Volume One: Chixoy Dam Legacy Issues Study

EXECUTIVE SUMMARY:
CONSEQUENTIAL DAMAGES and REPARATION:
RECOMMENDATIONS FOR REMEDY

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Chixoy Dam Legacy Issues Study

An independent scientific assessment by the Center for Political Ecology commissioned by *Asociacion Campesina Río Negro 13 de Marzo Maya Achi* (ASCRA), International Rivers Network, Reform the World Bank-Italy, and Rights Action-Guatemala.

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Supporting documents:

- Volume 2: Document Review and Chronology of Relevant Actions and Events, Barbara Rose Johnston (Center for Political Ecology).
- Volume 3: Consequential Damage Assessment of Chixoy River Basin Communities, Barbara Rose Johnston (Center for Political Ecology).
- Volume 4: Social Investigation of the Communities Affected by the Chixoy Dam, Study Director Iñaqui Aguirre, Research Coordinator Annie Bird (Rights Action Guatemala).
- Volume 5: Estudio Histórico, Catastral, Registral Y Geográfico de las Comunidades Afectadas Por La Inundación Provocada Por La Construcción De La Presa Pueblo Viejo-Quixal, Sobre El Río Negro O Chixoy, Diego Martinez Estrada.

Cover Photo: *Río Negro community pilgrimage to one of their new sacred sites at Pak'oxom, in the hills above Rio Negro, where they will build a memorial marking the massacre site and reinterred remains of family members – 70 women and 107 children –who were forcibly evicted from their village and killed on March 13, 1982. Photo credit: Elisabeth Biesemans.*

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CONTENTS

CHIXOY DAM LEGACY ISSUES: OVERVIEW

The Chixoy Dam and its Pueblo Viejo Hydroelectric facility, built by INDE (*Instituto Nacional de Electrificación*) with financing from the Inter-American Development Bank and the World Bank, is the major source of electrical power for the nation of Guatemala.

Map 1: Location of the Chixoy Dam

Designs for this facility were approved, the project financed, and construction begun in 1975 without notifying the local population. **Construction began without conducting a comprehensive census of affected peoples, without legal acquisition of all the land supporting the construction works, the dam, and the hydroelectric generation facility, nor legal acquisition of land that would be flooded by the reservoir.** Construction proceeded without a plan to address compensation, resettlement and alternative livelihoods for some 3,445 mostly Mayan residents who would be displaced, and, without assessing the losses and developing safeguards measures for the 6,000 households in surrounding communities who faced flooding of land and other property, loss of sacred sites, loss of access to land, and disruptions of transportation routes, socioeconomic ties between communities, and access to traditional markets.

The complete disregard for resident peoples and their rights to land, culture, livelihood, and life remains present throughout the life of the project. When financiers identified the failure to recognize and provide for resident communities as a serious problem requiring immediate attention by INDE, and stipulated in loan contracts and side agreements that INDE must provide prioritized attention, the concerns and needs of projected affected people were systematically excluded. **INDE failed to develop resettlement agreement, failed to implement a viable resettlement and reconstruction plan, and failed to obtain and legally transfer title to a portion of the land used to build the dam and electrical generation facility. The Inter-American Development Bank and World Bank granted the initial planning and construction loans without evidence that INDE held title to the development site.** And, the World Bank granted subsequent 1978 and 1985 loans without evidence of clear title.

There is considerable evidence that the Banks were aware of the problems in developing a viable plan for resettlement and compensation. Beginning in 1977, triennial reports on social conditions and the resettlement program were prepared by INDE and submitted to the Inter-American Development Bank. The Inter-American Development Bank

conducted an evaluation of the resettlement program in 1983, and the World Bank conducted a similar investigation in 1984, finding the failure to create a viable social safeguard program contributed to the serious problems experienced by resident communities, and finding gross violations in INDE's compliance with contractual obligations. The World Bank ignored procedural policy and directives contained in their 1980 Operational Manual Statement (OMS 2-33 of 1980) on Involuntary Resettlement. In negotiating a second loan to complete construction repairs in 1984, the World Bank failed to correct the situation through loan negotiations.

The failure to implement a viable resettlement, compensation and reconstruction program contributed to violence in the area. With dam construction largely completed some residents acquiesced to relocation terms, moved, and found extreme differences between promises and the reality of poor quality housing and small allotments of infertile land. Some rejected the replacement homes and returned to their old communities, refusing to leave without fair and just compensation for their losses. Other dam affected residents, refused to move and attempted to negotiate more equitable terms. In a number of cases, resettlement negotiations were conducted with the armed presence of the military, and tensions escalated. Communities had their records of resettlement promises and land documents seized, and their leaders killed. The Army declared resistant communities subversive. INDE security officers working at the dam site (*Policia Militar Ambulante*, PMA) were involved in a number of documented incidents of violence (see Volume 2, 4). In at least two documented cases, construction equipment owned by sub-contractors (a COFEGAR helicopter and trucks) was used to carry out massacres. The Army forcibly evicted residents from original village sites, and later, from emergency housing.

MAP 2: Chixoy Dam-Affected Communities and the Rio Negro Massacres

Shortly after the first massacre occurred in the project area, the March 4, 1980 massacre of Rio Negro civilians by INDE security, a formal complaint describing the incident and its relationship to dam construction was filed with the Inter-American Commission on Human Rights, and in 1981 the event was included in the Court's preliminary and final country report on Guatemala (IACHR 1981).

When construction was complete and reservoir waters rose in January 1983, forced removal of the population had been accomplished by military and civil patrols at gunpoint and with massacre. In one village alone – Rio Negro– 444 of the 791 inhabitants had been killed. At this point in time, January 1983, compensation and resettlement agreements with the affected population had yet to be finalized, resettlement villages had yet to be completed, and fair and just compensation for various losses – including acquisition of new land – had yet to be determined. And by this date ten communities in the Chixoy River Basin had been destroyed by massacre: Río Negro, Los Encuentros, La Laguna, Agua Fría, Comalmapa, Jocotales, Chitucan, Los Mangales, Pacaal, and Hacienda Chitucan.

More than a decade later, **exhumation and investigation of the Rio Negro massacre produced a finding by the Guatemalan Truth Commission** (Comisión para el Esclarecimiento Histórico – CEH) **that this state-sponsored violence constituted genocide, and that the massacres in Río Negro illustrate how "many resistant attitudes to administrative decisions, even though they were peaceful, as occurred in the relation to the construction of the hydroelectric dam, were *a priori* conceived to be instigated by the guerilla and were resolved through violent repression"** (CEH 1999:Volume 1, Annex 1, Chapter VI: Exemplary Case No. 10).

Over the past twenty years, investigations have taken place and various parties have attempted to provide modest remedy to the dam-affected communities who continue to suffer from loss of lands, livelihood, and life. In those cases where compensatory measures were provided – cash, property, or social and economic development – compensation did not reflect full and fair value of lost or damaged resources. In a number of cases compensation was "paid" on paper, but never received by the household or community. No realistic (that is, acceptable to the affected people) effort was made to restore the livelihoods of affected people in violation of the Inter-American Development Bank and World Bank legal agreements. **While project sponsors identified compensation and resettlement program failures several times over the years, no consistent effort was made to ensure program success, monitor remedial measures, and confirm that promises were actually delivered.**

The project developer, *Instituto Nacional de Electrificación* (INDE), has taken the position that their obligations to the dam-affected communities have been met. They further point out that since privatization in 1998, they no longer have the institutional mechanism, financial ability, or legal responsibility to respond to dam-affected community complaints.

Staff of the World Bank, acknowledging that project planning and implementation was hindered by significant failures in the resettlement program, conducted a social program evaluation in 1996 and announced that, in their view, World Bank obligations had been met. They also acknowledged that serious problems remain with regard to INDE failures to complete compensation and resettlement obligations stipulated in a 1985 loan agreement.

And, from 1996, World Bank staff provided periodic assistance in facilitating the acquisition of replacement land, prodding agencies to legalize title, and providing technical assistance to support small economic development initiatives.

Representatives of the dam-affected communities in testimony to the World Commission on Dams (Brazil, 1999), the Rivers for Life Meeting of Dam-Affected Peoples (Thailand, November 2003), and in numerous petitions to the Guatemalan Government, financiers, and the international community have testified that they do not have resettlement and compensation documents establishing their rights and entitlements, nor have they been able to access the documentation used by project financiers and developers to support contentions that resettlement obligations have been met.

Dam-affected communities have not received the compensation and assistance that they are entitled to as defined by the World Bank policy on Involuntary Resettlement, nor even the full array of promises extended by INDE so many years ago. In many cases resettlement and compensation negotiations were aborted or halted and agreements never reached, and even in those cases where agreements were tentatively reached, they were achieved under great duress – with the very real threat of violence and massacre hanging over villagers. Lacking the documentation to prove their rights to even basic entitlements verbally promised so many years ago, resettlement communities have been unable to maintain those entitlements (e.g., the provision of free electricity by INDE). Numerous **other dam-affected communities have not received any compensation or remediation for damages resulting from the loss of land and other property, and loss of access to lands and markets.** Nor, have communities been compensated for damages associated with the operation of the dam, including loss of property and life as a result of construction failures and flashfloods resulting from the operation of the floodgates. They see the failure to provide equivalent size and quality of farm and household land as a significant factor in the severe poverty, widespread hunger, and high malnutrition rates of the region. They note that dam releases occur with no warning and resulting flashfloods destroy crops, drown livestock, and sometimes kill people. Upstream communities have seen part of their agricultural land flooded, and lost access to land, roads, and regional markets. **No rights-protected mechanism exists for affected people to complain or negotiate assistance.**

Over the years Chixoy Dam-affected communities have met to discuss common problems and strategies, and testified before national truth commissions and in international human rights arenas. With help from national and international advocates, dam-affected communities have commissioned and participated in a range of research initiatives to document the impact of the dam and the consequential damages to their communities. Given the failure of these efforts to secure a comprehensive, holistic remedy addressing the needs of all the dam-affected communities, and given the varied perspectives on obligations and liabilities mentioned above, an independent assessment of the project record was deemed a critical component in the overall effort to secure meaningful remedy for Chixoy Dam-affected peoples.[1] This Executive Summary presents the summary findings from development impact and consequential damage assessment research initiatives.

The major conclusion emerging from this Chixoy Dam Legacy Issues Study is that **hydroelectric energy development occurred at the cost of land, lives, and livelihood in**

violation of national and international laws, and considerable profits were achieved. Inter-American Development Bank, for example, reports revalued interest income of US$139,628,376.29 from Chixoy Project loans 301(0C), 301A(OC), #456(OC), #169(OC) (BID July 21, 2004:1-2). With respect to the lives and livelihoods of the former residents of the Chixoy River Basin, these profits have been accrued at their personal expense, and hydroelectric development has by no measure improved their quality of life.

Damages resulting from the violations of laws and fundamental human rights in the Chixoy Dam Development include personal injuries and losses as well as consequential damages associated with the loss of the means to sustain a healthy way of life. In order of proportionate responsibility: INDE; The Government of Guatemala; World Bank and the Inter-American Development Bank have an obligation to provide remedy for the consequences resulting from their failure to protect the right to life and livelihood, the right to fair and just compensation, and the right to remedy.

No one can go back in time and undo the violence that accompanied this dam development project. No amount of money can bring back to life the many who died as a result of forced evictions and the failures to provide just compensation and create meaningful resettlement programs. While many other Mayan communities displaced by the violence have returned to their former homes and begun the process to rebuild families, communities, and way of life, the dam-displaced communities cannot go home. No amount of money can move these communities back in time to a "before-dam" river valley and the associated way of life.

Governments and financing institutions can, however, **provide official and formal recognition that their failures helped shape rights-abusive conditions and generated lasting injuries for which they share responsibility.** They can provide restitution for the physical, economic, and spiritual losses. **They can take action to restore the dignity, identity, and integrity of previously self-sufficient communities.** They can help protect sacred sites, insuring the creation and protection of memorials and cemeteries to mark the massacres that occurred in this area. And, they can support community efforts to transform the region, building an economy and society that involves all of its members in the common goal of securing a self-sustaining way of life.

Summary of Recommendations

This study recommends the creation and implementation of a negotiation process that results in a legally binding reparation agreement (see pages 38-41). Recommended elements of that agreement, include:

- Compensation for personal injury and loss of life.
- Restored access to or full replacement of lost lands and other property.
- Renewed commitment to providing free household access to water and electricity as an entitlement to communities whose lives and lands subsidized the construction of the Chixoy facility.
- Improved housing conditions.
- Access to health and education funds, personnel, and programs.
- Infrastructure and development to reestablish the socioeconomic linkages between communities whose social fabric was disrupted by the reservoir.

- ❖ Infrastructure and economic development of the region in ways that enhances and revitalizes Mayan traditions, while restoring the degraded environment.
- ❖ The establishment of a social/economic/cultural development trust fund, held in perpetuity, with interest used to finance projects that benefit the dam-affected communities in Alta Verapaz, Baja Verapaz, and Quiche.
- ❖ And, the passage and enforcement legislation that strengthens indigenous rights, and legislation that establishes a free and prior informed consent requirement in development.

This study urges the inclusion of these elements into a five-tiered plan for remedy that involves immediate emergency relief as well as long-term actions to restore the dignity, integrity and viability of dam-affected communities:

Tier I. Immediate actions to address the dire needs of resettled, disenfranchised, and stigmatized communities including: emergency relief to households and communities who suffer from the lack of water, electricity, and deteriorating housing; and, an assessment and remedy for the gaps in their delivery of social, economic, education, and public health services in the Alta and Baja Verapaz Districts. Other immediate needs include a thorough survey and census of the entire dam-affected population.

Tier II. Economic, sociocultural, education, health, and infrastructure development of dam affected communities and the broader region.

