EDLVL		Row Total
		14.0	66.0	
.0	1			24 6.0
1.0	5	1		51 12.7
2.0	4			82 20.4
3.0	1			66 16.5
Column		14	1	401
(Continued) Total		3.5	.2	100.0

Page 132

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

Page 4 of 12

CHILD#	Count	EDLVL							Row Total
		.0	1.0	2.0	3.0	4.0	5.0	6.0	
4.0	2	2	2	2	1	5	5	16	55 13.7
5.0	1			4	3	5	8	12	51 12.7
6.0				2	1	4	3	5	28 7.0
7.0	1	1	1	1	1	2		6	16 4.0
Column		9	6	12	12	32	28	100	401
(Continued) Total		2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 133

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

Page 5 of 12

CHILD#	Count	EDLVL							Row Total
		7.0	8.0	9.0	10.0	11.0	12.0	13.0	
4.0	5	5	4	5	1		1		55 13.7

Column	26	43	23	60	13	14	8	401
Total	6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

7/6/94

EDLVL Page 6 of 12

7/6/94

EDLVL Page 7 of 12

[illegible]

		9	6	12	12	32	28	100	401
(Continued)	Column Total	2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 136 SPSS/PC+ Studentware+ 7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

Page 8 of 12

CHILD#	Count	EDLVL							Row Total
		7.0	8.0	9.0	10.0	11.0	12.0	13.0	
8.0	1				1			1	12 3.0
9.0	1	1	1	1	1				11 2.7
10.0			1						2 .5
11.0									1 .2
	Column Total	26	43	23	60	13	14	8	401
(Continued)	Total	6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

Page 137 SPSS/PC+ Studentware+ 7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

Page 9 of 12

CHILD#	Count	EDLVL		Row Total
		14.0	66.0	
8.0				12 3.0
9.0				11 2.7
10.0				2 .5
11.0				1 .2
	Column Total	14	1	401
(Continued)	Total	3.5	.2	100.0

Page 138 SPSS/PC+ Studentware+ 7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

CHILD#	Count	EDLVL							Row Total
		.0	1.0	2.0	3.0	4.0	5.0	6.0	
12.0			1					1	2
									.5
Column		9	6	12	12	32	28	100	401
(Continued) Total		2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 139

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

CHILD#	Count	EDLVL							Row Total
		7.0	8.0	9.0	10.0	11.0	12.0	13.0	
12.0									2
									.5
Column		26	43	23	60	13	14	8	401
(Continued) Total		6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

Page 140

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children of respondent
by EDLVL educational level of respondent

CHILD#	Count	EDLVL		Row Total
		14.0	66.0	
12.0				2
				.5
Column		14	1	401
Total		3.5	.2	100.0

Number of Missing Observations: 3

Page 141

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 0135136
variable labels child# "number of children of respondent".
variable labels edlvl "educational level of respondent".
set printer off.

crosstab ethgrp by edlvl.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 302

SPSS/PC+ Studentware+

7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

Page 1 of 6

Count		EDLVL							Row Total
		.0	1.0	2.0	3.0	4.0	5.0	6.0	
ETHGRP									
ormocano	1.0	9	4	9	10	25	25	82	325
									81.0
cebuano	2.0		1	3	2	5	2	12	49
									12.2
davaoenos	3.0							2	8
									2.0
waray	4.0					2		2	13
									3.2
Column Total		9	6	12	12	32	28	100	401
(Continued)	Total	2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 303

SPSS/PC+ Studentware+

7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

Page 2 of 6

Count		EDLVL							Row Total
		7.0	8.0	9.0	10.0	11.0	12.0	13.0	
ETHGRP									
ormocano	1.0	18	33	19	50	9	12	6	325
									81.0
cebuano	2.0	5	8	3	6		2		49
									12.2
davaoenos	3.0		1		1	2		1	8
									2.0
waray	4.0	3	1	1	2	2			13
									3.2
Column Total		26	43	23	60	13	14	8	401
(Continued)	Total	6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

Page 304

SPSS/PC+ Studentware+

7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

Count EDLVL Page 3 of 6

		Row		
		14.0	66.0	Total
ETHGRP				
	1.0	13	1	325
ormocano				81.0
	2.0			49
cebuano				12.2
	3.0	1		8
davaoenos				2.0
	4.0			13
waray				3.2
Column		14	1	401
(Continued)	Total	3.5	.2	100.0

Page 305

SPSS/PC+ Studentware+

7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

		EDLVL							Page 4 of 6	
		Count								
			.0	1.0	2.0	3.0	4.0	5.0	6.0	Row
ETHGRP										Total
	5.0			1					2	4
visayan										1.0
	6.0							1		2
tagalog										.5
Column			9	6	12	12	32	28	100	401
(Continued)	Total		2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

Page 306

SPSS/PC+ Studentware+

7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

		EDLVL							Page 5 of 6	
		Count								
			7.0	8.0	9.0	10.0	11.0	12.0	13.0	Row
ETHGRP										Total
	5.0								1	4
visayan										1.0
	6.0					1				2
tagalog										.5
Column			26	43	23	60	13	14	8	401
(Continued)	Total		6.5	10.7	5.7	15.0	3.2	3.5	2.0	100.0

Page 307

SPSS/PC+ Studentware+

7/6/94

ETHGRP ethnic group of respondent by EDLVL educational level of respondent

	Count	EDLVL		Row Total
		14.0	66.0	
ETHGRP				
visayan	5.0			4 1.0
tagalog	6.0			2 .5
Column Total		14 3.5	1 .2	401 100.0

Number of Missing Observations: 3

Page 308

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 6:51:35
 variable labels ethgrp "ethnic group of respondent".
 variable labels edlvl "educational level of respondent".
 value labels ethgrp 1 "ormocano" 2 "cebuano" 3 "davaoenos"
 4 "waray" 5 "visayan" 6 "tagalog" 7 "chinese".
 set printer off.

```

variable labels elec "pre-resettlement access to electricity".
variable labels elec2 "post-resettlement access to electricity".
value labels elec 1 "yes" 2 "no".
value labels elec2 1 "yes" 2 "no".
crosstabs elec by elec2.

```

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 331

SPSS/PC+ Studentware+

7/6/94

ELEC pre-resettlement access to electricity
by ELEC2 post-resettlement access to electricity

		ELEC2		Page 1 of 1
Count		yes	no	
		1.0	2.0	Row Total
ELEC	1.0	51	175	226
	yes			56.4
	2.0	11	164	175
	no			43.6
Column		62	339	401
Total		15.5	84.5	100.0

Number of Missing Observations: 3

Page 332

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 7:05:15
set printer off.

variable labels sanitn "pre-resettlement access to sanitation".
 variable labels sanitn2 "post-resettlement access to sanitation".
 value labels sanitn 1 "yes" 2 "no".
 value labels sanitn2 1 "yes" 2 "no".
 crosstabs sanitn by sanitn2.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 324

SPSS/PC+ Studentware+

7/6/94

SANITN pre-resettlement access to sanitation
 by SANITN2 post-resettlement access to sanitation

Page 1 of 1

		SANITN2		Row Total
		yes	no	
SANITN	Count	1.0	2.0	
yes	1.0	251	15	266 66.3
	2.0	126	9	135 33.7
Column Total		377 94.0	24 6.0	401 100.0

Number of Missing Observations: 3

Page 325

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 7:01:54
 set printer off.

variable labels health "pre-resettlement access to health care".
 variable labels health2 "post-resettlement access to health care".
 value labels health 1 "yes" 2 "no".
 value labels health2 1 "yes" 2 "no".
 crosstabs health by health2.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

 Page 317 SPSS/PC+ Studentware+ 7/6/94

HEALTH pre-resettlement access to health care
 by HEALTH2 post-resettlement access to health care

Page 1 of 1

		HEALTH2		Row Total
		yes	no	
HEALTH	Count	1.0	2.0	
	1.0	390	10	400
yes				99.8
no	2.0	1		1
				.2
Column Total		391	10	401
		97.5	2.5	100.0

Number of Missing Observations: 3

 Page 318 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 6:58:22
 set printer off.

crosstabs fuelsrc by fuelsrc2.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 354

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source

		FUELSRC2					Page 1 of 4
Count							
		buy wood	collect wood	gas	buy and collect	Row Total	
		-1.0	1.0	2.0	3.0	4.0	
FUELSRC							
	-1.0	19					19 4.7
buy wood	1.0	6	118	8	32	8	185 46.1
collect wood	2.0		9	25	3	4	46 11.5
gas	3.0	1	8		47	3	64 16.0
Column Total		29	163	38	95	29	401
(Continued) Total		7.2	40.6	9.5	23.7	7.2	100.0

Page 355

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source

		FUELSRC2		Page 2 of 4
Count				
		combinat	ion	Row Total
		5.0		
FUELSRC				
	-1.0			19 4.7
buy wood	1.0	13		185 46.1
collect wood	2.0	5		46 11.5
gas	3.0	5		64 16.0
Column Total		47		401
(Continued) Total		11.7		100.0

Page 356

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source

		FUELSRC2					Page 3 of 4
Count		buy wood	collect wood	gas	buy and collect	Row Total	
		-1.0	1.0	2.0	3.0	4.0	
FUELSRC							
	4.0	2	16	5	5	13	50
buy and collect							12.5
	5.0	1	12		8	1	37
combination							9.2
Column		29	163	38	95	29	401
(Continued) Total		7.2	40.6	9.5	23.7	7.2	100.0

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source

		FUELSRC2		Page 4 of 4
Count		combination	Row Total	
		5.0		
FUELSRC				
	4.0	9	50	
buy and collect			12.5	
	5.0	15	37	
combination			9.2	
Column		47	401	
Total		11.7	100.0	

Number of Missing Observations: 3

This procedure was completed at 7:13:20
 variable labels fuelsrc "pre-resettlement fuel source".
 variable labels fuelsrc2 "post-resettlement fuel source".
 value labels fuelsrc 1 "buy wood" 2 "collect wood" 3 "gas"
 4 "buy and collect wood" 5 "combination".
 value labels fuelsrc2 1 "buy wood" 2 "collect wood" 3 "gas"
 4 "buy and collect wood" 5 "combination".
 set printer off.

crosstabs health by health2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

Page 436

SPSS/PC+ Studentware+

7/6/94

HEALTH pre-resettlement access to health care
by HEALTH2 post-resettlement access to health care
Controlling for..
SEX sex of respondent Value = -1.0

		HEALTH2		Page 1 of 1	
		yes		Row	
		1.0	Total		
HEALTH	Count				
yes	1.0	1	1	100.0	
		Column	1	1	
		Total	100.0	100.0	

Page 437

SPSS/PC+ Studentware+

7/6/94

HEALTH pre-resettlement access to health care
by HEALTH2 post-resettlement access to health care
Controlling for..
SEX sex of respondent Value = 1.0 male

		HEALTH2		Page 1 of 1	
		yes	no	Row	
		1.0	2.0	Total	
HEALTH	Count				
yes	1.0	106	6	112	100.0
		Column	106	6	112
		Total	94.6	5.4	100.0

Page 438

SPSS/PC+ Studentware+

7/6/94

HEALTH pre-resettlement access to health care
by HEALTH2 post-resettlement access to health care
Controlling for..
SEX sex of respondent Value = 2.0 female

		HEALTH2		Page 1 of 1	
		yes	no	Row	
		1.0	2.0	Total	
HEALTH	Count				
yes	1.0	283	4	287	99.7
		2.0	1	1	.3

	+-----+		
Column	284	4	288
Total	98.6	1.4	100.0

Number of Missing Observations: 3

Page 439

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 7:22:53
 variable labels health "pre-resettlement access to health care".
 variable labels health2 "post-resettlement access to health care".
 variable labels sex "sex of respondent".
 value labels health 1 "yes" 2 "no".
 value labels health2 1 "yes" 2 "no".
 value labels sex 1 "male" 2 "female".
 set printer off.

variable labels sanitn " pre-resettlement access to sanitation".
 variable labels sanitn2 "post-resettlement access to sanitation".
 variable labels sex "sex of respondent".
 value labels sanitn 1 "yes" 2 "no".
 value labels sanitn2 1 "yes" 2 "no".
 value labels sex 1 "male" 2 "female".
 crosstabs sanitn by sanitn2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

SANITN pre-resettlement access to sanitation
 by SANITN2 post-resettlement access to sanitation
 Controlling for..
 SEX sex of respondent Value = -1.0

		SANITN2		Page 1 of 1	
Count		yes		Row	
		1.0		Total	
SANITN					
yes	1.0	1		1	100.0
Column		1		1	
Total		100.0		100.0	

SANITN pre-resettlement access to sanitation
 by SANITN2 post-resettlement access to sanitation
 Controlling for..
 SEX sex of respondent Value = 1.0 male

		SANITN2		Page 1 of 1	
Count		yes	no	Row	
		1.0	2.0	Total	
SANITN					
yes	1.0	4	6	80	71.4
no	2.0	31	1	32	28.6
Column		105	112		
Total		93.8	6.3	100.0	

SANITN pre-resettlement access to sanitation
 by SANITN2 post-resettlement access to sanitation
 Controlling for..
 SEX sex of respondent Value = 2.0 female

		SANITN2	Page 1 of 1
Count			

		yes	no	Row
		1.0	2.0	Total
SANITN	1.0	176	9	185
yes				64.2
	2.0	95	8	103
no				35.8
Column		271	17	288
Total		94.1	5.9	100.0

Number of Missing Observations: 3

Page 513

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 11:27:15
set printer off.

variable labels elec "pre-resettlement access to electricity".
 variable labels elec2 "post-resettlement access to electricity".
 variable labels sex "sex of respondent".
 value labels elec 1 "yes" 2 "no".
 value labels elec2 1 "yes" 2 "no".
 value labels sex 1 "male" 2 "female".
 crosstabs elec by elec2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

Page 37

SPSS/PC+ Studentware+

7/6/94

ELEC pre-resettlement access to electricity
 by ELEC2 post-resettlement access to electricity
 Controlling for..
 SEX sex of respondent Value = -1.0

		ELEC2		Page 1 of 1	
Count		no		Row	
		2.0		Total	
ELEC	yes	1.0	1	1	100.0
	no				
Column		1	1		
Total		100.0	100.0		

Page 38

SPSS/PC+ Studentware+

7/6/94

ELEC pre-resettlement access to electricity
 by ELEC2 post-resettlement access to electricity
 Controlling for..
 SEX sex of respondent Value = 1.0 male

		ELEC2		Page 1 of 1	
Count		yes	no	Row	
		1.0	2.0	Total	
ELEC	yes	1.0	17	51	68
	no	2.0	5	39	44
Column		22	90	112	
Total		19.6	80.4	100.0	

Page 39

SPSS/PC+ Studentware+

7/6/94

ELEC pre-resettlement access to electricity
 by ELEC2 post-resettlement access to electricity
 Controlling for..
 SEX sex of respondent Value = 2.0 female

		ELEC2		Page 1 of 1	
Count					

		yes		Row Total
		1.0	2.0	
ELEC	yes	1.0	34	123
				157
no	2.0	6	125	131
				45.5
Column		40	248	288
Total		13.9	86.1	100.0

Number of Missing Observations: 3

Page 40

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 7:37:40
set printer off.

variable labels fuelsrc "pre-resettlement fuel source".
 variable labels fuelsrc2 "post-resettlement fuel source".
 value labels fuelsrc 1 "buy wood" 2 "collect wood" 4 "buy and collect wood"
 3 "gas" 5 "combination".
 value labels fuelsrc2 1 "buy wood" 2 "collect wood" 3 "gas"
 4 "buy and collect wood" 5 "combination".
 value labels sex 1 "male" 2 "female".
 crosstabs fuelsrc by fuelsrc2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..
 SEX sex of respondent Value = -1.0

Page 1 of 1

		FUELSRC2			
Count		gas		Row	
		3.0		Total	
FUELSRC	1.0	1	1	1	
buy wood				100.0	
Column		1	1		
Total		100.0	100.0		

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..
 SEX sex of respondent Value = 1.0 male

Page 1 of 4

		FUELSRC2						
Count		buy wood collect gas buy and					Row	
		wood wood wood collect					Total	
		-1.0	1.0	2.0	3.0	4.0		
FUELSRC	-1.0	16					16	
							14.3	
FUELSRC	1.0	1	31	3	11	1	50	
buy wood							44.6	
FUELSRC	2.0		3	9	1	1	14	
collect wood							12.5	
Column		17	43	12	23	7	112	
(Continued)	Total	15.2	38.4	10.7	20.5	6.3	100.0	

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..

SEX sex of respondent Value = 1.0 male

		FUELSRC2	Page 2 of 4	
Count		combinat	Row	
		ion	5.0	Total
FUELSRC				
	-1.0		16	14.3
buy wood	1.0	3	50	44.6
collect wood	2.0		14	12.5
Column		10	112	
(Continued)	Total	8.9	100.0	

Page 59

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source
Controlling for..
SEX sex of respondent Value = 1.0 male

		FUELSRC2					Page 3 of 4	
Count							Row	
		buy wood	collect wood	gas	buy and collect		Total	
		-1.0	1.0	2.0	3.0	4.0		
FUELSRC								
gas	3.0		4		7	2	14	12.5
buy and collect	4.0		1		1	2	8	7.1
combination	5.0		4		3	1	10	8.9
Column		17	43	12	23	7	112	
(Continued)	Total	15.2	38.4	10.7	20.5	6.3	100.0	

Page 60

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source
Controlling for..
SEX sex of respondent value = 1.0 male

		FUELSRC2	Page 4 of 4	
Count		combinat	Row	
		ion	5.0	Total
FUELSRC				
gas	3.0	1	14	12.5

buy and collect	4.0	4	8
			7.1
combination	5.0	2	10
			8.9
Column Total		10	112
		8.9	100.0

Page 61

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source
Controlling for..
SEX sex of respondent Value = 2.0 female

		FUELSRC2					Page 1 of 4
Count		buy wood	collect wood	gas	buy and collect	Row Total	
		-1.0	1.0	2.0	3.0	4.0	
FUELSRC	-1.0	3					3
							1.0
buy wood	1.0	5	87	5	20	7	134
							46.5
collect wood	2.0		6	16	2	3	32
							11.1
Column Total		12	120	26	71	22	288
(Continued)	Total	4.2	41.7	9.0	24.7	7.6	100.0

Page 62

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
by FUELSRC2 post-resettlement fuel source
Controlling for..
SEX sex of respondent Value = 2.0 female

		FUELSRC2		Page 2 of 4
Count		combinat	Row Total	
		ion	5.0	
FUELSRC	-1.0		3	1.0
buy wood	1.0	10	134	46.5
collect wood	2.0	5	32	11.1
Column Total		37	288	
(Continued)	Total	12.8	100.0	

Page 63

SPSS/PC+ Studentware+

7/6/94

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..
 SEX sex of respondent Value = 2.0 female

		FUELSRC2					Page 3 of 4
Count							
		buy wood collect gas buy and					Row
		wood wood 2.0 3.0 4.0					Total
FUELSRC		-1.0	1.0	2.0	3.0	4.0	
gas	3.0	1	4		40	1	50 17.4
buy and collect	4.0	2	15	5	4	11	42 14.6
combination	5.0	1	8		5		27 9.4
Column		12	120	26	71	22	288
(Continued)	Total	4.2	41.7	9.0	24.7	7.6	100.0

Page 64 SPSS/PC+ Studentware+ 7/6/94

FUELSRC pre-resettlement fuel source
 by FUELSRC2 post-resettlement fuel source
 Controlling for..
 SEX sex of respondent Value = 2.0 female

		FUELSRC2		Page 4 of 4
Count				
		combinat		Row
		ion		Total
FUELSRC		5.0		
gas	3.0	4		50 17.4
buy and collect	4.0	5		42 14.6
combination	5.0	13		27 9.4
Column		37		288
Total		12.8		100.0

Number of Missing Observations: 3

Page 65 SPSS/PC+ Studentware+ 7/6/94

Page 66 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 7:43:50
 set printer off.

variable labels cvlsts "civil status of respondent".
variable labels edlvl "educational level of respondent".
value labels cvlsts 1 "single" 2 "married" 3 "widowed" 4 "separated".
crosstabs cvlsts by edlvl.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

CVLSTS civil status of respondent by EDLVL educational level of respondent

Page 1 of 3

		EDLVL							Row Total
Count		.0	1.0	2.0	3.0	4.0	5.0	6.0	
CVLSTS	1.0						1		6
	single								1.5
	2.0	6	2	11	10	28	23	94	350
	married								87.3
3.0	widowed	3	3	1	1	4	2	3	32
									8.0
4.0	separated		1		1		2	3	13
									3.2
Column		9	6	12	12	32	28	100	401
(Continued)	Total	2.2	1.5	3.0	3.0	8.0	7.0	24.9	100.0

CVLSTS civil status of respondent by EDLVL educational level of respondent

Page 2 of 3

		EDLVL							Row Total
Count		7.0	8.0	9.0	10.0	11.0	12.0	13.0	
CVLSTS	1.0	1			2		1		6
	single								1.5
	2.0	19	38	20	53	12	12	8	350
	married								87.3
3.0	widowed	5	4	2	3	1			32
									8.0
4.0	separated	1	1	1	2		1		13
									3.2
Column		26	43	23	60	13	14	8	401
(Continued)	Total	6.9	10.7	5.7	15.0	3.2	3.5	2.0	100.0

CVLSTS civil status of respondent by EDLVL educational level of respondent

CVLSTS	Count	EDLVL		Row Total
		14.0	66.0	
single	1.0		1	6 1.5
married	2.0	14		350 87.3
widowed	3.0			32 8.0
separated	4.0			13 3.2
Column Total		14 3.5	1 .2	401 100.0

Number of Missing Observations: 3

Page 78	SPSS/PC+ Studentware+	7/6/94
Page 79	SPSS/PC+ Studentware+	7/6/94

This procedure was completed at 7:52:48
set printer off.

variable labels religion "religion of respondent".
 variable labels child# "number of children of respondent".
 value labels religion 1 "catholic" 2 "protestant" 3 "7th day adventist"
 4 "jehovah's witness" 5 "born again christian" 6 "muslims" 7 "mormons"
 8 "iglesia nni kristo" 9 "church of the nazarene" 10 "assembly of god"
 11 "baptist".
 crosstabs religion by child#.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 91 SPSS/PC+ Studentware+ 7/6/94

RELIGION religion of respondent by CHILD# number of children of respondent

Page 1 of 6

		CHILD#								
		Count	.0	1.0	2.0	3.0	4.0	5.0	6.0	Row Total
RELIGION	.0									
	1.0	catholic	24	42	77	62	44			358.0
	2.0	protestant			1		1			
	3.0	7th day adventis			2			1	2	1.0
		Column Total	24	51	82	66	55	51	28	400
(Continued)		Total	6.0	12.7	20.4	16.5	13.7	12.7	7.0	100.0

Page 92 SPSS/PC+ Studentware+ 7/6/94

RELIGION religion of respondent by CHILD# number of children of respondent

Page 2 of 6

		CHILD#							
		Count	7.0	8.0	9.0	10.0	11.0	12.0	Row Total
RELIGION	.0								1.2
	1.0	catholic	15	9	10	1	1	2	353.0
	2.0	protestant				1			3.7
	3.0	7th day adventis							5.2
		Column Total	16	12	11	2	1	2	401
(Continued)		Total	4.0	3.0	2.7	.5	.2	.5	100.0

RELIGION religion of respondent by CHILD# number of children of respondent

Page 3 of 6

RELIGION	Count	CHILD#						Row Total
		.0	1.0	2.0	3.0	4.0	5.0	
jehovah's witnes	4.0						1	1
born again chris	5.0			1	2	5	3	15
muslims	6.0			1			1	5
mormons	7.0			1				1
Column Total		24	51	82	66	55	51	401
(Continued)		6.0	12.7	20.4	16.5	13.7	12.7	100.0

RELIGION religion of respondent by CHILD# number of children of respondent

Page 4 of 6

RELIGION	Count	CHILD#					Row Total
		7.0	8.0	9.0	10.0	11.0	
jehovah's witnes	4.0						1
born again chris	5.0	1	2				15
muslims	6.0		1	1			5
mormons	7.0						1
Column Total		16	12	11	2	1	401
(Continued)		4.0	3.0	2.7	.5	.2	100.0

RELIGION religion of respondent by CHILD# number of children of respondent

Page 5 of 6

RELIGION	Count	CHILD#					Row Total
		.0	1.0	2.0	3.0	4.0	
	8.0		3	1	1	3	9

iglesia nni kris								2.2
9.0			1		2	2		5
church of the na								1.2
10.0		1					1	2
assembly of god								.5
11.0		1						1
baptist								.2
Column	24	51	82	66	55	51	28	401
(Continued) Total	6.0	12.7	20.4	16.5	13.7	12.7	7.0	100.0

RELIGION religion of respondent by CHILD# number of children of respondent

Page 6 of 6

Count	CHILD#						Row
	7.0	8.0	9.0	10.0	11.0	12.0	Total
RELIGION							
8.0							9
iglesia nni kris							2.2
9.0							5
church of the na							1.2
10.0							2
assembly of god							.5
11.0							1
baptist							.2
Column	16	12	11	2	1	2	401
Total	4.0	3.0	2.7	.5	.2	.5	100.0

Number of Missing Observations: 3

This procedure was completed at 7:58:50
set printer off.

variable labels religion "religion of respondent".
 variable labels child# "number of children".
 value labels religion 1 "catholic" 2 "protestant" 3 "7th day adventist"
 4 "jehovah's witness" 5 "born again christian" 6 "muslim" 7 "mormon"
 8 "iglesia ni kristo" 9 "nazarene" 10 "assembly of god" 11 "baptist".
 crosstab religion by child#.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

RELIGION religion of respondent by CHILD# number of children

Page 1 of 6

Count		CHILD#							Row Total
		.0	1.0	2.0	3.0	4.0	5.0	6.0	
RELIGION									
	.0		1						1 .2
catholic	1.0	24	42	77	62	44	44	22	353 88.0
protestant	2.0		1		1				3 .7
7th day adventis	3.0		2			1		2	5 1.2
Column		24	51	82	66	55	51	28	401
(Continued)	Total	6.0	12.7	20.4	16.5	13.7	12.7	7.0	100.0

RELIGION religion of respondent by CHILD# number of children

Page 2 of 6

Count		CHILD#						Row Total
		7.0	8.0	9.0	10.0	11.0	12.0	
RELIGION								
	.0							1 .2
catholic	1.0	15	9	10	1	1	2	353 88.0
protestant	2.0				1			3 .7
7th day adventis	3.0							5 1.2
Column		16	12	11	2	1	2	401
(Continued)	Total	4.0	3.0	2.7	.5	.2	.5	100.0

RELIGION religion of respondent by CHILD# number of children

Page 3 of 6

		CHILD#							Row Total
Count		.0	1.0	2.0	3.0	4.0	5.0	6.0	
RELIGION									
	4.0						1		1
jehovah's witnes									.2
	5.0			1	2	5	3	1	15
born again chris									3.7
	6.0			1			1	1	5
muslim									1.2
	7.0			1					1
mormon									.2
Column		24	51	82	66	55	51	28	401
(Continued)	Total	6.0	12.7	20.4	16.5	13.7	12.7	7.0	100.0

Page 134

SPSS/PC+ Studentware+

7/6/94

RELIGION religion of respondent by CHILD# number of children

Page 4 of 6

		CHILD#						Row Total
Count		7.0	8.0	9.0	10.0	11.0	12.0	
RELIGION								
	4.0							1
jehovah's witnes								.2
	5.0	1	2					15
born again chris								3.7
	6.0		1	1				5
muslim								1.2
	7.0							1
mormon								.2
Column		16	12	11	2	1	2	401
(Continued)	Total	4.0	3.0	2.7	.5	.2	.5	100.0

Page 135

SPSS/PC+ Studentware+

7/6/94

RELIGION religion of respondent by CHILD# number of children

Page 5 of 6

		CHILD#						Row Total
Count		.0	1.0	2.0	3.0	4.0	5.0	
RELIGION								
	8.0		3	1	1	3		9
iglesia ni krist							1	2.2

nazarene	9.0		1		2	2		5
								1.2
assembly of god	10.0		1				1	2
								.5
baptist	11.0		1					1
								.2
Column	24	51	82	66	55	51	28	401
(Continued) Total	6.0	12.7	20.4	16.5	13.7	12.7	7.0	100.0

RELIGION religion of respondent by CHILD# number of children

	Count	CHILD#						Page 6 of 6
		7.0	8.0	9.0	10.0	11.0	12.0	Row
RELIGION								Total
iglesia ni krist	8.0							9
								2.2
nazarene	9.0							5
								1.2
assembly of god	10.0							2
								.5
baptist	11.0							1
								.2
Column	16	12	11	2	1	2		401
Total	4.0	3.0	2.7	.5	.2	.5		100.0

Number of Missing Observations: 3

This procedure was completed at 21:55:12
set printer off.

variable labels cvlsts "civil status of respondent".
 variable labels child# "number of children".
 value labels cvlsts 1 "single" 2 "married" 3 "widowed" 4 "separated".
 crosstabs cvlsts by child#.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

CVLSTS civil status of respondent by CHILD# number of children

Page 1 of 2

		CHILD#							Row Total
Count		.0	1.0	2.0	3.0	4.0	5.0	6.0	
CVLSTS	1.0	3	2						6
	single								1.5
	2.0	18	41	75	57	51	48	26	350
	married								87.3
widowed	3.0	3	5	4	5	4	2	1	32
									8.0
separated	4.0		3	3	4		1	1	13
									3.2
Column Total		24	51	82	66	55	51	28	401
(Continued)		6.0	12.7	20.4	16.5	13.7	12.7	7.0	100.0

CVLSTS civil status of respondent by CHILD# number of children

Page 2 of 2

		CHILD#						Row Total
Count		7.0	8.0	9.0	10.0	11.0	12.0	
CVLSTS	1.0		1					6
	single							1.5
	2.0	14	9	8	1	1	1	350
	married							87.3
widowed	3.0	2	2	2	1		1	32
								8.0
separated	4.0			1				13
								3.2
Column Total		16	12	11	2	1	2	401
		4.0	3.0	2.7	.5	.2	.5	100.0

Number of Missing Observations: 3

variable labels stplfd "pre-resettlement staple food".
 variable labels staple2 "post-resettlement staple food".
 variable labels sex "sex of respondent".
 value labels stplfd 1 "rice" 2 "corn" 3 "rice and corn" 4 "combination".
 value labels staple2 1 "rice" 2 "corn" 3 "rice and corn" 4 "combination".
 value labels sex 1 "male" 2 "female".
 crosstabs stplfd by staple2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

STPLFD pre-resettlement staple food
 by STAPLE2 post-resettlement staple food
 Controlling for..
 SEX sex of respondent Value = -1.0

Page 1 of 1

Count		STAPLE2	Row Total
		rice and corn	
		3.0	
STPLFD	-----	-----	-----
rice and corn	3.0	1	1
			100.0
	-----	-----	-----
Column Total		1	1
		100.0	100.0

STPLFD pre-resettlement staple food
 by STAPLE2 post-resettlement staple food
 Controlling for..
 SEX sex of respondent Value = 1.0 male

Page 1 of 2

Count		STAPLE2				Row Total
		rice	corn	rice and corn	combination	
		1.0	2.0	3.0	4.0	
STPLFD	-----	-----	-----	-----	-----	-----
rice	1.0	72		6	1	79
						70.5
corn	2.0		2	1		3
						2.7
rice and corn	3.0	7	1	17		25
						22.3
	-----	-----	-----	-----	-----	-----
Column Total		84	3	24	1	112
(Continued)	Total	75.0	2.7	21.4	.9	100.0

STPLFD pre-resettlement staple food
 by STAPLE2 post-resettlement staple food
 Controlling for..
 EX sex of respondent Value = 1.0 male

		STAPLE2				Page 2 of 2
Count		rice	corn	rice and combinat corn	ion	Row Total
		1.0	2.0	3.0	4.0	
STPLFD						
combination	4.0	5				5
						4.5
Column		84	3	24	1	112
Total		75.0	2.7	21.4	.9	100.0

Page 105

SPSS/PC+ Studentware+

7/6/94

STPLFD pre-resettlement staple food
by STAPLE2 post-resettlement staple food
Controlling for..
SEX sex of respondent Value = 2.0 female

		STAPLE2				Page 1 of 2
Count		rice	corn	rice and combinat corn	ion	Row Total
		-1.0	1.0	2.0	3.0	4.0
STPLFD						
	-1.0		1			1
						.3
rice	1.0	1	188	2	16	207
						71.9
corn	2.0		1	4	3	8
						2.8
Column		1	208	6	70	288
(Continued) Total		.3	72.2	2.1	24.3	100.0

Page 106

SPSS/PC+ Studentware+

7/6/94

STPLFD pre-resettlement staple food
by STAPLE2 post-resettlement staple food
Controlling for..
SEX sex of respondent Value = 2.0 female

		STAPLE2				Page 2 of 2
Count		rice	corn	rice and combinat corn	ion	Row Total
		-1.0	1.0	2.0	3.0	4.0
STPLFD						
rice and corn	3.0		17		50	1
						68
						23.6
combination	4.0		1		1	2
						4
						1.4
Column		1	208	6	70	3
Total		.3	72.2	2.1	24.3	100.0

Number of Missing Observations: 3

variable labels educ "pre-resettlement access to education".
 variable labels educ2 "post-resettlement access to education".
 variable labels sex "sex of respondent".
 value labels educ 1 "yes" 2 "no" 99 "dna".
 value labels educ2 1 "yes" 2 "no" 99 "dna".
 value labels sex 1 "male" 2 "female".

crosstabs educ by educ2 by sex.

Memory allows for 5,806 cells with 3 dimensions for general CROSSTABS.

Page 88 SPSS/PC+ Studentware+ 7/6/94

EDUC pre-resettlement access to education
 by EDUC2 post-resettlement access to education
 Controlling for..
 SEX sex of respondent Value = -1.0

Page 1 of 1

	Count	EDUC2		Row Total
		yes	1.0	
EDUC				
yes	1.0	1	1	100.0
	Column Total	1	1	100.0

Page 89 SPSS/PC+ Studentware+ 7/6/94

EDUC pre-resettlement access to education
 by EDUC2 post-resettlement access to education
 Controlling for..
 SEX sex of respondent Value = 1.0 male

Page 1 of 1

	Count	EDUC2			Row Total
		yes	no	dna	
EDUC					
yes	1.0	63	7	10	80
no	2.0		4	1	5
dna	99.0	2	1	24	27
	Column Total	65	12	35	112
		58.0	10.7	31.3	100.0

Page 90 SPSS/PC+ Studentware+ 7/6/94

EDUC pre-resettlement access to education
 by EDUC2 post-resettlement access to education
 Controlling for..

SEX sex of respondent Value = 2.0 female

Page 1 of 1

	Count	EDUC2			Row Total
		yes	no	dna	
EDUC	1.0	157	15	14	186
	2.0	1	4		5
	99.0	9	1	87	97
yes					64.6
no					1.7
dna					33.7
Column Total		167	20	101	288
		58.0	6.9	35.1	100.0

Number of Missing Observations: 3

Page 91 SPSS/PC+ Studentware+ 7/6/94

Page 92 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 21:39:31
set printer off.

variable labels landsts "land status",
 value labels landsts 1 "squat" 2 "rent" 3 "own".
 frequencies landsts / percentiles 1 2 3 .

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

Page 206

SPSS/PC+ Studentware+

5/29/94

LANDSTS land status

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-1.0	4	1.0	1.0	1.0
squat	1.0	222	55.0	55.4	56.4
rent	2.0	156	38.6	38.9	95.3
own	3.0	19	4.7	4.7	100.0
	.	3	.7	Missing	
	Total	404	100.0	100.0	

Percentile	Value	Percentile	Value	Percentile	Value
1.00	-.960	2.00	1.000	3.00	1.000

Valid cases 401 Missing cases 3

Page 207

SPSS/PC+ Studentware+

5/29/94

This procedure was completed at 7:00:01
 frequencies landsts / statistics all / histogram / format notable.

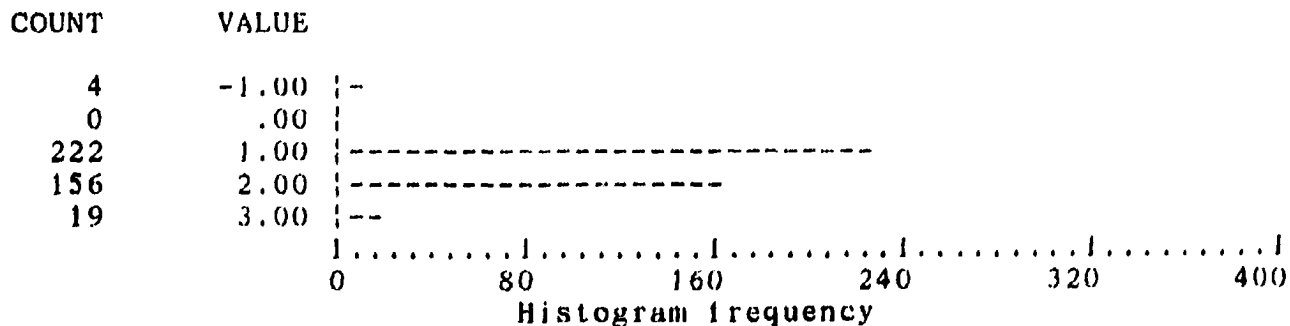
***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

Page 208

SPSS/PC+ Studentware+

5/29/94

LANDSTS land status



Page 209

SPSS/PC+ Studentware+

5/29/94

LANDSTS land status

Mean 1.464 Std err .032 Median 1.000

Mode	1.000	Std dev	.636	Variance	.404
Kurtosis	1.268	S E Kurt	.243	Skewness	.107
S E Skew	.122	Range	4.000	Minimum	-1.000
Maximum	3.000	Sum	587.000		

Valid cases	401	Missing cases	3
-------------	-----	---------------	---

Page 210	SPSS/PC+ Studentware+	5/29/94
----------	-----------------------	---------

This procedure was completed at 7:00:46
set printer off.

variable labels housests "house status".
 value labels housests 1 "squat" 2 "rent" 3 "own".
 frequencies housests / percentiles 1 2 3 .

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 191 SPSS/PC+ Studentware+ 5/29/94

HOUSESTS house status

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-1.0	3	.7	.7	.7
squat	1.0	263	65.1	65.6	66.3
rent	2.0	98	24.3	24.4	90.8
own	3.0	36	8.9	9.0	99.8
	22.0	1	.2	.2	100.0
	.	3	.7	Missing	
	Total	404	100.0	100.0	

Percentile	Value	Percentile	Value	Percentile	Value
1.00	1.000	2.00	1.000	3.00	1.000

Valid cases 401 Missing cases 3

 Page 192 SPSS/PC+ Studentware+ 5/29/94

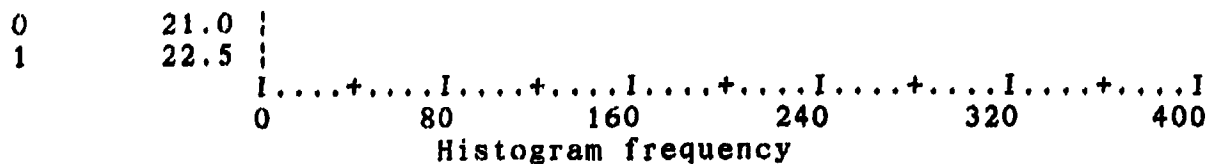
This procedure was completed at 6:55:13
 frequencies housests / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 193 SPSS/PC+ Studentware+ 5/29/94

HOUSESTS house status

Count	Midpoint
3	-1.5
0	.0
361	1.5
36	3.0
0	4.5
0	6.0
0	7.5
0	9.0
0	10.5
0	12.0
0	13.5
0	15.0
0	16.5
0	18.0
0	19.5



Page 194 SPSS/PC+ Studentware+ 5/29/94

HOUSESTS house status

Mean	1.461	Std err	.062	Median	1.000
Mode	1.000	Std dev	1.235	Variance	1.524
Kurtosis	191.742	S E Kurt	.243	Skewness	11.670
S E Skew	.122	Range	23.000	Minimum	-1.000
Maximum	22.000	Sum	586.000		

Valid cases 401 Missing cases 3

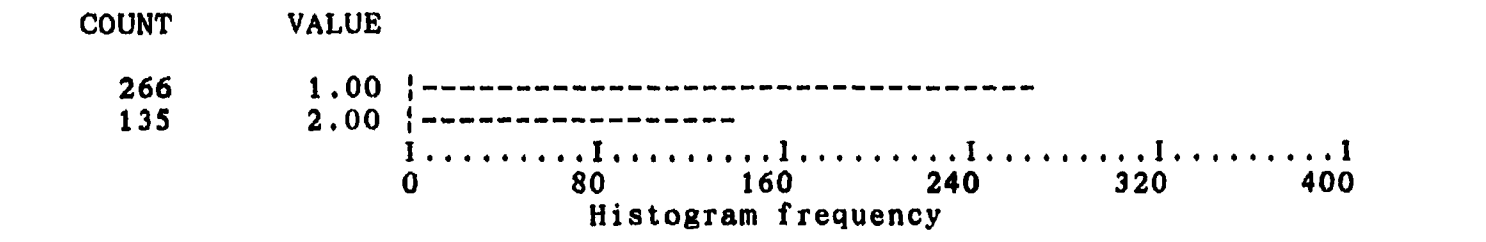
Page 195 SPSS/PC+ Studentware+ 5/29/94

This procedure was completed at 6:55:23
set printer off.

variable labels sanitn "access to sanitation pre-resettlement".
 value labels sanitn 1 "yes" 2 "no".
 frequencies sanitn / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

SANITN access to sanitation pre-resettlement



SANITN access to sanitation pre-resettlement

Mean	1.337	Std err	.024	Median	1.000
Mode	1.000	Std dev	.473	Variance	.224
Kurtosis	-1.526	S E Kurt	.243	Skewness	.694
S E Skew	.122	Range	1.000	Minimum	1.000
Maximum	2.000	Sum	536.000		

Valid cases 401 Missing cases 3

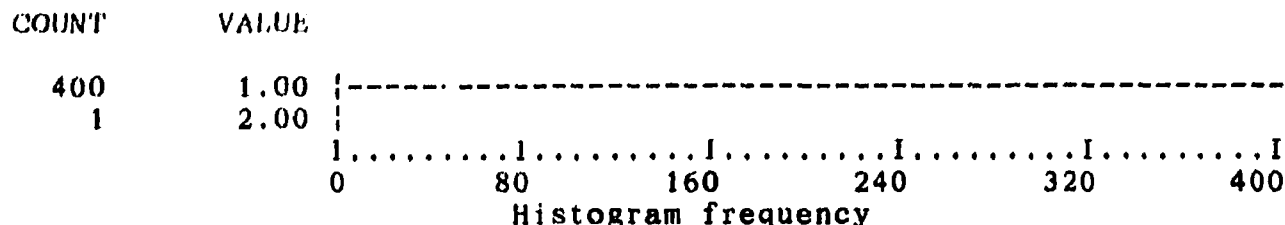
This procedure was completed at 7:11:29
 set printer off.

variable labels health "access to health care".
 value labels health 1 "yes" 2 "no".
 frequencies health / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 218 SPSS/PC+ Studentware+ 5/29/94

HEALTH access to health care



 Page 219 SPSS/PC+ Studentware+ 5/29/94

HEALTH access to health care

Mean	1.002	Std err	.002	Median	1.000
Mode	1.000	Std dev	.050	Variance	.002
Kurtosis	401.000	S E Kurt	.243	Skewness	20.025
S E Skew	.122	Range	1.000	Minimum	1.000
Maximum	2.000	Sum	402.000		

Valid cases 401 Missing cases 3

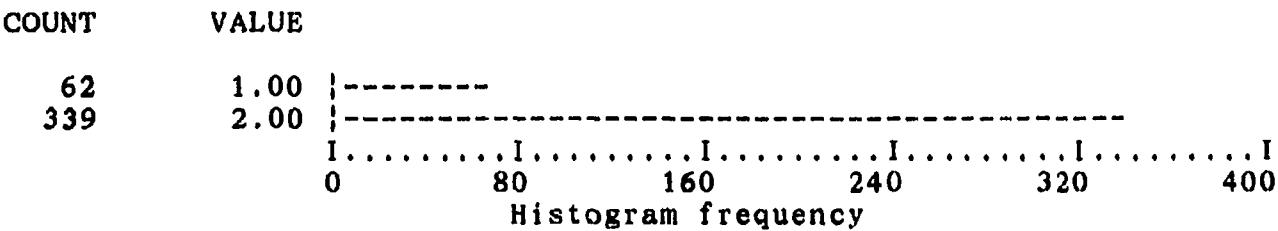
 Page 220 SPSS/PC+ Studentware+ 5/29/94

This procedure was completed at 7:04:05
 set printer off.

variable labels elec2 "access to electricity post-resettlement".
value labels elec2 1 "yes" 2 "no".
frequencies elec2 / statistics all /format notable / histogram.

**** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

ELEC2 access to electricity post-resettlement



ELEC2 access to electricity post-resettlement

Mean	1.845	Std err	.018	Median	2.000
Mode	2.000	Std dev	.362	Variance	.131
Kurtosis	1.687	S E Kurt	.243	Skewness	-1.918
S E Skew	.122	Range	1.000	Minimum	1.000
Maximum	2.000	Sum	740.000		

Valid cases 401 Missing cases 3

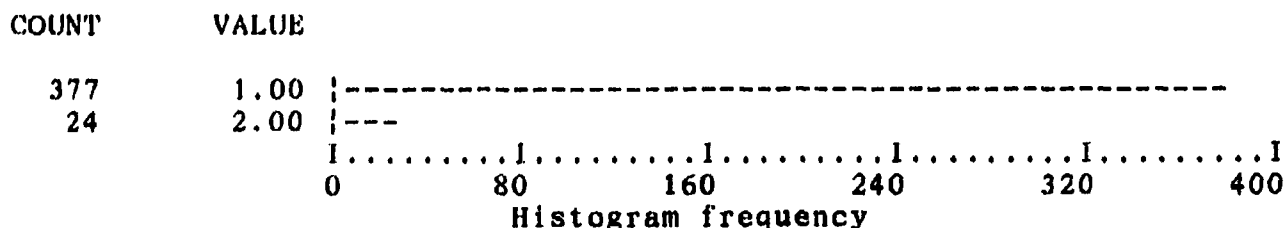
This procedure was completed at 7:40:37
set printer off.

variable labels sanitn2 "access to sanitation post-resettlement".
value labels sanitn2 1 "yes" 2 "no".
frequencies sanitn2 / statistics all / format notable / histogram.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

Page 36 SPSS/PC+ Studentware+ 5/29/94

SANITN2 access to sanitation post-resettlement



Page 37 SPSS/PC+ Studentware+ 5/29/94

SANITN2 access to sanitation post-resettlement

Mean	1.060	Std err	.012	Median	1.000
Mode	1.000	Std dev	.238	Variance	.056
Kurtosis	11.935	S E Kurt	.243	Skewness	3.725
S E Skew	.122	Range	1.000	Minimum	1.000
Maximum	2.000	Sum	425.000		

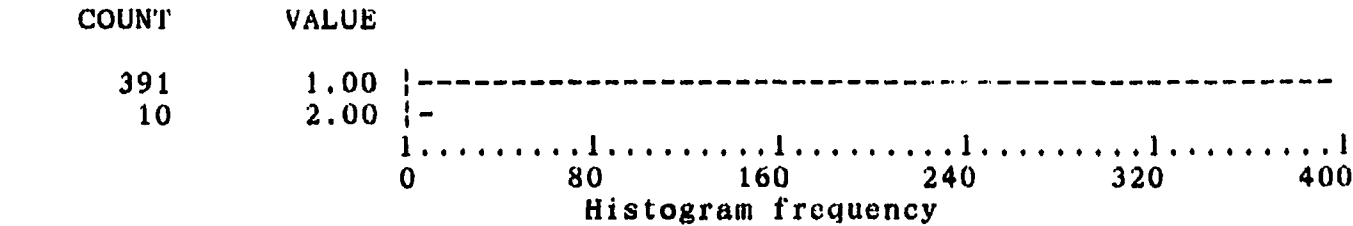
Valid cases 401 Missing cases 3

Page 38 SPSS/PC+ Studentware+ 5/29/94

This procedure was completed at 7:37:52
set printer off.

variable labels health2 "access to health care post-resettlement".
value labels health2 1 "yes" 2 "no".
frequencies health2 / statistics all / format notable / histogram.
**** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

HEALTH2 access to health care post-resettlement



HEALTH2 access to health care post-resettlement

Mean	1.025	Std err	.008	Median	1.000
Mode	1.000	Std dev	.156	Variance	.024
Kurtosis	35.583	S E Kurt	.243	Skewness	6.116
S E Skew	.122	Range	1.000	Minimum	1.000
Maximum	2.000	Sum	411.000		

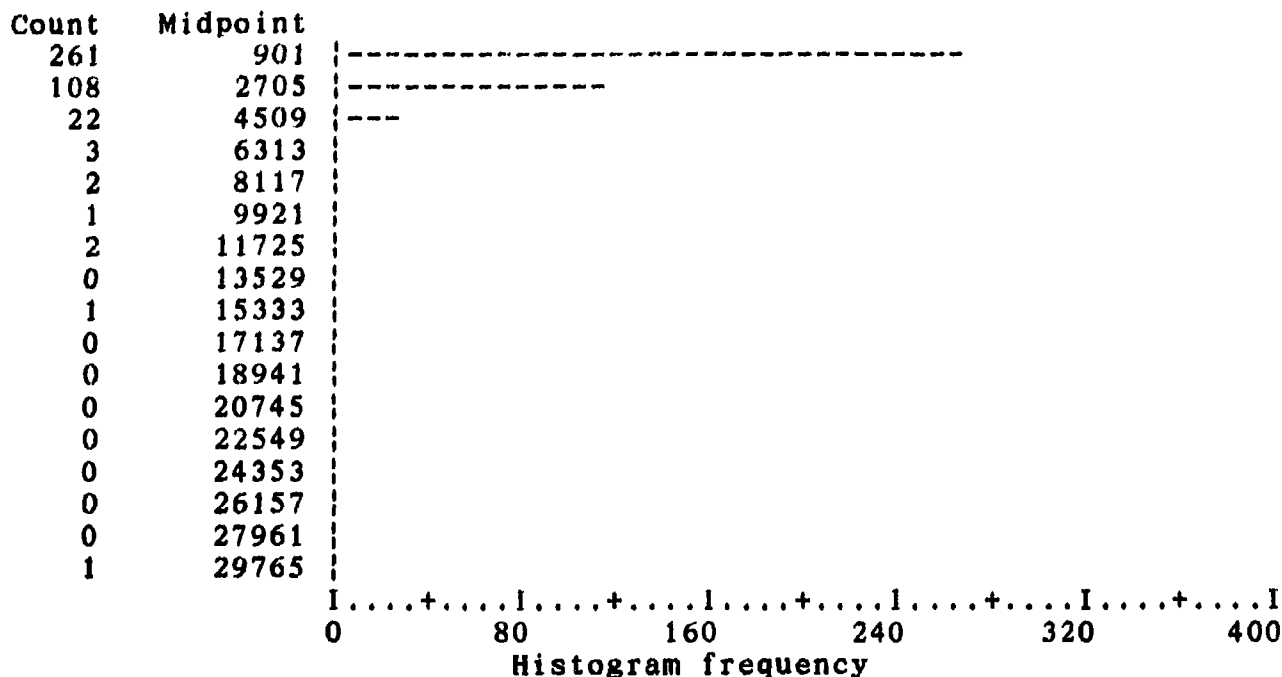
Valid cases 401 Missing cases 3

This procedure was completed at 7:31:30
set printer off.

variable labels ttlincm2 "total family income post-resettlement".
 frequencies ttlincm2 / statistics all / format notable / histogram.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

TTLINCM2 total family income post-resettlement



TTLINCM2 total family income post-resettlement

Mean	1837.272	Std err	109.759	Median	1500.000
Mode	1500.000	Std dev	2197.923	Variance	4830867.70
Kurtosis	79.342	S E Kurt	.243	Skewness	7.096
S E Skew	.122	Range	30666.000	Minimum	.000
Maximum	30666.000	Sum	736746.000		

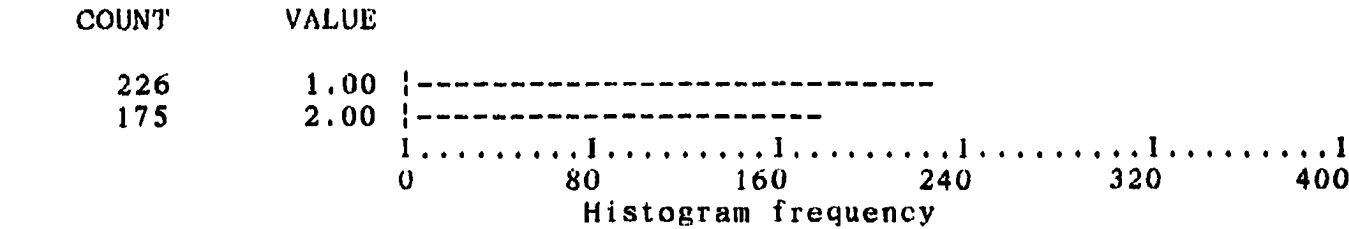
Valid cases 401 Missing cases 3

This procedure was completed at 7:25:44
 set printer off.

variable labels elec "access to electricity pre-resettlement".
value labels elec 1 "yes" 2 "no".
frequencies elec / statistics all / format notable / histogram.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

ELEC access to electricity pre-resettlement



ELEC access to electricity pre-resettlement

Mean	1.436	Std err	.025	Median	1.000
Mode	1.000	Std dev	.497	Variance	.247
Kurtosis	-1.943	S E Kurt	.243	Skewness	.257
S E Skew	.122	Range	1.000	Minimum	1.000
Maximum	2.000	Sum	576.000		

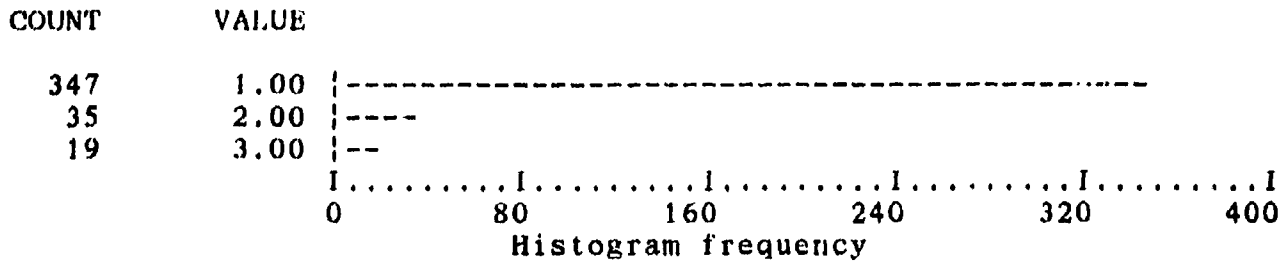
Valid cases 401 Missing cases 3

This procedure was completed at 7:21:11
set printer off.

```
variable label status "do you plan to remain or leave the camp?".
value label status 1 "remain" 2 "leave" 3 "unsure".
frequencies status / statistics all / format notable / histogram.
```

```
***** Memory allows a total of 10176 Values, accumulated across all Variables.
        There also may be up to 1272 Value Labels for each Variable.
```

```
STATUS      do you plan to remain or leave the camp?
```



```
STATUS      do you plan to remain or leave the camp?
```

Mean	1.182	Std err	.025	Median	1.000
Mode	1.000	Std dev	.494	Variance	.244
Kurtosis	6.486	S E Kurt	.243	Skewness	2.731
S E Skew	.122	Range	2.000	Minimum	1.000
Maximum	3.000	Sum	474.000		

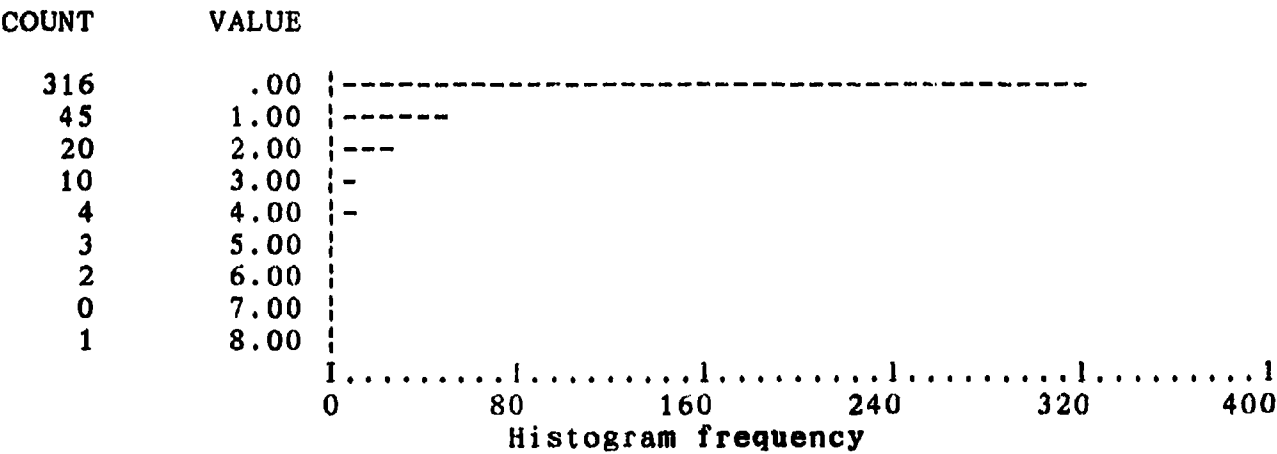
```
Valid cases      401      Missing cases      3
```

```
This procedure was completed at 7:43:44
set printer off.
```

variable labels fmk "family members killed in the flood".
frequencies fmk / statistics all / format notable / histogram.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

FMK family members killed in the flood



FMK family members killed in the flood

Mean	.414	Std err	.051	Median	.000
Mode	.000	Std dev	1.026	Variance	1.053
Kurtosis	14.905	S E Kurt	.243	Skewness	3.483
S E Skew	.122	Range	8.000	Minimum	.000
Maximum	8.000	Sum	166.000		

Valid cases 401 Missing cases 3

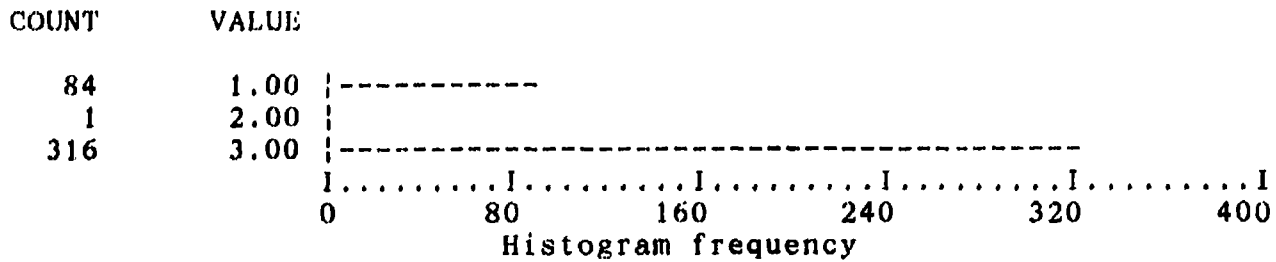
This procedure was completed at 7:45:39
set printer off.

variable labels govtcomp "government compensation if family member killed".
 value labels govtcomp 1 "yes" 2 "no" 3 "dna".
 frequencies govtcomp / statistics all / format notable / histogram.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 75 SPSS/PC+ Studentware+ 5/29/94

GOVTCOMP government compensation if family member



 Page 76 SPSS/PC+ Studentware+ 5/29/94

GOVTCOMP government compensation if family member

Mean	2.579	Std err	.041	Median	3.000
Mode	3.000	Std dev	.815	Variance	.664
Kurtosis	.034	S E Kurt	.243	Skewness	-1.424
S E Skew	.122	Range	2.000	Minimum	1.000
Maximum	3.000	Sum	1034.000		

Valid cases 401 Missing cases 3

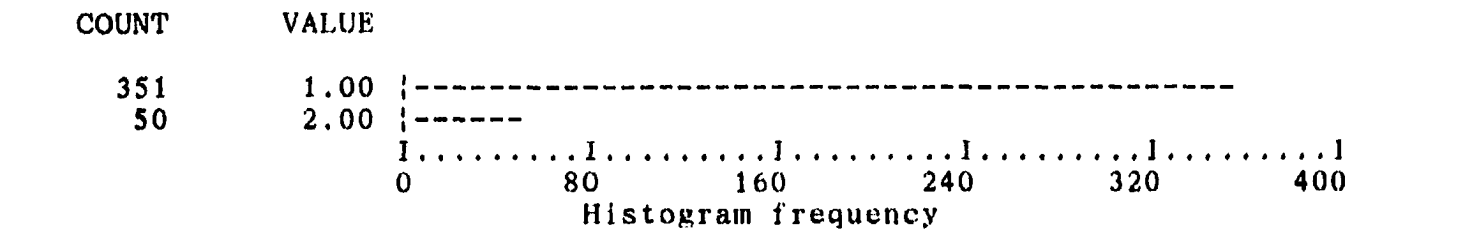
 Page 77 SPSS/PC+ Studentware+ 5/29/94

This procedure was completed at 7:48:37
 set printer off.

variable labels aid "do you receive aid while living in the camp?".
value labels aid 1 "yes" 2 "no".
frequencies aid / statistics all / format notable / histogram.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

AID do you receive aid while living in the c



AID do you receive aid while living in the c

Mean	1.125	Std err	.017	Median	1.000
Mode	1.000	Std dev	.331	Variance	.109
Kurtosis	3.217	S E Kurt	.243	Skewness	2.281
S E Skew	.122	Range	1.000	Minimum	1.000
Maximum	2.000	Sum	451.000		

Valid cases 401 Missing cases 3

This procedure was completed at 7:51:43
set printer off.

variable labels religion "religion of respondent".
 value labels religion 0 "none" 1 "Catholic" 2 "Protestant"
 3 "7th Day Adventist" 4 "Jehovah's Witness" 5 "Born Again Christian"
 6 "Muslim" 7 "Mormon" 8 "Iglesia ni Kristo" 9 "Church of the Nazarene"
 10 "Assembly of God" 11 "Baptist".
 frequencies religion / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

Page 118

SPSS/PC+ Studentware+

5/29/94

RELIGION religion of respondent

COUNT VALUE

1	.00
353	1.00
3	2.00
5	3.00
1	4.00
15	5.00
5	6.00
1	7.00
9	8.00
5	9.00
2	10.00
1	11.00

1.....1.....1.....1.....1.....1.....1.....1
 0 80 160 240 320 400
 Histogram frequency

Page 119

SPSS/PC+ Studentware+

5/29/94

RELIGION religion of respondent

Mean	1.591	Std err	.091	Median	1.000
Mode	1.000	Std dev	1.814	Variance	3.292
Kurtosis	9.377	S E Kurt	.243	Skewness	3.178
S E Skew	.122	Range	11.000	Minimum	.000
Maximum	11.000	Sum	638.000		

Valid cases 401 Missing cases 3

Page 120

SPSS/PC+ Studentware+

5/29/94

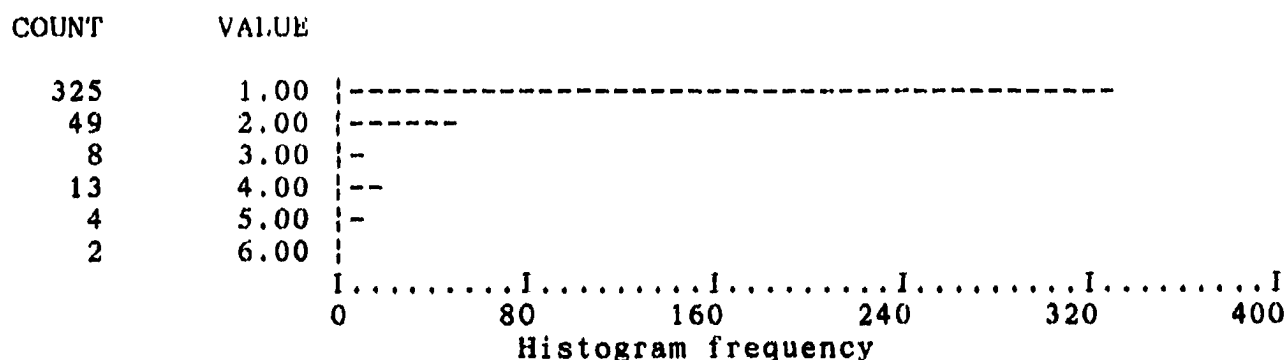
This procedure was completed at 6:13:11
 set printer off.

variable labels ethgrp "ethnic group of respondent".
 value labels ethgrp 1 "ormocano" 2 "cebuano" 3 "davaoenio"
 4 "waray-waray" 5 "visayan" 6 "tagalog" 7 "chinese".
 frequencies ethgrp / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 128 SPSS/PC+ Studentware+ 5/29/94

ETHGRP ethnic group of respondent



 Page 129 SPSS/PC+ Studentware+ 5/29/94

ETHGRP ethnic group of respondent

Mean	1.324	Std err	.041	Median	1.000
Mode	1.000	Std dev	.821	Variance	.675
Kurtosis	10.525	S E Kurt	.243	Skewness	3.146
S E Skew	.122	Range	5.000	Minimum	1.000
Maximum	6.000	Sum	531.000		

Valid cases 401 Missing cases 3

 Page 130 SPSS/PC+ Studentware+ 5/29/94

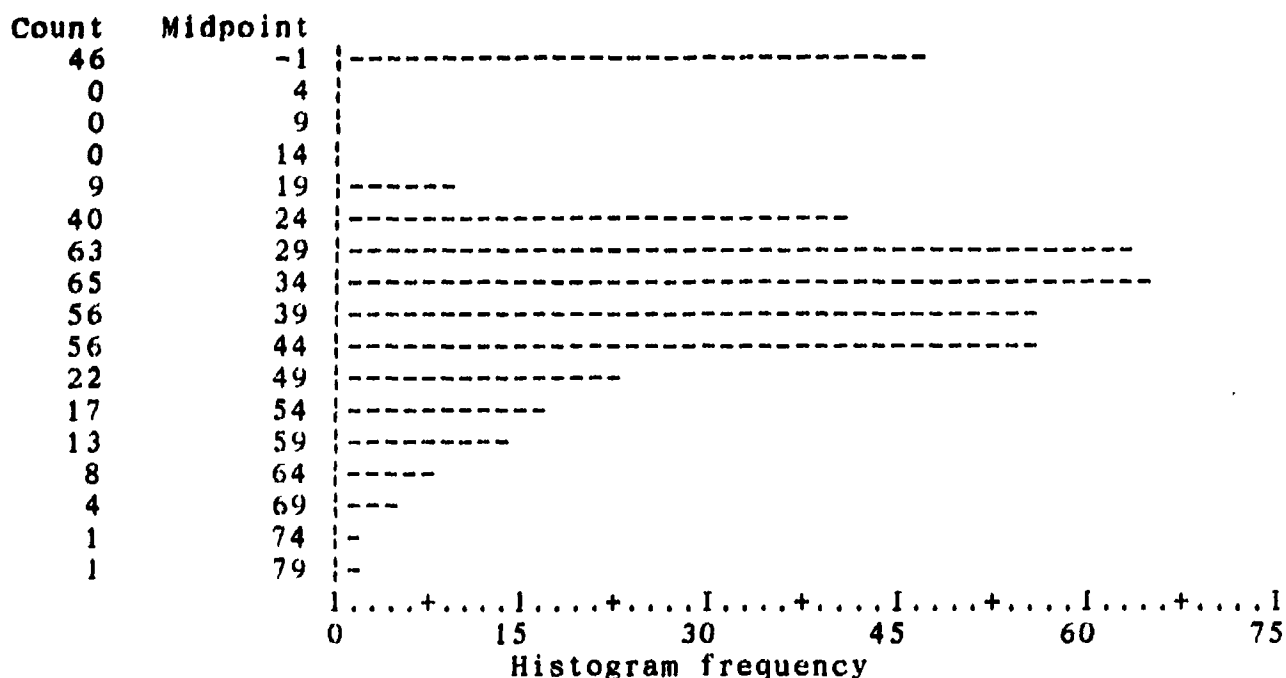
This procedure was completed at 6:32:51
 set printer off.

frequencies spage / statistics all / histogram / format notable.