Tier III. Implementation of community and family specific remedies to restore, repair, and improve the conditions of life of those communities and families most seriously affected by the Chixoy Dam Project.

Tier IV. Reparation and reconciliation with respect to violence accompanying the construction of the Chixoy Dam including violence associated with resettlement negotiations, the assassination of community leaders and the theft of community records, and the massacres of the Rio Negro community and the communities that sheltered Rio Negro survivors.

Tier V. Political actions and initiatives that acknowledge and address the historical wrongs of this case of hydroelectric dam development subsidized by the lands, livelihood and lives of societies' most vulnerable people, and political action that insures "never again."

The overarching goal of this reparation plan is to not only provide redress for past wrongs but also to ensure that project affected peoples are provided with the legal means and the right-protective space to participate as free and informed actors in development, that their participation is supported in full by the agencies and institutions involved in the project, and, that should they agree to large scale development proposals, they actually enjoy the social and material benefits of development.

STUDY DESIGN

The Chixoy Dam Legacy Issues Study was designed to: Generate quantitative evidence that confirms, contextualizes, or discounts the allegations and claims contained in the published and documentary record. Assess this evidence in comparative fashion, allowing recognition of how Chixoy River Basin community experiences and current conditions differ from other rural Mayan communities. And, identify specific consequential damages that can be directly or indirectly attributed to the failures and flaws in dam construction, planning, and social program implementation.

The Chixoy Dam Legacy Issues Study was initiated at the request of dam-affected communities in July 2003 with the goal of documenting the consequential damages of the dam in ways that identify remaining obligations and make recommendations for locally appropriate remedy. This study is an independent, transparent, peer-reviewed assessment of history, consequential damages, and community needs. Research, analysis and the production of this report have been supported by the generous contributions of private foundations and nonprofit organizations. The conceptual approach and preliminary findings have been reviewed and endorsed by the American Association for the Advancement of Science (AAAS) Science and Human Rights Program, the American Anthropological Association Committee for Human Rights, and the Society for Applied Anthropology.[2]

Study goals, methods, and activities were developed following consultations with community leaders, their advocates, World Bank and Inter-American Development Bank staff in Guatemala and Washington DC, Guatemalan lawyers and advocacy groups, social science consultants who worked on the project in the 1970s and 1980s, and anthropologists and other experts who work with Mayan communities.[3]

Key questions

- Over the course of hydroelectric development planning in Guatemala, and assessment, planning, construction and management of the Pueblo Viejo-Quixal hydroelectric project, what were the obligations of the Guatemalan Government, INDE, project financiers and project contractors with regard to dam-affected communities?
- What is the record of resettlement and compensation promises or agreements, and how is this record reflected in testimonial accounts, project plans, contracts, and related documents?
- What assumptions, methods and indicators were used to determine the affected population, their rights and resources, and the value of goods, lands and livelihoods that would adversely affected by the development?
- In what ways and at what times were resettlement, compensation and related social problems reported?
- When problems were reported, what were the responses?

- In those cases where specific promises and plans were made to remedy reported problems, what actions were implemented, and did these efforts achieve their stated socioeconomic goals?
- Were institutional actors, in particular the financial institutions and lender countries, aware of the violence occurring in the region, and specifically of the violence being perpetrated upon project-affected communities?
- What evidence can be found in published and public record documents, forensic reports, news reports, witness testimony, project consultant files, and other records – that contextualizes, confirms or clarifies the testimony of members of dam-affected communities, or conversely, the views and conclusions of project financiers?

Validity of Data

Research strategies included reviewing the documentary record, community workshops, investigations and needs assessments, title search, and consequential damage assessment of changes in access and use of critical resources.[4]

Photo credit: Bert Janssens

Household Survey Research. A total of 182 household surveys assessing pre-dam and current conditions and resources were completed in seven communities, including the four resettlement villages of Pacux, El Naranjo, Chicuxtin and Colonia Italia; the upstream communities of Chirramos and Los Pajalaes, Quiche; and Agua Blanca, one of the settlements downstream from the Chixoy Dam.

Community needs assessments, household surveys, and key informant interviews produced consequential damage findings that are reported here. A series of targeted interviews were conducted in Achi, recorded on cassette tapes and written notes at the time of interview. Interview topics included transmission of traditional resource knowledge, sacred sites, conditions and damages related to the dam in downstream communities, conditions and damages related to the dam in upstream communities, social problems and concerns in resettlement communities, and life in a militarized village.

To verify testimony and substantiate accounts of the major violations of human rights summarized in the Chronology of Relevant Actions and Events (Volume 2), accounts were crosschecked with at least three independent sources. To establish the record of pre-dam socioeconomic conditions and measure change over time informant memories of conditions, property, access and use of key resources were crosschecked with documentary evidence. These include the land title record, as well as census, survey and ethnographic documents from the periods before and during dam construction. A significant portion of the Household Survey sample participated in a census conducted by Gustavo Adolfo Gaítan Sanchez and his research team in four visits to the Río Negro and Chixoy River Basins between October 1977 and February 1978 (Gaitan 1979). That census reports family names, household size, number of structures in the household compound, size of farm land, number and kinds of domesticated animals, agricultural product, and market participation for fourteen communities living on the river banks upstream of the Pueblo Viejo-Quixal Dam site. Residents from nine of the communities in Gaitan's census were included in the 2004 survey and 137 "pre-dam" households -- 75% of the 2004 sample—are listed and their properties described in the Gaítan record.

A summary of findings are presented here in Volume 1 of the Chixoy Dam Legacy Issues Study. The evidentiary record and citations that support these findings are presented in:

- Volume 2: Document Review and Chronology of Relevant Actions and Events.
- Volume 3: Consequential Damage Assessment of Chixoy River Basin Communities.
- Volume 4: Social Investigation of the Communities Affected by the Chixoy Dam.
- Volume 5: Estudio Histórico, Catastral, Registral Y Geográfico de las Comunidades Afectadas Por La Inundación Provocada Por La Construcción De La Presa Pueblo Viejo-Quixal, Sobre El Río Negro O Chixoy.

SUMMARY OF MAJOR FINDINGS

FINANCING THE DAM

- World Bank and Inter-American Development Bank financial support and technical advice shaped the initial formation of INDE and it's energy development plans. The World Bank and Inter-American Development Bank influenced, sustained, monitored, and evaluated INDE's energy development and distribution projects. The World Bank and Inter-American Development Bank influenced and supported the privatization of INDE. World Bank and Inter-American Development Bank loans for Chixoy Hydroelectric Development were repaid with interest, in full, with the income generated from the sale of INDE's distribution system. The privatization of INDE in the late 1990s resulted in the closure of INDE's Resettlement Office and the effective loss of any viable complaint mechanism for dam-affected communities. Privatization of INDE occurred without evaluation or demonstration that all remaining obligations to dam-affected citizens have been met. The loss of a viable complaint mechanism and the failure to meet remaining obligations contributes to current socioeconomic crises, and political and conditions in the resettlement communities.

- International financial institutions supported the Chixoy project from its initial conception. (See Table 1: International Financing of the Pueblo Viejo-Quixal (Chixoy) Dam). World Bank "Power Project Loans" initiated in 1963 and Inter-American Development Bank loans signed in 1964 financed the development of INDE, a national energy plan, and the hydroelectric dam feasibility studies that recommended construction of a series of hydroelectric dams, including those on the Chixoy River. In 1972, World Bank loan 545-GU-IBRD was used by INDE and its subcontractor Consorcio LAMI to conduct prefeasibility studies on 32 sites on the Chixoy River. An environmental reconnaissance conducted in 1973 reported archaeological sites, extensive agricultural cultivation in the canyons, and the presence of a resident population. Engineering estimates recognized the need for land acquisition and resettlement.

Table 1: International Financing of the Pueblo Viejo-Quixal (Chixoy) Dam

Source	Date	Details	Source
World Bank	**1951**	Economic plan for Guatemala prioritizes construction of highways and hydroelectric energy to allow mining, timber harvest and export agriculture as the means to transform and develop the rural areas. Plan recommends creation of INDE. Subsequent loans reflect this development template.	WB 2004b.
World Bank	**7/29/55** $2.73 million	First World Bank loan to Guatemala: # 0124 Highway Project	WB 2004b.
United Nations Special Fund and World Bank	**1961**	The United Nations Special Fund, Guatemalan Government, and World Bank sign an agreement for a comprehensive study of electric power and irrigation in Guatemala. World Bank is executing agency for the studies.	WB 2004b.
Inter-American Development Bank	**12/19/63** $3.15 million loan #81 (OC).	Loan provided to INDE, signed on 6/18/64. Financing the development of INDE and the initiation of national energy development plans.	Loan detail in BID 2004.
World Bank	1963 "Power Project" agreement in. **1/19/67** loan #0487 for $15 million; and **6/18/68** loan #0545-0 for $7 million.	"Power Project" loans finance a national energy plan for Guatemala. Loan allowed formation of energy development policy and surveys that examined energy production, estimates future demand, identified key strategies for developing new energy source, and produced a national energy plan emphasizing the production of energy from renewable resources. A series of hydroelectric dam sites are identified, including sites on the Chixoy River.	"*Plan de Desarrollo 75/85*" INDE 1974; INDE 1991. Loan detail in WB 2004a.
World Bank	**6/12/72** # 545-GU-IBRD used by INDE to conduct pre-feasibility studies.	INDE contracts with Consorcio LAMI (lead company is Frankfurt-based Lahmeyer Int.) to study the hydrological potential of the middle Chixoy River and draft plans for thermal plants. First phase identifies some 32 possible locations, second phase narrows it down to four: primary recommendation for the Pueblo Viejo-Quixal site.	Consorcio LAMI/INDE 1973, 1974. Funding discussed in INDE 1991.
Government of West Germany	**11/13/72**	Government of West Germany formalizes a technical assistance grant to Guatemala to elaborate a plan for hydroelectric development.	Discussed in INDE 1991.
Central American Bank of Economic Integration	**1974-75** BCIE loans #74, #75, #75-1. $13.27 million.	Financing to support the construction of the Pueblo Viejo-Quixal (Chixoy) Dam.	Loan detail in INDE 1991:254.
Investment Fund of Venezuela	$74.8 million. Loan #01-29 ; loan #03-70.	Financing to support construction of the Pueblo Viejo-Quixal (Chixoy) Dam.	Loan detail in INDE 1991:254.
Government of West Germany	**1975**	West Germany and Guatemala agree to develop a master plan for development of a dam and hydroelectric generation facility at Chixoy River. West Germany contracts with LAMI Consortium. Guatemalan Government creates a governmental agency to work in partnership with LAMI.	Discussed in INDE 1991.
World Bank	**2/24/75** Distribution of # 545-GU-IBRD.	INDE and Consortio LAMI sign contract. LAMI prepares bidding documents for construction and equipment; evaluates offers; carries out financial and engineering studies; develops design and technical specifications.	Contract details discussed in INDE 1991.
Inter-American Development Bank (BID) "BID 1"	**1/15/76** $105 million to INDE for Chixoy Loan contracts under this authorization: #301, 302, 454 and 6/VF.	BID loan to Guatemalan Government (INDE) to refine engineering plans and build the Chixoy Dam. Contract includes no mention of a resettlement program, or source or amount of financing for compensatory programs. Chapter V, Clausula 2 (d) (ii), stipulates that INDE is required to satisfy the Inter-American Development Bank that it has possession of lands where project works are to be constructed. Construction is set for the end of 1976.	Loan discussed in Partridge 1983. Contract cited by INDE 1991:254. Also, BID 2004.
World Bank	**7/16/76** Loan #1314-0 $4.2 million and Loan #1315-0 $20 million.	Loan to Guatemalan Government. National survey of housing conditions and reconstruction following the 2/4/76 earthquake assesses housing and rebuilds some schools and homes in urban areas; rural surveys include the psychological, socioeconomic, ethnic, and political characteristics of communities. In the Chixoy River Basin, survey also involves a census, housing, property, and initial proposals for compensation and resettlement.	WB 1976. Gaitán 1979. Loan details in WB 2004a.