There also may be up to 1272 Value Labels for each Variable.

5/29/94

age of spouse



5/29/94

age of spouse

Mean	33.574	Std. err	.812	Median	35.000
Mode	-1.000	Std. dev	16.255	Variance	264.215
Kurtosis	.461	S. E. Kurt	.243	Skewness	-.540
S. E. Skew	.122	Range	80.000	Minimum	-1.000
Maximum	79.000	Sum	13463.000		

Valid cases	401	Missing cases	3
-------------	-----	---------------	---

5/29/94

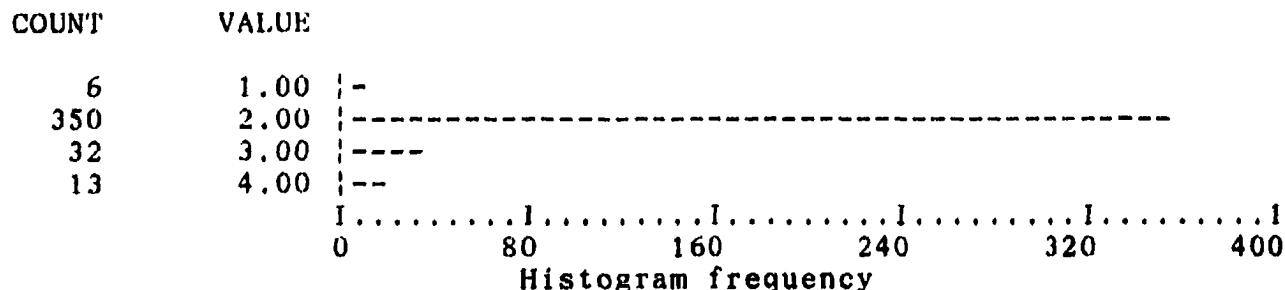
This procedure was completed at 6:01:23
set printer off.

variable labels cvlsts "civil status of respondent".
 value labels cvlsts 1 "single" 2 "married" 3 "widowed" 4 "separated".
 frequencies cvlsts / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 90 SPSS/PC+ Studentware+ 5/29/94

CVLSTS civil status of respondent



Page 91 SPSS/PC+ Studentware+ 5/29/94

CVLSTS civil status of respondent

Mean	2.130	Std err	.023	Median	2.000
Mode	2.000	Std dev	.456	Variance	.208
Kurtosis	7.950	S E Kurt	.243	Skewness	2.560
S E Skew	.122	Range	3.000	Minimum	1.000
Maximum	4.000	Sum	854.000		

Valid cases 401 Missing cases 3

 Page 92 SPSS/PC+ Studentware+ 5/29/94

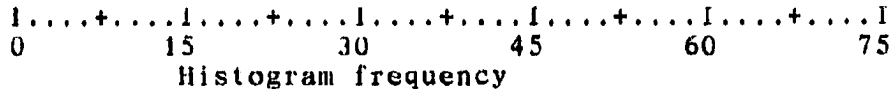
This procedure was completed at 5:54:56
 set printer off.

```
frequencies age / statistics all / histogram / format notable.
```

There also may be up to 1272 Value Labels for each Variable.

5/29/94

AGE age of respondent



5/29/94

AGE age of respondent

Mean	38.135	Std err	.633	Median	36.000
Mode	33.000	Std dev	12.666	Variance	160.427
Kurtosis	.601	S E Kurt	.243	Skewness	.673
S E Skew	.122	Range	83.000	Minimum	-1.000
Maximum	82.000	Sum	15292.000		

* Multiple modes exist. The smallest value is shown.

Valid cases 401 **Missing cases** 3

5/29/94

set printer off.

Value labels spoccp 1010 "raised pigs" 1020 "fisher" 1030 "labourer"
 1040 "gardener" 1050 "farmer" 1060 "cocowood cutter" 1070 "slaughterman"
 2010 "tailor" 2020 "mechanic" 2030 "carpenter" 2040 "driver"
 2050 "projecter operator" 2060 "mason" 2070 "surveyor" 2080 "foreman"
 2090 "sugarmill operator" 2100 "barber" 2110 "port engineer"
 2120 "welder" 2130 "jeweller" 2140 "cook-baker" 2150 "vulcaniser"
 2160 "electrician" 2170 "chemist" 2180 "technician" 2190 "butcher"
 2200 "shoemaker" 2210 "autobody builder" 2220 "utility man"
 3010 "makes tuba" 3020 "fish vendor" 3030 "laundrywomen" 3040 "matmaker"
 3050 "beautician" 3060 "vendor" 3070 "buyandsell" 3080 "sarisari"
 3090 "housepainter" 3100 "gambler" 3110 "babysitter" 3120 "nipamaker"
 3130 "latero" 3140 "canteen owner" 3150 "sells lechon" 3160 "sells drygoods"
 3170 "makes paper bags" 3180 "crab trap maker" 4010 "collector"
 4020 "watchman" 4030 "brgy official" 4040 "policeman" 4050 "govt employee"
 4060 "teacher" 4070 "pnoc employee" 4080 "nawasa employee"
 5010 "jeepney conductor" 5020 "bus dispatcher" 5030 "messenger"
 5040 "private employee" 5050 "salesgirl" 5060 "helper" 5070 "porter"
 5080 "construction worker" 5090 "dispatcher" 5100 "delliveryman"
 5110 "bus conductor" 5120 "pumpboy" 5130 "factoryworker" 6010 "NFA rettailer"
 6020 "tupperware dealer" 6030 "businessman" 6040 "coke retailer"
 6050 "bookkeeper" 6060 "secretary" 6070 "contractor" 6080 "HEDECO"
 6090 "accounting clerk" 8010 "healer" 8020 "musician" 8030 "NGO employee"
 8040 "pensioner" 8050 "student" 7010 "CAFGU" 7020 "security guard".
 variable labels spoccp "occupation of spouse".
 frequencies spoccp / statistics all.

**** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

SPOCCP occupation of spouse

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-1.0	45	11.1	11.2	11.2
	.0	50	12.4	12.5	23.7
raised pigs	1010.0	3	.7	.7	24.4
fisher	1020.0	3	.7	.7	25.2
labourer	1030.0	60	14.9	15.0	40.1
gardener	1040.0	2	.5	.5	40.6
farmer	1050.0	8	2.0	2.0	42.6
cocowood cutter	1060.0	1	.2	.2	42.9
slaughterman	1070.0	1	.2	.2	43.1
tailor	2010.0	6	1.5	1.5	44.6
mechanic	2020.0	3	.7	.7	45.4
carpenter	2030.0	16	4.0	4.0	49.4
driver	2040.0	26	6.4	6.5	55.9
projecter operator	2050.0	1	.2	.2	56.1
nason	2060.0	4	1.0	1.0	57.1
foreman	2080.0	4	1.0	1.0	58.1
sugarmill operator	2090.0	4	1.0	1.0	59.1

SPOCCP occupation of spouse

barber	2100.0	1	.2	.2	59.4
port engineer	2110.0	1	.2	.2	59.6
welder	2120.0	4	1.0	1.0	60.6
cook-baker	2140.0	4	1.0	1.0	61.6
electrician	2160.0	3	.7	.7	62.3
chemist	2170.0	1	.2	.2	62.6
technician	2180.0	2	.5	.5	63.1
butcher	2190.0	2	.5	.5	63.6
shoemaker	2200.0	1	.2	.2	63.8
autobody builder	2210.0	4	1.0	1.0	64.8
utility man	2220.0	1	.2	.2	65.1
makes tuba	3010.0	2	.5	.5	65.6
fish vendor	3020.0	5	1.2	1.2	66.8
laundrywomen	3030.0	7	1.7	1.7	68.6
beautician	3050.0	3	.7	.7	69.3
vendor	3060.0	32	7.9	8.0	77.3
buyandsell	3070.0	11	2.7	2.7	80.0
sarisari	3080.0	12	3.0	3.0	83.0
housepainter	3090.0	1	.2	.2	83.3
gambler	3100.0	2	.5	.5	83.8
nipamaker	3120.0	2	.5	.5	84.3

Page 125

SPSS/PC+ Studentware+

5/29/94

SPOCCP occupation of spouse

latero	3130.0	2	.5	.5	84.8
canteen owner	3140.0	1	.2	.2	85.0
makes paper bags	3170.0	1	.2	.2	85.3
crab trap maker	3180.0	1	.2	.2	85.5
brgy official	4030.0	1	.2	.2	85.8
govt employee	4050.0	2	.5	.5	86.3
teacher	4060.0	4	1.0	1.0	87.3
pnoc employee	4070.0	1	.2	.2	87.5
nawasa employee	4080.0	1	.2	.2	87.8
jeepney conductor	5010.0	3	.7	.7	88.5
bus dispatcher	5020.0	1	.2	.2	88.8
messenger	5030.0	1	.2	.2	89.0
private employee	5040.0	6	1.5	1.5	90.5
salesgirl	5050.0	2	.5	.5	91.0
helper	5060.0	5	1.2	1.2	92.3
porter	5070.0	5	1.2	1.2	93.5
construction worker	5080.0	1	.2	.2	93.8
delliveryman	5100.0	1	.2	.2	94.0
bus conductor	5110.0	1	.2	.2	94.3
pumpboy	5120.0	1	.2	.2	94.5
factoryworker	5130.0	1	.2	.2	94.8

Page 126

SPSS/PC+ Studentware+

5/29/94

SPOCCP occupation of spouse

tupperware dealer	6020.0	1	.2	.2	95.0
businessman	6030.0	1	.2	.2	95.3
coke retailer	6040.0	1	.2	.2	95.5
bookkeeper	6050.0	1	.2	.2	95.8
secretary	6060.0	1	.2	.2	96.0
DEDECO	6080.0	2	.5	.5	96.5
accounting clerk	6090.0	1	.2	.2	96.8
AFGU	7010.0	1	.2	.2	97.0
security guard	7020.0	9	2.2	2.2	99.3

healer	8010.0	1	.2	.2	99.5
musician	8020.0	1	.2	.2	99.8
NGO employee	8030.0	1	.2	.2	100.0
	.	3	.7	Missing	
Total		404	100.0	100.0	

SPOCCP occupation of spouse

Mean	2082.805	Std err	91.289	Median	2040.000
Mode	1030.000	Std dev	1828.055	Variance	3341786.47
Kurtosis	.602	S E Kurt	.243	Skewness	.933
S E Skew	.122	Range	8031.000	Minimum	-1.000
Maximum	8030.000	Sum	835205.000		

Valid cases

401

Missing cases

3

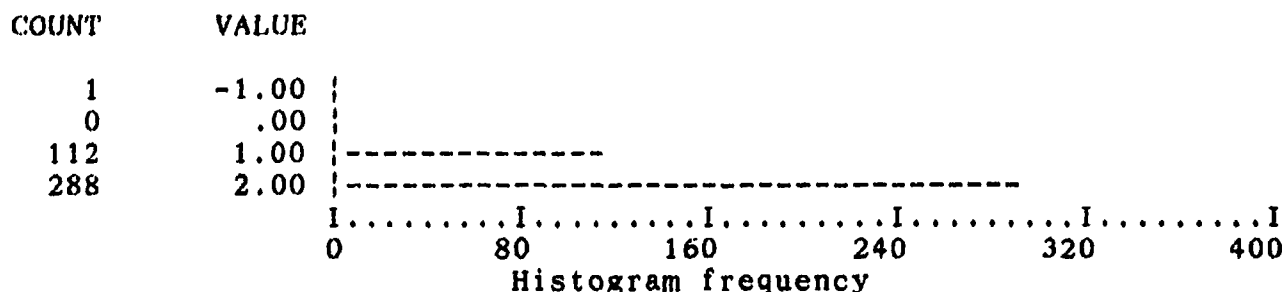
This procedure was completed at 8:49:14
set printer off.

value labels sex 1 "male" 2 "female".
 variable labels sex "sex of respondent".
 frequencies sex / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 55 SPSS/PC+ Studentware+ 5/29/94

SEX sex of respondent



 Page 56 SPSS/PC+ Studentware+ 5/29/94

SEX sex of respondent

Mean	1.713	Std err	.023	Median	2.000
Mode	2.000	Std dev	.469	Variance	.220
Kurtosis	1.439	S E Kurt	.243	Skewness	-1.310
S E Skew	.122	Range	3.000	Minimum	-1.000
Maximum	2.000	Sum	687.000		

Valid cases 401 Missing cases 3

 Page 57 SPSS/PC+ Studentware+ 5/29/94

This procedure was completed at 5:41:57
 set printer off.

```

value labels spoccp2 1010 "raised pigs" 1020 "fisher" 1030 "labourer"
1040 "gardener" 1050 "farmer" 1060 "cocowood cutter" 1070 "slaughterman"
2010 "tailor" 2020 "mechanic" 2030 "carpenter" 2040 "driver"
2050 "projector operator" 2060 "mason" 2070 "surveyor" 2080 "foreman"
2090 "sugermill operator" 2100 "barber" 2110 "port engineer"
2120 "welder" 2130 "jeweller" 2140 "cook/baker" 2150 "vulcaniser"
2160 "electrician" 2170 "chemist" 2180 "technician" 2190 "butcher"
2200 "shoemaker" 2210 "autobody builder" 2220 "utilityman"
3010 "makes tuba" 3020 "fish vendor" 3030 "laundrywoman" 3040 "matmaker"
3050 "beautician" 3060 "vendor" 3070 "buyandsell" 3080 "sarisari"
3090 "housepainter" 3100 "gambler" 3110 "babysitter" 3120 "nipamaker"
3130 "latero" 3140 "canteen owner" 3150 "sells lechon" 3160 "sells drygoods"
3170 "makes paperbags" 3180 "crabtrap maker" 4010 "collector"
4020 "watchman" 4030 "brgy official" 4040 "policeman" 4050 "govt employee"
4060 "teacher" 4070 "PNOC employee" 4080 "NAWASA employee"
5010 "jeepney conductor" 5020 "bus dispatcher" 5030 "messenger"
5040 "private employee" 5050 "salesgirl" 5060 "helper" 5070 "porter"
5080 "construction worker" 5090 "dispatcher" 5100 "deliveryman"
5110 "bus conductor" 5120 "pumpboy" 5130 "factoryworker" 6010 "NFA retailer"
6020 "tupperware dealer" 6030 "businessman" 6040 "coke retailer"
6050 "bookkeeper" 6060 "secretary" 6070 "contractor" 6080 "HEDECO employee"
6090 "accounting clerk" 8010 "healer" 8020 "musician" 8030 "NGO employee"
8040 "pensioner" 8050 "student" 7010 "CAFGU" 7020 "security guard".
variable label spoccp2 "occupation of spouse post-resettlement".
frequencies spoccp2 / statistics all.

```

***** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

Page 43 SPSS/PC+ Studentware+ 5/29/94

SPOCCP2 occupation of spouse post-resettlement

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-1.0	50	12.4	12.5	12.5
	.0	88	21.8	21.9	34.4
fisher	1020.0	2	.5	.5	34.9
labourer	1030.0	52	12.9	13.0	47.9
gardener	1040.0	2	.5	.5	48.4
farmer	1050.0	5	1.2	1.2	49.6
cocowood cutter	1060.0	1	.2	.2	49.9
slaughterman	1070.0	1	.2	.2	50.1
tailor	2010.0	5	1.2	1.2	51.4
nechanic	2020.0	3	.7	.7	52.1
carpenter	2030.0	21	5.2	5.2	57.4
driver	2040.0	20	5.0	5.0	62.3
nason	2060.0	4	1.0	1.0	63.3
foreman	2080.0	2	.5	.5	63.8
sugermill operator	2090.0	6	1.5	1.5	65.3
barber	2100.0	1	.2	.2	65.6
port engineer	2110.0	1	.2	.2	65.8

Page 44 SPSS/PC+ Studentware+ 5/29/94

SPOCCP2 occupation of spouse post-resettlement

Valid cases 401 Missing cases 3

Page 48 SPSS/PC+ Studentware+ 5/29/94

This procedure was completed at 9:46:11
sett printer off.

value labels occp 1010 "raised pigs" 1020 "fisher" 1030 "labourer"
 1040 "gardener" 1050 "farmer" 1060 "cocowood cutter" 1070 "slaughterman"
 2010 "tailor" 2020 "mechanic" 2030 "carpenter" 2040 "driver"
 2050 "projector operator" 2060 "mason" 2070 "surveyor" 2080 "foreman"
 2090 "sugermill operator" 2100 "barber" 2110 "port engineer"
 2120 "welder" 2130 "jeweller" 2140 "cook/baker" 2150 "vulcaniser"
 2160 "electrician" 2170 "chemist" 2180 "technician" 2190 "butcher"
 2200 "shoemaker" 2210 "autobody builder" 2220 "utilityman"
 3010 "makes tuba" 3020 "fish vendor" 3030 "laundrywoman" 3040 "matmaker"
 3050 "beautician" 3060 "vendor" 3070 "buyandsell" 3080 "sarisari"
 3090 "housepainter" 3100 "gambler" 3110 "babysitter" 3120 "nipamaker"
 3130 "latero" 3140 "canteen owner" 3150 "sells lechon" 3160 "sells drygoods"
 3170 "makes paperbags" 3180 "crabtrap maker" 4010 "collector"
 4020 "watchman" 4030 "brgy official" 4040 "policeman" 4050 "govt employee"
 4060 "teacher" 4070 "PNOC employee" 4080 "NAWASA employee"
 5010 "jeepney conductor" 5020 "bus dispatcher" 5030 "messenger"
 5040 "private employee" 5050 "salesgirl" 5060 "helper" 5070 "porter"
 5080 "construction worker" 5090 "dispatcher" 5100 "deliveryman"
 5110 "bus conductor" 5120 "pumpboy" 5130 "factoryworker" 6010 "NFA retailer"
 6020 "tupperware dealer" 6030 "businessman" 6040 "coke retailer"
 6050 "bookkeeper" 6060 "secretary" 6070 "contractor" 6080 "HEDECO"
 6090 "accounting clerk" 8010 "healer" 8020 "musician" 8030 "NGO employee"
 8040 "pensioner" 8050 "student" 7010 "CAFGU" 7020 "security guard".
 variable labels occp "occupation of respondent".
 frequencies occp /statistics all.

***** Memory allows a total of 10176 Values accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 106 SPSS/PC+ Studentware+ 5/29/94

OCCP occupation of respondent

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-1.0	1	.2	.2	.2
	.0	137	33.9	34.2	34.4
raised pigs	1010.0	4	1.0	1.0	35.4
fisher	1020.0	2	.5	.5	35.9
labourer	1030.0	24	5.9	6.0	41.9
gardener	1040.0	1	.2	.2	42.1
farmer	1050.0	2	.5	.5	42.6
tailor	2010.0	8	2.0	2.0	44.6
mechanic	2020.0	3	.7	.7	45.4
carpenter	2030.0	8	2.0	2.0	47.4
driver	2040.0	6	1.5	1.5	48.9
projector operator	2050.0	1	.2	.2	49.1
mason	2060.0	4	1.0	1.0	50.1
surveyor	2070.0	1	.2	.2	50.4
foreman	2080.0	2	.5	.5	50.9
sugermill operator	2090.0	1	.2	.2	51.1
barber	2100.0	1	.2	.2	51.4

 Page 107 SPSS/PC+ Studentware+ 5/29/94

OCCP occupation of respondent

port engineer	2110.0	1	.2	.2	51.6
welder	2120.0	2	.5	.5	52.1
jeweller	2130.0	1	.2	.2	52.4
cook/baker	2140.0	2	.5	.5	52.9
vulcaniser	2150.0	1	.2	.2	53.1
makes tuba	3010.0	1	.2	.2	53.4
fish vendor	3020.0	12	3.0	3.0	56.4
laundrywoman	3030.0	28	6.9	7.0	63.3
matmaker	3040.0	1	.2	.2	63.6
beautician	3050.0	4	1.0	1.0	64.6
vendor	3060.0	41	10.1	10.2	74.8
buyandsell	3070.0	13	3.2	3.2	78.1
sarisari	3080.0	48	11.9	12.0	90.0
housepainter	3090.0	1	.2	.2	90.3
gambler	3100.0	1	.2	.2	90.5
babysitter	3110.0	3	.7	.7	91.3
nipamaker	3120.0	2	.5	.5	91.8
collector	4010.0	1	.2	.2	92.0
watchman	4020.0	1	.2	.2	92.3
brgy official	4030.0	1	.2	.2	92.5
policeman	4040.0	2	.5	.5	93.0

Page 108

SPSS/PC+ Studentware+

5/29/94

OCCP occupation of respondent

govt employee	4050.0	3	.7	.7	93.8
teacher	4060.0	3	.7	.7	94.5
jeepney conductor	5010.0	1	.2	.2	94.8
bus dispatcher	5020.0	1	.2	.2	95.0
messenger	5030.0	1	.2	.2	95.3
private employee	5040.0	1	.2	.2	95.5
salesgirl	5050.0	4	1.0	1.0	96.5
helper	5060.0	1	.2	.2	96.8
porter	5070.0	1	.2	.2	97.0
NFA retailer	6010.0	1	.2	.2	97.3
contractor	6070.0	1	.2	.2	97.5
CAFGU	7010.0	1	.2	.2	97.8
security guard	7020.0	4	1.0	1.0	98.8
pensioner	8040.0	2	.5	.5	99.3
student	8050.0	2	.5	.5	99.8
	8058.0	1	.2	.2	100.0
		3	.7	Missing	

Total	404	100.0	100.0
-------	-----	-------	-------

Page 109

SPSS/PC+ Studentware+

5/29/94

OCCP occupation of respondent

Mean	1937.125	Std err	87.780	Median	2060.000
Mode	.000	Std dev	1757.784	Variance	3089802.97
Kurtosis	.760	S E Kurt	.243	Skewness	.707
S E Skew	.122	Range	8059.000	Minimum	-1.000
Maximum	8058.000	Sum	776787.000		

Valid cases	401	Missing cases	3
-------------	-----	---------------	---

Page 110

SPSS/PC+ Studentware+

5/29/94

value labels occp2 1010 "raised pigs" 1020 "fishers" 1030 "labourer"
 1040 "gardener" 1050 "farmer" 1060 "cocowood cutter" 1070 "slaughterman"
 2010 "tailor" 2020 "mechanic" 2030 "carpenter" 2040 "driver"
 2050 "projector operator" 2060 "mason" 2070 "surveyor" 2080 "foreman"
 2090 "sugermill operator" 2100 "barber" 2110 "port engineer"
 2120 "welder" 2130 "jeweller" 2140 "cook/baker" 2150 "vulcaniser"
 2160 "electrician" 2170 "chemist" 2180 "technician" 2190 "butcher"
 2200 "shoemaker" 2210 "autobody builder" 2220 "utility man"
 3010 "makes tuba" 3020 "fish vendor" 3030 "laundrywoman" 3040 "matmaker"
 3050 "beautician" 3060 "vendor" 3070 "buyandsell" 3080 "sarisari"
 3090 "housepainter" 3100 "gambler" 3110 "babysitter" 3120 "nipamaker"
 3130 "latero" 3140 "canteen owner" 3150 "sells lechon" 3160 "sells drygoods"
 3170 "makes paperbags" 3180 "crabtrap maker" 410 "collector"
 4020 "watchman" 4030 "brgy official" 4040 "policeman" 4050 "govt employee"
 4060 "teacher" 4070 "PNOC employee" 4080 "NAWASA employee"
 5010 "jeepney conductor" 5020 "bus dispatcher" 5030 "messenger"
 5040 "private employee" 5050 "salesgirl" 5060 "helper" 5070 "porter"
 5080 "construction worker" 5090 "dispatcher" 5100 "deliveryman"
 5110 "bus conductor" 5120 "pumpboy" 5130 "factoryworker" 6010 "NFA retailer"
 6020 "tupperware dealer" 6030 "businessman" 6040 "coke retailer"
 6050 "bookkeeper" 6060 "secretary" 6070 "contractor" 6080 "HEDECO employee"
 6090 "accounting clerk" 8010 "healer" 8020 "musician" 8030 "NGO employee"
 8040 "pensioner" 8050 "student" 7010 "CAFGU" 7020 "security guard".
 variable label occp2 "occupation of respondent post-resettlement".
 frequencies occp2 / statistics all.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 142 SPSS/PC+ Studentware+ 5/29/94

OCCP2 occupation of respondent post-resettleme

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	.0	233	57.7	58.1	58.1
raised pigs	1010.0	3	.7	.7	58.9
labourer	1030.0	14	3.5	3.5	62.3
tailor	2010.0	7	1.7	1.7	64.1
mechanic	2020.0	1	.2	.2	64.3
carpenter	2030.0	7	1.7	1.7	66.1
driver	2040.0	6	1.5	1.5	67.6
projector operator	2050.0	1	.2	.2	67.8
mason	2060.0	3	.7	.7	68.6
surveyor	2070.0	1	.2	.2	68.8
foreman	2080.0	1	.2	.2	69.1
sugermill operator	2090.0	1	.2	.2	69.3
welder	2120.0	2	.5	.5	69.8
jeweller	2130.0	1	.2	.2	70.1
makes tuba	3010.0	1	.2	.2	70.3
fish vendor	3020.0	4	1.0	1.0	71.3
laundrywoman	3030.0	13	3.2	3.2	74.6

 Page 143 SPSS/PC+ Studentware+ 5/29/94

OCCP2 occupation of respondent post-resettleme

matmaker	3040.0	2	.5	.5	75.1
beautician	3050.0	3	.7	.7	75.8
vendor	3060.0	18	4.5	4.5	80.3
buyandsell	3070.0	6	1.5	1.5	81.8
sarisari	3080.0	43	10.6	10.7	92.5
housepainter	3090.0	1	.2	.2	92.8
babysitter	3110.0	4	1.0	1.0	93.8
nipamaker	3120.0	1	.2	.2	94.0
watchman	4020.0	1	.2	.2	94.3
brgy official	4030.0	1	.2	.2	94.5
policeman	4040.0	2	.5	.5	95.0
govt employee	4050.0	1	.2	.2	95.3
teacher	4060.0	3	.7	.7	96.0
jeepney conductor	5010.0	1	.2	.2	96.3
bus dispatcher	5020.0	1	.2	.2	96.5
messenger	5030.0	1	.2	.2	96.8
helper	5060.0	5	1.2	1.2	98.0
porter	5070.0	1	.2	.2	98.3
CAFGU	7010.0	1	.2	.2	98.5
security guard	7020.0	4	1.0	1.0	99.5
pensioner	8040.0	2	.5	.5	100.0

Page 144 SPSS/PC+ Studentware+ 5/29/94

OCCP2 occupation of respondent post-resettleme

	3	.7	Missing
Total	404	100.0	100.0

Page 145 SPSS/PC+ Studentware+ 5/29/94

OCCP2 occupation of respondent post-resettleme

Mean	1257.082	Std err	84.742	Median	.000
Mode	.000	Std dev	1696.966	Variance	2879692.72
Kurtosis	1.171	S E Kurt	.243	Skewness	1.215
S E Skew	.122	Range	8040.000	Minimum	.000
Maximum	8040.000	Sum	504090.000		

Valid cases 401 Missing cases 3

Page 146 SPSS/PC+ Studentware+ 5/29/94

This procedure was completed at 9:12:51
set printer off.