BID	**1/25/77** $1.51 million. Grant of Canadian $539,000 and US$231,000. Donated by Canada, BID administered.	Technical assistance grant to INDE to prepare a plan to protect the environment in the project zone of influence, and finance the preparation of a program for economic and social development of the project zone. BID is responsible for planning, and INDE for implementation. BID requires INDE to submit resettlement program reports three times each year. LAVALIN, a Canadian consulting firm, is contracted to prepare the Chixoy River Basin Sustainable Development plan, including plans for resettlement.	IN WB 1978, and Partridge 1983. Also, LAVALIN 1978, 1981. La Nacion Guatemala April 26, 1978.
World Bank	**6/19/78** Chixoy Loan BIRF #1605-0 providing $72 million to INDE at a 7.5% rate.	Contract obligates INDE to provide houses and services for relocatees of better quality than previously enjoye. "In addition to the normal commitment to carry out the project with due regard to ecological matters, the Bank obtained assurances from Government and INDE that a program will be implemented to compensate adequately and, if necessary, resettle, those residents (about 1,500) of the area to be flooded by the reservoir whose living and working conditions have been adversely affected by such flooding. INDE will prepare such a program and present it for Bank review by 12/ 31/1979."	WB Staff Appraisal Report, June 15, 1978. Contract discussed in Partridge 1983. Loan detail and rate WB 2004a.
BID "BID 2"	**11/11/81** Loan #301A and 302A to INDE for $45 million Repaid with 9.25% interest.	Contracts are signed December 17, 1981 by the Republic of Guatemala and BID. No specific clause makes reference to requirements for resettlement planning or implementation, but a budget line exists under the direct costs of construction for "Purchase of Lands and Resettlement" in the amount of US $3.8 million.	Discussed in Partridge 1983. Detail in BID 2004.
BID	**12/21/83** Loan #456 (OC) $34,1130,000 award to INDE. ($10,466,060.94 was cancelled).	Severe water losses from the headrace tunnel prompts shut-down of the power plant. Inspection reveals considerable damage to tunnel areas. Disbursement under funding provided by BID 1 used for emergency repairs. Additional loans and another two years of repairs are required before the plant can begin commercial operation.	Detail in BID 2004. INDE (1991:254) cites this loan as BID 454.
BID "BID 3"	1985 Loan #GU-0026 totaling $44.51 million. Loan #169 (IC) $44.5 million.	Loans to finance repairs. Total BID financing approved is $57 million. BID also facilitated a cofinancing agreement with FIV (Venezuela) for an additional $22.3 million.	Loan detail in BID 2004; INDE 1991.
World Bank	**3/19/85** BIRF #1605-1 providing $44.46 million to INDE at a 2.98% rate.	Loan to repair the collapsed conduction tunnel. Accompanying the loan is an Aide Memoire signed by all parties that notes: "INDE has not complied with Section 3.06(a), (b) and (c) of the Loan Agreement signed with the World Bank dated July 21, 1978 (1605 GU). Therefore the supplementary loan now being considered by the World Bank for the Chixoy Project should not be approved until INDE can successfully demonstrate during appraisal that the major problems with the human resettlement and community reconstruction components of the project have been corrected."	Loan terms discussed in Partridge 1984. Loan detail and rate in WB 2004a.
BID	11/12/91 Loan 871/SF-GU $14.4 million.[1]	Chixoy River Watershed Management and Conservation Program. Reforestation, installation of automated sensor flood gates. With $14,272,000 dispersed, this project was evaluated by BID in 2001 as "Unsatisfactory" noting: "implementation progress was extremely complex and the executing unit invested a great deal of time on startup and coordination."	BID 2001:15.
Note 1: Loans above represent only a portion of total construction costs ascribed to the Chixoy Dam. According to some estimates, financing specifically earmarked for the Chixoy Project, including repairs in the 1980s, total $955 million and by the mid-1990s represented some 45% of Guatemala's foreign debt. In 1991, 51% of INDE's revenues were used to service this debt (Goldman et al 2000:15). The privatization of INDE allowed the World Bank and most of the BID loans to be paid in full. World Bank loans have been repaid at interest rates noted above, and while their portfolio statement includes interest rates, maturation dates and payment status it does not report total income earned on this debt. On July 21, 2004, BID reports collecting income from loans 301(0C), 301A(OC), #456(OC), #169(OC) of revalued US$139,628,376.29. (BID 2004:1-2; World Bank 2004a).			

- Pueblo Viejo-Quixal (Chixoy) construction designs are approved, sub-contractors identified, construction loans obtained from the Central American Bank of Economic Integration and the Investment Fund of Venezuela, and construction activities begin in 1975, two years before resident communities were notified and any effort was taken to assess their rights and the responsibilities of the developers. Subcontractor bidding documents are prepared with funding from World Bank loan 545-GU-IBRD. (See Table 2: Companies Involved in the Construction of Chixoy Dam).

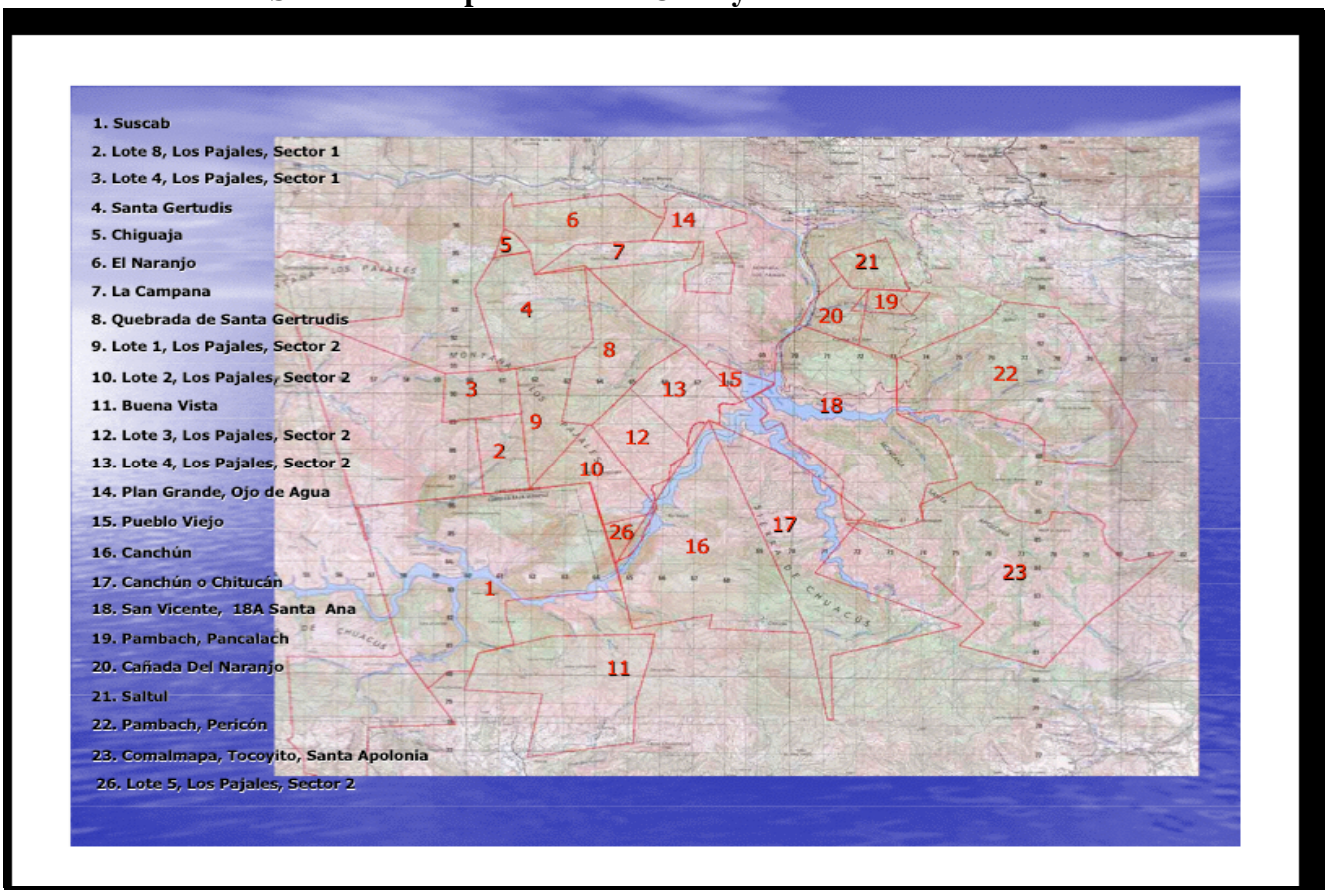
Table 2: Companies Involved in the Construction of Chixoy Dam

Company	Location	Years	Workers	Additional info
INDE	**Guatemala**		**1 supervisor on site, 20-25 people present on site, many more in INDE's offices**	**INDE contracted 60+PMA to work as security, as well as private security firms. INDE helped provide construction labor. About 10,000 Guatemalans worked on the dam with 4,000 living in worker camps.**
ICOGUA	Guatemala	1976-77	15 people.	Built administrative headquarters.
Escher Weis	Switzerland	1980-83	8 (?) Swiss	Installed turbines, lived in Quixal, worked in Quixal. INDE used BID funds to pay the $11,804,000 award.[1]
ICA	Guatemala and Mexico	1977 1982-83	20 (?) Mexican Workers lived and worked in Quixal.	In 1977 INDE used BID funds to pay ICA (Guatemala) $1,900,000 for "heavy construction: Ex. Building" and another $1,952,000 to ICA (Mexico) for "Services NEC." In 1982 INDE paid ICA $14,612,000 to build the turbine house ($9,465,000 financed by BID).
NELLOLTER	United States	1970-75	80 (?) US workers.	Built access roads. Lived in Santa Cruz, work camps in Agua Blanca and Pueblo Viejo.
QUASIM	Italy	1996		COFEGAR subcontractor. Built a relief tunnel, installed automatic basin doors with sensor units.
LAMI Consortium Lahmeyer Int., International Engineering, Motor Columbus	Germany, United States, Switzerland	1974-87	Developed technical plans for the project. 4 or 5 representatives present on site. Onsite workers did technical oversight.	First contract of $252,000 on 1/1/1974 for "heavy construction, ex. Building." Second series of contracts on 1/1/77 total $1,574,000 for engineering and related technical assistance. First and second series of contracts financed by BID awarded to Germany-based Consortium. Third set of contracts awarded 5/31/82 to Guatemala-based Consorcio LAMI total $10,180,000 with $5,810,000 financed by BID.
MITSUBISHI	Japan	1979-83	15 (?) Japanese Provided and installed diesel plants, lived in San Cristobal, worked in Quixal.	Awarded $23,866,000 in a series of three contracts issued 8/17/78 with BID funds $11,272,000 and (presumably) World Bank funds $12,594,000.
SHOKE WALTMAN	India		3 (?) Indians	COFEGAR subcontractor. Built release tunnel 2, lived in Santa Cruz, work base in Pueblo Viejo.
HOLCHTIEF	Germany	1977-83	60 (?) Germans Designed and built tunnel. Hired 47 security guards.	Lived in San Cristobal, workshops and warehouses in Quixal. Awarded contracts for $3,359,000 in 1/1/77 financed by BID, and $70,754,000 in 5/31/82 of which $54,275.000 was financed by BID.
SWISS BORING	Honduras		10 (?)	COFEGAR subcontractor. Tunnel work, lived/worked in Pueblo Viejo.
SOREFOMER	Portugal	1979-83	40 (?) Portuguese Installed bocatoma equipment, lived in San Cristobal, half worked in Quixal, half in Pueblo Viejo.	Funded in a series of three contracts 8/1/78 with $6,992,000 financed by BID and $7,812,000 financed (presumably) by the World Bank.
COFEGAR - Impregilo	Italy	1977-83 1990s	40-50 (?) Italians Built the dam, lived in Santa Cruz, worked in Pueblo Viejo.	Contractor for the $12.7 million El Jute gallery, which adjusts the water level at the Chixoy dam, funded in part with Italian bilateral aid. Contracts awarded by INDE on 8/10/78 total $70,576,000 with $15,606,000 paid with BID funds, and $54,980,000 presumably paid with World Bank funds. In 1996, QUASIM, a COFEGAR subcontractor, built a relief tunnel and installed automatic basin doors with sensor units.
LAVALIN: Lamarre Valois Int. Limitee of Canada	Canada	1978-81		Developed plans for the development and restoration of the Chixoy River Basin, including dam-affected villages, and the integrated rural development project in the municipalities of San Juan Cotzal and Chajul. Work funded through a $1.51 million technical assistance grant provided, in part, by Canada and administered by BID.

Note 1: Contract award detail reflects only that portion reported on BID procurement records, and total some $224,694,000 – about 25% of the close to one billion reportedly spent. **Sources:** Annie Bird, interview notes with INDE workers, October 31, 2000; Goldman, et al 2000:14; Inter-American Development Bank, "Project Procurement Information: Goods and World by Borrowing Country" Web-based summary for contracts facilitated or financed by BID in Guatemala, March 14, 2005.

- Financing for Chixoy construction was provided by the Inter-American Development Bank (application submitted February 1975, loan signed January 1976) despite the failure of INDE to meet the terms of the loan contract that included demonstration of legal possession of the land where project works are to be constructed. Financing provided by the World Bank in 1978 and 1985 was approved without demonstration that legal title had been secured. Review of land title records in 2004 indicates that all of the 26 fincas (633 caballerías) along the margin of the Rio Negro, Chixoy and around the dam are properly registered titles with dates first inscribed between 1883 and 1910 (see Map 3, and Volume 5). The dam is located on lots 15 and 18 on "Finca Santa Ana," and the building of the intake on lot 15. Of the 26 lots researched, only lot 18 is in the name of the National Institute of Electrification (INDE), dam owner, while all the rest are in the names of private owners or institutions or representatives of the indigenous communities of the area. Conclusion: INDE did not secure legal title to all the land supporting construction works. The land that supports a portion of the dam, the hydroelectric facility, and the majority of land beneath the reservoir are held by communal and individual title.

MAP 3: Land Title Search on Properties in the Chixoy River Basin



- To maintain rights to use lands above the reservoir, communities are paying taxes on submerged lands.[5]

- Loan financing provided in 1977 and beyond was approved in apparent violation of United States law requiring environmental assessment and social safeguards to be in place before World Bank and Inter-American Development Bank issuing of loans. The United States National Environmental Protection Act of 1969 was recognized in 1977 as applying to any actions within the nation and abroad involving the use of federal funds, including actions funded by international financial institutions. At the time that international loan financing was obtained, Title 22 of the United States International Financial Institutions Act of 1977, required impact assessments and creation of safeguard programs before project approval. Section 701 of the Act mandates U.S. opposition to bank loans to governments that consistently engage in gross violations of human rights, except when a loan expressly meets basic human needs. Human rights violations were known to occur in the region, prompting the United States to withdraw military aid to the Government of Guatemala in 1977.

- World Bank involvement in this project was also regulated by internal environmental assessment policies requiring the development of social safeguards. First articulated in 1972 and published as a handbook in 1974, this policy was utilized in loan agreements for other projects in the region. The Cerron Grande power project in El Salvador, jointly funded by the World Bank and Inter-American Development Bank in 1973, was approved after agreeing upon safeguards to protect public health and the environment, including a resettlement and reconstruction program to ensure the welfare of some 10,000 people affected by the construction of the dam. This resettlement program was designed, financed, and an implementing agency identified *before* the issuing of the loan.

- INDE reports submitted in December 1975 to the Inter-American Bank in support of loan applications 301, 302, 454 and 6/VF establish the compensation principle for resettlement as being "an improvement of the living conditions of the population in the service area of the project." This compensation principle is reaffirmed in the World Bank 1978 loan contract for BIRF 1605-0, where INDE is obligated to compensate adequately and provide houses and services for the relocatees of better quality that those they previously enjoyed.

RESETTLEMENT NEGOTIATIONS AND RELATED VIOLENCE

- Failure to implement a viable resettlement and remediation program at the time of dam construction contributed to violence in the area. Communities that attempted to negotiate fair compensation were declared guerilla-supporting communities, and the military and civil patrols were used to forcibly remove people from the reservoir site. Guerilla activity did occur in this area, but it did not begin until well after dam construction had begun (Dill 2004, Douzant Rosenfeld 2003, Museo Comunita Río Rabinal Achi, 2003). Violence, a series of massacres, and the burning of villages and fields in the early 1980s was followed by guarded containment of many surviving families in militarized "model villages."

- Violence associated with resettlement negotiations and forced displacement included the kidnapping, torture and deaths of four community leaders from two villages, and the related loss of documents memorializing compensation and resettlement agreements with INDE's Resettlement Office. Similar actions in a third village resulted in the detainment and torture of a community leader and seizure of land title and compensation documents.

- Failures to negotiate an adequate resettlement agreement resulted in an escalation of violence that included a series of massacres. Massacre events have been documented through the testimony of survivors and - except for the Los Encuentros massacre where the site lies under the reservoir - by exhumation and forensic analysis by *Fundación de Antropología Forense de Guatemala* (FAFG). The relationship between the Rio Negro massacres and the Chixoy Dam is noted in a number of national and international investigations, where the Rio Negro case is cited as an example of state sponsored genocide. Massacres experienced by the communities that would be flooded by the reservoir include:
    (1) March 1980 massacre in Rio Negro by PMA agents who worked for INDE (some 61 PMA worked on the Chixoy project as security for INDE);
    (2) February 1982 massacre of Rio Negro community in Xococ,
    (3) February 1982 massacre of Rio Negro residents in Rio Negro;
    (4) May 1982 massacre of Rio Negro survivors and their hosts at Los Encuentros;
    (5) And, the September 1982 massacre of Rio Negro survivors and their hosts at Agua Fria.

  Other communities in Chixoy River Basin destroyed by massacre in this same time period include: La Laguna, Comalmapa, Jocotales, Chitucan, Los Mangales, Pacaal, and Hacienda Chitucan (CEH 1999).

- Following the Rio Negro massacres, demands for compensation from other dam-affected communities were silenced with threats from INDE workers that if they complain, they will end up like the Rio Negro community.

- The lack of a viable program to accomplish resettlement was well known and is well documented in World Bank and Inter-American Development Bank project files and reports. The escalation of violence in and around the project area was also well-known by these institutions (Partridge 1983, 1984; Douzant Rosenfeld 2003). And, the linkages between dam construction, resettlement failure, and the escalation of violence known by these institutions, as evidenced by reports reviewed and summarized in Volume 2 of this study. The World Bank and Inter-American Development Bank regularly sent staff to the area to evaluate performance and conduct new feasibility studies in support of additional financing. An archaeological research team worked in the Chixoy River Basin periodically from 1978 through 1982 and their reports, communications and concerns were part of the project record. INDE resettlement officers recorded conflicts and other details on all families in the affected communities, and submitted triennial reports to the Inter-American Development Bank on the status of social programs beginning in 1977 through the life of the project. INDE resettlement office staff visited the Rio Negro village the day after the March 1980 massacre, transporting by helicopter

one of the surviving civilians to a hospital (he was later killed by soldiers while recovering at the hospital), and this incident was noted in program reports. Violence in the area, including the March 1980 massacre at Rio Negro was reported nationally and internationally. And, the relationship between massacre and failed Chixoy resettlement negotiations was noted in the Inter-American Human Rights Commission draft report on Guatemala in 1980 and its final report in 1981.

- In the case of Rio Negro, the resettlement village funded by international loans on the basis of designs promising a traditional Mayan village with modern infrastructure, productive land, and the provision of critical livelihood resources was not built. What was built was Pacux: a series small one-room structures lined up in an urbanized grid, surrounded by wire fencing, with access to the village limited to a single road monitored by an armed military guard. The infrastructure, housing, and adjacent agricultural fields reflect a priority of militarized control, rather than social and economic development of the community. For the first several years of this settlement residents were not allowed to enter or leave the village without written permission, could not leave the area to grow food, pasture animals, or collect firewood, and were forced to serve as unpaid labor in exchange for food. While model villages like Pacux were later built in other areas of Guatemala, most were demilitarized by the mid-1990s and residents were free to return to their former homes and lands. In Pacux, military guards were present up until December 21, 2003. The lasting military presence helped perpetuate the social stigmatization of the Rio Negro community: the perception that Pacux residents were dangerous subversives who must be monitored by armed guard to protect the broader population. Ten years of life under such guarded conditions produced an array of social, economic and psychological damages. Systemic violence associated with the stigmatization of Pacux and its exceptionally long status as a militarized community includes a pattern of threats, harassment, torture, killings and rape. Exhumations of a clandestine grave located in a well on the guard base controlling the entry to Pacux by FAFG in 2004 found some 73 bodies.

RESETTLEMENT AND COMPENSATION

- Throughout the life of the project financial institutions noted the need for compensation and resettlement planning and implementation, and included requirements in the loan contracts and supporting agreements. Funds were provided at several points in the project history to finance a compensation and resettlement program. While INDE and the Government of Guatemala failed in their obligation to develop and implement just compensation, resettlement and reconstruction programs, the financing institutions failed in their fiduciary responsibilities to monitor conditions, assess the use of compensation funds, and withhold funds until corrective actions were taken and obligations were met:
  - A US$1.51 million technical assistance grant administered by the Inter-American Development Bank was issued to INDE in January 1977 to prepare an environmental restoration program and finance the preparation of an economic and social development plan for the area, including for resettlement communities. In this grant, the Inter-American Development Bank accepted responsibility for planning, and INDE accepted responsibility for implementation.

- World Bank 1978 loan agreement 1605 GU section 3.06(a), (b) and (c) obligated INDE to implement compensation, resettlement and reconstruction programs.
- Inter-American Development Bank 1981 loans 301A and 302A included $3.8 million to fund the purchase of lands for resettlement, funds that were largely reallocated by INDE and used for construction repairs associated with the failure of the tunnel below the dam.
- An Inter-American Development Bank evaluation of the Chixoy resettlement program in 1983 found gross violations of financial oversight, project monitoring, and evidence of INDE's failures to meet their contractual obligations with regard to resettlement and compensation. Subsequent investigation and remedial plans were approved by the World Bank in 1984, and signed by all parties in a memo tied to the 1985 loan. The Aide Memoire obligated INDE to provide: (1) a ferry system; (2) house plots in the three resettlements equaling a minimum of 50 X 50 meters, and village land enough to permit livestock, gardens and the addition of houses for newly married offspring; (3) construction of access and settlement roads, potable water systems, drainage systems, and public buildings with displaced people receiving preferential employment opportunities and training at all skill levels; (4) displaced communities with legal ownership of all property, structures and tools (boats, *nixtamal* mill, chain saws, houses, tools, experimental garden plots, land or other properties acquired by INDE for the resettlement program); (5) reconstruction programs for the displaced population, including development of new fisheries in the reservoir, fruit tree nurseries, high-value crop cultivation in the drawdown area, and agricultural innovations.
- A World Bank review in 1996 found deepening impoverishment of the affected people, a failure by INDE to correct prior errors, and violation of World Bank policies. Despite this, the Banks did not make a consistent or comprehensive effort to ensure meaningful remedy for the affected communities. Instead, the World Bank and Inter-American Development Bank failed to engage the affected people in planning culturally adequate and comprehensive corrective plans.
- Water and power infrastructure was established in some resettlement communities, but reliable water and energy supply -- and the documentation establishing community rights to water and energy -- was not delivered to the communities.
- A community hall, health post, church, and a school were built in resettlement communities, but staffing and supplies were not provided and communities have been largely excluded from government programs providing these and other social services.
- Free electricity was promised and delivered in the resettlement villages until recently, when the new privately-owned energy provider refused, in the absence of documents to prove entitlement, to continue INDE's long-established practice of providing free electricity to communities displaced by the dam. .
- INDE's privatization was carried out with technical assistance from the World Bank and the Inter-American Development Bank. Privatization allowed repayment of bank loans, with interest, in full.
- Proceeds from privatization, in addition to repaying World Bank and Inter-American Development Bank loans, were used to fund a rural electrification trust meant to subsidize the costs of providing rural electricity. As of March 2005, communities

immediately adjacent to the reservoir and downstream from the hydroelectric generation facility lack electricity and have not enjoyed the benefits of this program.

- The removal of INDE's grievance and dispute mechanism, and the failure to investigate and resolve remaining socioeconomic obligations has had a direct effect on current socioeconomic and political crises.

- In Pacux and the other resettlement villages, failures to provide the full extent of promised lands, the construction of substandard housing, inadequate or nonexistent compensation for other property losses, and failures to provide promised health, education and effective economic development assistance in any sustaining way have had a demonstrable degenerative effect on individual, household and community economy, culture, and health (See testimony, photos, and survey findings reported in Volumes 3 and 4)

- In those cases where compensation for loss of property was provided, monetary payments were granted in haphazard ways with grossly flawed methods of assigning value. For example, the value of forested lands was defined solely in terms of the commercial market values. Because no commercial timber harvest enterprise was actively exploiting these lands in the 1970s, forested lands were defined as having no compensable value, allowing the determination that no indemnification was owed to individuals or communities whose losses included forested lands (LAVALIN 1981:9). And, compensation values for household and communal land reflected a generic average that assumed all households were at the same level of poverty found in the region. In the mid-1970s in Rabinal, 50% of the population had plots smaller than 1.6 manzanas and the average plot of 2 manzanas produced corn yields that fed the household for only three months (EAFG 1997: 27, 291). However, Río Negro and adjacent Chixoy River Basin settlements were long established communities with rights to significant land holdings, with plots conservatively reported as an average 6 manzanas of fertile land per household supporting two harvests per year and communal use rights to another 1000 hectares (as reported by Gaitán 1979). Upon placement in the new resettlement villages most households received plots of 1.5 to 2 *manzanas* of rocky, infertile land.

- Replacement land for the displaced population not only failed to meet the compensation objective of improving conditions, but also failed to meet even the minimal objective of equivalent replacement (as evidenced in Volumes 2, 3, and 4).

- The Inter-American Development Bank and the World Bank not only accepted what they knew to be flawed plans and failed implementation (Partridge 1983) and turned a blind-eye to violations of loan agreements, they apparently modified their definition of the minimum area of land needed to sustain a rural household in order to justify new financial support to fund engineering and construction repairs. In a 1976 assessment of land tenure in Guatemala conducted by the World Bank, Inter-American Bank and US AID, it was determined that 4 to 7 hectares of land (depending upon the quality of land) was the minimal area necessary to sustain a household in rural Guatemala. In 1979, LAVALIN's plan for Chixoy River Basin development funded by the Inter-American

Development Bank determined that land needed for each resettlement to support housing, agricultural, pasture, and future growth is 20 hectares per family. In 1985, when US law prohibited loans to countries with known human rights violations, World Bank statements to US Congress defended INDE's progress with resettlement efforts and argued that financing should be approved as humanitarian assistance that will allow completion of the resettlement program. In addition to contradicting earlier findings with the assertion that in rural Guatemala "2.4 hectares of land is considered sufficient to provide the needs of one family" the World Bank erroneously asserted that 2.4 hectares of agricultural land (3.5 *manzana*) had been assigned to each family in the three permanent resettlement villages.

- No effort was made to assess and provide compensation to downstream communities for lost crops, animals, land, and lives due to dam operations. Communities have experienced water shortages, crop failures, and loss of fisheries as a result of inadequate or interrupted stream flow in dry seasons (INDE 1991, Levy 2002). No effort was made to minimize risk and protect the lives and property of downstream residents. Since 1997, flash floods produced by unannounced dam releases have caused at least three deaths in downstream communities.

- The original compensation principle established in Chixoy plans and loan agreements, articulated a commitment to improve living in conditions and the quality of life, and identified tourism development as a major strategy to transform the local economy. As early as 1973 plans called for scientific exploration of the pyramid complex and development of a Tikal-like tourism industry. Excavations of Cauinal in 1979 confirmed that the city complex was equal to or more important than Tikal. Ethnographic research at that time confirmed that Chixoy River Basin communities had ancestral ties to the ceremonial complexes. The archaeological team to INDE submitted proposals on three occasions (1980-1983) to modify the dam at a projected cost of $220,000 to rescue the Cauinal site and allow the development of archaeotourism. These proposals were rejected. Cauinal remains in a deteriorated state, partially submerged for part of the year, totally submerged at other times. The extensive artifact collection removed from the excavations in the Chixoy River Basin includes jade, gold, and a jaguar carved in stone. Artifacts are housed in the basement of the Museo Nacional de Arqueologia y Etnologia in Guatemala City.

EFFORTS TO SECURE REMEDY

- The dam-affected communities have from the onset, attempted to document legitimate grievances and secure meaningful remedy. Some of the formal efforts noted in the documentary record include:
  - Beginning in 1978, a series of petitions from Rio Negro and other threatened communities to INDE resettlement officers concerning compensation and resettlement terms.
  - A 1979 petition outlining grievances experienced by dam affected communities submitted to the President of Guatemala (and published in national newspapers).
  - A petition to the Inter-American Human Rights Commission presenting an account of the March 1980 massacre and ascribing culpability to INDE security.