26-35						30.4
	3.0				2	122
36-45						30.4
Column	1	4	1	2	5	401
(Continued) Total	.2	1.0	.2	.5	1.2	100.0

Page 258 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 7 of 30
Count		laundryw	beautici	vender	buyandse	sarisari	
		oman	an		ll		Row
		3030.0	3050.0	3060.0	3070.0	3080.0	Total
AGE	-1.0				1		1
							.2
	1.0			3	1	1	61
15-25							15.2
	2.0	2		10	3	4	122
26-35							30.4
	3.0	3	3	10	3	3	122
36-45							30.4
Column		7	3	32	11	12	401
(Continued) Total		1.7	.7	8.0	2.7	3.0	100.0

Page 259 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 8 of 30
Count		housepai	gambler	nipamake	latero	canteen	
		nter		r		owner	Row
		3090.0	3100.0	3120.0	3130.0	3140.0	Total
AGE	-1.0						1
							.2
	1.0			1			61
15-25							15.2
	2.0	1	1	1	2		122
26-35							30.4
	3.0		1				122
36-45							30.4
Column		1	2	2	2	1	401
(Continued) Total		.2	.5	.5	.5	.2	100.0

Page 260 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 9 of 30
Count		makes pa	crabtrap	brgy off	govtt em	teacher	
		per bags	maker	icial	ployee		Row
		3170.0	3180.0	4030.0	4050.0	4060.0	Total
AGE							
	-1.0						1 .2
	1.0				1	1	61 15.2
15-25							
	2.0						122 30.4
26-35							
	3.0		1	1		1	122 30.4
36-45							
Column		1	1	1	2	4	401
(Continued)	Total	.2	.2	.2	.5	1.0	100.0

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 10 of 30
Count		phoc emp	nawasa e	jeepney	bus disp	messenge	
		loyee	mployee	conducto	attcher	r	Row
		4070.0	4080.0	5010.0	5020.0	5030.0	Total
AGE							
	-1.0						1 .2
	1.0		1	1			61 15.2
15-25							
	2.0					1	122 30.4
26-35							
	3.0	1		2	1		122 30.4
36-45							
Column		1	1	3	1	1	401
(Continued)	Total	.2	.2	.7	.2	.2	100.0

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 11 of 30
Count		private	salesgir	helper	porter	construc	
		employee l				tion wor	Row
		5040.0	5050.0	5060.0	5070.0	5080.0	Total

AGE		SPOCCP					Row Total
		delivery man	bus ursor	cond pumpboy	factory worker	tupperware deale	
15-25	-1.0						1 .2
	1.0	2	1		1		61 15.2
26-35	2.0	1	1	5	2	1	122 30.4
	3.0	2			1		122 30.4
Column Total		6 1.5	2 .5	5 1.2	5 1.2	1 .2	401 100.0

Page 263 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

AGE	Count	SPOCCP					Row Total
		delivery man	bus ursor	cond pumpboy	factory worker	tupperware deale	
15-25	-1.0						1 .2
	1.0		1	1	1		61 15.2
26-35	2.0	1					122 30.4
	3.0					1	122 30.4
Column Total		1 .2	1 .2	1 .2	1 .2	1 .2	401 100.0

Page 264 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

AGE	Count	SPOCCP					Row Total
		business coke ret. bookkeeper	secretary	hedeco e			
15-25	-1.0						1 .2
	1.0	1					61 15.2
26-35	2.0		1		1		122 30.4

36-45	3.0			1		2	122
							30.4
<hr/>							
Column		1	1	1	1	2	401
(Continued)	Total	.2	.2	.2	.2	.5	100.0

Page 265 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 14 of 30
AGE	Count	accounti	cafgu	security	healer	musician	
		ng clerk		guard			Row
		6090.0	7010.0	7020.0	8010.0	8020.0	Total
<hr/>							
	-1.0						1
							.2
<hr/>							
	1.0		1	1			61
15-25							15.2
<hr/>							
	2.0	1		5			122
26-35							30.4
<hr/>							
	3.0			4		1	122
36-45							30.4
<hr/>							
Column		1	1	9	1	1	401
(Continued)	Total	.2	.2	2.2	.2	.2	100.0

Page 266 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP		Page 15 of 30
AGE	Count	ngo empl		
		oyee	Row	
		8030.0	Total	
<hr/>				
	-1.0		1	
			.2	
<hr/>				
	1.0		61	
15-25			15.2	
<hr/>				
	2.0		122	
26-35			30.4	
<hr/>				
	3.0	1	122	
36-45			30.4	
<hr/>				
Column		1	401	
(Continued)	Total	.2	100.0	

Page 267 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 16 of 30
Count							
		raised p fisher labourer					
		igs					Row
		-1.0	.0	1010.0	1020.0	1030.0	Total
AGE							
	4.0	15	8	1		9	70
46-60							17.5
	5.0	13	1				25
61-100							6.2
Column		45	50	3	3	60	401
(Continued)	Total	11.2	12.5	.7	.7	15.0	100.0

Page 268 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 17 of 30
Count							
		gardener farmer cocowood slaughte tailor					
		cutter rman					Row
		1040.0	1050.0	1060.0	1070.0	1080.0	Total
AGE							
	4.0	1	2			2	70
46-60							17.5
	5.0		1				25
61-100							6.2
Column		2	8	1	1	6	401
(Continued)	Total	.5	2.0	.2	.2	1.5	100.0

Page 269 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 18 of 30
Count							
		mechanic carpente driver projecto mason					
		r r operat					Row
		2020.0	2030.0	2040.0	2050.0	2060.0	Total
AGE							
	4.0	1	4	3	1		70
46-60							17.5
	5.0					1	25
61-100							6.2
Column		3	16	26	1	4	401
(Continued)	Total	.7	4.0	6.5	.2	1.0	100.0

Page 270 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 19 of 30
Count		forreman	sugermi	barber	port eng welder		
		ll opera		ineer		Row	
		2080.0	2090.0	2100.0	2110.0	2120.0	Total
AGE							
	4.0			1			70
46-60							17.5
	5.0						25
61-100							6.2
Column		4	4	1	1	4	401
(Continued)	Total	1.0	1.0	.2	.2	1.0	100.0

Page 271 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 20 of 30
Count		cook/bak electric	chemist	technici	butcher		
		er	ian	an		Row	
		2140.0	2160.0	2170.0	2180.0	2190.0	Total
AGE							
	4.0		1	1			70
46-60							17.5
	5.0						25
61-100							6.2
Column		4	3	1	2	2	401
(Continued)	Total	1.0	.7	.2	.5	.5	100.0

Page 272 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 21 of 30
Count		shoemaker	autobody		maker	to fish ven	
		r	builder	ba	der		Row
		2200.0	2210.0	2220.0	3010.0	3020.0	Total
AGE							
	4.0					1	70
46-60							17.5
	5.0					1	25
61-100							6.2
Column		1	4	1	2	5	401
(Continued)	Total	.2	1.0	.2	.5	1.2	100.0

Page 273 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

	Count	SPOCCP					Row Total
		laundryw oman	beautici an	vender ll	buyandse ll	sisari ll	
		3030.0	3050.0	3060.0	3070.0	3080.0	
AGE							
46-60	4.0	2		4	2	4	70
							17.5
61-100	5.0			5	1		25
							6.2
Column		7	3	32	11	12	401
(Continued) Total		1.7	.7	8.0	2.7	3.0	100.0

Page 274

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

	Count	SPOCCP					Row Total
		housepai nter	gambler	nipamake r	latero owner	canteen owner	
		3090.0	3100.0	3120.0	3130.0	3140.0	
AGE							
46-60	4.0					1	70
							17.5
61-100	5.0						25
							6.2
Column		1	2	2	2	1	401
(Continued) Total		.2	.5	.5	.5	.2	100.0

Page 275

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

	Count	SPOCCP					Row Total
		makes pa per bags	crabtrap maker	brgy off icial	govtt em ployee	teacher ployee	
		3170.0	3180.0	4030.0	4050.0	4060.0	
AGE							
46-60	4.0	1			1	1	70
							17.5
61-100	5.0					1	25
							6.2
Column		1	1	1	2	4	401
(Continued) Total		.2	.2	.2	.5	1.0	100.0

Page 276

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

Count	SPOCCP					Row Total
	pnoc emp 4070.0	nawasa e 4080.0	jeepney 5010.0	bus disp 5020.0	messenge 5030.0	
AGE						
4.0						70
46-60						17.5
5.0						25
61-100						6.2
Column	1	1	3	1	1	401
(Continued) Total	.2	.2	.7	.2	.2	100.0

Page 277

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

Count	SPOCCP					Row Total
	private employee 1 5040.0	salesgir 5050.0	helper 5060.0	porter 5070.0	construc tion wor 5080.0	
AGE						
4.0	1			1		70
46-60						17.5
5.0						25
61-100						6.2
Column	6	2	5	5	1	401
(Continued) Total	1.5	.5	1.2	1.2	.2	100.0

Page 278

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

Count	SPOCCP					Row Total
	delivery man 5100.0	bus cond uctor 5110.0	pumpboy 5120.0	factory worker 5130.0	tupperwa re deale 6020.0	
AGE						
4.0						70
46-60						17.5
5.0						25
61-100						6.2
Column	1	1	1	1	1	401
(Continued) Total	.2	.2	.2	.2	.2	100.0

Page 279

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

Count		business man	coke ailer	ret er	bookkeep y	secretar hedeco e	Row
		6030.0	6040.0	6050.0	6060.0	6080.0	Total
AGE							
	4.0						70
46-60							17.5
	5.0						25
61-100							6.2
Column		1	1	1	1	2	401
Continued)	Total	.2	.2	.2	.2	.5	100.0

Page 280 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

Count		SPOCCP					Row
		accounti ng clerk	cafgu	security guard	healer	musician	Total
		6090.0	7010.0	7020.0	8010.0	8020.0	
AGE							
	4.0			1			70
46-60							17.5
	5.0				1		25
61-100							6.2
Column		1	1	9	1	1	401
Continued)	Total	.2	.2	2.2	.2	.2	100.0

Page 281 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

Count		SPOCCP	
		ngo empl	oyee
		8030.0	Row
		Total	
AGE			
	4.0		70
46-60			17.5
	5.0		25
61-100			6.2
Column		1	401
Total		.2	100.0

Number of Missing Observations: 3

Page 282 SPSS/PC+ Studentware+ 7/7/94

This procedure was completed at 5:27:56
at printer off.

```

recode edlvl (0 thru 4=1) (5 thru 7=2) (8 thru 10=3) (11 thru 14=4).
variable labels edlvl 'educational level collapsed into categories'.
value labels edlvl 1 '0-4' 2 '5-7' 3 '8-10' 4 '11-14'.
recode credit (0 thru 100=1) (101 thru 300=2) (301 thru 500=3)
(501 thru 700=4) (701 thru 1000=5) (1001 thru 7500=6).
variable labels credit 'credit collapsed into categories'.
value labels credit 1 '0-100' 2 '101-300' 3 '301-500' 4 '501-700'
5 '701-1000' 6 '1001-7500'.
crosstab edlvl by credit.
The raw data or transformation pass is proceeding
  404 cases are written to the compressed active file.

```

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 61 SPSS/PC+ Studentware+ 7/8/94

EDLVL educational level collapsed into categor
by CREDIT credit collapsed into categories

Page 1 of 4

		CREDIT					
Count		0-100	101-300	301-500	501-700		Row
		-1.0	1.0	2.0	3.0	4.0	Total
EDLVL							
	1.0		42	17	8	1	71
0-4							17.7
	2.0	1	100	34	11		154
5-7							38.4
	3.0		84	23	7	2	126
8-10							31.4
	4.0	1	39	2	4		49
11-14							12.2
Column		2	266	76	30	3	401
Continued)	Total	.5	66.3	19.0	7.5	.7	100.0

Page 62 SPSS/PC+ Studentware+ 7/8/94

EDLVL educational level collapsed into categor
by CREDIT credit collapsed into categories

Page 2 of 4

		CREDIT		
Count		701-1000	1001-7500	Row
		5.0	6.0	Total
EDLVL				
	1.0	2	1	71
0-4				17.7
	2.0	5	3	154
5-7				38.4
	3.0	5	5	126
8-10				31.4

11-14	4.0	2	1	49
				12.2
Column	14	10	401	
Continued) Total	3.5	2.5	100.0	

Page 63 SPSS/PC+ Studentware+ 7/8/94

DLVL educational level collapsed into categor
by CREDIT credit collapsed into categories

		CREDIT					Page 3 of 4	
Count		0-100	101-300	301-500	501-700			
		-1.0	1.0	2.0	3.0	4.0	Row	
							Total	
DLVL	66.0	1					1	.2
Column	2	266	76	30	3	401		
Continued) Total	.5	66.3	19.0	7.5	.7	100.0		

Page 64 SPSS/PC+ Studentware+ 7/8/94

DLVL educational level collapsed into categor
by CREDIT credit collapsed into categories

		CREDIT		Page 4 of 4	
Count		701-1000	1001-750		
		0		Row	
		5.0	6.0	Total	
DLVL	66.0			1	.2
Column	14	10	401		
Total	3.5	2.5	100.0		

umber of Missing Observations: 3

Page 65 SPSS/PC+ Studentware+ 7/8/94

this procedure was completed at 5:51:39
et printer off.

Crosstab sex by shelter.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

SEX sex of respondent by SHELTER shelter type

Count

Page 1 of 1

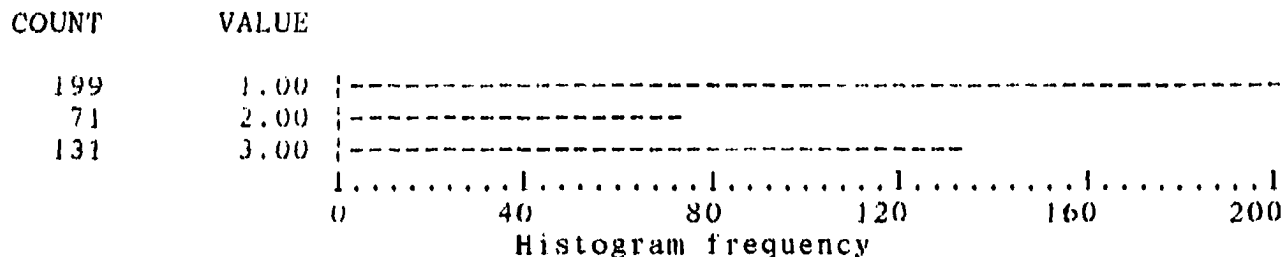
	SHELTER			Row Total
	temporar y 1.0	semi-per manent 2.0	permanen t 3.0	
SEX				
-1.0	1			1 .2
male	74	34	4	112 27.9
female	232	51	5	288 71.8
Column Total	307 76.6	85 21.2	9 2.2	401 100.0

umber of Missing Observations: 3

his procedure was completed at 3:34:11
variable labels sex 'sex of respondent'.
value labels sex 1 'male' 2 'female'.
variable labels shelter 'shelter type'.
value labels shelter 1 'temporary' 2 'semi-permanent' 3 'permanent'.
at printer off.

```
***** Memory allows a total of 10176 Values, accumulated across all Variables.
        There also may be up to 1272 Value Labels for each Variable.
```

RELATN are relations between your camp and the



RELATN are relations between your camp and the

Mean	1.830	Std err	.045	Median	2.000
Mode	1.000	Std dev	.892	Variance	.796
Kurtosis	-1.662	S E Kurt	.243	Skewness	.339
S E Skew	.122	Range	2.000	Minimum	1.000
Maximum	3.000	Sum	734.000		

Valid cases	401	Missing cases	3
-------------	-----	---------------	---

Page 94 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 6:27:05

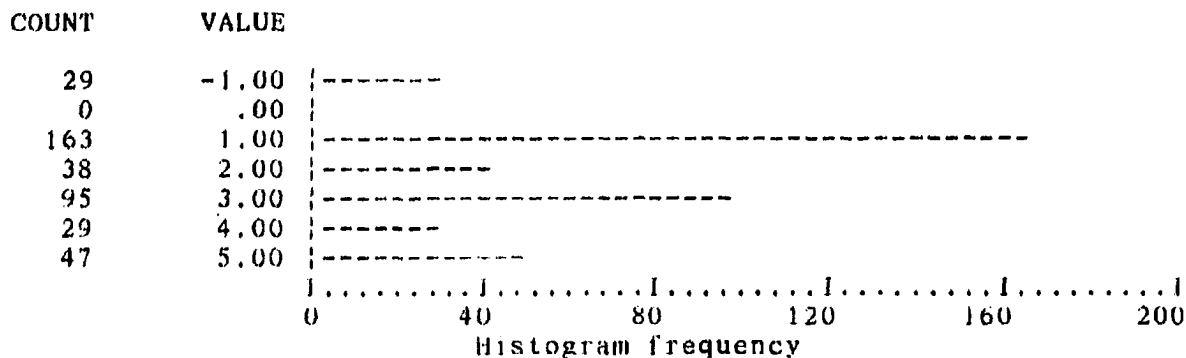
Page 95 SPSS/PC+ Studentware+ 7/6/94

variable labels fuelsrc2 "post-resettlement fuel source".
frequencies fuelsrc2 / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

Page 82 SPSS/PC+ Studentware+ 7/6/94

FUELSRC2 post-resettlement fuel source



Page 83 SPSS/PC+ Studentware+ 7/6/94

FUELSRC2 post-resettlement fuel source

Mean	2.110	Std err	.081	Median	2.000
Mode	1.000	Std dev	1.623	Variance	2.633
Kurtosis	-.581	S E kurt	.243	Skewness	.178
S E Skew	.122	Range	6.000	Minimum	-1.000
Maximum	5.000	Sum	846.000		

Valid cases 401 Missing cases 3

Page 84 SPSS/PC+ Studentware+ 7/6/94

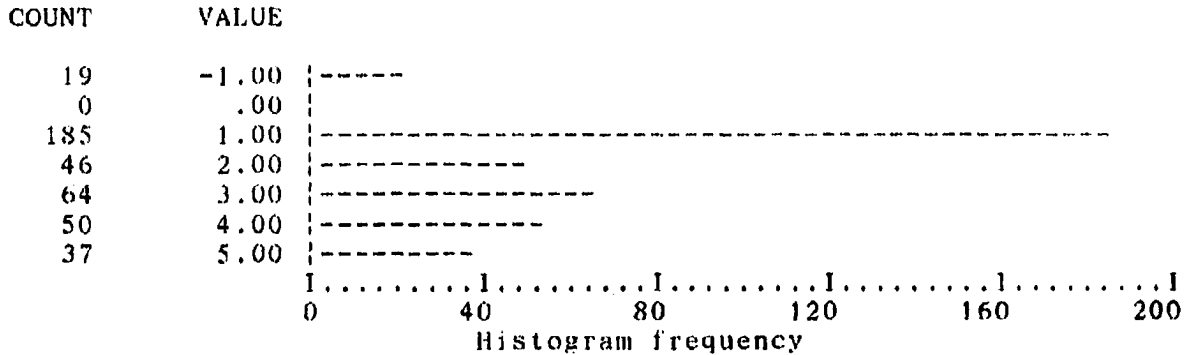
This procedure was completed at 6:21:46
set printer off.

variable labels fuelsrc "pre-resettlement source of fuel".
 frequencies fuelsrc / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values. accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 64 SPSS/PC+ Studentware+ 7/6/94

FUELSRC pre-resettlement source of fuel



 Page 65 SPSS/PC+ Studentware+ 7/6/94

FUELSRC pre-resettlement source of fuel

Mean	2.082	Std err	.077	Median	1.000
Mode	1.000	Std dev	1.541	Variance	2.376
Kurtosis	-.607	S E Kurt	.243	Skewness	.364
S E Skew	.122	Range	6.000	Minimum	-1.000
Maximum	5.000	Sum	835.000		

Valid cases 401 Missing cases 3

 Page 66 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 6:16:30
 set printer off.

```
variable labels stplfd "pre-resettlement staple food".
value labels 1 "rice" 2 "corn" 3 "rice and corn" 4 "combination".
```

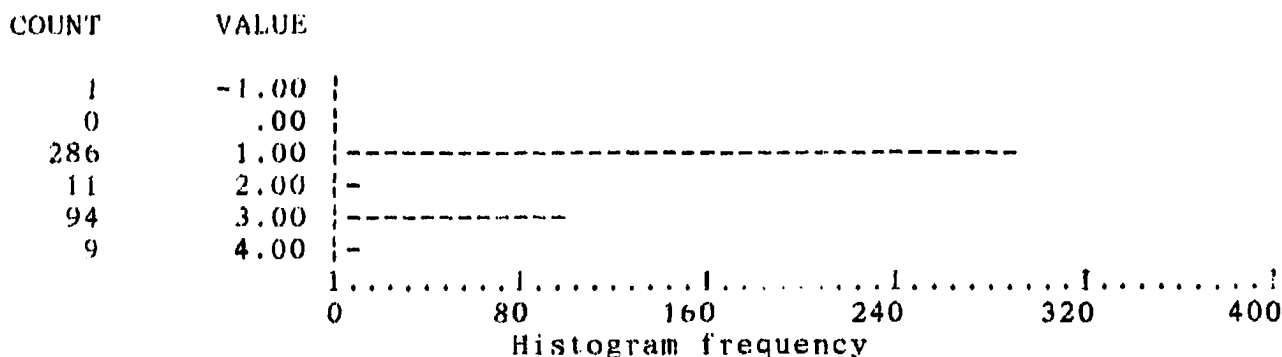
WARNING 254, Text: 1
 INVALID SYMBOL ON VALUE LABELS COMMAND--The VALUE LABELS command contains
 an unrecognized symbol where a name is expected. All labels up to the
 next slash are ignored.

```
frequencies stplfd / statistics all / histogram / format notable.
```

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

Page 56 SPSS/PC+ Studentware+ 7/6/94

STPLFD pre-resettlement staple food



Page 57 SPSS/PC+ Studentware+ 7/6/94

STPLFD pre-resettlement staple food

Mean	1.559	Std err	.047	Median	1.000
Mode	1.000	Std dev	.931	Variance	.867
Kurtosis	-.334	S E Kurt	.243	Skewness	1.079
S E Skew	.122	Range	5.000	Minimum	-1.000
Maximum	4.000	Sum	625.000		

Valid cases 401 Missing cases 3

Page 58 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 6:13:50
 set printer off.

frequencies educ / statistics all.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

Page 38

SPSS/PC+ Studentware+

7/6/94

EDUC

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1.0	267	66.1	66.6	66.6
	2.0	10	2.5	2.5	69.1
	99.0	124	30.7	30.9	100.0
	.	3	.7	Missing	
	Total	404	100.0	100.0	

Page 39

SPSS/PC+ Studentware+

7/6/94

EDUC

Mean	31.329	Std err	2.264	Median	1.000
Mode	1.000	Std dev	45.333	Variance	2055.106
Kurtosis	-1.320	S E Kurt	.243	Skewness	.829
S E Skew	.122	Range	98.000	Minimum	1.000
Maximum	99.000	Sum	12563.000		

Valid cases 401

Missing cases 3

Page 40

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 21:23:29
set printer off.

frequencies educ2 / statistics all.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

Page 46 SPSS/PC+ Studentware+ 7/6/94

EDUC2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1.0	233	57.7	58.1	58.1
	2.0	32	7.9	8.0	66.1
	99.0	136	33.7	33.9	100.0
	.	3	.7	Missing	
	Total	404	100.0	100.0	

Page 47 SPSS/PC+ Studentware+ 7/6/94

EDUC2

Mean	34.317	Std err	2.317	Median	1.000
Mode	1.000	Std dev	46.397	Variance	2152.662
Kurtosis	-1.543	S E Kurt	.243	Skewness	.682
S E Skew	.122	Range	98.000	Minimum	1.000
Maximum	99.000	Sum	13761.000		

Valid cases 401 Missing cases 3

Page 48 SPSS/PC+ Studentware+ 7/6/94

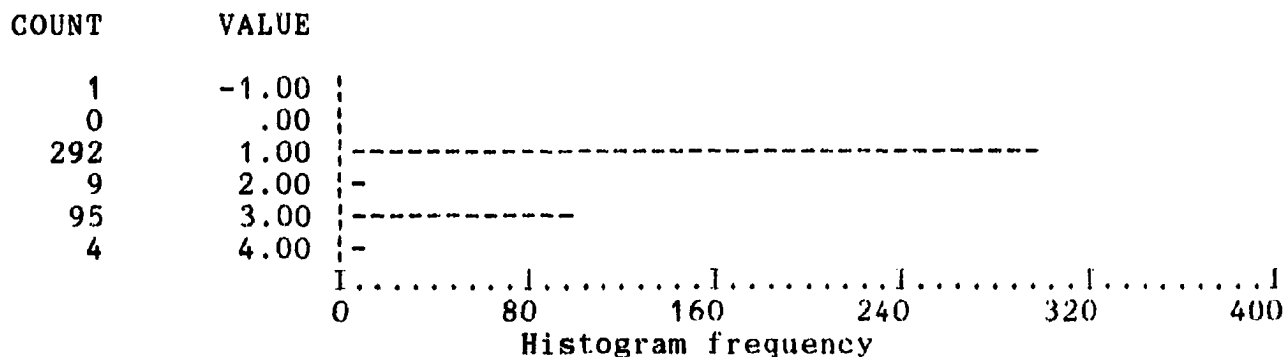
This procedure was completed at 21:24:46
set printer off.

frequencies staple2 / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
There also may be up to 1272 Value Labels for each Variable.

Page 59 SPSS/PC+ Studentware+ 7/6/94

STAPLE2 post-resettlement staple food



Page 60 SPSS/PC+ Studentware+ 7/6/94

STAPLE2 post-resettlement staple food

Mean	1.521	Std err	.045	Median	1.000
Mode	1.000	Std dev	.895	Variance	.800
Kurtosis	-.376	S E Kurt	.243	Skewness	1.094
S E Skew	.122	Range	5.000	Minimum	-1.000
Maximum	4.000	Sum	610.000		

Valid cases 401 Missing cases 3

Page 61 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 21:28:19
value labels staple2 1 "rice" 2 "corn" 3 "rice and corn"
4 "combination".
variable labels staple2 "post-resettlement staple food".
set printer off.

variable labels edlvl 'educational level of respondent'.
 frequencies edlvl / statistics all / histogram.

**** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

Page 37 SPSS/PC+ Studentware+ 7/12/94

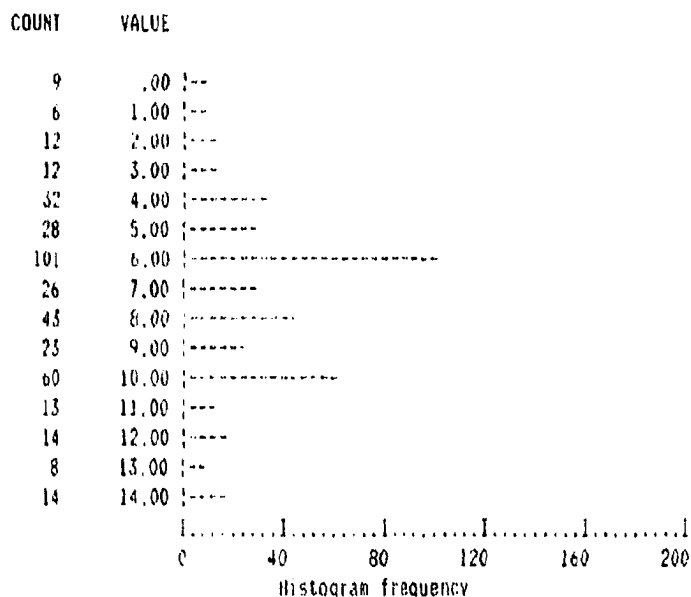
EDLVL educational level of respondent

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	.0	9	2.2	2.2	2.2
	1.0	6	1.5	1.5	3.7
	2.0	12	3.0	3.0	6.7
	3.0	12	3.0	3.0	9.7
	4.0	32	7.9	8.0	17.7
	5.0	28	6.9	7.0	24.7
	6.0	101	25.0	25.2	49.9
	7.0	26	6.4	6.5	56.4
	8.0	43	10.6	10.7	67.1
	9.0	23	5.7	5.7	72.8
	10.0	60	14.9	15.0	87.8
	11.0	13	3.2	3.2	91.0
	12.0	14	3.5	3.5	94.5
	13.0	8	2.0	2.0	96.5
	14.0	14	3.5	3.5	100.0
	.	3	.7	Missing	

Page 38 SPSS/PC+ Studentware+ 7/12/94
 Total 404 100.0 100.0

Page 39 SPSS/PC+ Studentware+ 7/12/94

EDLVL educational level of respondent



EDLVL educational level of respondent

Mean	7.192	Std err	.155	Median	7.000
Mode	6.000	Std dev	3.099	Variance	9.606
Kurtosis	-.193	S E Kurt	.243	Skewness	.076
S E Skew	.122	Range	14.000	Minimum	.000
Maximum	14.000	Sum	2884.000		

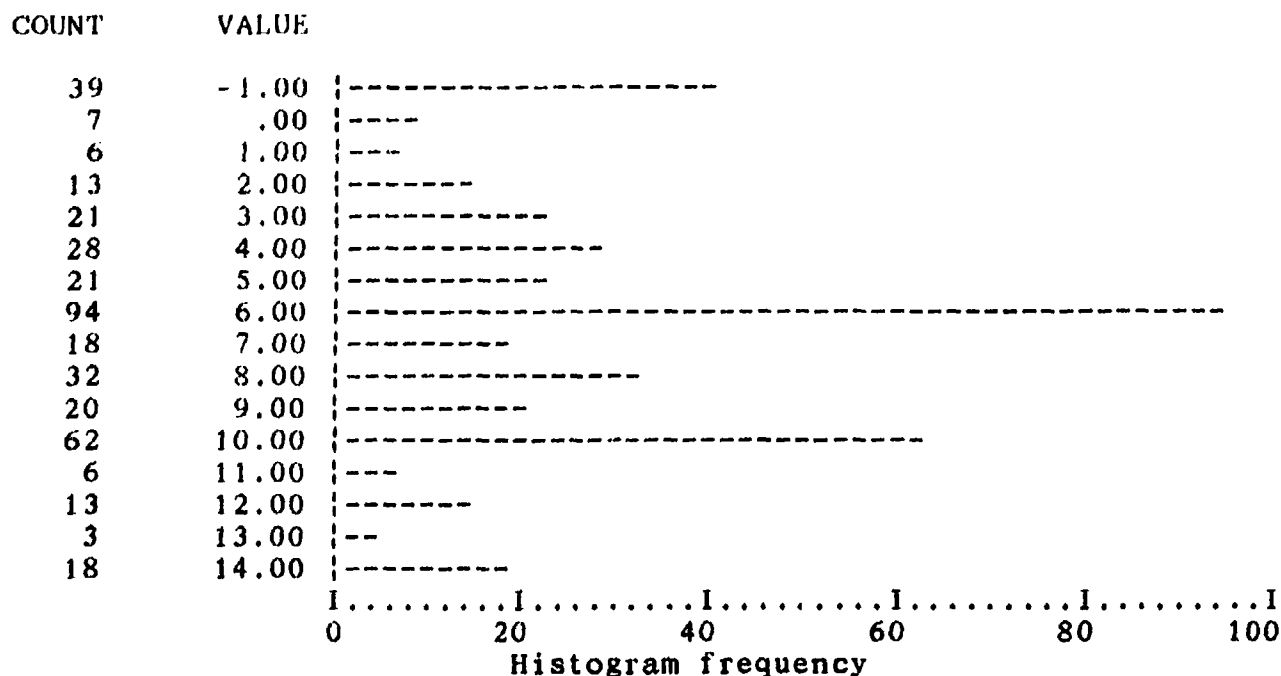
Valid cases 401 Missing cases 3

This procedure was completed at 6:59:26
set printer off.

variable labels spedlvl "educational level of spouse".
 frequencies spedlvl / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

SPEDLVL educational level of spouse



SPEDLVL educational level of spouse

Mean	6.314	Std err	.194	Median	6.000
Mode	6.000	Std dev	3.885	Variance	15.096
Kurtosis	-.423	S E Kurt	.243	Skewness	-.189
S E Skew	.122	Range	15.000	Minimum	-1.000
Maximum	14.000	Sum	2532.000		

Valid cases 401 Missing cases 3

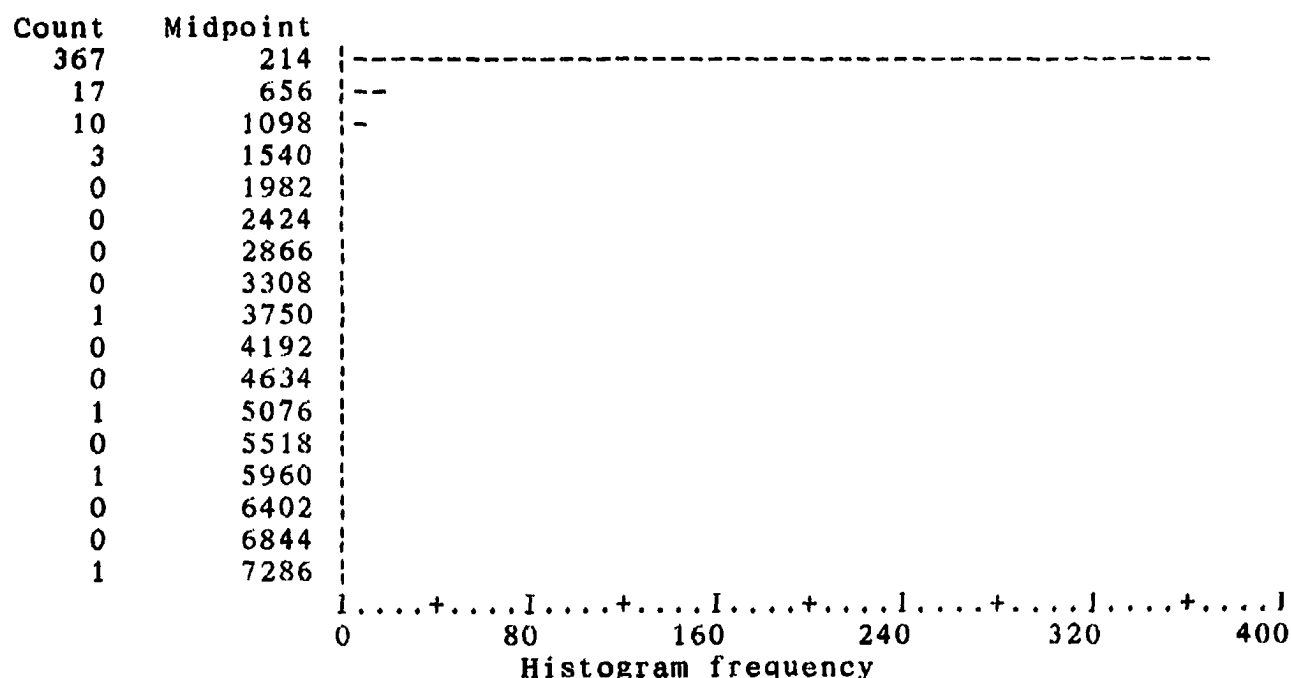
This procedure was completed at 6:40:06
 set printer off.

variable labels credit "amount of credit available".
 frequencies credit / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 155 SPSS/PC+ Studentware+ 5/29/94

CREDIT amount of credit available



 Page 156 SPSS/PC+ Studentware+ 5/29/94

CREDIT amount of credit available

Mean	182.608	Std err	30.550	Median	.000
Mode	.000	Std dev	611.760	Variance	374250.619
Kurtosis	82.678	S E Kurt	.243	Skewness	8.348
S E Skew	.122	Range	7501.000	Minimum	-1.000
Maximum	7500.000	Sum	73226.000		

Valid cases 401 Missing cases 3

 Page 157 SPSS/PC+ Studentware+ 5/29/94

This procedure was completed at 6:43:29
 set printer off.

```
frequencies tllincm / statistics all / histogram / format notable.
```

There also may be up to 1272 Value Labels for each Variable.