- A June 1982 petition from Junta Directiva de la Comunidad Indigena of Los Pajales, Directors of Local Committees of Reconstruction in Los Encuentros, El Cebollal, Chirramos, Chitomax, Guaynep, Patsulup, Chicruz, Cauinal, and 20 professionals and merchants of Cubulco to the President of the Republic of Guatemala asking that the archeological city Cauinal be rescued from the floodwaters both because of its religious significance to the Maya-Quiche and because of its potential for generating a tourism industry.
- In May 1983, 34 leaders of settlements by the Chixoy reservoir assembled outside the palace of the President of the Republic and threatened not to eat until the promised road to link Cubulco with the emergency-housing settlements along the reservoir perimeter was completed. Extensive press coverage was given to this protest, and days later the President issued an order that prompted immediate construction of a road along the reservoir.
- An August 1983 petition presented to the President of the Republic by the members of the Junta Directiva de la Comunidad Indigena at Los Pajales and the Directors of the Local Committees for Reconstruction of numerous settlements in the indigenous highlands of the municipios of Cubulco and Rabinal signed by 490 leaders of indigenous towns and villages protesting their exclusion from "dam-affected status" and their inability to participate in reconstruction programs providing electricity, schools and health centers; their serious problems resulting from the lack of roads, lack of boats to cross the reservoir, interruption of trade routes, and inability to access traditional markets; and, pressing the urgent need to rescue the sacred site of Cauinal.

➢ Petitions from dam-affected communities occasionally produced some measure of desired outcome. More typically, petitions generated violence, the threat of violence, and other forms of intimidation to silence complaints. Petitions concerning the violence and failures to provide meaningful remedy were presented to all parties from the earliest stage of failed negotiation up to this day, including petitions submitted to the United Nations Commission on Human Rights, INDE, Guatemalan Government, and the World Bank. The threat of violence and other forms of intimidation continue to be directed towards community leaders, as evidenced by death threats received by community investigators and study coordinators working on this Chixoy Dam Legacy Issues Study in the spring of 2004, and, by INDE's issuance of warrants for arrest of several community leaders following the peaceful protest at the Chixoy Dam September 7-8, 2004.

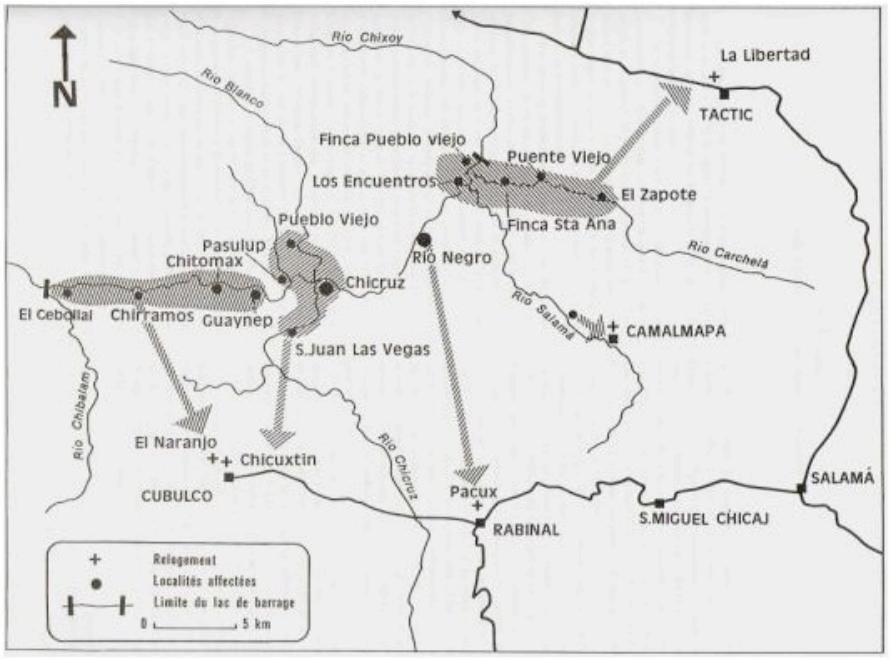
THE DAM-AFFECTED POPULATION

➢ The directly-affected population – physically displaced by the construction of the dam and its reservoir -- is significantly larger than presently or historically recognized by INDE and project financiers.

➢ Some families displaced by the dam were excluded from the initial census, others were disenfranchised by INDE in the post-project evaluation of 1991. A national census in 1975 found 170 families in Río Negro, the 1980 census adopted by INDE as defining the dam-affected community identified 150 families. In 1991, 44 of the 150 families were disenfranchised: some were not present at the time of 1991 census as they had left

Pacux in search of work, the majority were excluded because they were widows or orphans whose head of household had been killed in the Río Negro massacres.

Map 4: Displaced Communities who now live in Resettlement Villages



Map Credit: Douzant Rosenfeld 1988

- Downstream and upstream communities affected by the project have never been compensated for their losses, and were also subjected to intimidation and violence.

- The total affected population is significantly larger than presently or historically recognized. The scale of the total affected community is estimated in the August 1983 petition submitted to President of the Republic and signed by 490 indigenous leaders of towns and villages of the indigenous highlands of the *municipios* of Cubulco and Rabinal, who represented some 6,000 families. In actuality, this figure is most likely much higher. Preliminary efforts to identify the total extent of the dam-affected population in Chixoy Dam Legacy Issue Study initiatives in 2003 and 2004 produced findings that included communities in the municipalities of Cubulco, Rabinal, Santa Cruz, San Cristobal, and Chicaman (See Table 3, below).

Table 3: Chixoy Dam Affected Communities

Dam-affected communities with damages documented by the Chixoy Dam Legacy Issues Study…

Baja Verapaz	Alta Verapaz	Quiche
Río Negro, Rabinal	Rosario Italia, Santa Cruz	La Campana, Chicamán
Pacux, Rabinal	San Antonio Panec, Santa Cruz	Las Pajales, Chicamán
El Naranjo, Cubulco	El Zapote, Santa Cruz	
Chicruz, Cubulco	Agua Blanca, San Cristóbal	
Patzulup, Cubulco	Panquix, San Cristóbal	
Chitomax, Cubulco	San José Chituzul, San Cristóbal	
Chirramos, Cubulco	Agua Fría, Chicamán	
Pueblo Viejo Cahuinal, Cubulco		
San Juan Las Vegas		

Communities that presented damage complaints in outreach workshops and meetings, but were not visited by Chixoy Dam Legacy Issues Study investigators…

Baja Verapaz	Alta Verapaz	Quiche
Chivaquito, Cubulco		
Xinacati 2, Cubulco		
Pichal, Cubulco		
Pachijul, Cubulco		
Patuy, Cubulco		
Chitucán, Rabinal		

Communities known by workshop participants to have experienced damages from dam construction, but were unable to participate in outreach meetings and workshops…

Baja Verapaz	Alta Verapaz	Quiche
Xuaxán, Cubulco		Plan Grande, Chicaman
Guaynep. Cubulco		
Pachec, Cubulco		
Pacaní, Cubulco		
Camalmapa, Rabinal		
Chicután, Rabinal		
Canchún, Rabinal		

Downstream communities that were not researched, but based on information from adjacent communities are identified as probably affected…

Communities in the section of the river between Pueblo Viejo and Quixal
Communities adjacent to the tunnel that carries water from Pueblo Viejo, especially those which have experienced as the drying up of water sources, as in the case of La Campana, Chicamán, Quiche
Communities below Quixal, where the tunnel meets the rivers, especially damages relating to changes in water quantity and quality, and changes in the ecosystem of the river.
Communal owners of Finca La Providencia, where the tunnel meets the Chixoy River, where INDE has buildings.

CONSEQUENTIAL DAMAGES:
Loss of Land, Lives, and a Self-Sustaining Way of Life

Consequential damage assessment of pre-existing conditions and the current levels of access to critical resources demonstrate that the people living in this part of the Chixoy River Basin not only had the means to survive, but also clearly enjoyed the means to thrive. At the time of initial project construction, in the 1970s, land rights were secure, and communal rights in many cases dated back to the 1800s. Communities lived in the same region where their ancestors lived. Fertile river basin lands provided a biannual harvest, fish was plentiful and available year round, communal lands supported livestock and harvesting of palms and other resources to make saleable goods. Ancient trade routes connected the area to the highlands. The sociocultural fabric of life was tightly woven across a landscape maintained by trade, familial ties, cultural beliefs, and historical relationships.

Today, people who once enjoyed a largely self-sustaining way of life now struggle under severe conditions, where more and more of life's essentials can only be acquired with money. Money is needed to pay for water, power, firewood, commercial fertilizer, household food, clothing, school fees and supplies, land taxes, roofing and other materials to repair crumbling homes and community halls. Money is needed to travel to distant farmlands. Money is needed to pay for the time and assistance of lawyers and others who help prepare claims to secure long-promised compensation and other entitlements. And, people now lack access to the critical resources that once supported household and community income generation.

Volumes 3 and 4 identify some of the many and varied local consequences resulting from the construction of the Chixoy Dam. Consequential damages include the physical and mental health problems associated with surviving the violence – the individual experience of nervousness, anxiety, fear, depression, and deep enduring sadness; and the societal problems resulting from living in a continued climate of suspicion, stigmatization, and fear. No community is immune from this legacy of the violence. Many communities still struggle with the contentious conflicts created by inadequate or inconsistent compensation paid by INDE during the construction of the dam. All communities suffer from the loss of sacred and cultural sites, including their cemeteries, prayers sites, or as in Pueblo Cauinal, the loss of archaeological and ancestral site used by the communities for spiritual and recreation activities. All of the communities suffer from the transportation difficulties created by the construction of the dam and its reservoir. Some have to travel great distances and face dangerous crossings to move people and their products to towns and commerce centers. Other communities have lost all access to traditional markets such as the case of Los Pajales.

Some communities were displaced for several years, such as San Antonio Panec, displaced for 7 years in three different places until they were finally resettled. The years that went by while families where in constant displacement made it impossible to recover, let alone improve family and community conditions. The precariousness of the successive

resettlements impeded investing in the future. For example, nine years went by between the first emergency displacement and the definitive resettlement of the Rosario Italia community.

Some communities experienced partial displacement, meaning they were evicted from or forced to abandon their homes when floodwaters rose and moved their belongings to higher elevation. Fruit trees, vegetable gardens, coffee, corn and beans were lost in these evacuations. Some communities were never compensated for their losses, such as the Agua Blanca and La Campana communities, and others received inadequate compensation compared to the real value of the lost crops. In many instances, the homes and buildings of the communities destroyed by the flooding of the reservoir and by the failure of the tunnel below the dam were rebuilt by families through their own labor, with local materials and household resources. In numerous cases INDE did not provide assistance or compensation to rebuild homes and other structures.

For communities who were able to remain in the Chixoy River Basin and continue cultivating their lands in the banks of the reservoir or downstream from the dam, periodic flooding has seriously affected the length of the agricultural season and the number of harvest per year. Before the dam construction river-based settlements were able to reap two or three harvests per year in a piece of land. Today upstream land is inundated for months on end, restricting harvests to one or, rarely, two per year. Downstream, land is periodically flooded, and severe erosion has reduced soil fertility. Also, the construction of the dam has dried up wells and water sources that supplied water for downstream communities, such as in La Campana. Stagnant waters of the river and differences in water flow during the summer and winter have created conditions that cause diseases in people, such as malaria, and disease in fish. Many former fishing communities have seen the complete loss of local fisheries, such as the San Juan Las Vegas community.

All the resettlement communities experience problems from the lack of potable water, which has caused disease; problems with crowded homes and deteriorated buildings; inadequate land to grow food for the household; and, lack of income generation opportunities. For more than 20 years these communities have suffered from the lack of access to fertile lands, markets, and critical resources (fish, palm leaves, fruits, firewood). Extreme poverty has contributed to malnutrition, and many died for lack of food in the first years of resettlement. Health conditions continue to be precarious as many are unable to access traditional remedies and have no money to buy medicine. While resettled families have increased access to schools, they lack the money to send their children to school. Houses have not been improved, and homes for new families have not been built due to lack of construction materials and land. Surveys conducted by community investigators found as many as seven families living on a single lot provided by INDE. The newer generations lack employment alternatives because their parents' lands are too small to support increased cultivation and they do not have access to technical or higher education that would allow other possibilities. Lack of money has inhibited the emergence of small businesses, and the lack of a social network between displaced communities and their new hosts inhibits access to markets and opportunities to find new work.

The social fabric of the resettlement communities is frayed and stretched thin from overcrowding, lack of economic and social alternatives, and the consequences of the violence. Conflicts increasingly erupt over land title and use rights. Families struggle with the difficulties of rearing children with the absence of one or parents, who have been forced to emigrate to earn money. Communities have seen the growth of gangs and the problems of gang-related violence. There has been overall loss of traditional authority, increase in alcoholism, crime, drug use. And, the situation for widows and orphans, is all the more extreme. Conditions in the resettlement communities have caused numerous families to leave, some to the cities, but many returning to work degraded communal lands due to the lack of economic alternatives in the resettlement communities.

Some of the material consequences of these findings are illustrated in data generated in the 2004 survey of 179 households living in resettlement villages, and upstream and downstream communities in the Chixoy River Basin (see Volume 3).

Material damages include:

1. In cases where replacement land was provided to displaced communities, compensation was grossly inadequate. In 2004, some 97% of 179 surveyed households reported farmland holdings totaling some 1170 *manzanas*[6] before the dam (circa 1975), while current use rights total some 235 *manzanas*. In this population the area available to farm per household declined from a pre-dam average of 6.5 *manzanas* to a current average of 1.3 *manzanas*.