5/29/94

TTLINCM total family income

Histogram frequency

5/29/94

TTLINCM total family income

Sum	963104.000
-----	------------

Missing cases 3

5/29/94

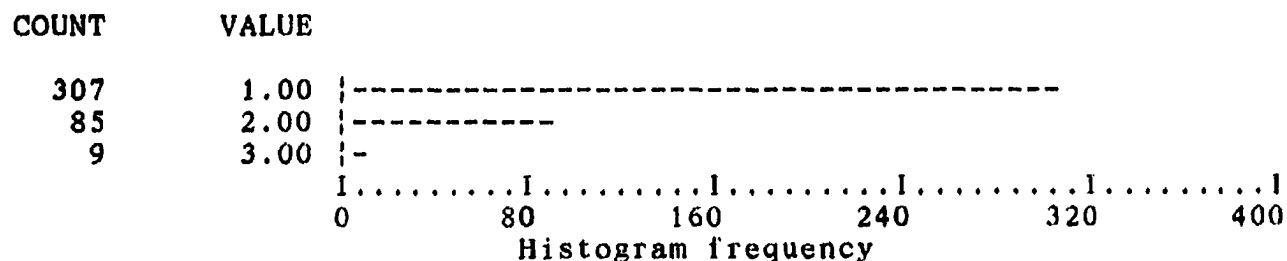
set printer off.

variable labels shelter "shelter type".
 value labels shelter 1 "temporary" 2 "semi-permanent" 3 "permanent".
 frequencies shelter / statistics all / histogram / format notable.

***** Memory allows a total of 10176 Values, accumulated across all Variables.
 There also may be up to 1272 Value Labels for each Variable.

 Page 174 SPSS/PC+ Studentware+ 5/29/94

SHELTER shelter type



 Page 175 SPSS/PC+ Studentware+ 5/29/94

SHELTER shelter type

Mean	1.257	Std err	.024	Median	1.000
Mode	1.000	Std dev	.486	Variance	.236
Kurtosis	1.990	S E Kurt	.243	Skewness	1.691
S E Skew	.122	Range	2.000	Minimum	1.000
Maximum	3.000	Sum	504.000		

Valid cases 401 Missing cases 3

 Page 176 SPSS/PC+ Studentware+ 5/29/94

This procedure was completed at 6:49:54
 set printer off.

osstab spoccp2 by sex.

emory allows for 6,130 cells with 2 dimensions for general CROSSTABS.

age 780

SPSS/PC+ Studentware+

7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

Page 1 of 15

Count	SEX		male	female	Row Total
	-1.0	1.0	2.0		
POCCP2	-1.0	16	34	50	12.5
	.0	47	41	88	21.9
fisher	1020.0		2	2	.5
labourer	1030.0		52	52	13.0
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

age 781

SPSS/PC+ Studentware+

7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

Page 2 of 15

Count	SEX		male	female	Row Total
	-1.0	1.0	2.0		
POCCP2	1040.0		2	2	.5
gardener	1050.0		5	5	1.2
farmer	1060.0		1	1	.2
cocowood cutter	1070.0		1	1	.2
slaughterman					
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

age 782

SPSS/PC+ Studentware+

7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

Page 3 of 15

Count	SEX		male	female	Row
	-1.0	1.0	2.0		

crosstabs landsts by sex.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 201

SPSS/PC+ Studentware+

5/30/94

LANDSTS land status by SEX sex of respondent

		SEX			Page 1 of 1
Count					
		male		female	Row
		-1.0	1.0	2.0	Total
LANDSTS	-1.0		2	2	4
					1.0
	1.0	1	64	157	222
					55.4
squat	2.0		37	119	156
					38.9
rent	3.0		9	10	19
					4.7
own	Column	1	112	288	401
	Total	.2	27.9	71.8	100.0

Number of Missing Observations: 3

Page 202

SPSS/PC+ Studentware+

5/30/94

Page 203

SPSS/PC+ Studentware+

5/30/94

This procedure was completed at 7:53:58
 value labels sex 1 "male" 2 "female".
 value labels landsts 1 "squat" 2 "rent" 3 "own".
 variable labels landsts "land status".
 set printer off.

crosstabs shelter by fmk.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 70

SPSS/PC+ Studentware+

5/31/94

SHELTER type of shelter by FMK family members killed

Page 1 of 2

		FMK							Row Total
Count		.0	1.0	2.0	3.0	4.0	5.0	6.0	
SHELTER									
temporary	1.0	248	34	12	5	4	1	2	307 76.6
semi-permanent	2.0	60	10	8	5		2		85 21.2
permanent	3.0	8	1						9 2.2
Column Total		316	45	20	10	4	3	2	401
(Continued) Total		78.8	11.2	5.0	2.5	1.0	.7	.5	100.0

Page 71

SPSS/PC+ Studentware+

5/31/94

SHELTER type of shelter by FMK family members killed

Page 2 of 2

		FMK	
Count		8.0	Row Total
SHELTER			
temporary	1.0	1	307 76.6
semi-permanent	2.0		85 21.2
permanent	3.0		9 2.2
Column Total		1	401
Total		.2	100.0

Number of Missing Observations: 3

Page 72

SPSS/PC+ Studentware+

5/31/94

This procedure was completed at 7:35:27
 value labels shelter 1 "temporary" 2 "semi-permanent" 3 "permanent".
 variable labels shelter "type of shelter".
 variable labels fmk "family members killed".
 set printer off.

crosstabs status by sex.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 37

SPSS/PC+ Studentware+

5/31/94

STATUS do you plan to remain in the camp or lea by SEX

Page 1 of 1

Count	SEX		male	female	Row Total
	-1.0	1.0			
STATUS					
remain	1.0	1	91	255	347 86.5
leave	2.0		9	26	35 8.7
unsure	3.0		12	7	19 4.7
Column Total		1 .2	112 27.9	288 71.8	401 100.0

Number of Missing Observations: 3

Page 38

SPSS/PC+ Studentware+

5/31/94

This procedure was completed at 7:18:27

variable label status "do you plan to remain in the camp or leave ?".
value labels sex 1 "male" 2 "female".
value labels status 1 "remain" 2 "leave" 3 "unsure".
set printer off.

crosstab religion by ethgrp.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

RELIGION religion of respondent by ETHGRP ethnic group of respondent.

Page 1 of 6

Count		ETHGRP					Row Total
		ormocano	cebuano	davaoeni os	Waray-wa ray	visayans	
RELIGION		1.0	2.0	3.0	4.0	5.0	
	.0	1					1 .2
catholic	1.0	285	45	4	13	4	353 88.0
protestant	2.0	3					3 .7
7th day adventis	3.0	4	1				5 1.2
Column (Continued) Total		325 81.0	49 12.2	8 2.0	13 3.2	4 1.0	401 100.0

RELIGION religion of respondent by ETHGRP ethnic group of respondent.

Page 2 of 6

Count		ETHGRP		Row Total
		tagalog	6.0	
RELIGION				
	.0			1 .2
catholic	1.0	2		353 88.0
protestant	2.0			3 .7
7th day adventis	3.0			5 1.2
Column (Continued) Total		2 .5	401	100.0

RELIGION religion of respondent by ETHGRP ethnic group of respondent.

Page.3 of 6

Count		ETHGRP
-------	--	--------

RELIGION		ormocano	cebuano	davaoeni	Waray-wa	visayans	Row Total
		1.0	2.0	os 3.0	ray 4.0	5.0	
Jehovah's Witnes	4.0			1			1 .2
Born Again Chris	5.0	14	1				15 3.7
Muslims	6.0	2		3			5 1.2
Mormons	7.0	1					1 .2
Column Total		325	49	8	13	4	401
(Continued)		81.0	12.2	2.0	3.2	1.0	100.0

Page 116

SPSS/PC+ Studentware+

5/31/94

RELIGION religion of respondent by ETHGRP ethnic group of respondent.

RELIGION	Count	ETHGRP	Row Total
		tagalog 6.0	
Jehovah's Witnes	4.0		1 .2
Born Again Chris	5.0		15 3.7
Muslims	6.0		5 1.2
Mormons	7.0		1 .2
Column Total		2	401
(Continued)		.5	100.0

Page 117

SPSS/PC+ Studentware+

5/31/94

RELIGION religion of respondent by ETHGRP ethnic group of respondent.

RELIGION	Count	ormocano	cebuano	davaoeni	Waray-wa	visayans	Row Total
		1.0	2.0	os 3.0	ray 4.0	5.0	
Iglesia ni Krist	8.0	9					9 2.2
Church of the Na	9.0	4	1				5 1.2
	10.0	2					2

Assembly of God							.5
Baptist	11.0	1					.2
Column Total	325	49	8	13	4	401	
(Continued)	81.0	12.2	2.0	3.2	1.0	100.0	

Page 118 SPSS/PC+ Studentware+ 5/31/94

RELIGION religion of respondent by ETHGRP ethnic group of respondent.

Page 6 of 6

Count	ETHGRP	Row Total
	tagalog	
	6.0	
RELIGION		
8.0		9
Iglesia ni Krist		2.2
9.0		5
Church of the Na		1.2
10.0		2
Assembly of God		.5
11.0		1
Baptist		.2
Column Total	2	401
	.5	100.0

Number of Missing Observations: 3

Page 119	SPSS/PC+ Studentware+	5/31/94
Page 120	SPSS/PC+ Studentware+	5/31/94

This procedure was completed at 7:52:17
variable labels religion "religion of respondent".
variable labels ethgrp "ethnic group of respondent".
value labels religion 1 "catholic" 2 "protestant" 3 "7th day adventist"
4 "Jehovah's Witness" 5 "Born Again Christian" 6 "Muslims" 7 "Mormons"
8 "Iglesia ni Kristo" 9 "Church of the Nazarene" 10 "Assembly of God"
11 "Baptist".
value labels ethgrp 1 "ormocano" 2 "cebuano" 3 "davaoenios"
4 "Waray-waray" 5 "visayans" 6 "tagalog" 7 "chinese".
set printer off.

recode age (15 thru 25=1) (26 thru 35=2) (36 thru 45=3) (46 thru 60=4)
 (61 thru 100=5).
 variable labels age "age collapsed into categories".
 value labels age 1 "15-25" 2 "26-35" 3 "36-45" 4 "46-60" 5 "61-100".
 variable labels occp "pre-resettlement occupation of respondent".
 value labels occp 1010 'raised pigs' 1020 'fisher' 1030 'labourer'
 1040 'gardener' 1050 'farmer' 1060 'cocowoodcutter' 1070 'slaughterman'
 2010 'tailor' 2020 'mechanic' 2030 'carpenter' 2040 'driver'
 2050 'projector operator' 2060 'mason' 2070 'surveyor' 2080 'foreman'
 2090 'sugermill operator' 2100 'barber' 2110 'port engineer'
 2120 'welder' 2130 'jeweller' 2140 'cook/baker' 2150 'vulcaniser'
 2160 'electrician' 2170 'chemist' 2180 'technician' 2190 'butcher'
 2200 'shoemaker' 2210 'autobody builder' 2230 'utilityman'
 3010 'makes tuba' 3020 'fish vender' 3030 'laundrywoman' 3040 'matmaker'
 3050 'beautician' 3060 'vender' 3070 'buyandsell' 3080 'sarisari'
 3090 'housepainter' 3100 'gambler' 3110 'babysitter' 3120 'nippamaker'
 3130 'latero' 3140 'canteen owner' 3150 'sells lechon' 3160 'sells drygoods'
 3170 'makes paper bags' 3180 'crabtrap maker' 4010 'collector'
 4020 'watchman' 4030 'brgy official' 4040 'policeman' 4050 'govtt employee'
 4060 'teacher' 4070 'pnoc employee' 4080 'nawasa employee'
 5010 'jeepney conductor' 5020 'bus dispatthcer' 5030 'messenger'
 5040 'private employee' 5050 'salesgirl' 5060 'helper' 5070 'porter'
 5080 'construction worker' 5090 'dispatcher' 5100 'deliveryman'
 5110 'bus conductor' 5120 'pumpboy' 5130 'factory worker' 6010 'nfa retailer'
 6020 'tupperware dealer' 6030 'businessman' 6040 'coke retailer'
 6050 'bookkeeper' 6060 'secretary' 6070 'contractor' 6080 'hedeco employee'
 6090 'accounting clerk' 8010 'healer' 8020 'musician' 8030 'ngo employee'
 8040 'pensioner' 8050 'sttudent' 7010 'cafgu' 7020 'security guard'.
 crosstabs occp by age.

The raw data or transformation pass is proceeding
 404 cases are written to the compressed active file.

Memory allows for 7,354 cells with 2 dimensions for general CROSS TABS.

Page 90 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
 by AGE age collapsed into categories

		AGE					Page 1 of 28
Count		15-25	26-35	36-45	46-60	Row	
		-1.0	1.0	2.0	3.0	4.0	Total
OCCP							
	-1.0		1				1
							.2
	.0		41	52	29	7	137
							34.2
1010.0					3	1	4
raised pigs							1.0
1020.0						1	2
fisher							.5
Column		1	61	122	122	70	401
(Continued) Total		.2	15.2	30.4	30.4	17.5	100.0

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE		Page 2 of 28	
Count		61-100			
		5.0		Row	
				Total	
OCCP	-1.0			1	
				.2	
	.0	8		137	
				34.2	
	1010.0			4	
raised pigs				1.0	
	1020.0	1		2	
fisher				.5	
Column		25		401	
(Continued)	Total	6.2		100.0	

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE					Page 3 of 28	
Count		15-25 26-35 36-45 46-60						
		-1.0	1.0	2.0	3.0	4.0	Row	
							Total	
OCCP								
	1030.0			8	10	4	24	
labourer							6.0	
	1040.0					1	1	
gardener							.2	
	1050.0					1	2	
farmer							.5	
	2010.0				7	1	8	
tailor							2.0	
Column		1	61	122	122	70	401	
(Continued)	Total	.2	15.2	30.4	30.4	17.5	100.0	

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE		Page 4 of 28	
Count		61-100			
				Row	

	5.0	Total
OCCP		
1030.0	2	24
labourer		6.0
1040.0		1
gardener		.2
1050.0	1	2
farmer		.5
2010.0		8
tailor		2.0
Column	25	401
(Continued) Total	6.2	100.0

Page 94

SPSS/PC+ Studentware+

7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE					Page 5 of 28	
Count								
		15-25	26-35	36-45	46-60			
		-1.0	1.0	2.0	3.0	4.0	Row	Total
OCCP								
2020.0			1	1			3	
mechanic							.7	
2030.0				4	4		8	
carpenter							2.0	
2040.0			1	4	1		6	
driver							1.5	
2050.0			1				1	
projector operat							.2	
Column		1	61	122	122	70	401	
(Continued) Total		.2	15.2	30.4	30.4	17.5	100.0	

Page 95

SPSS/PC+ Studentware+

7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE		Page 6 of 28	
Count					
		61-100			
		5.0	Row		
			Total		
CCP					
2020.0		1	3		
mechanic			.7		
2030.0			8		
carpenter			2.0		
2040.0			6		

driver	1	1
2050.0		1
projector operat		.2
Column	25	401
(Continued) Total	6.2	100.0

Page 96 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

Count AGE Page 7 of 28

		15-25	26-35	36-45	46-60	
		-1.0	1.0	2.0	3.0	4.0
OCCP						
2060.0			2	1	1	4
mason						1.0
2070.0				1		1
surveyor						.2
2080.0				1	1	2
forreman						.5
2090.0				1		1
sugermill opera						.2
Column		1	61	122	122	70
(Continued) Total		.2	15.2	30.4	30.4	17.5
						401
						100.0

Page 97 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

Count AGE Page 8 of 28

		61-100
		5.0
OCCP		
2060.0		4
mason		1.0
2070.0		1
surveyor		.2
2080.0		2
forreman		.5
2090.0		1
sugermill opera		.2
Column		25
(Continued) Total		6.2
		401
		100.0

Page 98 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE					Page 9 of 28
Count							
		15-25	26-35	36-45	46-60		
		-1.0	1.0	2.0	3.0	4.0	Row
							Total
OCCP							
2100.0			1				1
barber							.2
2110.0							1
port engineer							.2
2120.0			1	1			2
welder							.5
2130.0			1				1
jeweller							.2
Column		1	61	122	122	70	401
(Continued)	Total	.2	15.2	30.4	30.4	17.5	100.0

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE		Page 10 of 28
Count		61-100		
		5.0	Row	
			Total	
OCCP				
2100.0			1	
barber			.2	
2110.0		1	1	
port engineer			.2	
2120.0			2	
welder			.5	
2130.0			1	
jeweller			.2	
Column		25	401	
(Continued)	Total	6.2	100.0	

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE					Page 11 of 28
Count		15-25	26-35	36-45	46-60		
		-1.0	1.0	2.0	3.0	4.0	Row
							Total

OCCP						
2140.0				2		2
cook/baker						.5
2150.0				1		1
vulcaniser						.2
3010.0		1				1
makes tuba						.2
3020.0		1	4	6	1	12
fish vender						3.0
Column	1	61	122	122	70	401
(Continued) Total	.2	15.2	30.4	30.4	17.5	100.0

Page 101

SPSS/PC+ Studentware+

7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

	AGE	Page 12 of 28
Count	61-100	
	5.0	Row Total
OCCP		
2140.0		2
cook/baker		.5
2150.0		1
vulcaniser		.2
3010.0		1
makes tuba		.2
3020.0		12
fish vender		3.0
Column	25	401
(Continued) Total	6.2	100.0

Page 102

SPSS/PC+ Studentware+

7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

	AGE	Page 13 of 28
Count	15-25 26-35 36-45 46-60	
	-1.0 1.0 2.0 3.0 4.0	Row Total
OCCP		
3030.0	3 9 8 3	28
laundrywoman		7.0
3040.0		1
matmaker		.2
3050.0	1 1 1 1	4
beautician		1.0

vender	3060.0		3	13	9	13	41
							10.2
Column		1	61	122	122	70	401
(Continued)	Total	.2	15.2	30.4	30.4	17.5	100.0

Page 103 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE	Page 14 of 28
	Count	61-100	Row
		5.0	Total
OCCP			
	3030.0		28
laundrywoman			7.0
	3040.0	1	1
matmaker			.2
	3050.0		4
beautician			1.0
	3060.0	3	41
vender			10.2
	Column	25	401
(Continued)	Total	6.2	100.0

Page 104	SPSS/PC+ Studentware+	7/7/94
----------	-----------------------	--------

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE					Page 15 of 28	
	Count	15-25 26-35 36-45 46-60					Row	Total
		-1.0	1.0	2.0	3.0	4.0		
OCCP	3070.0	1		2	3	5	13	
buyandsell							3.2	
	3080.0		7	10	14	13	48	
sarisari							12.0	
	3090.0			1			1	
housepainter							.2	
	3100.0				1		1	
gambler							.2	
Column		1	61	122	122	70	401	
(Continued)	Total	.2	15.2	30.4	30.4	17.5	100.0	

Page 105 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE		Page 16 of 28	
Count		61-100			
		5.0		Row	
				Total	
OCCP	3070.0	2	13		
buyandsell			3.2		
sarisari	3080.0	4	48		
			12.0		
housepainter	3090.0		1		
			.2		
gambler	3100.0		1		
			.2		
Column		25	401		
(Continued) Total		6.2	100.0		

Page 106 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE					Page 17 of 28	
Count		15-25 26-35 36-45 46-60						
		-1.0 1.0 2.0 3.0 4.0					Row	
							Total	
OCCP	3110.0			1	2		3	
babysitter							.7	
nipamaker	3120.0			1	1		2	
							.5	
collector	4010.0				1		1	
							.2	
watchman	4020.0				1		1	
							.2	
Column		1	61	122	122	70	401	
(Continued) Total		.2	15.2	30.4	30.4	17.5	100.0	

Page 107 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE		Page 18 of 28	
Count		61-100			
		5.0		Row	
				Total	
OCCP					

3110.0		3
babysitter		.7
3120.0		2
nipemaker		.5
4010.0		1
collector		.2
4020.0		1
watchman		.2
Column	25	401
(Continued) Total	6.2	100.0

Page 108 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE					Page 19 of 28	
Count								
		15-25	26-35	36-45	46-60			
		-1.0	1.0	2.0	3.0	4.0	Row	
							Total	
OCCP								
4030.0					1		1	
brgy official							.2	
4040.0					1	1	2	
policeman							.5	
4050.0			1			2	3	
govtt employee							.7	
4060.0			1	1	1		3	
teacher							.7	
Column		1	61	122	122	70	401	
(Continued) Total		.2	15.2	30.4	30.4	17.5	100.0	

Page 109 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE		Page 20 of 28	
Count					
		61-100			
		5.0		Row	
				Total	
OCCP					
4030.0				1	
brgy official				.2	
4040.0				2	
policeman				.5	
4050.0				3	
govtt employee				.7	

4060.0	3
teacher	.7
Column	25
(Continued) Total	401
	6.2
	100.0

Page 110 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE					Page 21 of 28	
Count								
		15-25	26-35	36-45	46-60			
		-1.0	1.0	2.0	3.0	4.0	Row	Total
OCCP								
5010.0					1		1	
jeepney conducto							.2	
5020.0			1				1	
bus dispatthcher							.2	
5030.0			1				1	
messenger							.2	
5040.0					1		1	
private employee							.2	
Column		1	61	122	122	70	401	
(Continued) Total		.2	15.2	30.4	30.4	17.5	100.0	

Page 111 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE		Page 22 of 28	
Count					
		61-100			
		5.0	Row		
			Total		
OCCP					
5010.0			1		
jeepney conducto			.2		
5020.0			1		
bus dispatthcher			.2		
5030.0			1		
messenger			.2		
5040.0			1		
private employee			.2		
Column		25	401		
(Continued) Total		6.2	100.0		

Page 112 SPSS/PC+ Studentware+ 7/7/94

OCCP pre-resettlement occupation of responden

by AGE age collapsed into categories

		AGE					Page 23 of 28
Count							
		15-25	26-35	36-45	46-60		
		-1.0	1.0	2.0	3.0	4.0	Row Total
ICCP							
5050.0			1	3			4
salesgirl							1.0
5060.0				1			1
helper							.2
5070.0					1		1
porter							.2
6010.0					1		1
nfa retailer							.2
Column		1	61	122	122	70	401
(Continued) Total		.2	15.2	30.4	30.4	17.5	100.0
Page 113		SPSS/PC+ Studentware+					7/7/94

ICCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE		Page 24 of 28
Count		61-100		
		5.0	Row Total	
ICCP				
5050.0			4	
salesgirl			1.0	
5060.0			1	
helper			.2	
5070.0			1	
porter			.2	
6010.0			1	
nfa retailer			.2	
Column		25	401	
(Continued) Total		6.2	100.0	
Page 114		SPSS/PC+ Studentware+		7/7/94

ICCP pre-resettlement occupation of responden
by AGE age collapsed into categories

		AGE					Page 25 of 28
Count							
		15-25	26-35	36-45	46-60		
		-1.0	1.0	2.0	3.0	4.0	Row Total
ICCP							
6070.0					1		1

contractor						.2
7010.0				1		1
cafgu						.2
7020.0			3		1	4
security guard						1.0
8040.0					1	2
pensioner						.5
Column	1	61	122	122	70	401
(Continued) Total	.2	15.2	30.4	30.4	17.5	100.0

Page 115

SPSS/PC+ Studentware+

7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

	AGE	Page 26 of 28
Count	61-100	
	5.0	Row Total
OCCP		
6070.0		1
contractor		.2
7010.0		1
cafgu		.2
7020.0		4
security guard		1.0
8040.0	1	2
pensioner		.5
Column	25	401
(Continued) Total	6.2	100.0

Page 116

SPSS/PC+ Studentware+

7/7/94

OCCP pre-resettlement occupation of responden
by AGE age collapsed into categories

	AGE	Page 27 of 28
Count	15-25 26-35 36-45 46-60	
	-1.0 1.0 2.0 3.0 4.0	Row Total
OCCP		
8050.0	1	1
student		.5
8058.0	1	1
		.2
Column	1	61
(Continued) Total	.2	15.2

Page 117

SPSS/PC+ Studentware+

7/7/94

OCCP pre-resettlement occupation of responden
 by AGE age collapsed into categories

		AGE	Page 28 of 28	
Count		61-100		
		5.0	Row	
			Total	
OCCP	8050.0		2	
student			.5	
	8058.0		1	
			.2	
Column		25	401	
Total		6.2	100.0	

Number of Missing Observations: 3

Page 118 SPSS/PC+ Studentware+ 7/7/94

This procedure was completed at 5:29:49
 set printer off.

```

recode age (15 thru 25=1) (26 thru 35=2) (36 thru 45=3) (46 thru 60=4)
(61 thru 100=5).
variable labels age "age collapsed into categories".
value labels age 1 "15-25" 2 "26-35" 3 "36-45" 4 "46-60" 5 "61-100".
variable labels spoccp "pre-resettlement occupation of spouse of respondent".
value labels spoccp 1010 'raised pigs' 1020 'fisher' 1030 'labourer'
1040 'gardener' 1050 'farmer' 1060 'coco woodcutter' 1070 'slaughterman'
2010 'tailor' 2020 'mechanic' 2030 'carpenter' 2040 'driver'
2050 'projector operator' 2060 'mason' 2070 'surveyor' 2080 'forreman'
2090 'sugermill operator' 2100 'barber' 2110 'port engineer'
2120 'welder' 2130 'jeweller' 2140 'cook/baker' 2150 'vulcaniser'
2160 'electrician' 2170 'chemist' 2180 'technician' 2190 'butcher'
2200 'shoemaker' 2210 'autobody builder' 2230 'utilityman'
3010 'makes tuba' 3020 'fish vender' 3030 'laundrywoman' 3040 'matmaker'
3050 'beautician' 3060 'vender' 3070 'buyandsell' 3080 'sarisari'
3090 'housepainter' 3100 'gambler' 3110 'babysitter' 3120 'nipamaker'
3130 'latero' 3140 'canteen owner' 3150 'sells lechon' 3160 'sells drygoods'
3170 'makes paper bags' 3180 'crabtrap maker' 4010 'collector'
4020 'watchman' 4030 'brgy official' 4040 'policeman' 4050 'govtt employee'
4060 'teacher' 4070 'pnoc employee' 4080 'nawasa employee'
5010 'jeepney conductor' 5020 'bus dispatthcer' 5030 'messenger'
5040 'private employee' 5050 'salesgirl' 5060 'helper' 5070 'porter'
5080 'construction worker' 5090 'dispatcher' 5100 'deliveryman'
5110 'bus conductor' 5120 'pumpboy' 5130 'factory worker' 6010 'nfa retailer'
6020 'tupperware dealer' 6030 'businessman' 6040 'coke retailer'
6050 'bookkeeper' 6060 'secretary' 6070 'contractor' 6080 'hedeco employee'
6090 'accounting clerk' 8010 'healer' 8020 'musician' 8030 'ngo employee'
8040 'pensioner' 8050 'student' 7010 'catgu' 7020 'security guard'.
crosstabs age by spoccp.
The raw data or transformation pass is proceeding
404 cases are written to the compressed active file.

```

Memory allows for 7,354 cells with 2 dimensions for general CROSSABS.

Page 252 SPSS/PC+ Studentware+ 1/17/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 1 of 30
Count							
		raised p fisher labourer					Row
		igs					Total
		-1.0	.0	1010.0	1020.0	1030.0	
AGE	-1.0						1
							.2
15-25	1.0		8	1		12	61
							15.2
26-35	2.0	7	16	1	1	23	122
							30.4
36-45	3.0	10	17		2	16	122
							30.4
Column		45	50	5	3	60	401
Continued) Total		11.2	12.5	.7	.7	15.0	100.0

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

Page 2 of 30

Count	SPOCCP					Row Total
	gardener	farmer	cocowood cutter	slaughte rman	tailor	
	1040.0	1050.0	1060.0	1070.0	2010.0	
AGE						
-1.0						1 .2
1.0	1	1		1		61 15.2
15-25						
2.0		2	1			122 30.4
26-35						
3.0		2			4	122 30.4
36-45						
Column	2	8	1	1	6	401
Continued) Total	.5	2.0	.2	.2	1.5	100.0

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

Page 3 of 30

Count	SPOCCP					Row Total
	mechanic	carpente r	driver	projecto r operat	mason	
	2020.0	2030.0	2040.0	2050.0	2060.0	
AGE						
-1.0						1 .2
1.0	1	1	4			61 15.2
15-25						
2.0		7	9		2	122 30.4
26-35						
3.0	1	4	10		1	122 30.4
36-45						
Column	3	16	26	1	4	401
Continued) Total	.7	4.0	6.5	.2	1.0	100.0

AGE age collapsed into categories

by SPOCCP pre-resettlement occupation of spouse of

Page 4 of 30

Count	SPOCCP					Row
	forreman	sugerm ll opera	barber	boit eng ineer	weldbr	

		2080.0	2090.0	2100.0	2110.0	2120.0	Total
AGE	-1.0						1 .2
	1.0		1			2	61 15.2
15-25	2.0	1	1		1		122 30.4
26-35	3.0	3	2			2	122 30.4
36-45							
Column		4	4	1	1	4	401
(Continued)	Total	1.0	1.0	.2	.2	1.0	100.0

Page 256 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 5 of 30
Count		cook/bak	electric	chemist	technici	butcher	
		er	ian		an		Row
		2140.0	2160.0	2170.0	2180.0	2190.0	Total
AGE	-1.0						1 .2
	1.0	1	1				61 15.2
15-25	2.0	3			2		122 30.4
26-35	3.0		1			2	122 30.4
36-45							
Column		4	3	1	2	2	401
(Continued)	Total	1.0	.7	.2	.5	.5	100.0

Page 257 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP pre-resettlement occupation of spouse of

		SPOCCP					Page 6 of 30
Count		shoemaker	autobody		maker	fish ven	
		er	builder		ba	der	Row
		2200.0	2210.0	2220.0	3010.0	3020.0	Total
AGE	-1.0						1 .2
	1.0	1	4			1	61 15.2
15-25	2.0			1	2		122
26-35							
36-45							

osstab spoccp2 by sex.

emory allows for 6,130 cells with 2 dimensions for general CROSSTABS.

age 780 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Page 1 of 15
Count					
		male		female	Row
		-1.0	1.0	2.0	Total
POCCP2	-1.0		16	34	50 12.5
	.0		47	41	88 21.9
	1020.0			2	2 .5
fisher					
labourer	1030.0			52	52 13.0
Column		1	112	288	401
Continued) Total		.2	27.9	71.8	100.0

age 781 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Page 2 of 15
Count					
		male		female	Row
		-1.0	1.0	2.0	Total
POCCP2	1040.0			2	2 .5
gardener					
	1050.0			5	5 1.2
farmer					
	1060.0			1	1 .2
cocowood cutter					
	1070.0			1	1 .2
slaughterman					
Column		1	112	288	401
Continued) Total		.2	27.9	71.8	100.0

age 782 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Page 3 of 15
Count					
		male		female	Row

POCCP2	2010.0		1	4	5
tailor					1.2
	2020.0			3	3
mechanic					.7
	2030.0			21	21
carpenter					5.2
	2040.0		1	19	20
driver					5.0
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

age 783 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX		Page 4 of 15	
Count		male	female	Row	
	-1.0	1.0	2.0	Total	
POCCP2	2060.0		4	4	
mason				1.0	
	2080.0		2	2	
foreman				.5	
	2090.0		6	6	
sugermill operat				1.5	
	2100.0		1	1	
barber				.2	
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

age 784 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX		Page 5 of 15	
Count		male	female	Row	
	-1.0	1.0	2.0	Total	
POCCP2	2110.0		1	1	
port engineer				.2	
	2120.0		4	4	
welder				1.0	
	2140.0		3	3	
cook/baker				.7	
	2160.0		3	3	
electrician				.7	
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

POCCP2 post-resettlement occupation of spouse by SEX

Page 6 of 15

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
POCCP2				
2180.0			1	1
technician				.2
2190.0			2	2
butcher				.5
2200.0			1	1
shoemaker				.2
2210.0			4	4
autobody builder				1.0
Column	1	112	288	401
Continued) Total	.2	27.9	71.8	100.0

POCCP2 post-resettlement occupation of spouse by SEX

Page 7 of 15

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
POCCP2				
2220.0			1	1
utilityman				.2
3010.0		1		1
makes tuba				.2
3020.0		3	2	5
fish vender				1.2
3030.0		5		5
laundrywoman				1.2
Column	1	112	288	401
(continued) Total	.2	27.9	71.8	100.0

POCCP2 post-resettlement occupation of spouse by SEX

Page 8 of 15

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
POCCP2				
3050.0		2		2
beautician				.5
3060.0		17	11	28
vender				7.0

buyandsell	3070.0				2.5
sarisari	3080.0		10	3	13
					3.2
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

age 788 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Page 9 of 15
Count		male		female	Row Total
		-1.0	1.0	2.0	
POCCP2					
3100.0	gambler			1	1
					.2
3110.0	babysitter		1		1
					.2
3120.0	nipamaker			2	2
					.5
3130.0	latero			1	1
					.2
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

age 789 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Page 10 of 15
Count		male		female	Row Total
		-1.0	1.0	2.0	
POCCP2					
3180.0	crabtrap maker			1	1
					.2
4030.0	brgy official		1		1
					.2
4050.0	govt employee			2	2
					.5
4060.0	teacher		4	1	5
					1.2
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

age 790 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Page 11 of 15
Count					

		-1.0	1.0	2.0	Row Total
POCCP2					
	4070.0			1	1
pnoc employee					.2
	5010.0			1	1
jeepney conducto					.2
	5030.0			2	2
messenger					.5
	5040.0			6	6
private employee					1.5
Column		1	112	288	401
Continued)	Total	.2	27.9	71.8	100.0

age 791 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Row Total
		Page 12 of 15			
Count		male	female		
		-1.0	1.0	2.0	
POCCP2					
	5060.0			6	6
helper					1.5
	5070.0			5	5
porter					1.2
	5100.0			1	1
deliveryman					.2
	5120.0			1	1
pumpboy					.2
Column		1	112	288	401
Continued)	Total	.2	27.9	71.8	100.0

age 792 SPSS/PC+ Studentware+ 7/8/94

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Row Total
		Page 13 of 15			
Count		male	female		
		-1.0	1.0	2.0	
POCCP2					
	5130.0			1	1
factory worker					.2
	6030.0			1	1
businessman					.2
	6060.0		1		1
secretary					.2
	6080.0			1	1
hedeco employee					.2

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Page 14 of 15
Count		male		female	Row
		-1.0	1.0	2.0	Total
POCCP2	6090.0			1	1
accounting clerk					.2
cafgu	7010.0			1	1
					.2
security guard	7020.0			9	9
					2.2
musician	8020.0			1	1
					.2
Column		1	112	288	401
Continued) Total		.2	27.9	71.8	100.0

POCCP2 post-resettlement occupation of spouse by SEX

		SEX			Page 15 of 15
Count		male		female	Row
		-1.0	1.0	2.0	Total
POCCP2	8040.0			1	1
pensioner					.2
Column		1	112	288	401
Total		.2	27.9	71.8	100.0

Number of Missing Observations: 3

This procedure was completed at 20:17:34
 at printer off.

Test pairs ttlincm ttlincm2.
TEST requires 64 BYTES of workspace for execution.

Page 62 SPSS/PC+ Studentware+ 7/8/94
- - - t-tests for paired samples - - -

Variable	Number of pairs	Corr	2-tail Sig	Mean	SD	SE of Mean
TTLINCM	401	.674	.000	2401.7556	3651.854	182.365
TTLINCM2				1837.2718	2197.923	109.759

Paired Differences			t-value	df	2-tail Sig
Mean	SD	SE of Mean			
54.4838	2712.026	135.432	4.17	400	.000
95% CI (298.177, 830.790)					

Page 63 SPSS/PC+ Studentware+ 7/8/94

This procedure was completed at 17:19:31
Printer off.

crosstabs edlvl by sex.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 152

SPSS/PC+ Studentware+

5/30/94

EDLVL educational level of respondent by SEX sex of respondent

		SEX		Page 1 of 4	
Count	EDLVL	male		female	
		-1.0	1.0	2.0	Row Total
.0			1	8	9 2.2
1.0			4	2	6 1.5
2.0			5	7	12 3.0
3.0			3	9	12 3.0
Column Total		1 .2	112 27.9	288 71.8	401 100.0
(Continued)					

Page 153

SPSS/PC+ Studentware+

5/30/94

EDLVL educational level of respondent by SEX sex of respondent

Page 2 of 4

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
EDLVL				
4.0		5	27	32 8.0
5.0		3	25	28 7.0
6.0		22	78	100 24.9
7.0		6	20	26 6.5
Column	1	112	288	401
(Continued) Total	.2	27.9	71.8	100.0

Page 154

SPSS/PC+ Studentware+

5/30/94

EDLVL educational level of respondent by SEX sex of respondent

Page 3 of 4

Count	SEX
-------	-----

		male		female	Row Total
		-1.0	1.0	2.0	
EDLVL	8.0	1	11	31	43 10.7
	9.0		9	14	23 5.7
	10.0		25	35	60 15.0
	11.0		6	7	13 3.2
Column		1	112	288	401
(Continued) Total		.2	27.9	71.8	100.0

Page 155 SPSS/PC+ Studentware+ 5/30/94

EDLVL educational level of respondent by SEX sex of respondent

		SEX		Page 4 of 4	
	Count	male		female	Row Total
		-1.0	1.0	2.0	
EDLVL	12.0		3	11	14 3.5
	13.0		4	4	8 2.0
	14.0		4	10	14 3.5
	66.0		1		1 .2
Column		1	112	288	401
Total		.2	27.9	71.8	100.0

Number of Missing Observations: 3

Page 156 SPSS/PC+ Studentware+ 5/30/94

Page 157 SPSS/PC+ Studentware+ 5/30/94

This procedure was completed at 7:35:39
variable labels edlvl "educational level of respondent".
value labels sex 1 "male" 2 "female".
set printer off.

crosstabs spedlvl by sex.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

SPEDLVL educational level of spouse by SEX sex of respondent

Page 1 of 4

SEX	Count	SEX			Row Total
		male		female	
		-1.0	1.0	2.0	
SPEDLVL	-1.0		15	24	39 9.7
	.0		4	3	7 1.7
	1.0		1	5	6 1.5
	2.0		1	12	13 3.2
Column		1	112	288	401
(Continued)	Total	.2	27.9	71.8	100.0

SPEDLVL educational level of spouse by SEX sex of respondent

Page 2 of 4

SEX	Count	SEX			Row Total
		male		female	
		-1.0	1.0	2.0	
SPEDLVL	3.0	1	6	14	21 5.2
	4.0		7	21	28 7.0
	5.0		4	17	21 5.2
	6.0		23	71	94 23.4
Column		1	112	288	401
(Continued)	Total	.2	27.9	71.8	100.0

SPEDLVL educational level of spouse by SEX sex of respondent

Page 3 of 4

SEX	Count
-----	-------

		male		female	Row Total
		-1.0	1.0	2.0	
SPEDLVL	7.0		7	11	18 4.5
	8.0		7	25	32 8.0
	9.0		4	16	20 5.0
	10.0		18	44	62 15.5
Column (Continued) Total		1 .2	112 27.9	288 71.8	401 100.0

Page 169

SPSS/PC+ Studentware+

5/30/94

SPEDLVL educational level of spouse by SEX sex of respondent

		SEX		male		female	Row Total
		Count		-1.0	1.0	2.0	
SPEDLVL	11.0				1	5	6 1.5
	12.0				7	6	13 3.2
	13.0					3	3 .7
	14.0				7	11	18 4.5
Column Total				1 .2	112 27.9	288 71.8	401 100.0

Number of Missing Observations: 3

Page 170

SPSS/PC+ Studentware+

5/30/94

Page 171

SPSS/PC+ Studentware+

5/30/94

This procedure was completed at 7:39:01
variable labels spedlvl "educational level of spouse".
value labels sex 1 "male" 2 "female".
set printer off.

crosstabs crdsrc by sex.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 178

SPSS/PC+ Studentware+

5/30/94

CRDSRC source of credit by SEX sex of respondent

		SEX			Page 1 of 3
Count					
		male		female	
		-1.0	1.0	2.0	Row Total
CRDSRC	-1.0			1	1
					.2
neighbours	1.0		41	94	135
					33.7
relatives	2.0		4	4	8
					2.0
employer	3.0		5	4	9
					2.2
Column Total		1	112	288	401
(Continued)		.2	27.9	71.8	100.0

Page 179

SPSS/PC+ Studentware+

5/30/94

CRDSRC source of credit by SEX sex of respondent

		SEX			Page 2 of 3
Count					
		male		female	
		-1.0	1.0	2.0	Row Total
CRDSRC	5.0		1	3	4
sari-sari					1.0
bank	6.0			2	2
					.5
none	7.0	1	58	178	237
					59.1
DSWD	8.0		2	2	4
					1.0
Column Total		1	112	288	401
(Continued)		.2	27.9	71.8	100.0

Page 180

SPSS/PC+ Studentware+

5/30/94

CRDSRC source of credit by SEX sex of respondent

		SEX			Page 3 of 3
Count					

		male		female	
		-1.0	1.0	2.0	Row Total
CRDSRC	44.0		1		1 .2
Column		1	112	288	401
Total		.2	27.9	71.8	100.0

Number of Missing Observations: 3

This procedure was completed at 7:43:15
variable labels crdsrc "source of credit".
value labels sex 1 "male" 2 "female".
value labels crdsrc 1 "neighbours" 2 "relatives" 3 "employer"
4 "cooperative" 5 "sari-sari" 6 "bank" 7 "none" 8 "DSWD".
set printer off.

crosstabs shelter by sex.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 186

SPSS/PC+ Studentware+

5/30/94

SHELTER type of shelter by SEX sex of respondent

		SEX			Page 1 of 1
Count			male	female	
		-1.0	1.0	2.0	Row Total
SHELTER					
temporary	1.0	1	74	232	307 76.6
semi-permanent	2.0		34	51	85 21.2
permanent	3.0		4	5	9 2.2
Column Total		1	112	288	401
		.2	27.9	71.8	100.0

Number of Missing Observations: 3

Page 187

SPSS/PC+ Studentware+

5/30/94

This procedure was completed at 7:48:42
 variable labels shelter "type of shelter".
 value labels sex 1 "male" 2 "female".
 value labels shelter 1 "temporary" 2 "semi-permanent" 3 "permanent".
 set printer off.

crosstabs housests by sex.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

HOUSESTS house status by SEX sex of respondent

		SEX				Page 1 of 2	
Count		male		female		Row	
		-1.0	1.0	2.0		Total	
HOUSESTS	-1.0		2	1		3	.7
squat	1.0	1	68	194		263	65.6
rent	2.0		27	71		98	24.4
own	3.0		15	21		36	9.0
Column		1	112	288		401	
(Continued)	Total	.2	27.9	71.8		100.0	

HOUSESTS house status by SEX sex of respondent

		SEX				Page 2 of 2	
Count		male		female		Row	
		-1.0	1.0	2.0		Total	
HOUSESTS	22.0			1		1	.2
Column		1	112	288		401	
Total		.2	27.9	71.8		100.0	

Number of Missing Observations: 3

This procedure was completed at 7:51:25
value labels sex 1 "male" 2 "female".
variable labels housests "house status".
value labels housests 1 "squat" 2 "rent" 3 "own".
set printer off.

AGE age collapsed into categories
by OCCP2 pre-resettlement occupation of spouse of

Page 15 of 16

		OCCP2					
		jeepney	bus disp	messenger	helper	porter	
		conductor	attender				Row
		5010.0	5020.0	5030.0	5060.0	5070.0	Total
AGE	Count						
46-60	4.0						70
							17.5
61-100	5.0						25
							6.2
Column		1	1	1	5	1	401
(Continued)	Total	.2	.2	.2	1.2	.2	100.0

Page 319 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by OCCP2 pre-resettlement occupation of spouse of

Page 16 of 16

		OCCP2			
		catigu	security	pensioner	
		guard			Row
		7010.0	7020.0	8040.0	Total
AGE	Count				
46-60	4.0		1	1	70
					17.5
61-100	5.0			1	25
					6.2
Column		1	4	2	401
	Total	.2	1.0	.5	100.0

Number of Missing Observations: 3

Page 320 SPSS/PC+ Studentware+ 7/7/94

this procedure was completed at 6:02:50
set printer off.

26-35	2.0				1	1	122
							30.4
36-45	3.0	1	1	1		1	122
							30.4
Column		1	1	2	1	3	401
(Continued)	Total	.2	.2	.5	.2	.7	100.0

AGE age collapsed into categories
 by OCCP2 pre-resettlement occupation of spouse of

		OCCP2					Page 7 of 16
AGE	Count	jeepney conductor	bus attacher	disp messenge r	helper	porter	Row
		5010.0	5020.0	5030.0	5060.0	5070.0	Total
-1.0							1
							.2
1.0					1		61
							15.2
2.0			1	1	2		122
							30.4
3.0		1			2	1	122
							30.4
Column		1	1	1	5	1	401
(Continued)	Total	.2	.2	.2	1.2	.2	100.0

AGE age collapsed into categories
 by OCCP2 pre-resettlement occupation of spouse of

		OCCP2			Page 8 of 16
AGE	Count	cafigu guard	security r	pensione	Row
		7010.0	7020.0	8040.0	Total
-1.0					1
					.2
1.0					61
					15.2
2.0			2		122
					30.4
3.0		1	1		122
					30.4
Column		1	4	2	401
(Continued)	Total	.2	1.0	.5	100.0

AGE age collapsed into categories

by OCCP2 pre-resettlement occupation of spouse of

Page 9 of 16

		OCCP2						
Count								
		raised p labourer tailor mechanic						
		igs						
		2010.0	2030.0	2010.0	2020.0		Row	
							Total	
AGE								
46-60	4.0	36	1	2	1		70	17.5
61-100	5.0	17	1			1	25	6.2
Column		233	3	14	7	1	401	
(Continued)	Total	58.1	.7	3.5	1.7	.2	100.0	

AGE age collapsed into categories

by OCCP2 pre-resettlement occupation of spouse of

Page 10 of 16

		OCCP2						
Count								
		carpente driver projecto mason surveyor						
		r r operat						
		2030.0	2040.0	2050.0	2060.0	2070.0	Row	
							Total	
AGE								
46-60	4.0	2			1		70	17.5
61-100	5.0						25	6.2
Column		7	0	1	0	1	401	
(Continued)	Total	1.7	1.5	.2	.7	.2	100.0	

AGE age collapsed into categories

by OCCP2 pre-resettlement occupation of spouse of

Page 11 of 16

		OCCP2						
Count								
		forreman sugermi welder jeweller makes						
		ll opera ba						
		2080.0	2090.0	2120.0	2130.0	21010.0	Row	
							Total	
AGE								
46	4.0	1					70	17.5
61-100	5.0						25	6.2
Column		1	1	2	1	1	401	
(Continued)	Total	.2	.2	.5	.2	.2	100.0	

AGE age collapsed into categories
by OCCP2 pre-resettlement occupation of spouse of

		OCCP2					Page 12 of 16
Count		fish	ven	laundryw	mateaker	beautici	vender
		der	oman		an		
		3020.0	3030.0	3040.0	3050.0	3060.0	Row
							Total
AGE							
46-60	4.0		5		1	5	70
							17.5
61-100	5.0			1		2	25
							6.2
Column		4	13	2	3	18	401
(Continued)	Total	1.0	3.2	.5	.7	4.5	100.0

Page 316 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by OCCP2 pre-resettlement occupation of spouse of

		OCCP2					Page 13 of 16
Count		buyandse	sarisari	housepai	babysitt	nipamake	
		ll		nter	er	r	Row
		3070.0	3080.0	3090.0	3110.0	3120.0	Total
AGE							
46-60	4.0	2	7		2		70
							17.5
61-100	5.0		1		1		25
							6.2
Column		6	43	1	4	1	401
(Continued)	Total	1.5	10.7	.2	1.0	.2	100.0

Page 317 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by OCCP2 pre-resettlement occupation of spouse of

		OCCP2					Page 14 of 16
Count		watchman	brgy off	police	ma govtt	em teacher	
		icial	n	ployee			Row
		4020.0	4030.0	4040.0	4050.0	4060.0	Total
AGE							
46-60	4.0			1		1	70
							17.5
61-100	5.0						25
							6.2
Column		1	1	.5	1	3	401
(Continued)	Total	.2	.2	.5	.2	.7	100.0

Page 318 SPSS/PC+ Studentware+ 7/7/94

```

de ttlincm2 (0 thru 1500=1) (1501 thru 3000=2) (3001 thru 5000=3)
1 thru 10000=4) (10001 thru 61000=5).
variable labels ttlincm2 "total income2 collapsed into categories".
value labels ttlincm2 1 '0-1500' 2 '1501-3000' 3 '3001-5000' 4 '5001-10000'
'10001-61000'.
crosstab occp2 by ttlincm2.
the raw data or transformation pass is proceeding
404 cases are written to the compressed active file.

```

memory allows for 6,130 cells with 2 dimensions for general CROSSTABS.

Page 797 SPSS/PC+ Studentware+ 7/8/94

occ2 post-resettlement occupation
 by TTLINCM2 total income2 collapsed into categories

Page 1 of 10

	Count	TTLINCM2					Row Total
		0-1500 1.0	1501-300 2.0	3001-500 3.0	5001-100 4.0	10001-61 5.0	
occ2	.0	142	78	11	1	1	233 58.1
raised pigs	1010.0	2	1				3 .7
labourer	1030.0	9	5				14 3.5
tailor	2010.0	4	3				7 1.7
Column (continued) Total		228 56.9	130 32.4	31 7.7	8 2.0	4 1.0	401 100.0

Page 798 SPSS/PC+ Studentware+ 7/8/94

occ2 post-resettlement occupation
 by TTLINCM2 total income2 collapsed into categories

Page 2 of 10

	Count	TTLINCM2					Row Total
		0-1500 1.0	1501-300 2.0	3001-500 3.0	5001-100 4.0	10001-61 5.0	
mechanic	2020.0		1				1 .2
carpenter	2030.0	4	2	1			7 1.7
driver	2040.0	5		1			6 1.5
projector operat	2050.0	1					1 .2
Column (continued) Total		228 56.9	130 32.4	31 7.7	8 2.0	4 1.0	401 100.0

2 post-resettlement occupation

TTLINCM2 total income2 collapsed into categories

		TTLINCM2					Page 3 of 10
Count		0-1500	1501-300	3001-500	5001-100	10001-61	Row Total
		0	0	00	000	000	
		1.0	2.0	3.0	4.0	5.0	
DCP2	-----	-----	-----	-----	-----	-----	-----
mason	2060.0		2		1		3 .7
surveyor	2070.0				1		1 .2
foreman	2080.0			1			1 .2
sugermill operat	2090.0			1			1 .2
-----		-----	-----	-----	-----	-----	-----
Column		228	130	31	8	4	401
(Continued) Total		56.9	32.4	7.7	2.0	1.0	100.0

Page 800

SPSS/PC+ Studentware+

7/8/94

DCP2 post-resettlement occupation

2 TTLINCM2 total income2 collapsed into categories

Page 4 of 10

		TTLINCM2					
Count		0-1500	1501-300	3001-500	5001-100	10001-61	Row
		0	0	00	000		Total
		1.0	2.0	3.0	4.0	5.0	
DCP2							
welder	2120.0	1	1				2 .5
Jeweller	2130.0		1				1 .2
makes tuba	3010.0	1					1 .2
fish vender	3020.0	3	1				4 1.0
Column		228	130	31	8	4	401
Continued)	Total	56.9	32.4	7.7	2.0	1.0	100.0

Page 801

SPSS/PC+ Studentware+

7/8/94

DCP2 post-resettlement occupation

2 TTLINCM2 total income2 collapsed into categories

		TTLINCM2					Page 5 of 10
Count		0-1500	1501-300	3001-500	5001-100	10001-61	Row Total
		0	0	00	000		
		1.0	2.0	3.0	4.0	5.0	
CP2	3030.0	11	2				13
laundrywoman							3.2

matmaker	3040.0	2					.5
beautician	3050.0	1	2				.7
vender	3060.0	10	6	2			18 4.5
Column	228	130	31	8	4	401	
Continued) Total	56.9	32.4	7.7	2.0	1.0	100.0	

age 802 SPSS/PC+ Studentware+ 7/8/94

PCP2 post-resettlement occupation
 / TTLINCM2 total income2 collapsed into categories

		TTLINCM2						Page 6 of 10	
Count		0-1500	1501-300	3001-500	5001-100	10001-61		Row	Total
		1.0	2.0	3.0	4.0	5.0			
PCP2	3070.0	3	2	1				6	1.5
buyandsell	3080.0	15	13	9	4	2		43	10.7
sarisari	3090.0		1					1	.2
housepainter	3110.0	4						4	1.0
babysitter									
Column	228	130	31	8	4	401			
Continued) Total	56.9	32.4	7.7	2.0	1.0	100.0			

age 803 SPSS/PC+ Studentware+ 7/8/94

PCP2 post-resettlement occupation
 / TTLINCM2 total income2 collapsed into categories

		TTLINCM2						Page 7 of 10	
Count		0-1500	1501-300	3001-500	5001-100	10001-61		Row	Total
		1.0	2.0	3.0	4.0	5.0			
PCP2	3120.0	1						1	.2
nipamaker	4020.0		1					1	.2
watchman	4030.0	1						1	.2
brgy official	4040.0		1	1				2	.5
policeman									
Column	228	130	31	8	4	401			
Continued) Total	56.9	32.4	7.7	2.0	1.0	100.0			

age 804 SPSS/PC+ Studentware+ 7/8/94

PC2 post-resettlement occupation
 TTLINCM2 total income2 collapsed into categories

		TTLINCM2						Page 8 of 10
Count		0-1500	1501-300	3001-500	5001-100	10001-61	Row Total	
		1.0	2.0	3.0	4.0	5.0		
PCP2								
	4050.0		1				1	
	govt employee						.2	
	4060.0		1	1	1		3	
	teacher						.7	
	5010.0	1					1	
	jeepney conducto						.2	
	5020.0	1					1	
	bus dispatcher						.2	
Column		228	130	31	8	4	401	
(continued) Total		56.9	32.4	7.7	2.0	1.0	100.0	
Page 805		SPSS/PC+ Studentware+						7/8/94

PCP2 post-resettlement occupation
 TTLINCM2 total income2 collapsed into categories

		TTLINCM2						Page 9 of 10
Count		0-1500	1501-300	3001-500	5001-100	10001-61	Row Total	
		1.0	2.0	3.0	4.0	5.0		
PCP2								
	5030.0		1				1	
	messenger						.2	
	5060.0	3	1			1	5	
	helper						1.2	
	5070.0		1				1	
	porter						.2	
	7010.0	1					1	
	cafgu						.2	
Column		228	130	31	8	4	401	
(continued) Total		56.9	32.4	7.7	2.0	1.0	100.0	
Page 806		SPSS/PC+ Studentware+						7/8/94

PCP2 post-resettlement occupation
 TTLINCM2 total income2 collapsed into categories

		TTLINCM2						Page 10 of 10
Count		0-1500	1501-300	3001-500	5001-100	10001-61	Row Total	
		1.0	2.0	3.0	4.0	5.0		
PCP2								
	7020.0		2	2			4	
	security guard						1.0	
	8040.0	2					2	

Column	228	130	31	8	4	401
Total	56.9	32.4	7.7	2.0	1.0	100.0

Number of Missing Observations: 3

Page 807 SPSS/PC+ Studentware+

7/8/94

This procedure was completed at 20:22:12
 at printer off.

code ttlincm (0 thru 1500=1) (1501 thru 3000=2) (3001 thru 5000=3)
 5001 thru 10000=4) (10001 thru 61000=5).
 variable labels ttlincm "total income collapsed into categories".
 value labels ttlincm 1 '0-1500' 2 '1501-3000' 3 '3001-5000' 4 '5001-10000'
 '10001-61000'.
 crosstab occp by ttlincm.
 the raw data or transformation pass is proceeding
 404 cases are written to the compressed active file.

memory allows for 6,130 cells with 2 dimensions for general CROSSTABS.

Page 809 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation
 TTINCM total income collapsed into categories

Page 1 of 14

Count	TTINCM					Row Total
	0-1500 1.0	1501-300 2.0	3001-500 3.0	5001-100 4.0	10001-61 5.0	
CP						
-1.0		1				1 .2
.0	75	51	9	1	1	137 34.2
1010.0 raised pigs	1	3				4 1.0
1020.0 fisher	2					2 .5
Column (continued) Total	170 42.4	147 36.7	63 15.7	15 3.7	6 1.5	401 100.0

Page 810 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation
 TTINCM total income collapsed into categories

Page 2 of 14

Count	TTINCM					Row Total
	0-1500 1.0	1501-300 2.0	3001-500 3.0	5001-100 4.0	10001-61 5.0	
CP						
1030.0 labourer	10	7	6	1		24 6.0
1040.0 gardener	1					1 .2
1050.0 farmer	1	1				2 .5
2010.0 tailor	3	2	3			8 2.0
Column (continued) Total	170 42.4	147 36.7	63 15.7	15 3.7	6 1.5	401 100.0

PCP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM					Page 3 of 14	
Count		0-1500	1501-300	3001-500	5001-100	10001-61		
		1.0	2.0	3.0	4.0	5.0	Row Total	
PCP	2020.0	1	2				3	.7
mechanic	2030.0	4	4				8	2.0
carpenter	2040.0	2	3	1			6	1.5
driver	2050.0	1					1	.2
projector operat								
Column		170	147	63	15	6	401	
Continued) Total		42.4	36.7	15.7	3.7	1.5	100.0	

PCP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM					Page 4 of 14	
Count		0-1500	1501-300	3001-500	5001-100	10001-61		
		1.0	2.0	3.0	4.0	5.0	Row Total	
PCP	2060.0	1	1	2			4	1.0
mason	2070.0				1		1	.2
surveyor	2080.0			1	1		2	.5
foreman	2090.0		1				1	.2
sugermill operat								
Column		170	147	63	15	6	401	
Continued) Total		42.4	36.7	15.7	3.7	1.5	100.0	

PCP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM					Page 5 of 14	
Count		0-1500	1501-300	3001-500	5001-100	10001-61		
		1.0	2.0	3.0	4.0	5.0	Row Total	
PCP	2100.0	1					1	.2
barber								

port engineer	2110.0						1
							.2
welder	2120.0	1		1			2
							.5
Jeweller	2130.0		1				1
							.2
Continued) Total	Column	170	147	63	15	6	401
		42.4	36.7	15.7	3.7	1.5	100.0

Page 814 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM						Page 6 of 14
Count		0-1500	1501-300	3001-500	5001-100	10001-61		
		1.0	2.0	3.0	4.0	5.0	Row	Total
CP								
cook/baker	2140.0	1	1				2	.5
vulcaniser	2150.0					1	1	.2
makes tuba	3010.0	1					1	.2
fish vender	3020.0	6	5	1			12	3.0
Continued) Total	Column	170	147	63	15	6	401	
		42.4	36.7	15.7	3.7	1.5	100.0	

Page 815 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM						Page 7 of 14
Count		0-1500	1501-300	3001-500	5001-100	10001-61		
		1.0	2.0	3.0	4.0	5.0	Row	Total
CP								
laundrywoman	3030.0	14	10	3		1	28	7.0
matmaker	3040.0	1					1	.2
beautician	3050.0	1	2	1			4	1.0
vender	3060.0	14	14	12	1		41	10.2
Continued) Total	Column	170	147	63	15	6	401	
		42.4	36.7	15.7	3.7	1.5	100.0	

Page 816 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM					Page 8 of 14	
Count		0-1500	1501-300	3001-500	5001-100	10001-61		
		1.0	2.0	3.0	4.0	5.0	Row	Total
DCP	3070.0	6	2	2	3		13	3.2
buyandsell	3080.0	13	16	12	4	3	48	12.0
sarisari	3090.0	1					1	.2
housepainter	3100.0		1				1	.2
gambler								
Column		170	147	63	15	6	401	
Continued) Total		42.4	36.7	15.7	3.7	1.5	100.0	

age 817

SPSS/PC+ Studentware+

7/8/94

CP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM					Page 9 of 14	
Count		0-1500	1501-300	3001-500	5001-100	10001-61		
		1.0	2.0	3.0	4.0	5.0	Row	Total
DCP	3110.0		3				3	.7
babysitter	3120.0			1	1		2	.5
nipamaker	4010.0				1		1	.2
collector	4020.0		1				1	.2
watchman								
Column		170	147	63	15	6	401	
Continued) Total		42.4	36.7	15.7	3.7	1.5	100.0	

age 818

SPSS/PC+ Studentware+

7/8/94

CP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM					Page 10 of 14	
Count		0-1500	1501-300	3001-500	5001-100	10001-61		
		1.0	2.0	3.0	4.0	5.0	Row	Total
DCP	4030.0		1				1	.2
brgy official	4040.0		1	1			2	

4050.0	1	2				3
govt employee						.7
4060.0			2	1		3
teacher						.7
Column	170	147	63	15	6	401
Continued) Total	42.4	36.7	15.7	3.7	1.5	100.0

Page 819 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM					Page 11 of 14	
Count		0-1500	1501-300	3001-500	5001-100	10001-61	Row	Total
		1.0	2.0	3.0	4.0	5.0		
CP	5010.0	1					1	
jeepney conducto							.2	
5020.0	1						1	
bus dispatcher							.2	
5030.0			1				1	
messenger							.2	
5040.0				1			1	
private employee							.2	
Column	170	147	63	15	6	401		
Continued) Total	42.4	36.7	15.7	3.7	1.5	100.0		

Page 820 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

		TTLINCM					Page 12 of 14	
Count		0-1500	1501-300	3001-500	5001-100	10001-61	Row	Total
		1.0	2.0	3.0	4.0	5.0		
CP	5050.0	1	2	1			4	
salesgirl							1.0	
5060.0			1				1	
helper							.2	
5070.0			1				1	
porter							.2	
6010.0			1				1	
nfa retailer							.2	
Column	170	147	63	15	6	401		
Continued) Total	42.4	36.7	15.7	3.7	1.5	100.0		

Page 821 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation

	Count	TTLINCM					Row Total
		0-1500 1.0	1501-300 0 2.0	3001-500 0 3.0	5001-100 00 4.0	10001-61 000 5.0	
DCP							
contractor	6070.0		1				1 .2
cafgu	7010.0	1					1 .2
security guard	7020.0		2	2			4 1.0
pensioner	8040.0	2					2 .5
Column		170	147	63	15	6	401
Continued) Total		42.4	36.7	15.7	3.7	1.5	100.0

Page 822

SPSS/PC+ Studentware+

7/8/94

DCP pre-resettlement occupation
 / TTLINCM total income collapsed into categories

	Count	TTLINCM					Row Total
		0-1500 1.0	1501-300 0 2.0	3001-500 0 3.0	5001-100 00 4.0	10001-61 000 5.0	
DCP							
student	8050.0	1	1				2 .5
	8058.0		1				1 .2
Column		170	147	63	15	6	401
Total		42.4	36.7	15.7	3.7	1.5	100.0

Number of Missing Observations: 3

Page 823

SPSS/PC+ Studentware+

7/8/94

This procedure was completed at 20:24:57
 at printer off.

rosstab occp by sex.

emory allows for 6,130 cells with 2 dimensions for general CROSSTABS.

age 675 SPSS/PC+ Studentware+ 7/8/94

CCP pre-resettlement occupation by SEX

		SEX		Page 1 of 14	
Count		male		female	
		-1.0	1.0	2.0	Row Total
CCP	-1.0		1		1 .2
	.0		6	131	137 34.2
1010.0 raised pigs				4	4 1.0
1020.0 fisher			2		2 .5
Column (continued) Total		1 .2	112 27.9	288 71.8	401 100.0

age 676 SPSS/PC+ Studentware+ 7/8/94

CCP pre-resettlement occupation by SEX

Page 2 of 14

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
CCP				
1030.0 labourer		23	1	24 6.0
1040.0 gardener			1	1 .2
1050.0 farmer			2	2 .5
2010.0 tailor		3	5	8 2.0
Column (continued) Total	1 .2	112 27.9	288 71.8	401 100.0

age 677 SPSS/PC+ Studentware+ 7/8/94

CCP pre-resettlement occupation by SEX

	SEX	Page 3 of 14	
Count		male	female
	</		

CP	2020.0		3		3
mechanic					.7
	2030.0		8		8
carpenter					2.0
	2040.0		5	1	6
driver					1.5
	2050.0		1		1
projector operat					.2
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

Page 678

SPSS/PC+ Studentware+

7/8/94

CP pre-resettlement occupation by SEX

		SEX		Page 4 of 14	
Count		male	female		Row
		-1.0	1.0	2.0	Total
CP	2060.0		4		4
mason					1.0
	2070.0		1		1
surveyor					.2
	2080.0		2		2
foreman					.5
	2090.0		1		1
sugermill operat					.2
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

Page 679

SPSS/PC+ Studentware+

7/8/94

CP pre-resettlement occupation by SEX

		SEX		Page 5 of 14	
Count		male	female		Row
		-1.0	1.0	2.0	Total
CP	2100.0		1		1
barber					.2
	2110.0		1		1
port engineer					.2
	2120.0		2		2
welder					.5
	2130.0		1		1
jeweller					.2
Column	1	112	288	401	
Continued) Total	.2	27.9	71.8	100.0	

CCP pre-resettlement occupation by SEX

Page 6 of 14

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
CCP				
2140.0			2	2
cook/baker				.5
2150.0			1	1
vulcaniser				.2
3010.0		1		1
makes tuba				.2
3020.0		3	9	12
fish vender				3.0
Column	1	112	288	401
Continued) Total	.2	27.9	71.8	100.0

Page 681

SPSS/PC+ Studentware+

7/8/94

CCP pre-resettlement occupation by SEX

Page 7 of 14

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
CCP				
3030.0			28	28
laundrywoman				7.0
3040.0			1	1
matmaker				.2
3050.0		1	3	4
beautician				1.0
3060.0		7	34	41
vender				10.2
Column	1	112	288	401
Continued) Total	.2	27.9	71.8	100.0

Page 682

SPSS/PC+ Studentware+

7/8/94

CCP pre-resettlement occupation by SEX

Page 8 of 14

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
CCP				
3070.0	1	7	5	13
buyandsell				3.2
3080.0		5	43	48
sarisari				12.0

housepainter	3070.0				.2
gambler	3100.0		1		.2
Continued)	Column Total	1	112	288	401
		.2	27.9	71.8	100.0

Page 683 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation by SEX

		SEX			Page 9 of 14
Count		male		female	Row
		-1.0	1.0	2.0	Total
CP	3110.0			3	3
babysitter					.7
nipamaker	3120.0			2	2
					.5
collector	4010.0			1	1
					.2
watchman	4020.0		1		1
					.2
Continued)	Column Total	1	112	288	401
		.2	27.9	71.8	100.0