2. Displacement, loss of critical resources, and failures to provide the means to restore and improve the pre-existing way of life has had a devastating effect on the household economy. Before the dam, household production provided all food needs for 79% of the total survey population. Today, household production sustains the food needs for only 28% of the survey population.

3. In the resettlement communities (people displaced from the fertile river valleys of the Chixoy Basin), deterioration of household production is even greater, with 93% of the 119 surveyed households in the resettlement communities reporting the ability to provide all household food needs before the dam, and only 26% reporting this ability today. The declining ability to produce food is directly related to the loss of productive agricultural land, loss of pasture, loss of access to viable river and wildland resources, and relocation from traditional lands and settlements to an urbanized "resettlement" village where productive lands are scarce and located at great distance from the home.

4. Loss of access to critical resources has had a dramatic effect on dietary patterns, especially a decline in dietary protein. Survey data indicate:
   - Before the dam, 74% of all surveyed families reported eating fish several times each week. Currently, only 23% report access to fish at levels that allow consumption several times each week.
   - Consumption of meat several times each week dropped from 30% to 21%.
   - The percentage of households raising pigs dropped from 82% to 26%.

- Household ability to keep poultry declined from 96% with an average 34 poultry per household to 69% with an average 14 per household.
- Dairy and cattle production dropped from 70% of the 179 surveyed households who owned a total of 1115 cows, to 21% who now own a total of 121 cows.

Marked decline in dietary protein reflects development-induced impoverishment, one of the consequences of which is high rates of acute extreme malnutrition and infant mortality (Marini and Gragnoloti 2003; World Bank 2003).

5. The loss of access to fertile lands, pastures, river, and forest resources adversely affects household ability to generate monetary income.
   - To grow crops on rocky, infertile replacement land, communities are dependent upon commercial fertilizer. Before the dam none of the population purchased and used commercial inputs. Today 139 of the 150 households with rights to farmland purchase fertilizer at a total annual cost of Q54,754 (US $7,100). Because replacement farmland is distant from the home people must also pay for transportation to access their land. And, because replacement land is smaller and less fertile, production of surplus crops for sale in the marketplace has declined from 37% of households able to sell surplus, to the current 07%.
   - Before the dam, 44% of surveyed households were able to generate a surplus of goods to sell or trade from their garden and animals kept around the home. Currently, only 12% of surveyed households report producing a surplus of vegetables, fruit, chickens, eggs or livestock from their area to sell at market.
   - Before the dam 49% of surveyed households caught and sold fish 49%. Today, only 03% are able to catch and sale fish.
   - Before the dam, the forests provided a significant source of income. Today, resettlement communities lack access to forests, and for those remaining in the area the reservoir has inhibits access. As a result, the ability of surveyed households to harvest and sell palm leaves dropped from 81% to 32%; the ability of families to make and sell ocote torches declined from 56% to 02%; household access to and sell of firewood declined from 29% to 11%; and household ability to harvest and sell construction timber declined from 25% to 01%.

6. The inability to produce sufficient food and generate income from locally available resources has forced more people to leave home in search of work, and more families to rely upon remittances from an absent parent. Before the dam, some 54% of households reported leaving home for part of the year with their family to work on distant farms. Most of these respondents reported that before the dam they worked on distant farms only once or twice, as opposed to an annual income generation strategy. Today 43% of the households report income from migrant work on distant *fincas,* however this is a regular rather than occasional income generation strategy, with the male head of household gone for part or all of every year. In the past, only 2% reported leaving home to work in wage/labor jobs in the city. Today, 29% of households report income from one or more adult who lives and works year round in the city. This change has had profound consequences in the social dynamics of the family and is leading to a breakdown in cultural norms and traditions.

7. On paper, access to water and electricity for families living in resettlement villages appears to be better than the national rural average reported in the Guatemala Poverty Study (World Bank 2003). Electrical hookups are found in 97 of the 119 homes surveyed in resettlement villages, suggesting 81.5% of the homes have electricity (compared to 56% of the rural households nationally). Piped water in the home or yard is found in 77 of the 119 homes, suggesting 64.7% of the households have water (compared to 54% of the rural households nationally). *However*, in reality, water is not regularly provided through the pipes, when it is it requires additional payments, and in some villages, requires electricity to power the water pump. Lacking the money to pay the bills, people go without electricity and water. Thus, while only 9 families reported times before the dam when no water was available to drink or use for household needs, today 90% -- 107 of the 119 resettlement village households surveyed -- report such scarcity.

8. Resettlement village construction included a school, community hall, church, and a health center. However, promised staff and supplies for the school and health center were only provided by INDE for a couple of years in the 1980s. While a number of Guatemalan Government programs support education and health services elsewhere in the region, such programs are largely absent in the resettlement communities. Thus, while 58% of the rural population's children benefit from national school food programs, only 31.5% of the households with school age children living in resettlement villages report access to subsidized meal programs.

9. Resettlement village housing is crowded, crumbling, and does not allow for any expansion of the population over time. Homes in the resettlement villages are typically single-roomed homes on an urbanized grid, with little room to garden, grow trees, or keep poultry and other livestock, and no room to expand or build outbuildings to support an extended family. Resettlement village households reported a pre-dam household that averaged 6 people living in household compounds where over 90% of the population had space around the home to garden, grow fruit trees, and keep livestock. Today, these households contain an average of 7.5 people per home, although some households have only one or two people who are the survivors of massacre, while others have ten or more people representing two, three and four generations who share a single room home.

COMMUNITY NEEDS

The following summary of needs reflects the expressed concerns of dam-affected communities who participated in workshops and dam-affected community needs assessments reported in Volume 4, and the consequential damage assessments and qualitative interviews reported in Volume 3.

1. Sustainable economic alternatives for their livelihood.

The economic situation of dam-affected communities is extreme poverty. Needs prioritized by the community and mentioned in Volume 4 of this study include:

- Legal title to individual and community land, buildings, water rights, and other and property still needs to be established and transferred in a number of cases.
- Granting of full and equivalent replacement land for cultivation, pasture, and harvesting.
- Access needs to be provided to the communal lands on distant shores that have been lost due to the creation of the reservoir.
- Technical systems and assistance to support agricultural activities (drip irrigation and tractors) and technical systems and support to allow the sustainable diversification of agriculture, forestry, cattle ranching and fishing.
- Communities are interested in participating in reforestation programs and expanding production of market crops including food, medicinal plants, timber, poultry, cattle, and fish. Communities need access to seeds, fertilizers, post-harvest management, animal feed and vaccines.
- Given the unknowns with replacement land, communities need technical assistance to understand how to cultivate new lands, especially soil fertility studies, business plans and market analyses, and marketing strategies. And, communities need assistance in developing the basic infrastructure on replacement land, especially when farms are distant from homes, and lack the water and power to support residential occupation.
- Communities need assistance in developing business and marketing plans to launch and maintain manufacturing, fisheries, handicrafts, and other non-agricultural endeavors.
- Transportation issues are a significant problem throughout the region. Communities need assistance in regaining access to land cut off by the reservoir. Resettled communities need assistance in traveling to farm distant replacement land. Residents need help in safely transporting people and goods around and across the reservoir. In addition to transportation equipment (trucks, boats), communities desperately need improvement to existing bridges, construction of access roads, and the construction of a new bridge across the reservoir.
- Communities need resources and the educational and technical capacity training to allow for the creation of small enterprises (data processing and internet access, mechanical shops, beauty parlors, lawyers, and other professionals).
- Special attention is needed to address the social and economic development of women and youth. Education, jobs, social support, and recreational opportunities are all needed.
- Dam-affected communities are strongly interested in participating in effective efforts to decontaminate the polluted rivers and reclaim a healthy rivers, fisheries, and forests.
- Communities expressed the need to develop and implement a warning system to alert downstream communities of impending flash floods due to dam operations.
- Communities urgently need assistance in developing waste disposal strategies, and installing or upgrading sanitation systems.
- Communities are interested in identifying critical resource areas, establishing reserves, and managing and protecting green spaces.
- There is a strong desire to restore sacred sites, especially the complex of archaeological sites that rival Tikal in complexity and significance. Restoration of Cauinal through modifications to the Chixoy Dam, establishment of an on-site museum to display the artifacts excavated by archaeologists when the dam was built, the creation of education

and outreach programs that celebrate the cultural links to the sites and resident Mayan communities, and related tourism infrastructure development will all stimulate the local economy and create new employment opportunities.

2. Provide or upgrade basic services.

- Electricity. Most of the affected communities upstream and downstream from the dam do not have electricity. In the resettlement communities, where electrical hookups are present, it is expensive, service is irregular, and the necessity to pay contradicts previously held entitlements to free electricity.
- Water. Many communities lack potable water. Where this service exists it does not cover the entire needs of the community. All resettlement communities, and the villages in the broader region need construction and upgrade of basic water infrastructure systems such as water faucets, potable water supply, water tanks, outhouses, and septic systems. There is a need to ensure that promised or acquired water rights for resettlement communities are actually legalized in the name of affected communities.
- Education. Access to education should be strengthened. Communities urgently need teachers; an expansion of the curriculum beyond grade six; scholarships and access to government programs that subsidize the costs of education, especially for women and youth; and increased access to higher levels of education. Communities expressed interest in adult education and literacy campaigns, teleschooling, and seeing their children go to college.
- Health. Health services are very deficient in all communities. Malnutrition is evident, and childhood mortality from malnutrition is on the rise. There is almost a complete lack of doctors, nurses, and medicines in all of the dam-affected communities. When present, health promoters and community midwives are over-worked, and lack supplies or other forms of support. The communities expressed interest in gaining access to health education and prevention programs, as well as counseling and mental health, and drug education and abuse prevention programs.
- Housing. In the resettlement communities housing is in extremely poor condition. Problems include poor quality construction of buildings, inadequate roofing, small size, and inability to expand when families grow. In the broader region, extreme poverty inhibits efforts to improve housing conditions: money goes to food, rather than roofs, walls, windows, latrines, and other basic improvements.

3. Create and improve community infrastructure.

- In the resettled communities, streets and access roads need grading and asphalting. Some communities need new road construction and the repair of bridges.
- All communities need assistance with the construction, repair, and upgrading of public buildings including communal spaces, schools, kitchens for schools, health posts, and clinics to treat malnutrition.
- All communities need assistance with the construction, repair, and upgrading of infrastructure for spiritual development, education, culture, sports, and recreation. Communities expressed strong interest in improving churches and sanctuaries, restoring sacred places, building and improving soccer fields, creating libraries, building and expanding community museums, building playgrounds in settlements, restoring water quality to allow swimming in rivers, and building swimming pools.

- Fuel. Resettlement communities lack access to lands that provide wood for cooking. All communities need efficient cooking stoves.

4. Reinvigoration of social and cultural life.

Community needs assessments emphasized the need to attain justice and reparation for all the violence suffered by all communities during the process of involuntary resettlement and displacement. Actions identified by communities as central to a truth and reconciliation process include, restoring the dignity of victims and their surviving families through exhumations, creation of spaces for keeping the memory alive, economic compensation, provision of community mental health, and respect and strengthening of the traditional ways of life.

- To reinvigorate social and cultural life, assistance is needed in identifying funds and providing for organizational costs, employing staff and developing staff capacity.
- Assistance is needed in developing and financing community work programs, such as those that repair roads and provide transportation.
- Youth and the elderly: communities need space and programs that develop social, educational, and economic opportunities for youth, widows, and the elderly.
- Communities have a strongly expressed desire to rescue their cultural practices, historic memory, ancestral knowledge, including the restoration and reinvigorated use of sacred sites, costumes, and ceremonial traditions.

COMMUNITY PROPOSALS

As articulated in Volume 4 of this study, to repair damages, address the above needs, and restore livelihoods, the affected communities propose:

- Immediate actions to address emergency problems, such as the immediate provision of potable water, free electricity services, repair of bridges, upgrading of housing, and the resettlement of downstream residents whose lives and property are at risk from the operation of the dam.
- Provision of land of comparable quantity and quality to that lost.
- The establishment of a fund that could finance projects for the economic, social, environmental and cultural revitalization of all the communities affected by the Chixoy Dam. The trust fund should be endowed with sufficient funds to achieve development goals and needs of the affected communities. The community should be provided with technical support to develop a management strategy that allows active and meaningful participation of all dam-affected the communities in the identification, prioritizing, planning, evaluation and supervision of the projects and payments made by the fund.

To accomplish the above, the dam-affected communities see the urgent need for a complete census of the population, their damages, and their prioritized needs. Communities also see the need to establish locally-based mechanisms for conflict mediation and resolution for the

many problems associated with the dam construction, especially: problems of land ownership and use rights), conflicts within families and communities concerning the record of prior compensation, and the problems that may emerge from any reparation process. They recognize the importance of full participation of representative organizations from all communities in all activities of reparation, especially in the selection of trusted agencies to implement projects, capacity building and technical support. They recognize that the dam-affected communities include an array of actors with varied experiences during the violence. And, they have seen the positive effects of bringing disparate communities and actors together to share what is known about their history, grievances, needs and strengths. Finally, the dam-affected communities consider it important to develop a holistic approach to defining and prioritizing needs, rather than identify and respond to needs on an ad-hoc or crisis specific way.