Page 684 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation by SEX

		SEX			Page 10 of 14
Count		male		female	Row
		-1.0	1.0	2.0	Total
CP	4030.0		1		1
brgy official					.2
policeman	4040.0		2		2
					.5
govt employee	4050.0		3		3
					.7
teacher	4060.0			3	3
					.7
Continued)	Column Total	1	112	288	401
		.2	27.9	71.8	100.0

Page 685 SPSS/PC+ Studentware+ 7/8/94

CP pre-resettlement occupation by SEX

		SEX			Page 11 of 14
Count					

		SEX			Row
		-1.0	1.0	2.0	Total
ICP					
	5010.0		1		1
	jeepney conducto				.2
	5020.0		1		1
	bus dispatcher				.2
	5030.0		1		1
	messenger				.2
	5040.0			1	1
	private employee				.2
Column		1	112	288	401
Continued) Total		.2	27.9	71.8	100.0

Page 686

SPSS/PC+ Studentware+

7/8/94

ICP pre-resettlement occupation by SEX

		SEX			Row
		-1.0	1.0	2.0	Total
ICP					
	5050.0			4	4
	salesgirl				1.0
	5060.0		1		1
	helper				.2
	5070.0		1		1
	porter				.2
	6010.0		1		1
	nfra retailer				.2
Column		1	112	288	401
Continued) Total		.2	27.9	71.8	100.0

Page 687

SPSS/PC+ Studentware+

7/8/94

ICP pre-resettlement occupation by SEX

		SEX			Row
		-1.0	1.0	2.0	Total
ICP					
	6070.0		1		1
	contractor				.2
	7010.0		1		1
	cafegu				.2
	7020.0		4		4
	security guard				1.0
	8040.0		2		2
	pensioner				.5

PCP pre-resettlement occupation by SEX

Page 14 of 14

Count	SEX		Row Total
	male	female	
	-1.0	1.0	2.0
PCP			
student			
8050.0			2
			.5
8058.0		1	1
			.2
Column	1	112	288
Total	.2	27.9	71.8
			401
			100.0

Number of Missing Observations: 3

This procedure was completed at 20:08:40
 Value labels sex 1 "male" 2 "female".
 Set printer off.

rosstab spoccp by sex.

emory allows for 6,130 cells with 2 dimensions for general CROSSTABS.

age 691 SPSS/PC+ Studentware+ 7/8/94

POCCP pre-resettlement occupation of spouse by SEX

		SEX			Page 1 of 18
Count					
		male female			Row
		-1.0	1.0	2.0	Total
POCCP	-1.0		15	30	45
					11.2
	.0		37	13	50
					12.5
1010.0	raised pigs		2	1	3
					.7
1020.0	fisher			3	3
					.7
Column		1	112	288	401
Continued) Total		.2	27.9	71.8	100.0

age 692 SPSS/PC+ Studentware+ 7/8/94

POCCP pre-resettlement occupation of spouse by SEX

		SEX			Page 2 of 18
Count					
		male female			Row
		-1.0	1.0	2.0	Total
POCCP	1030.0			60	60
labourer					15.0
1040.0	gardener			2	2
					.5
1050.0	farmer			8	8
					2.0
1060.0	cocowood cutter			1	1
					.2
Column		1	112	288	401
Continued) Total		.2	27.9	71.8	100.0

age 693 SPSS/PC+ Studentware+ 7/8/94

POCCP pre-resettlement occupation of spouse by SEX

		SEX			Page 3 of 18
Count					
		male female			Row

slaughterman	1070.0			1	1
					.2
tailor	2010.0		2	4	6
					1.5
mechanic	2020.0			3	3
					.7
carpenter	2030.0			16	16
					4.0
Continued) Column Total		1	112	288	401
		.2	27.9	71.8	100.0

Page 694

SPSS/PC+ Studentware+

7/8/94

POCCP pre-resettlement occupation of spouse by SEX

		SEX			Page 4 of 18
Count		male	female		Row
		-1.0	1.0	2.0	Total
POCCP					
driver	2040.0		1	25	26
					6.5
projector operat	2050.0			1	1
					.2
mason	2060.0			4	4
					1.0
foreman	2080.0			4	4
					1.0
Continued) Column Total		1	112	288	401
		.2	27.9	71.8	100.0

Page 695

SPSS/PC+ Studentware+

7/8/94

POCCP pre-resettlement occupation of spouse by SEX

		SEX			Page 5 of 18
Count		male	female		Row
		-1.0	1.0	2.0	Total
POCCP					
sugermill operat	2090.0			4	4
					1.0
barber	2100.0			1	1
					.2
port engineer	2110.0			1	1
					.2
welder	2120.0			4	4
					1.0
Continued) Column Total		1	112	288	401
		.2	27.9	71.8	100.0

POCCP pre-resettlement occupation of spouse by SEX

Page 6 of 18

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
POCCP				
2140.0 cook/baker		1	3	4 1.0
2160.0 electrician			3	3 .7
2170.0 chemist			1	1 .2
2180.0 technician			2	2 .5
Column Continued) Total	1 .2	112 27.9	288 71.8	401 100.0

age 697

SPSS/PC+ Studentware+

7/8/94

POCCP pre-resettlement occupation of spouse by SEX

Page 7 of 18

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
POCCP				
2190.0 butcher			2	2 .5
2200.0 shoemaker			1	1 .2
2210.0 autobody builder			4	4 1.0
2220.0 utilityman			1	1 .2
Column Continued) Total	1 .2	112 27.9	288 71.8	401 100.0

age 698

SPSS/PC+ Studentware+

7/8/94

POCCP pre-resettlement occupation of spouse by SEX

Page 8 of 18

Count	SEX			Row Total
	male		female	
	-1.0	1.0	2.0	
POCCP				
3010.0 makes tuba		2		2 .5
3020.0 fish vender		4	1	5 1.2

laundrywoman	3050.0				1.7
beautician	3050.0		3		3.7
Continued)	Column Total	1 .2	112 27.9	288 71.8	401 100.0

Page 699 SPSS/PC+ Studentware+ 7/8/94

POCCP pre-resettlement occupation of spouse by SEX

		SEX			Page 9 of 18
Count					
		male		female	Row
		-1.0	1.0	2.0	Total
POCCP					
vender	3060.0		18	14	328.0
buyandsell	3070.0	1	2	8	112.7
sarisari	3080.0		8	4	123.0
housepainter	3090.0			1	1.2
Column		1	112	288	401
(continued) Total		.2	27.9	71.8	100.0

Page 700 SPSS/PC+ Studentware+ 7/8/94

POCCP pre-resettlement occupation of spouse by SEX

		SEX			Page 10 of 18
Count					
		male	female		Row
		-1.0	1.0	2.0	Total
POCCP					
gambler	3100.0			2	2.5
pipemaker	3120.0			2	2.5
latero	3130.0			2	2.5
canteen owner	3140.0		1		1.2
Column		1	112	288	401
(continued) Total		.2	27.9	71.8	100.0

Page 701 SPSS/PC+ Studentware+ 7/8/94

POCCP pre-resettlement occupation of spouse by SEX

Count	SEX
-------	-----

Page 11 of 18

		SEX			Row
		-1.0	1.0	2.0	Total
POCCP					
	3170.0		1		1
	makes paperbags				.2
	3180.0			1	1
	crabtrap maker				.2
	4030.0		1		1
	brgy official				.2
	4050.0			2	2
	govt employee				.5
Column		1	112	288	401
Continued) Total		.2	27.9	71.8	100.0

Page 702 SPSS/PC+ Studentware+ 7/8/94

POCCP pre-resettlement occupation of spouse by SEX

		SEX			Row
		-1.0	1.0	2.0	Total
POCCP					
	4060.0		3	1	4
	teacher				1.0
	4070.0			1	1
	pnoc employee				.2
	4080.0			1	1
	nawasa employee				.2
	5010.0			3	3
	jeepney conducto				.7
Column		1	112	288	401
Continued) Total		.2	27.9	71.8	100.0

Page 703 SPSS/PC+ Studentware+ 7/8/94

POCCP pre-resettlement occupation of spouse by SEX

		SEX			Row
		-1.0	1.0	2.0	Total
POCCP					
	5020.0			1	1
	bus dispatcher				.2
	5030.0			1	1
	messenger				.2
	5040.0			6	6
	private employee				1.5
	5050.0		1	1	2
	salesgirl				.5

variable labels stplfd "pre-resettlement staple food".
 variable labels staple2 "post-resettlement staple food".
 value labels stplfd 1 "rice" 2 "corn" 3 "rice and corn" 4 "combination".
 value labels staple2 1 "rice" 2 "corn" 3 "rice and corn" 4 "combination".
 crosstab stplfd by staple2.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 77

SPSS/PC+ Studentware+

7/6/94

STPLFD pre-resettlement staple food
 by STAPLE2 post-resettlement staple food

		STAPLE2					Page 1 of 2
Count		rice	corn	rice and corn	combinat ion	Row	
		-1.0	1.0	2.0	3.0	4.0	Total
STPLFD	-1.0		1				1 .2
rice	1.0	1	260	2	22	1	286 71.3
corn	2.0		1	6	4		11 2.7
rice and corn	3.0		24	1	68	1	94 23.4
Column		1	292	9	95	4	401
(Continued)	Total	.2	72.8	2.2	23.7	1.0	100.0

Page 78

SPSS/PC+ Studentware+

7/6/94

STPLFD pre-resettlement staple food
 by STAPLE2 post-resettlement staple food

Page 2 of 2

		STAPLE2					Row
Count		rice	corn	rice and corn	combinat ion	Total	
		-1.0	1.0	2.0	3.0	4.0	
STPLFD	4.0		6		1	2	9
combination							2.2
Column		1	292	9	95	4	401
Total		.2	72.8	2.2	23.7	1.0	100.0

Number of Missing Observations: 3

Page 79

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 21:35:27
 set printer off.


```
variable labels educ "pre-resettlement access to education".
variable labels educ2 "post-resettlement access to education".
value labels educ 1 "yes" 2 "no" 99 "dna".
value labels educ2 1 "yes" 2 "no" 99 "dna".
crosstabs educ by educ2.
```

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 68 SPSS/PC+ Studentware+ 7/6/94

EDUC pre-resettlement access to education
by EDUC2 post-resettlement access to education

Page 1 of 1

Count		EDUC2			Row Total
		yes	no	dna	
		1.0	2.0	99.0	
EDUC	1.0	221	22	24	267
	yes				66.6
	2.0	1	8	1	10
no					2.5
	99.0	11	2	111	124
dna					30.9
Column		233	32	136	401
Total		58.1	8.0	33.9	100.0

Number of Missing Observations: 3

Page 69 SPSS/PC+ Studentware+ 7/6/94

Page 70 SPSS/PC+ Studentware+ 7/6/94

This procedure was completed at 21:31:53
set printer off.

crosstab shelter by landsts.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

SHELTER type of shelter by LANDSTS tenancy status of land

Page 1 of 1

Count		LANDSTS				Row Total
		-1.0	1.0	2.0	3.0	
SHELTER	1.0	3	176	116	12	307
	temporary					76.6
	2.0	1	43	35	6	85
semi-permanent						21.2
	3.0		3	5	1	9
permanent						2.2
Column		4	222	156	19	401
Total		1.0	55.4	38.9	4.7	100.0

Number of Missing Observations: 3

This procedure was completed at 22:46:44

```
variable labels shelter "type of shelter".
variable labels landsts "tenancy status of land".
value labels shelter 1 "temporary" 2 "semi-permanent" 3 "permanent".
value labels landsts 1 "squat" 2 "rent" 3 "own".
set printer off.
```

crosstab shelter by housests.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 221

SPSS/PC+ Studentware+

7/6/94

SHELTER type of shelter by HOUSESTS tenancy status of house

		HOUSESTS					Page 1 of 1
Count			squat	rent	own		
		-1.0	1.0	2.0	3.0	22.0	Row Total
SHELTER	1.0	2	206	74	24	1	307
temporary							76.6
	2.0	1	53	22	9		85
semi-permanent							21.2
	3.0		4	2	3		9
permanent							2.2
Column Total		3	263	98	36	1	401
Total		.7	65.6	24.4	9.0	.2	100.0

Number of Missing Observations: 3

Page 222

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 22:42:49

variable labels shelter "type of shelter".

variable labels housests "tenancy status of house".

value labels shelter 1 "temporary" 2 "semi-permanent" 3 "permanent".

value labels housests 1 "squat" 2 "rent" 3 "own".

set printer off.

variable labels religion "religion of respondent".
 variable labels aid "did you receive aid while in the camp ?".
 value labels religion 1 "catholic" 2 "protestant" 3 "7th day adventists"
 4 "jehovah's witness" 5 "born again christian" 6 "muslim" 7 "mormon"
 8 "iglesia ni kristo" 9 "nazarene" 10 "assembly of god" 11 "baptist".
 crosstab religion by aid.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 186

SPSS/PC+ Studentware+

7/6/94

RELIGION religion of respondent
 by AID did you receive aid while in the camp ?

		AID		Row Total
Count		yes	no	
		1.0	2.0	
RELIGION	.0	1		1
				.2
catholic	1.0	305	48	353
				88.0
protestant	2.0	3		3
				.7
7th day adventis	3.0	4	1	5
				1.2
Column		351	50	401
(Continued)	Total	87.5	12.5	100.0

Page 187

SPSS/PC+ Studentware+

7/6/94

RELIGION religion of respondent
 by AID did you receive aid while in the camp ?

		AID		Row Total
Count		yes	no	
		1.0	2.0	
RELIGION	4.0	1		1
jehovah's witnes				.2
born again chris	5.0	15		15
				3.7
muslim	6.0	4	1	5
				1.2
mormon	7.0	1		1
				.2
Column		351	50	401
(Continued)	Total	87.5	12.5	100.0

RELIGION religion of respondent

by AID did you receive aid while in the camp ?

Page 3 of 3

RELIGION	Count	AID		Row Total
		yes	no	
		1.0	2.0	
iglesia ni krist	8.0	9		9
				2.2
nazarene	9.0	5		5
				1.2
assembly of god	10.0	2		2
				.5
baptist	11.0	1		1
				.2
Column Total		351	50	401
		87.5	12.5	100.0

Number of Missing Observations: 3

This procedure was completed at 22:34:36
set printer off.

variable labels child# "number of children".
 variable labels status "do you plan to remain or leave the camp?".
 value labels status 1 "remain" 2 "leave" 3 "unsure".
 crosstab child# by status.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 161

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children
 by STATUS do you plan to remain or leave the camp?

		STATUS			Page 1 of 4
Count		remain	leave	unsure	
		1.0	2.0	3.0	Row Total
CHILD#	.0	20	2	2	24
					6.0
	1.0	47	3	1	51
					12.7
2.0		71	7	4	82
					20.4
3.0		57	4	5	66
					16.5
Column Total		347	35	19	401
(Continued) Total		86.5	8.7	4.7	100.0

Page 162

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children
 by STATUS do you plan to remain or leave the camp?

		STATUS			Page 2 of 4
Count		remain	leave	unsure	
		1.0	2.0	3.0	Row Total
CHILD#	4.0	47	7	1	55
					13.7
5.0		44	5	2	51
					12.7
6.0		22	4	2	28
					7.0
7.0		15	1		16
					4.0
Column Total		347	35	19	401
(Continued) Total		86.5	8.7	4.7	100.0

Page 163

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children
by STATUS do you plan to remain or leave the camp?

Page 3 of 4

CHILD#	Count	STATUS			Row Total
		remain 1.0	leave 2.0	unsure 3.0	
8.0	9	2	1		12 3.0
9.0	10			1	11 2.7
10.0	2				2 .5
11.0	1				1 .2
Column Total		347 86.5	35 8.7	19 4.7	401 100.0

(Continued)

Page 164

SPSS/PC+ Studentware+

7/6/94

CHILD# number of children
by STATUS do you plan to remain or leave the camp?

Page 4 of 4

CHILD#	Count	STATUS			Row Total
		remain 1.0	leave 2.0	unsure 3.0	
12.0	2				2 .5
Column Total		347 86.5	35 8.7	19 4.7	401 100.0

Number of Missing Observations: 3

Page 165

SPSS/PC+ Studentware+

7/6/94

This procedure was completed at 22:27:07
set printer off.

recode age (15 thru 25=1) (26 thru 35=2) (36 thru 45=3) (46 thru 60=4)
 (60 thru 100=5).
 variable labels age "age collapsed into categories".
 value labels age 1 "15-25 years" 2 "26-35 years" 3 "36-45 years"
 4 "45-60 years" 5 "60-100 years".
 variable labels cvlstst "civil status of respondent".
 value labels cvlstst 1 "single" 2 "married" 3 "widowed" 4 "separated".
 crosstab age by cvlstst.
 The raw data or transformation pass is proceeding
 404 cases are written to the compressed active file.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

Page 37 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories by CVLSTST civil status of respondent

		CVLSTST				Page 1 of 2	
Count		single	married	widowed	separated	Row	
		1.0	2.0	3.0	4.0	Total	
AGE	-1.0		1			1	.2
15-25 years	1.0		60	1		61	15.2
26-35 years	2.0	4	114	2	2	122	30.4
36-45 years	3.0	1	109	8	4	122	30.4
Column		6	350	32	13	401	
(Continued)	Total	1.5	87.3	8.0	3.2	100.0	

Page 38 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories by CVLSTST civil status of respondent

		CVLSTST				Page 2 of 2	
Count		single	married	widowed	separated	Row	
		1.0	2.0	3.0	4.0	Total	
AGE	4.0	1	55	11	3	70	17.5
45-60 years							
60-100 years	5.0		11	10	4	25	6.2
Column		6	350	32	13	401	
	Total	1.5	87.3	8.0	3.2	100.0	

Number of Missing Observations: 3

Page 39 SPSS/PC+ Studentware+ 7/7/94

recode age (15 thru 25=1) (26 thru 35=2) (36 thru 45=3) (46 thru 60=4)
(61 thru 100=5).

variable labels age "age collapsed into categories".

value labels age 1 "15-25" 2 "26-35" 3 "36-45" 4 "46-60" 5 "61-100".

variable labels spoccp2 "post-resettlement occupation of spouse of respondent".

value labels spoccp2 1010 'raised pigs' 1020 'fisher' 1030 'labourer'

1040 'gardener' 1050 'farmer' 1060 'cocomodcutter' 1070 'slaughterman'

2010 'tailor' 2020 'mechanic' 2030 'carpenter' 2040 'driver'

2050 'projector operator' 2060 'mason' 2070 'surveyor' 2080 'forreman'

2090 'sugermill operator' 2100 'barber' 2110 'port engineer'

2120 'welder' 2130 'jeweller' 2140 'cook/baker' 2150 'vulcaniser'

2160 'electrician' 2170 'chemist' 2180 'technician' 2190 'butcher'

2200 'shoemaker' 2210 'autobody builder' 2230 'utilityman'

3010 'makes tuba' 3020 'fish vender' 3030 'laundrywoman' 3040 'matmaker'

3050 'beautician' 3060 'vender' 3070 'buyandsell' 3080 'sarisari'

3090 'housepainter' 3100 'gambler' 3110 'babysitter' 3120 'nipamaker'

3130 'latero' 3140 'canteen owner' 3150 'sells lechon' 3160 'sells drygoods'

3170 'makes paper bags' 3180 'crabtrap maker' 4010 'collector'

4020 'watchman' 4030 'brgy official' 4040 'policeman' 4050 'govt employee'

4060 'teacher' 4070 'pnoc employee' 4080 'nawasa employee'

5010 'jeepney conductor' 5020 'bus dispatcher' 5030 'messenger'

5040 'private employee' 5050 'salesgirl' 5060 'helper' 5070 'porter'

5080 'construction worker' 5090 'dispatcher' 5100 'deliveryman'

5110 'bus conductor' 5120 'pumpboy' 5130 'factory worker' 6010 'nfa retailer'

6020 'tupperware dealer' 6030 'businessman' 6040 'coke retailer'

6050 'bookkeeper' 6060 'secretary' 6070 'contractor' 6080 'hedeco employee'

6090 'accounting clerk' 8010 'healer' 8020 'musician' 8030 'ngo employee'

8040 'pensioner' 8050 'student' 7010 'catgu' 7020 'security guard'.

cross tabs age by spoccp2.

The raw data or transformation pass is proceeding

404 cases are written to the compressed active file.

Memory allows for 7,354 cells with 2 dimensions for general CROSS TABS.

Page 350

SPSS/PC+ Studentware+

7/1/94

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse n

		SPOCCP2					Page 1 of 24	
Count							Row	
		fisher labourer gardener						
		-1.0	1.0	11020.0	11030.0	11040.0	Total	
AGE	-1.0							1
								2
15-25	1.0	1	10		12	1	61	15.2
26-35	2.0	8	28		21		122	30.4
36-45	3.0	12	27	2	14		122	30.4
Column		50	88	2	52	2	401	
(Continued) Total		12.5	21.9	.5	13.0	.5	100.0	

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

Page 2 of 24

Count	SPOCCP2					Row Total
	farmer	cocowood cutter	slaughte rman	tailor	mechanic	
	1050.0	1060.0	1070.0	1010.0	1020.0	
AGE						
-1.0						1 .2
1.0			1		1	61 15.2
15-25						
2.0	2	1				122 30.4
26-35						
3.0				4	1	122 30.4
36-45						
Column	5	1	1	5	5	401
(Continued) Total	1.2	.2	.2	1.2	.7	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

Page 3 of 24

Count	SPOCCP2					Row Total
	carpente r	driver	mason	forreman	sugerm ll opera	
	2030.0	2040.0	2060.0	2080.0	2090.0	
AGE						
-1.0						1 .2
1.0	2	4			1	61 15.2
15-25						
2.0	7	8	2	1	2	122 30.4
26-35						
3.0	7	6	1	1	2	122 30.4
36-45						
Column	21	20	4	2	6	401
(Continued) Total	5.2	5.0	1.0	.5	1.5	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

Page 4 of 24

Count	SPOCCP2			
	barber	port end welder	constr electric	

		ineer er ian					Row Total
		2100.0	2110.0	2120.0	2140.0	2160.0	
AGE	-1.0						1 .2
	1.0			2	1		61 15.2
15-25	2.0		1		2	1	122 30.4
	3.0			2		1	122 30.4
26-35							
36-45							
Column		1	1	4	3	3	401
(Continued) Total		.2	.2	1.0	.7	.7	100.0

Page 354

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories
by SPOCCP2 post-resettlement occupation of spouse o

		SPOCCP2					Row Total
Count		technici an	butcher r	shoemake r	autobody builder		
		2180.0	2190.0	2200.0	2210.0	2220.0	Total
AGE	-1.0						1 .2
	1.0			1	4		61 15.2
15-25	2.0	1				1	122 30.4
	3.0		2				122 30.4
26-35							
36-45							
Column		1	2	1	4	1	401
(continued) Total		.2	.5	.2	1.0	.2	100.0

Page 355

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories
by SPOCCP2 post-resettlement occupation of spouse o

		SPOCCP2					Row Total
Count		smokes to fish ven	longhwy	beaducci	vender		
		30010.0	30020.0	30030.0	30050.0	30060.0	Total
AGE	-1.0						1 .2
	1.0		1			4	61 15.2
15-25							

26-35	2.0	1	1	1		9	122
							30.4
36-45	3.0		1	2	2	11	122
							30.4
Column		1	5	5	2	28	401
(Continued) Total		.2	1.2	1.2	.5	7.0	100.0

Page 356 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP2 post-resettlement occupation of spouse o

		SPOCCP2					Page 7 of 24
Count		buyandse	sarisari	gambier	babysitt	midamake	
		11			er	r	Row
		3070.0	3080.0	3100.0	3110.0	3120.0	Total
AGE	-1.0	1					1
							.2
15-25	1.0		1			1	61
							15.2
26-35	2.0	3	3		1	1	122
							30.4
36-45	3.0	3	6	1			122
							30.4
Column		10	13	1	1	2	401
(Continued) Total		2.5	3.2	.2	.2	.5	100.0

Page 357 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP2 post-resettlement occupation of spouse o

		SPOCCP2					Page 8 of 24
Count		latero	crabtrap	brgy off	govil em	teacher	
		maker	icial	ployee			Row
		3130.0	3180.0	4030.0	4050.0	4060.0	Total
AGE	-1.0						1
							.2
15-25	1.0				1	1	61
							15.2
26-35	2.0	1					122
							30.4
36-45	3.0		1	1		2	122
							30.4
Column		1	1	1	2	5	301
(Continued) Total		.2	.2	.2	.5	1.2	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

Page 9 of 24

		SPOCCP2					
Count		phoc emp	jeepney	messenge	private	helper	
		loyee	conducto	r	employee		Row
		4070.0	5010.0	5030.0	5040.0	5060.0	Total
AGE	-1.0						1 .2
	1.0		1	1	2		61 15.2
	2.0			1	1	6	122 30.4
	3.0	1			2		122 30.4
	Column	1	1	2	6	6	401
(Continued)	Total	.2	.2	.5	1.5	1.5	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

Page 10 of 24

		SPOCCP2					
Count		porter	delivery	pumpboy	factory	business	
		man	man	worker	man		Row
		5070.0	5100.0	5120.0	5130.0	6030.0	Total
AGE	-1.0						1 .2
	1.0	1		1	1	1	61 15.2
	2.0	2	1				127 30.4
	3.0	1					122 30.4
	Column	5	1	1	1	1	401
(Continued)	Total	1.2	.2	.2	.2	.2	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

Page 11 of 24

		SPOCCP2				
Count		secretar	hedeco e	accounti	calqu	security
		ly	employee	ng clerk		guard
						Row

		6060.0	6080.0	6090.0	7010.0	7020.0	Total
AGE	-1.0						1 .2
	1.0				1	2	61 15.2
15-25	2.0	1		1		2	122 30.4
26-35	3.0		1			4	122 30.4
36-45							
Column		1	1	1	1	4	401
(Continued) Total		.2	.2	.2	.2	2.2	100.0

Page 361

SPSS/PC+ Studentware+

1/1/94

AGE age collapsed into categories
by SPOCCP2 post-resettlement occupation of spouse o

		SPOCCP2		Page 12 of 24
Count		musician pensione		Row
		8020.0	8040.0	Total
AGE	-1.0			1 .2
	1.0			61 15.2
15-25	2.0			122 30.4
26-35	3.0	1		122 30.4
36-45				
Column		1	1	401
(Continued) Total		.2	.2	100.0

Page 362

SPSS/PC+ Studentware+

1/1/94

AGE age collapsed into categories
by SPOCCP2 post-resettlement occupation of spouse o

		SPOCCP2					Page 13 of 24
Count		fisher labourer gardener					Row
		-1.0	1.0	1020.0	1030.0	1040.0	Total
AGE	4.0	16	18		5	1	40
	5.0	13	5				25
46-60							
61-100							
Column		50	88	2	52	2	401

(Continued) Total 12.5 21.9 .5 13.0 .5 100.0

Page 363

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

		SPOCCP2					Page 14 of 24
Count		farmer	cocowood cutter	slaughte rman	tailor	mechanic	Row
		1050.0	1060.0	1070.0	1010.0	12020.0	Total
AGE							
46-60	4.0	2			1	1	70 17.5
61-100	5.0	1					25 6.2
Column		5	1	1	5	3	401
(Continued)	Total	1.2	.2	.2	1.2	.7	100.0

Page 364

SPSS/PC+ Studentware+

1/1/94

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

		SPOCCP2					Page 15 of 24
Count		carpente r	driver	mason	forreman	sugerm ll opera	Row
		12030.0	12040.0	12060.0	12080.0	12090.0	Total
AGE							
46-60	4.0	4	2	1		1	70 17.5
61-100	5.0	1					25 6.2
Column		21	20	4	2	6	401
(Continued)	Total	5.2	5.0	1.0	.5	1.5	100.0

Page 365

SPSS/PC+ Studentware+

1/1/94

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

		SPOCCP2					Page 16 of 24
Count		barber	port eng welder ineer	cool tek electric er	lan		Row
		12100.0	12110.0	12120.0	12130.0	12140.0	Total
AGE							
46-60	4.0	1				1	70 17.5
61-100	5.0						25 6.2
Column		1	1	4	3	3	401
(Continued)	Total	.2	.2	1.0	.7	.7	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

Page 17 of 24

		SPOCCP2					
Count		technici an	butcher	shoemaker r	autobody builder		Row Total
		2180.0	2190.0	2200.0	2210.0	2220.0	
AGE							
46-60	4.0						70
							17.5
61-100	5.0						25
							6.2
Column		1	2	1	4	1	401
(Continued)	Total	.2	.5	.2	1.0	.2	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

Page 18 of 24

		SPOCCP2					
Count		makes tu fish ba	ven laundry der	beautiful oman	vender an		Row Total
		3010.0	3020.0	3030.0	3050.0	3060.0	
AGE							
46-60	4.0		1	2		2	70
							17.5
61-100	5.0		1			2	25
							6.2
Column		1	5	5	2	28	401
(Continued)	Total	.2	1.2	1.2	.5	7.0	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse o

Page 19 of 24

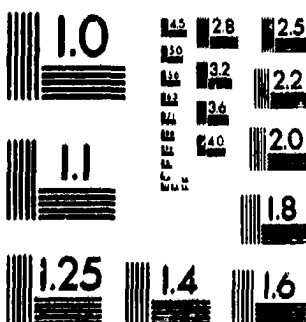
		SPOCCP2					
Count		buyandse sarisari gambler ll	dayysill lupamake er				Row Total
		3070.0	3080.0	3090.0	3110.0	3120.0	
AGE							
46-60	4.0			5			70
							17.5
61-100	5.0	1					25
							6.2
Column		10	1	1	1	2	401
(Continued)	Total	2.5	3.2	.2	.2	.5	100.0

6

of/de

6

PM-1 3 1/2" x 4" PHOTOGRAPHIC MICROCOPY TARGET
NBS 1010a ANSI/ISO #2 EQUIVALENT



AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse c

Page 20 of 24

		SPOCCP2					
Count		latero	crabtrap	brgy off	govtt em	teacher	Row
		maker	icial	ployee			
		3130.0	3180.0	4030.0	4050.0	4060.0	Total
AGE							
46-60	4.0				1	1	70
							17.5
61-100	5.0					1	25
							6.2
Column		1	1	1	2	5	401
(Continued)	Total	.2	.2	.2	.5	1.2	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse c

Page 21 of 24

		SPOCCP2					
Count		pnoc emp	jaepney	messenge	private	helper	Row
		loyee	conducto	r	employee		
		4070.0	5010.0	5030.0	5040.0	5060.0	Total
AGE							
46-60	4.0				1		70
							17.5
61-100	5.0						25
							6.2
Column		1	1	2	6	6	401
(Continued)	Total	.2	.2	.5	1.5	1.5	100.0

AGE age collapsed into categories

by SPOCCP2 post-resettlement occupation of spouse c

Page 22 of 24

		SPOCCP2					
Count		porter	delivery	pumpboy	factory	business	Row
		man	man	worker	man		
		5070.0	5100.0	5120.0	5130.0	5030.0	Total
AGE							
46-60	4.0	1					70
							17.5
61-100	5.0						25
							6.2
Column		5	1	1	1	1	401
(Continued)	Total	1.2	.2	.2	.2	.2	100.0

AGE age collapsed into categories
by SPOCCP2 post-resettlement occupation of spouse o

Page 23 of 24

		SPOCCP2					
Count		secretar	hedeco e	accounti	cafgu	security	Row
		y	mployee	ng clerk		guard	
		6060.0	6080.0	6090.0	7010.0	7020.0	Total
AGE							
	4.0					1	70
46-60							17.5
	5.0						25
61-100							6.2
Column		1	1	1	1	9	401
Continued)	Total	.2	.2	.2	.2	2.2	100.0

Page 373 SPSS/PC+ Studentware+ 7/7/94

AGE age collapsed into categories
by SPOCCP2 post-resettlement occupation of spouse o

Page 24 of 24

		SPOCCP2		
Count		musician	pensione	Row
		r		
		8020.0	8040.0	Total
AGE				
	4.0		1	70
46-60				17.5
	5.0			25
61-100				6.2
Column		1	1	401
Total		.2	.2	100.0

Number of Missing Observations: 3

Page 374 SPSS/PC+ Studentware+ 7/7/94

This procedure was completed at 6:16:31
set printer off.

variable labels child# "number of children of respondent".
 variable labels aid "did you receive aid while living in the camp?".
 value labels aid 1 "yes" 2 "no".
 crosstabs child# by aid.

Memory allows for 7,354 cells with 2 dimensions for general CROSSTABS.

CHILD# number of children of respondent
 by AID did you receive aid while living in the

		AID		Page 1 of 4	
Count		yes	no		
		1.0	2.0	Row	Total
CHILD#					
.0	19	5	24		
				6.0	
1.0	46	5	51		
				12.7	
2.0	67	15	82		
				20.4	
3.0	59	7	66		
				16.5	
Column		351	50	401	
(Continued)	Total	87.5	12.5	100.0	

CHILD# number of children of respondent
 by AID did you receive aid while living in the

		AID		Page 2 of 4	
Count		yes	no		
		1.0	2.0	Row	Total
CHILD#					
4.0	50	5	55		
				13.7	
5.0	47	4	51		
				12.7	
6.0	24	4	28		
				7.0	
7.0	15	1	16		
				4.0	
Column		351	50	401	
(Continued)	Total	87.5	12.5	100.0	

CHILD# number of children of respondent
by AID did you receive aid while living in the

Page 3 of 4

Count	AID		Row Total
	yes	no	
CHILD#	1.0	2.0	
8.0	12		12 3.0
9.0	7	4	11 2.7
10.0	2		2 .5
11.0	1		1 .2
Column Total	351 87.5	50 12.5	401 100.0

CHILD# number of children of respondent
by AID did you receive aid while living in the

Page 4 of 4

Count	AID		Row Total
	yes	no	
CHILD#	1.0	2.0	
12.0	2		2 .5
Column Total	351 87.5	50 12.5	401 100.0

This procedure was completed at 22:23:38
set printer off.

recode age (15 thru 25=1) (26 thru 35=2) (36 thru 45=3) (46 thru 60=4)
(61 thru 100=5).

variable labels age "age collapsed into categories".
value labels age 1 "15-25" 2 "26-35" 3 "36-45" 4 "46-60" 5 "61-100".
variable labels occp2 "pre-resettlement occupation of spouse of respondent".
value labels occp2 1010 'raised pigs' 1020 'fisher' 1030 'labourer'
1040 'gardener' 1050 'farmer' 1060 'cocowoodcutter' 1070 'slaughterman'
2010 'tailor' 2020 'mechanic' 2030 'carpenter' 2040 'driver'
2050 'projector operator' 2060 'mason' 2070 'surveyor' 2080 'foreman'
2090 'sugermill operator' 2100 'barber' 2110 'port engineer'
2120 'welder' 2130 'jeweller' 2140 'cook/baker' 2150 'vulcaniser'
2160 'electrician' 2170 'chemist' 2180 'technician' 2190 'butcher'
2200 'shoemaker' 2210 'autobody builder' 2230 'utilityman'
3010 'makes tuba' 3020 'fish vender' 3030 'laundrywoman' 3040 'matmaker'
3050 'beautician' 3060 'vender' 3070 'buyandsell' 3080 'sarisari'
3090 'housepainter' 3100 'gambler' 3110 'babysitter' 3120 'nipamaker'
3130 'latero' 3140 'canteen owner' 3150 'sells lechon' 3160 'sells drygoods'
3170 'makes paper bags' 3180 'crabtrap maker' 4010 'collector'
4020 'watchman' 4030 'brgy official' 4040 'policeman' 4050 'govtt employee'
4060 'teacher' 4070 'pnoc employee' 4080 'nawasa employee'
5010 'jeepney conductor' 5020 'bus dispatthcer' 5030 'messenger'
5040 'private employee' 5050 'salesgirl' 5060 'helper' 5070 'porter'
5080 'construction worker' 5090 'dispatcher' 5100 'deliveryman'
5110 'bus conductor' 5120 'pumpboy' 5130 'factory worker' 6010 'nfa retailer'
6020 'tupperware dealer' 6030 'businessman' 6040 'coke retailer'
6050 'bookkeeper' 6060 'secretary' 6070 'contractor' 6080 'hedeco employee'
6090 'accounting clerk' 8010 'healer' 8020 'musician' 8030 'ngo employee'
8040 'pensioner' 8050 'student' 7010 'cafgu' 7020 'security guard'.
crosstabs age by occp2.

The raw data or transformation pass is proceeding
404 cases are written to the compressed active file.

Memory allows for 7,354 cells with 2 dimensions for general CROSS TABS.

Page 304 SPSS/PC+ Studentware+ 1/1/94

AGE age collapsed into categories
by OCCP2 pre-resettlement occupation of spouse of

		OCCP2					Page 1 of 16	
Count								
		raised p igs	labourer	tailor	mechanic		Row	
		1010.0	1030.0	2010.0	2020.0		Total	
AGE	-1.0	1					1	.2
	1.0	48					61	15.2
	2.0	73		4			122	30.4
	3.0	58	1	8	6		122	30.4
Column		233	3	14	7	1	401	
Continued) Total		58.1	.7	3.5	1.7	.2	100.0	

AGE age collapsed into categories
 OCCP2 pre-resettlement occupation of spouse of

Page 2 of 16

	Count	OCCP2					Row Total
		carpente r	driver	projecto r operat	mason	surveyor	
		2030.0	2040.0	2050.0	2060.0	2070.0	
AGE	-1.0						1 .2
15-25	1.0	1					61 15.2
	2.0	1	2	1	1		122 30.4
26-35	3.0	3	4		1	1	122 30.4
Column		7	6	1	3	1	401
Continued)	Total	1.7	1.5	.2	.7	.2	100.0

AGE age collapsed into categories
 OCCP2 pre-resettlement occupation of spouse of

Page 3 of 16

	Count	OCCP2					Row Total
		forreman	sugerwi ll opera	welder	jeweller	makes tu ba	
		2080.0	2090.0	2120.0	2130.0	3010.0	
AGE	-1.0						1 .2
15-25	1.0					1	61 15.2
	2.0				1		122 30.4
26-35	3.0		1	2			122 30.4
Column		1	1	2	1	1	401
Continued)	Total	.2	.2	.5	.2	.2	100.0

AGE age collapsed into categories
 OCCP2 pre-resettlement occupation of spouse of

Page 4 of 16

Count	OCCP2				
	fish ven	laundryw	matmaker	beautici	vender

	der	oman	an	Row		
	3020.0	3030.0	3040.0	3050.0	3060.0	Total
AGE						
	1.0					1
						.2
	1.0	1		1	2	61
15-25						15.2
	2.0	4	1	1	6	122
26-35						30.4
	3.0	3			3	122
36-45						30.4
Column	4	13	2	3	18	401
(Continued) Total	1.0	3.2	.5	.7	4.5	100.0

Page 308

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories

by OCCP2 pre-resettlement occupation of spouse of

		OCCP2					Page 5 of 16
	Count						
		buyandse	sarisari	hooxepai	abysitt	nipamake	
		11	nter	er	r		Row
		3070.0	3080.0	3090.0	3100.0	3120.0	Total
AGE	-1.0						1
							.2
15-25	1.0		6				61
							15.2
26-35	2.0	2	13	1		1	122
							30.4
36-45	3.0	2	16		1		122
							30.4
Column		6	43	1	4	1	401
(Continued)	Total	1.5	10.7	.2	1.0	.2	100.0

Page 309

SPSS/PC+ Studentware+

7/7/94

AGE age collapsed into categories

by OCCP2 pre-resettlement occupation of spouse of

		OCCP2					Page 6 of 16
	Count						
		watchman	brgy off	police	govt em	teacher	
		icial	n	ployee			Row
		4020.0	4030.0	4040.0	4050.0	4060.0	Total
AGE	-1.0						1
							.2
15-25	1.0						61
							15.2

Bibliography

- "Disaster Strikes Again in The Philippines". UNDR0 News. November/December 1991, pgs.5-7
- "Limiting the Wastelands". Refugees. May 1992, pgs.8-12
- "Ormoc Tragedy Commemorated" .The Reporter. pg.1(7)
- "The Challenge of the 1990s". Refugees. May 1991, pgs.15-20
- Acosta, Romeo. "Assessment of the Causes of the Flooding of Ormoc City" paper presented at the National Symposium on Disaster Planning and Management for Agriculture, March 1992
- Acosta, Romeo. "Ormoc Floods: An Assessment of the Causes". SFP Newsletter. April/June 1992, vol.5 #2
- Amnesty International. Philippines: The Killing Goes On. (NY: AI, 1992)
- Anderson, J. Lands at Risk in the Third World: Local Level Perspectives. (Boulder: Westview Press, 1987)
- Anderson, Mary and PJ Woodrow. Rising From the Ashes. (US: Westview Press, 1989)
- Aralar, R.B. Agrarian Reform, Cooperatives and Taxation. (Manila: Aralar and Associates, 1989)
- Bagadion, B. Trees, Monies, Rebels and Cronies. (US: Cornell University Press, 1990)
- Blaikie, Piers and Harold Brookfield. "Defining and Debating the Problem" in Land Degradation and Society. (UK: Methuen, 1987)
- Boado, Elaine. "Incentive Policies and Forest Use in the Philippines" in Public Policies and the Misuse of Forest Resources. (UK: Cambridge University Press, 1988)
- Broad, Robin and John Cavanagh. The Philippines Challenge. (Manila: Philippines Centre for Policy Studies, 1991)
- Broad, Robin. Plundering Paradise. (Berkeley: University of California Press, 1993)
- Brown, Lester. Saving The Planet. (US: WorldWatch Institute, 1991)

- Bryant, Raymond. "Political Ecology: An Emerging Research Agenda in Third World Studies" *Political Geography* vol.11, #1, January 1992, pgs.12-36
- Carandang, E. et al. "Natural Resource Accounting: Plantation Forests" *Natural Resources Accounting Project, Final Workshop, National Institute for Geological Science, Manila October 15, 1991*
- Collins, Joseph. *Fire on the Rim*. (UK: Institute for Food and Development Policy, 1989)
- Constantino-David, K. "Access of the Poor to Basic Social Services" *Poverty and Growth in the Philippines*. (Manila: Philippines Economic Society, 1989)
- Corpuz, Onofre. *The Roots of the Filipino Nation*. (Manila: Aklahi Foundation, 1989)
- Cruz, W. *The Environmental Effects of Stabilisation and Structural Adjustment Programmes in the Philippines*. (Washington:WRI, 1992)
- Cruz, D. and L. Gibbs. "Resource Policy in the Context of Population Pressure: Philippines and Nepal" *American Journal of Agricultural Economics* 72 (2) ,1990, pgs.1264- 1268
- Daly, Herman and K. Townsend, eds. *Valuing the Earth: Economics, Ecology, Ethics*. (US: MIT Press, 1993)
- Davis, Leonard. *Revolutionary Struggle in the Philippines*. (Basingstoke: MacMillan, 1989)
- De Los Reyes, R.P. *Claims To Land*. (Manila: Ateneo de Manila University Press, 1989)
- DENR. *Towards Sustainable Development in the Philippines*. (Manila: DENR,1989)
- DENR. "Investigative Report of the Ormoc City Disaster". December, 1991
- DENR. "A Primer on Illegal Logging and the Ormoc Tragedy". (Manila, 1991)
- DENR. *Regional Ecological Profile Region 8*. (Manila: DENR, 1990)
- DENR. *A Report on Philippines Environment and Development*. (Manila: DENR, 1991)

- Department of Agriculture. "Appropriate Watershed Management: the Case of Ormoc City". (Tacloban: DA, 1991)
- Dolan, R. ed. Philippines: A Country Profile. (Washington: Library of Congress, 1993)
- Dorfman, R. and N. Dorfman, eds. Economics of the Environment. (US: Norton and Company, 1993)
- Douglass, Mike. "The Political Economy of Urban Poverty and Environmental Management in Asia: Access, Empowerment and Community Based Alternatives". Environment and Urbanisation. vol.4, #2, October, 1992
- ECDFC. Refugees in Their Own Land. (Manila: ECDFC, 1992)
- Economist Intelligence Unit. The ASEAN Countries: Economic Structures and Analysis. (UK: EIU, 1989)
- Economist Intelligence Unit. Philippines Country Profile 1993-1994. (UK: EIU, 1993)
- El-Hinnawi, Essam. Environmental Refugees. (Kenya: UNEP, 1985)
- Eller, Elke. "The Flashflood Tragedy of Ormoc: A Short Analysis From a Physio-Geographical View". unpublished
- Environmental Protection in Leyte. conference proceedings March 9-10/90 Ormoc City, Leyte, Philippines
- Fontaine, Pierre-Michel. "The Development of Refugee Law" Refugees. October, 1987
- Forest Economics Division, Forestry Management Bureau, Department of Environment and Natural Resources. Philippines Forestry: Present and Future. (Manila: DENR, 1992)
- Gamalinda, E. ed. Saving the Earth: the Philippines Experience. (Manila: Philippine Centre for Investigative Journalism, 1990)
- Garcia, Ed. A Future Without Refugees. (Manila: ECDFC, 1990)
- Gochenour, T. Considering Filipinos. (Yarmouth: Intercultural Press, 1990)
- Goodman, David and Michael Redclift. Refashioning Nature. (UK: Routledge, 1991)

- Goodno, J.B. The Philippines: Land of Broken Promises. (NJ: Zed Books, 1991)
- Grande, Nona. The Rocky Road to Democracy. (Ottawa: North/South Institute, 1992)
- gtz. "Consultative Meeting of the Project on High Diversity Forest Farming System for Ecosystem Rehabilitation and Protection of the Ormoc Watershed". ViSCA, Baybay, Leyte, Philippines.
- Hall, June. unpublished manuscript.
- Hathaway, James. "The Emerging Politics of Non-Entree". Refugees. December, 1992. pgs. 10-13
- Hayami, Yujiro. Toward an Alternative Land Reform Paradigm: A Philippines Perspective. (Manila: Ateneo de Manila University Press, 1990)
- Hildebrand, D. To Pay is to Die: the Philippines Foreign Debt Crisis. (Davao: Philippines International Forum, 1991)
- Hurst, Philip. Rainforest Politics: Ecological Destruction in South East Asia. (UK: Zed Books, 1989)
- Independent Commission on International Humanitarian Issues. Refugees: Dynamics of Displacement. (UK: Zed Books, 1984)
- International Organisation for Migration. Annual Report 1990. (Geneva: IOM, 1991)
- IREE. Ecological Economics: Emergence of a New Development Paradigm. (Ottawa: CIDA, 1993)
- Jacobson, Jodi. Environmental Refugees: A Yardstick of Habitability. (US: WorldWatch, 1988)
- Japanese Development Institute. Study on Disaster Preparedness and Prevention in Developing Countries. July 1992
- Jimenez, K. and R, Francisco. The Rural Poor in Leyte: A Social and Institutional Profile. (Manila: De La Salle University, 1984)
- Kerkvliet, B.J. Everyday Politics in the Philippines. (Berkeley: University of California Press, 1990)
- Kessler, R.J. Rebellion and Repression in the Philippines.

(US: Yale University Press, 1989)

Kikuchi, Y. *Philippine Kinship and Society*. (Manila: New Day Publishers, 1989)

Kummer, David. *Deforestation in Post War Philippines*. (Manila: Ateneo de Manila University Press, 1990)

La Vina, Antonio. ed. *Law and Ecology*. (Manila: Cacho Publishing House, 1991)

Lacson, D.L. *The Philippines, Yesterday Today Tomorrow*. (Singapore: Times Academic Press, 1991)

Lewis, Martin. *Wagering the Land*. (Berkeley: University of California Press, 1992)

Leyte Centre for Development Education. "Organised Citizens' Role in Disaster Response: the Typhoon Uring Experience". Tacloban, 1992

Markandya, A. and J. Richardson, eds. *The Earthscan Reader in Environmental Economics*. (UK: Earthscan, 1992)

Martin, S.F. "The Inhospitable Earth". *Refugees*. May 1992

Martinez-Alier, Juan. *Ecological Economics: Energy, Environment and Society*. (UK: Blackwell, 1987)

Mayuga, Sylvia et al. *Philippines*. (Singapore: APA, 1992)

McBeth, John. "Steady is not Enough". *Far Eastern Economic Review*. July 1/93 pgs.16-17

McBeth, John. "New Pastures Nearby". *Far Eastern Economic Review*. April 1/ 93

McDowell, Mark. "Development and Environment in ASEAN". *Pacific Affairs*. pgs.306-328

Monk, Paul. *Truth and Power*. (Clayton, Vic: Monash University Press, 1990)

Montes, Manuel. "Philippines External Adjustment Efforts and the Roles of the Bretton-Woods Agencies". *Poverty and Growth in the Philippines*. (Manila: Philippines Economic Society, 1989)

Nagaho, Habu. "The Philippines New Start and Japan". *Japan Quarterly*. July/September, 1992. pgs.311-320

National Statistics Office. *Provincial Profile: Leyte 1990*.

(Manila, 1990)

NDCC. "Final Report Re: Typhoon Uring". (Manila:DND, 1992)

Pearce, David. Blueprint2: Greening the World Economy. (UK: Earthscan, 1991)

Peet, Richard and Michael Watts. "Development Theory and Environment in the Age of Market Triumphalism". Economic Geography. pgs.227- 249

PhilGerman Inventory. "Natural Forest Resources of the Philippines". (Manila, 1988)

Pimentel, B. Rebolusyon: A Generation of Struggle in the Philippines. (NY: Monthly Review Press, 1991)

Pineda-Ofreneo, R. The Philippines: Debt and Poverty. (Oxford: Oxfam, 1991)

Porter, D. and H. Ganapin. Resources, Population and the Philippines' Future. (USA: WRI, 1988)

Putzel, James. Gaining Ground: Agrarian Reform in the Philippines. (UK: WOW, 1989)

Redclift, Michael. Sustainable Development: Exploring the Contradictions. (UK: Methuen, 1987)

Richardson, Jim. The Philippines. (UK: Oxford University Press, 1989)

Richter, Reiner. Poverty and Growth in the Philippines. (Manila: Philippines Economic Society, 1989)

Roque, C.R. Earth Water Air Fire. (Manila: Kaiksan Press, 1990)

Rudner, Martin. Canada and the Philippines. (Toronto: Captus Press, 1990)

Santos, A.F. The Debt Crisis:A Treadmill of Poverty for Filipino Women. (Manila: KALAYAAN, 1989)

Sarokin, D. and J. Schulkin. "Environmental Ecology and Responsibility". Environmental Conservation. vol.19 #4 pgs. 326-330

Sayaguks, Mercedes. "The Parched Earth". Refugees .October 1993 pgs.4-7

Segura-de los Angeles, Marian. A Review of Philippines'

- Natural Resource and Environmental Management. (Manila: Philippines Institute for Development Studies, 1990)
- Silverstein, M. The Environmental Economic Revolution. (NY: St. Martin's Press, 1993)
- Sison, J.M. The Philippines Revolution: the Leader's View. (NY: Crane Russak, 1989)
- Smith, Graham et al. Our Ecological Crisis. (US: MacMillan Press, 1974)
- Spretnak, C. and Fritjof Capra. Green Politics. (US: Dutton, 1986)
- Stafford, Douglas. "New Strategies for Refugees in the 1990s" Refugees. December 1992 pgs.9-13
- Steinberg, D.J. The Philippines: A Singular and Plural Place. (Boulder: Westview Press, 1990)
- The Group of Green Economists. Ecological Economics. (UK: Zed Books, 1992)
- Thompson, W.S. Philippines in Crisis. (NY: St. Martin's Press, 1992)
- Tiglao, R. "Man in Motion". Far Eastern Economic Review. November 18/93
- Tiglao, R. "Ramos Blinks First". Far Eastern Economic Review. Feb. 24/94 pgs.20-25
- Tiglao, R. "Paralysed by Politics". Far Eastern Economic Review. May 12/94 pgs.22-30
- Timberlake, Lloyd and Anders Wijkman. Natural Disasters: Acts of God or Acts of Man. (US: Earthscan, 1988)
- Timberlake, Lloyd. Only One Earth. (UK: Earthscan, 1987)
- Timberman, David. A Changeless Land: Continuity and Change in Philippine Politics. (US: Sharpe, 1991)
- Tope, L.R. ed .Philippines .(Singapore: Times Edition, 1991)
- UNDRO. Disaster Prevention and Mitigation: Social and Sociological Aspects. (US: UN, 1986)
- University of the Philippines. The Philippines Economy in 1990: Great Expectations. (Manila: UP, 1989)

- USAID. Sustainable Natural Resource Assessment: Philippines. (Manila: USAID, 1989)
- Vitug, M.D. Power From the Forest. (Philippines Centre for Investigative Journalism, 1993)
- Vokes, R.W.A. The Philippines Under Aquino. (Canberra: Australian Development Studies Network, 1989)
- WB. Philippines: Environment and Natural Resource Management Study. (Washington: WB, 1989)
- Westing, Arthur. "Environmental Refugees: A Growing Category of Displaced Persons". Environmental Conservation. vol.19 #3 Autumn 1992 pgs.201-207
- World Bank. World Development Report 1992: Development and Environment. (UK: Oxford University Press, 1992)
- World Commission on Environment and Development. Our Common Future. (UK: Oxford University Press, 1987)
- World Resource Institute. Population Growth, Poverty and Environmental Stress. (Washington: WRI, 1992)
- Wurfel, David and Bruce Burton. The Political Economy of Foreign Policy in South East Asia. (UK: MacMillan, 1990)
- Young, M. The Convention Refugee Determination Process in Canada: Its Reform. (Ottawa: Library of Parliament Research Branch, 1989)

1. "Disaster Strikes Again in the Philippines" UNDRO News November/December 1991 pg. 5-7
2. World Commission on Environment and Development Our Common Future (UK: Oxford University Press, 1987) pg.xii
3. Juan Martinez-Alier Ecological Economics:Energy, Environment and Society (UK: Blackwell, 1987)
4. Personal discussion with Dr. Shirley Conover, Dalhousie University.
5. The Group of Green Economists Ecological Economics (UK: Zed Books, 1992)
6. IBID
7. IREE Ecological Economics: Emergence of a New Development Paradigm (Ottawa: CIDA, 1993)
8. IBID
9. IBID
10. Op.Cit. World Commission on Environment and Development pg.8
11. Op Cit World Commission On Environment and Development pg.5
12. WB World Development Report 1992:Development and Environment (UK: Oxford University Press, 1992)
13. IBID
14. IBID pg.12
15. IBID
16. IBID pg.12
17. IBID
18. IBID
19. Lester Brown Saving The Planet (US: WorldWatch Institute, 1991) pg. 25
20. IBID
21. IBID pg.64

22. Op. Cit. Lester Brown pg.102
 23. Op. Cit. Brown pg. 151
 24. Op.Cit. Brown et al pg.142
 25. David Pearce ed. Blueprint2: Greening the World Economy (UK: EarthScan, 1991) pg. 105
 26. Graham Smith et. al. Our Ecological Crisis (US: MacMillan, 1974) pg.6
 27. Piers Blaikie and Harold Brookfield "Defining and Debating the Problem" in Land Degradation and Society (UK: Methuen, 1987)
 28. Raymond Bryant "Political Ecology: An Emerging Agenda in Third World Studies" Political Geography vol.11 #1 January 1992 pgs. 12-36 (pg. 23)
 29. Michael Redclift Sustainable Development: Exploring the Contradictions (UK: Methuen, 1987) pg. 63
 30. Richard Peet and Michael Watts "Development Theory and Environment in the Age of Market Triumphalism" Economic Geography pgs. 227-249 (pg. 243)
 31. D.Sarokin and Jay Schulkin "Environmental Economics and Responsibility" Environmental Conservation vol.19 #4 pgs. 326 to 330 pg.327
 32. David Goodman and Michael Redclift Refashioning Nature (UK: Routledge, 1991) pg.254
 33. "The Challenge of the 1990s" Refugees May 1991 pg.16
 34. Douglas Stafford "New Strategies for Refugees in the 1990s" Refugees December 1992 pg.10
 35. Pierre-Michel Fontaine "The Development of Refugee Law" Refugees October 1987
 36. M. Young The Convention Refugee Determination Process in Canada: Its Reform (Ottawa: Library of Parliament Research Branch, 1989) pg.2
 37. James Hathaway "The Emerging Politics of Non-Entr e" Refugees December 1992 pgs. 40-41
 38. M. Douglas Stafford "New Strategies for Refugees in the 1990s" Refugees December 1992 pgs.10-13 pg.10
-

39. Ed Garcia A Future Without Refugees (Manila: ECDFC, 1992) pg.1
40. ECDFC Refugees in Their Own Land (Manila: ECDFC, 1990) pg.7
41. Ed Garcia Op. Cit. pg. 7
42. "The Challenge of the 1990s" Refugees May 1991
43. from ECDFC Refugees in Their Own Land (Manila: ECDFC, 1990)
44. Ed Garcia A Future Without Refugees (Manila: ECDFC, 1992)
45. Ed Garcia A Future Without Refugees (Manila: ECDFC, 1992)
46. Mercedes Sayagula "The Parched Earth" Refugees 1993 pgs. 4 to 7
47. Ed Garcia A Future Without Refugees (Manila: ECDFC, 1992)
48. Ed Garcia A Future Without Refugees (Manila: ECDFC, 1992) pg.24
49. ECDFC Refugees in Their Own Land (Manila: ECDFC, 1990) pg.6
50. ECDFC Refugees in Their Own Land (Manila: ECDFC, 1990)
51. Ed Garcia A Future Without Refugees (Manila: ECDFC, 1992)
52. Ed Garcia A Future Without Refugees (Manila: ECDFC, 1992) pg.43
53. "Limiting the Wastelands" Refugees May 1992 pg.5
54. International Organisation for Migration Annual Report 1990 (Geneva: IOM, 1991)
55. Arthur Westing "Environmental Refugees: A Growing Category of Displaced Persons" Environmental Conservation vol. 19, no.3 Autumn 1992 pgs. 201- 207 pg.201
56. June Hall unpublished manuscript pg.9-1
57. Essam El-Hinnawi Environmental Refugees (Kenya: UNEP, 1985) pg.4
58. Jodi Jacobson Environmental Refugees:a Yardstick of Habitability (US: WorldWatch, 1988) pg.37

59. SF Martin "The Inhospitable Earth" Refugees May 1992 pg.13
60. June Hall unpublished manuscript pg. 9-5
61. El-Hinnawi Op. Cit. pg.24
62. Independent Commission on International Humanitarian Issues
Refugees: Dynamics of Displacement (UK: Zed Books, 1984)
pg.11
63. Jacobson Op. Cit. pg.20
64. Arthur Westing Op.Cit. pg.205
65. June Hall Op. Cit. pg.9-5
66. David Timberman A Changeless Land: Continuity and Change in
Philippine Politics (US: Sharpe, 1991) pg.23
67. Economist Intelligence Unit Philippines Country Profile
1993- 1994 (UK: EIU, 1993) pg.7
68. David Wurfel and Bruce Burton, eds. The Political Economy of
Foreign Policy in SouthEast Asia (UK: MacMillan Press, 1990)
pg. 147
69. Habu Nagaho "The Philippines New Start and Japan" Japan
Quarterly July/ September 1992 Pgs. 311 to 320 pg.311
70. Nona Grandea The Rocky Road to Democracy (Ottawa: North South
Institute, 1992) pg.6
71. Economist Intelligence Unit Philippines Country Profile 1993-
1994 (UK: EIU, 1993) pg.12
72. R. Tiglao "Ramos Blinks First" Far Eastern Economic Review
Feb. 24/94 pg.20
73. R. Tiglao "Paralysed by Politics" Far Eastern Economic Review
May 12/94 pgs 22 to 30
74. John McBeth "Steady is Not Enough" Far Eastern Economic
Review pgs. 16 to 17 July 1/93 pg.17
75. Joseph Collins Fire on the Rim (US: Institute for Food and
Development Policy, 1989) pg. 5

76. this confidential report was quoted in Reiner Richter Poverty and Growth in the Philippines (Manila: Philippine Economics Society, 1989)
77. WB report quoted in Joseph Collins Fire on the Rim (US: Institute for Food and Development Policy, 1989) pg. 4
78. David Timberman A Changeless Land: Continuity and Change in Philippine Politics (US: Sharpe, 1991)
79. Karina Constantino-David "Access of the Poor to Basic Social Services" Poverty and Growth in the Philippines (Manila: Philippine Economics Society, 1989) pg. 33
80. David Timberman Op.Cit. pg.21
81. Manuel Montes "Philippine External Adjustment Efforts and the Role of the Bretton Woods Agencies" Poverty and Growth in the Philippines (Manila: Philippines Economic Society, 1989) pg.42
82. Manuel Montes Op. Cit. pg 60
83. Economist Intelligence Unit Philippines Country Profile 1993-1994 (UK: EIU, 1993)
84. Manuel Montes Op. Cit.
85. Manuel Montes Op. Cit. pg. 43
86. Manuel Montes Op.Cit. pg.48
87. Economist Intelligence Unit Philippines Country Profile 1993-1994 (UK: EIU, 1993)
88. Robin Broad and John Cavanagh The Philippine Challenge (Manila: Philippine Centre for Policy Studies, 1991)
89. Rigoberto Tiglao "Man in Motion" Far Eastern Economic Review November 18, 1993 pgs. 26 to 27 pg.26
90. John McBeth "New Pastures Nearby" Far Eastern Economic Review April 1, 1993 pg. 15
91. Rigoberto Tiglao "Opposing the Oligarchs" Far Eastern Economic Review pgs. 44 to 50 May 6, 1993
92. Philip Hurst Rainforest Politics: Ecological Destruction in South East Asia (UK: Zed Books, 1989)
93. Op.Cit. Philip Hurst

94. Op. Cit. Philip Hurst pg.162
95. David Kummer Deforestation in PostWar Philippines (Manila: Ateneo de Manila University Press, 1990) pg.44
96. Op. Cit. David Kummer pg. 71
97. E. Carandong et al "Natural Resource Accounting: Plantation Forests" Natural Resources Accounting Project, Final Workshop, National Institute of Geological Science, Manila October 15, 1991
98. Forest Economics Division, Forestry Management Bureau, Department of Natural Resources Philippines Forestry: Present and Future.
99. IBID
100. Forest Economics Division, Forestry Management Bureau, Department of Natural Resources "National Report on Deforestation" 1993
101. Op. Cit. David Kummer pg. 93
102. Environmental Protection in Leyte Conference Proceedings March 9-10 1990, Ormoc City, Leyte, Philippines
103. J. Anderson Lands at Risk in the Third World: Local Level Perspectives (Boulder: Westview Press, 1987)
104. Op. Cit. Hurst pg.165
137. IBID pg. 20
138. "Ormoc Tragedy Commemorated" The Reporter Pg. 1(7)
139. Japanese Development Institute "Study On Disaster Preparedness and Prevention in Developing Countries" July 1992 pg.30
140. Op. Cit. Leyte Centre for Development Education
141. it is a common conviction among Ormocanons that the residents of Isla Verde were either rapists or thieves and their prostitutes.
142. Op. Cit. gtz pg.1

143. Department of Agriculture, Department of Environment and Natural Resources, Romeo Acosta
- 144.144. personal conversations
145. Romeo Acosta "Assessment of the Causes of the Flooding of Ormoc City" paper presented at the National Symposium on Disaster Planning and Management for Agriculture March 1992 pg.31
146. Op. Cit. Department of Agriculture pg. 14
147. IBID
148. Department of Environment and Natural Resources "Investigative Report of the Ormoc Disaster" December 1991
149. Op. Cit. Japanese Development Institute pg.29
150. National Disaster Coordinating Council "Final Report Re Typhoon Uring" (Manila: Department of National Defence, 1992) pg.5
151. Op. Cit. DA
152. Op. Cit. Romeo Acosta pg.10
153. Romeo Acosta "Ormoc Floods: An Assessment Of The Causes" SFP Newsletter April/June 1992 vol.5 #2
154. IBID
155. Romeo Acosta "Assessment of the Causes of the Flooding of Ormoc City" paper presented at the National Symposium on Disaster Planning and Management for Agriculture" March 1992
156. Op. Cit. National Disaster Coordinating Council
157. Op. Cit. Department of Agriculture
158. IBID
159. personal observation
160. Op. Cit. Department of Agriculture
161. Elke Eller "The FlashFlood Tragedy of Ormoc: A Short Analysis from a Physio-Geographical View" unpublished
162. Swedish Space Cooperation, as cited in Elke Eller
163. Op. Cit. Elke Eller pg.5

164. Op. Cit. UNDRO News Nov/Dec 1991 pg.6

165. personal discussions

166. personal conversations

167. It was a commonly held belief that all inhabitants of Isla Verde were thieves and prostitutes. This belief seemed to have been reinforced by both the local government and by the clergy.
168. A common type of small-scale convenience store to be found in even the most remote areas of the Philippines.
169. Nipa is a tree from whose leaves people construct their homes. The nipa-maker would process these leaves into a thatch-like product.
170. A barangay is a unit of government similar to a village. The official would have a mandate similar to that of a village councillor.
171. The person who would take the fare and give the ticket to the passengers on the jeepney.
172. Tuba is an alcoholic beverage made from the sap of the coconut tree.
173. NFA retailer= National Food Authority retailer
174. Cafgu is a Cebuano acronym describing a government sponsored and armed militia which has the mandate of eradicating the New People's Army and their supporters.
175. Harvests coconut tree lumber.
176. Pump attendant at a gasoline station.
177. Employee at the local sugar refinery.
178. Knife sharpener.
179. National Water Authority employee.
180. The following variables were also crosstabulated against sex but no significant differences were found between men and women: land status, house status, pre/post resettlement access to education, pre/post resettlement access to electricity, pre/post resettlement staple food, pre/post resettlement access to sanitation and pre/post resettlement access to health care.
181. Eleanor Leacock, Helen Safa et al. Women's Work (US: Bergin and Harvey Publishers, 1986)

END

21-02-95

FIN