RECONSTRUCTION AND REPARATION

Development Disasters and Institutional Obligations

The experiences of people living in and around the Chixoy Dam sharply reflect the predicted reality articulated by the World Bank's senior social scientist, Michael Cernea in his "Risks and Reconstruction" model. This model identifies the basic deprivations intrinsic in most forced displacements accompanying Bank financed projects and has been employed in a number of World Bank funded resettlement projects and post-project evaluation and reconstruction efforts (Cernea and McDowell, eds., 2000). The analytical framework recognizes eight socioeconomic consequences of forced displacement, including:

1. **Landlessness**: The expropriation of land removes the main foundation upon which people's productive systems, commercial activities, and livelihoods are constructed. Unless the land basis of people's productive systems is fully reconstructed elsewhere, or replaced with steady income-generating employment that sustains households and communities, the affected families will become impoverished.
2. **Joblessness**: Landless laborers, artisans, fishermen, and small businessmen and women all lose jobs when communities are uprooted. Creating new jobs is difficult and requires substantial investments. Unemployment or underemployment among resettlers often endures long after physical relocation has been completed.
3. **Homelessness**: The loss of housing and shelter results in a severe decline in living standards. In a broader cultural sense, the loss of a family's individual home also represents a part of the loss of a group's cultural space.
4. **Marginalization**: When families lose economic power, middle-income farm households struggle to survive on small landholdings. Small shopkeepers and craftsmen downsize and slip below poverty thresholds or become jobless as they have lost access to critical resources and markets. Individuals lack the social networks, and often the language, to integrate their old lives into a new social and cultural mileu. Marginalization involves more than a devastating economic decline. Marginalized people are often stigmatized. They suffer from a drop in social status, a loss of

confidence in society and self, a sense of injustice, at times, a self-defeating and perpetuating sense that their circumstance is their own fault. Psychological marginalization affects behavior, generates anxiety, and feeds a decline in self-esteem. These psychosocial effects have profound consequences in family and community relationships, especially with regard to respect and behavioral norms that once structured the relationships between the young and the old.

5. **Increased morbidity and mortality**: Serious declines in health result from displacement-caused social stress, insecurity, psychological trauma, and the outbreak of relocation-related illnesses, particularly parasitic and vector-born diseases such as malaria and schistosomiasis. Unsafe water supply and poor sewerage systems increase vulnerability to epidemics, chronic diarrhea and dysentery, and outbreaks of parasitic and vector-borne diseases such as malaria and schistosomiasis. The weakest segments of society -- infants, children, and the elderly -- are affected most strongly. People forced to relocate increase their exposure and vulnerability to illness, and to because the stresses of relocation and poverty, their comprised immune system makes the disease experience more severe. Exposure to the social stresses of relocation has a different effect on mental health depending upon age, gender, marital and occupational status.
6. **Food insecurity:** Forced displacement increases the risk that people will experience chronic undernourishment, defined as calorie-protein intake levels below the minimum necessary for normal growth and work. Undernourishment is both a symptom and result of inadequate resettlement. Sudden drops in food crop availability and/or incomes are predictable during physical relocation, rebuilding regular food production capacity at the relocation site may take many years, and hunger or undernourishment become lingering long term effects.
7. **Loss of access to common property and services**: For poor people, particularly for those who lack or have lost land and other critical resources, loss of access to common property (forested lands, water bodies, grazing lands, burial grounds, sacred sites) results in significant deterioration in income and livelihood. After losing the use of natural resources under common property, displaced people may be forced to encroach on reserved forests or to increase the pressure on common property resources of the host area population. This is a source of both social tension and increased environmental deterioration.
8. **Social disarticulation**: Forced displacement tears apart the existing social fabric and induces powerlessness -- it disperses and fragments communities, dismantles patterns of social organization and interpersonal ties; and abruptly transforms families who loss access to their kin. Life-sustaining informal networks of reciprocal help, local voluntary associations, and self-organized mutual service arrangements are dismantled. The destabilization of community life generates a state of crisis-laden insecurity and a loss of sense of cultural identity. The unraveling of spatially-based patterns of self-organization, interaction, and reciprocity is a net loss of valuable "social capital" that remains unperceived and uncompensated by planners. This real loss will mark and affect families, communities, and societies for generations to come.

The lessons emerging from this World Bank evaluation of its own past performance includes recognition that the failure to create, monitor, and effectively implement appropriate safeguards results in situational disasters, and presents obligations for the financiers that may last long after the project is completed and the loans have been paid. Thus, the above "Risks and Reconstruction" model has been used by the Bank to evaluate program failures in other regions and structure appropriate remedy addressing each of the eight categories of injury.

The fundamental obligation of project financiers to insure that social safeguards are effective, improve the quality of life, and when they do not – to provide effective remedy, was recently reconfirmed by the May 2003 report of the International Finance Corporation's (IFC, a member of the World Bank Group) Office of the Compliance Advisor/Ombudsman in relation to a complaint filed against the IFC's investment in ENDESA Pangue S.A., a hydroelectric generation project on the BíoBío River in Chile. In its conclusions, the Compliance Advisor/Ombudsman notes "…It is crucial, both for those people affected by the Pangue/Ralco projects, but also for the credibility of the IFC and the avoidance of similar experiences in the future, that ENDESA and IFC management resolve outstanding issues and compensate for past violations. As we know that ENDESA prepaid their loan, the most important leverage that the WGB [World Bank Group] presently has with the company is to refuse to fund new projects sponsored by the company or the many ENDESA-SPAIN controlled companies throughout the world" (CAO May 2003:48).

Reparation and the Right to Remedy

In this case of Chixoy Dam Development, reparation to address the many legacy issues have been demanded by the affected communities, and are clearly indicated. Before exploring possible ways to achieve remedy through reparation, it is important to clarify what is meant by this term.

"Reparation" means any action or processes that repair, make amends, restitution for something taken illegally, and compensation for injuries and related damages. The majority of reparations cases acknowledge war crimes including genocide, slave labor, human subject experimentation, and the war-time seizure of lands and property without due process or compensation. However, with the 1948 adoption of the Universal Declaration of Human Rights and subsequent expansion of international and national human rights and environmental law, a broader range of rights has been acknowledged, abuses or violations of rights documented, and increasingly, reparation is made to redress violations of international law committed in the name of colonial expansion, economic development, and national security. Thus, "reparation" means much more than cash compensation for damages. **Reparation incorporates an array of actions that acknowledge abuses; provides the means to repair or restore the problems associated with those abuses, including the improvement of livelihoods, society and culture; and, provides the political mechanisms and will to ensure "never again."**

In the 61st meeting of the United Nations Commission on Human Rights (UNHCR), the Commission adopted a resolution to accept and implement "Basic Principles and Guidelines to Reparation and the Right to Remedy" (E/CN.4/2005/L.48). In adopting this resolution the UNHCR recognized rights to reparation and remedy as already present in existing laws and

treaties, including laws that recognize the common concerns of humanity as superseding sovereign rights, and in particular the Universal Declaration of Human Rights at article 8, the International Covenant on Civil and Political Rights at article 2, the International Convention on the Elimination of All Forms of Racial Discrimination at article 6, the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment at article 14, the Convention on the Rights of the Child at article 39, and of international humanitarian law as found in article 3 of the Hague Convention of 18 October 1907 concerning the Laws and Customs of War and Land (Convention No. IV of 1907), article 91 of Protocol Additional to the Geneva Conventions of 12 August 1949 relating to the Protection of Victims of International Armed Conflicts (Protocol I), and articles 68 and 75 of the Rome Statute of the International Criminal Court.

The Rome Statute of the International Criminal Court requires the establishment of "principles relating to reparation to, or in respect of, victims, including restitution, compensation and rehabilitation" and requires the Assembly of States Parties to establish a trust fund for the benefit of victims of crimes within the jurisdiction of the Court, and of the families of such victims, and mandates the Court "to protect the safety, physical and psychological well-being, dignity and privacy of victims" and to permit the participation of victims at all "stages of the proceedings determined to be appropriate by the Court."

The provisions providing a right to a remedy for victims of violations of international human rights are found in regional conventions, in particular the African Charter on Human and Peoples' Rights at article 7, the American Convention on Human Rights at article 25, and the European Convention for the Protection of Human Rights and Fundamental Freedoms at article 13.[7]

Adopted guidelines address remedies for gross violations of international human rights law and serious violations of international humanitarian law include the victim's right to (a) equal and effective access to justice; (b) adequate, effective and prompt reparation for harm suffered; and (c) access to relevant information concerning violations and reparation mechanisms. A victim of a gross violation of international human rights law or of a serious violation of international humanitarian law should have equal access to an effective judicial remedy, and compensation shall be provided for any economically assessable damage, as appropriate and proportional to the gravity of the violation and the circumstances of each case.

Full and effective reparation involves remedy in the following forms: restitution, compensation, rehabilitation, satisfaction and guarantees of non-repetition.

Restitution refers to actions that seek to restore the victim to the original situation before the gross violations of international human rights law or serious violations of international humanitarian law occurred. Restitution includes, as appropriate: restoration of liberty, enjoyment of human rights, identity, family life and citizenship, return to one's place of residence, restoration of employment and return of property.

Compensation refers to economic payment for any assessable damage resulting from violations of human rights and humanitarian law. Assessed damage includes:

- Physical or mental harm, including pain, suffering and emotional distress;
- Material damages and loss of earnings, including loss of earning potential;
- Moral damage-- harm to reputation or dignity;
- Costs required for legal or expert assistance, medicine and medical services, and psychological and social services.

Rehabilitation -- includes medical and psychological care as well as legal and social services.

Satisfaction includes almost every other form of reparation and under the U.N. Guidelines include, where applicable, any or all of the following:

- Effective measures aimed at the cessation of continuing violations;
- Verification of the facts and full and public disclosure of the truth to the extent that such disclosure does not cause further harm or threaten the safety and interests of the victim, the victim's relatives, witnesses, or persons who have intervened to assist the victim or prevent the occurrence of further violations;
- The search for the whereabouts of the disappeared, for the identities of the children abducted, and for the bodies of those killed, and assistance in the recovery, identification and reburial of the bodies in accordance with the expressed or presumed wish of the victims, or the cultural practices of the families and communities
- An official declaration or a judicial decision restoring the dignity, reputation and legal rights of the victim and/or of persons connected with the victim;
- Public apology, including acknowledgement of the facts and acceptance of responsibility;
- Judicial or administrative sanctions against persons responsible for the violations;
- Commemorations and paying tribute to the victims;
- Inclusion of an accurate account of the violations that occurred in international human rights law and international humanitarian law training and in educational material at all levels.

Guarantees of non-repetition include, where applicable, any or all of the following measures, which will also contribute to prevention:

- Ensuring effective civilian control of military and security forces;
- Ensuring that all civilian and military proceedings abide by international standards of due process, fairness and impartiality;
- Strengthening the independence of the judiciary;
- Protecting persons in the legal, medical and health-care professions, the media and other related professions, and human rights defenders;
- Providing, on a priority and continued basis, human rights and international humanitarian law education to all sectors of society and training for law enforcement officials as well as military and security forces;
- Promoting the observance of codes of conduct and ethical norms, in particular international standards, by public servants, including law enforcement, correctional,

media, medical, psychological, social service and military personnel, as well as by economic enterprises;
- Promoting mechanisms for preventing and monitoring social conflicts and their resolution;
- Reviewing and reforming laws contributing to or allowing gross violations of international human rights law and serious violations of international humanitarian law.

In this case of Chixoy Dam Development, restitution, compensation and rehabilitation for the illegal taking of land, other property, and livelihood are required not only to foster the "building blocks of reconstruction" as outlined in Cernea's model and achieve the "right to remedy" but recognize and provide redress for the gross violations of international human rights law, including the violence associated with and resulting from flawed development plans, inept implementation of social safeguards, involuntary displacement at gunpoint, torture, threats and continued violence as a means suppress the rights of victims rights to seek remedy, and massacres that have been investigated and determined to be evidence of genocide.

Reparation for massacre survivors is mandated by the 1996 Peace Accord in Guatemala, and has most recently been confirmed in the December 2004 "Plan de Sanchez" ruling by the December 2004 ruling of the Inter-American Human Rights Court finding the Government of Guatemala responsible for the massacre of 188 Achi-Maya in the village of Plan de Sanchez in the mountains above Rabinal, Baja Verapaz and ordering reparation of US$25,000 per surviving family (IACHR 2004).

It is important to note that the United Nations Commission for Human Rights resolution to adopt "Basic Principles and Guidelines to Reparation and the Right to Remedy" received no opposing votes, and was adopted with the vote of 40 nations, including the nation of Guatemala.

RECOMMENDATIONS:
Seeking Meaningful Remedy for Chixoy Dam-Affected Communities

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With regard to this case of Chixoy Dam Legacy Issues, the first, fundamental remedy is to recognize that dam-affected communities represent much more than technical problems to be simply moved out of the way of development. Especially in this case where resident communities hold title to the land and cultural ties to an ancient past, dam-affected communities must be seen as beneficiaries of the development enterprise, with rights to information, full and meaningful participation, and opportunity and obligations of project partnership.

The many legacy issues of the Chixoy Dam outlined here and documented in greater detail in the supporting volumes of this study point to the obligation for all parties to provide remedy

for the consequences of failures to protect the right to life and livelihood, the right to fair and just compensation, and the right to remedy, in proportionate responsible order:

- INDE;
- The Government of Guatemala;
- World Bank;
- Inter-American Development Bank.

Recommended remedial actions include:

1. Compensation for personal injury and loss of life;
2. Restoration of access to critical resources, including full and comparable replacement land;
3. Improved housing conditions;
4. Access to health and education funds, personnel, and programs;
5. Passing and enforcing legislation that strengthens indigenous sovereign rights, and legislations that establishes a free and prior informed consent requirement in development;
6. The establishment of a social/economic/cultural development trust fund with interest, in perpetuity, used to finance projects that benefit the dam-affected communities in Alta Verapaz, Baja Verapaz, and Quiche.

It is recommended that the high level commission established by the Government of Guatemala in the fall of 2004, consider as its initial work the establishment of a legally binding five-tiered plan for remedy that involves:

Tier I **Immediate actions to address the dire needs of resettled, disenfranchised, and stigmatized communities.** Tier-one initiatives should involve INDE, in consultation with the World Bank, the Guatemalan Government, and affected community representatives, establishing a mechanism and process to register as affected people those households and communities who were excluded from recognition in the original formation of resettlement plans and agreements, and those households and communities who were later alienated from resettlement and compensatory programs. INDE and the Guatemalan Government should provide emergency relief to households and communities who suffer from the lack of water, electricity, and deteriorating housing. Significant effort should focus on the conditions and threats faced by downstream communities, especially those facing new evictions as a result of mining activities sustained by power and infrastructure improvements accompanying the construction of the Chixoy Dam. And, the Guatemalan Government should assess and remedy the gaps in their delivery of social, economic, education, and public health services in the Alta and Baja Verapaz Districts.

Tier II **Reconstruction of the Chixoy River Basin and resettlement communities**: especially the improvement of individual, household, community and regional health, education, economic opportunity, environmental quality, and sociocultural and spiritual wellbeing. Tier-two initiatives include economic development, social program, and infrastructure development grants, and should be funded by technical assistance and direct grants from the financial institutions that profited from this project. The shaping and prioritization of project proposals, construction, and

implementation should occur with the full and meaningful participation of affected communities.

Tier III **Community and family specific remedies that reflect a commitment to restore, repair, and improve the conditions of life in the Chixoy River Basin, and in the resettlement communities.** Tier-three initiatives should be funded by the interest accrued in a trust fund established by profit realized in the privatization of INDE and the repayment of Bank loans. The fund would be established with contributions from INDE, the Government of Guatemala, the World Bank and the Inter-American Development Bank. Management of the fund should occur in transparent ways, with local representation. Prioritization of projects and the distribution of funds should be controlled through the consensus-decision making institutions established by the dam-affected communities.

Tier IV **Reparation and reconciliation with respect to violence accompanying the construction of the Chixoy Dam** including violence associated with resettlement negotiations, the assassination of community leaders and the theft of community records, and the massacres of the Rio Negro community and the communities that sheltered Rio Negro survivors. Tier-four remedy should by funded by the Government of Guatemala in compliance with the 1996 Peace Accords and build upon the findings and compensatory awards announced by the Inter-American Court of Human Rights in the Plan de Sanchez vs. Government of Guatemala case (December 2004). Tier-four remedy might include reparation paid to surviving families, as well as Guatemalan Government support and assistance in exhuming massacre sites, establishing and protecting memorials, establishing and supporting museums, and providing health and social services to assist in the reconciliation process within and between communities. And, tier-four remedy includes insuring a rights-protective arena to bring legal action against culpable parties in documented massacres. To implement compensatory elements of tier-four remedy, the Government of Guatemala might consider establishing a Claims Tribunal composed of three judges -- two judges from other nations appointed by the United Nations or other neutral party, one judge from Guatemala -- to receive and adjudicate claims from injured families and communities. Claims would be developed with the assistance of the Claims Tribunal Office of the Public Advocate, whose office would undertake a comprehensive effort to identify injured parties, facilitate in the costs and technical assistance associated with the preparation of claims, and, if parties so desire, act as legal counsel in any claims proceedings.

Tier V **Political actions and initiatives that acknowledge and address the historical wrongs of this case of hydroelectric dam development subsidized by the lands, livelihood and lives of societies' most vulnerable people, and political action that insures "never again."** Tier-five remedy would be implemented by the government of Guatemala and INDE, and should include restoring access and rebuilding sacred sites, supporting cultural education and revitalization efforts, passing and enforcing laws that strengthen indigenous rights, especially the right to free and prior informed consent in the development process, placing a moratorium on all new hydroelectric

development until the legacy issues of the Chixoy Dam are resolved, and actions are taken to insure that new development reflects the participatory and best practice guidelines, in particular, the Policy Principles established by the World Commission on Dams. Project affected peoples must be provided with the legal means and the right-protective space to participate as free and informed actors in development, their participation should be supported in full by the agencies and institutions involved in the project, and should they agree to large scale development proposals, they must be able to enjoy the social and material benefits of development.

All parties must recognize that there are consequential damages resulting from failures to meet the obligation to provide just compensation for losses resulting from the construction and operation of the Chixoy Dam, and agree that these damages will be assessed and remedies identified and implemented within a reasonable, and mutually defined time frame.

All parties should recognize that current conditions and problems experienced by the Chixoy Dam affected communities are the result of actions that took place in the 1970s and 1980s, as well as the inaction of agencies and institutions that extend to this day. Thus, parties must agree that the responsibility to fund remediative actions is shared and should be proportionately distributed.

All parties should work to develop and implement a plan for financing remedies. Financing of a reparation agreement might occur through:

- Government of Guatemala, INDE, and DEORSA agreements to access the Rural Electrification Trust Fund. Dam-affected communities are titled owners of land and injured parties from INDE use of their land and constitute a legitimate third party claimant to these funds. The Guatemalan Government should order an audit of the Rural Electrification Trust Fund, and a legal opinion by a neutral party as to whether the dam-affected communities, given their status as land title holders and the failure to extinguish existing obligations when the fund was created, can seek compensation and recourse as a legitimate third party of this fund. The Guatemalan Government should instruct the Bank of New York to withhold the disbursementof any additional funds until the matter of compensation and reparations is determined by all parties to be no longer at issue.

- Government of Guatemala and INDE might consider developing equity or revenue share arrangements with the communities who were displaced from the river basin, and those who still hold title of the reservoir, dam, tunnels, and power generation facility. Equity sharing is one means to ensure that a share of the returns from the project go to the negatively affected people, who apart from giving up their homes and ancestral domain have to take the now universally acknowledged risks associated with displacement and resettlement. Revenue sharing mechanisms allow the redistribution of part of the revenue to accrue to community and other local or regional state authorities in the form of royalties tied to power generation.[8]

- The World Bank and the Inter-American Development Bank might consider designating a portion of the profit earned from interest on Chixoy Project loans and

direct these funds as grants that support infrastructure, economic development, social programs, and community improvement trust fund contributions.

And finally, it is recommended that the terms of agreement with respect to remaining obligations from the construction of the Chixoy Dam and the implementation of remedial actions, be shaped through an open, transparent negotiation process with the full and meaningful involvement of dam-affected community representatives. Full and meaningful participation involves the right to participate in all negotiations accompanied and assisted by legal counsel and other experts of their own choosing, the right to present community documentation of complaints and independent assessments as evidence of damages and injuries, and, the right to review (and the assistance of technical experts in this review) evidence supporting INDE, World Bank and Inter-American Development Bank claims concerning compensation and resettlement plans and performance. The costs associated with full and meaningful participation should not be shouldered by the dam-affected communities, but is the appropriate responsibility of Chixoy Dam project developers and financiers.

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ENDNOTES

[1] It is important to define what is meant by "independent assessment." Typically, post-development project assessment of the performance of social programs occurs in one of three ways: via in-house staff review, by consultants contracted by financiers to conduct an external review, or by staff of the nongovernmental organizations that make up the activist community. In each of these situations findings can be muted by controversy over the independent status of the review, as one party or the other claims an interest or agenda, which contaminates the independent findings. In this case conscious effort has been taken to ensure that the review is transparent, thorough, and independent of the various parties. While many people contributed their time and energy to locate, reproduce, translate and interpret information, the selection and articulation of relevant events and the summary findings discussed elsewhere in this Chixoy Dam Legacy Issues Study, unless otherwise noted by citation, formal declaration, or endorsement, are the sole responsibility of the author.

[2] In November 2004, a briefing memo and preliminary findings from the Chixoy Dam Legacy Issues Study were reviewed by an international panel of social impact assessment and resettlement experts and advocates in Santa Fe, New Mexico. The review was cosponsored by Center for Political Ecology; American Association for the Advancement of Science, Science and Human Rights Program; Society for Applied Anthropology; American Anthropological Association Committee for Human Rights; International Rivers Network; The Cornerhouse; and, the International Resettlement and Displacement Network. Findings include recognition that: significant violations of law and financial institution procedures occurred, financial institutions as well as host government agencies and private contractors share liability, and considerable obligations remain. In it's "Santa Fe Group Statement" the peer review panel called for an array of actions including a negotiations process that allows independent examination of claims, neutral mediation, and the provision of remedies that address immediate urgent needs as well as the long-term socioeconomic needs of the communities and the region. See "Santa Fe Group Statement" http://www.aaanet.org/committees/cfhr/rpt_chixoy.pd.

[3] The conceptual approach was developed by Barbara Rose Johnston following consultations with Annie Bird, Monti Aguirre, and Jaroslava Colajacomo, and critical review from anthropologists Linda Greene, Kathy Dill, Michael Cernea, Bill Partridge, Ted Scudder, Linda Raben, Bob Hitchcock, Ted Downing, Beatriz Manz, and Laura Nader. Iñaqui Aguirre served as Project Coordinator for the dam-affected community history and needs assessment research and facilitated the production of community narratives and summary reports. Rolando Cujá trained community investigators and supported their efforts to develop histories and needs assessments. Diego Martinez conducted land title research. Targeted interview and household survey questions were developed with critical input from Linda Green. Household surveys were carried out with the assistance of fourteen community investigators who had completed a four-month training program, Maya/Spanish translators, three project researchers, and field study coordinator Bert Janssens. All research data was assessed and interpreted by Barbara Rose Johnston. Draft and final reports were translated by Samuel Dubois, Monti Aguirre, Marie Manriquez, and Daniel Navarro.

[4] This study was proposed at a meeting of dam-affected communities held in Pacux on July 26, 2003. Community representatives returned home, discussed the project and selected representatives to participate in needs assessments. Workshops, trainings, and dam affected community needs assessment began in September of 2003 facilitated by Iñaqui Aguirre with the assistance of Annie Bird of Rights Action Guatemala. Rolando Cujá served as local coordinator, working with the leaders of organizations representing Pacux, El Naranjo, Rosario Italia, and San Antonio Panec. Communities selected their investigators – men and women who had the ability to read, write, and had the time to attend workshops and conduct community investigations. Fourteen investigators were selected by a community assembly or named by community leaders. Participation later expanded at the request of other affected communities, and investigators were trained and worked in Agua Blanca, El Zapote, La Campana, Panquix, San José Chitzul, San Juan Las Vegas, Chicruz, Patzulup, and Agua Fría. Project coordinators also conducted research in Aldea Rio Negro and San Juan Las Vegas Caserío. Summary findings of dam-related history and needs of 15 different communities are presented in Volume 4 of this Chixoy Dam Legacy Issues Study.

[5] Land title research was conducted by Diego Martinez (January - July 2004). Results are presented in Volume 5 of this Chixoy Dam Legacy Issues Study. Work includes a cadastral, or land measurement based on files from the *Archivo General de Centro America* and extracts from the *Indice General del Archivo del Extinguido Juzgado Privado Tierras* (a historical archive that describes disputes over land). Properties affected by the dam basin are listed and certified copies of the records of each property, twenty-six all together, are included. Information recorded in the National Registry on each property is also summarized -- name, size, location, name of owner according to first and last inscriptions and certified copies of the land registry for each property and a transcription of each title is included. These documents demonstrate that legalization of private and public lands and properties has not been completed. Transfer of title for housing and replacement farm property has, in some cases, not been completed. Portions of submerged lands, and portions of land beneath the construction works, dam, hydroelectric facility, and tunnel are the titled property of Mayan communities and individual private holders. Implications of this evidence include: The Inter-American Development Bank granted the initial construction loan without evidence that INDE held title to the development site. The World Bank granted a 1978 and 1985 loan without evidence of clear title. Privatization of INDE occurred without demonstration that all remaining obligations to a class of claimants, displaced and dam-affected citizens, have been met.

[6] Measurement of land: 1 manzana = 0.7 hectares.

[7] "Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Violations of International Human Rights and Humanitarian Law" (E/CN.4/2005/59) deals with obligations to respect, ensure respect for and implement international human rights law and international humanitarian law; the scope of the obligation; gross violations of international human rights law and serious violations of international humanitarian law that constitute crimes under international law; statutes of limitations; victims of gross violations of international human rights law and serious violations of international humanitarian law; treatment of victims; victims' right to remedies; access to justice; reparation for harm suffered; access to relevant information concerning violations and reparation mechanisms; non-discrimination; non-derogation; and rights of others.

[8] "Equity sharing mechanisms in hydropower projects as applied by Hydro Quebec are illustrated by the case of the Pesamit Agreement (1999) signed between Hydro Quebec and the relatively poor indigenous community of Betsiamites through the Band Council of the Montagnais. According to the agreement the community of Betsiamite may invest up to 17.5% of the total construction cost of partial river -diversion. In return the community can benefit from equivalent revenues from energy generated. Hydro Quebec will buy the power from Betsiamites over a 50 year period under an agreed price formula. Hydro Quebec has also entered into agreements with concerned Regional Municipalities towards establishing a joint-partnership company for river-diversion projects… Revenue sharing is a mechanism used in Brazil, where the constitution of 1988 and Law 8001 of 1990 requires 45% of royalties from hydropower projects to be paid to municipalities, which have lost land to the dam. Revenue flow from the Itaipu project to sixteen local municipalities who had lost area to the project, amount to US $ 70 million per year. Similarly, in Colombia under the National Law 99 promulgated in 1993, all new power generation plants of more than 10 MW capacity must transfer part of project revenues to local watershed agencies and concerned municipalities. Decree 1933 promulgated in 1994, specifies that 3% of project revenues should be transferred to municipalities bordering the project site and located on the watershed upstream" (Bartolome et al, 2000:28-29).