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AMEMBASSY GUATEMALA

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FOR USAID/OFDA, USAID/LAC/AA, USAID/LAC/CEN, SOUTHCOM, USGS,
NOAA, FEMA, USDA/FAS, CDC ATLANTA.

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SUBJECT: USAID/GUATEMALA HURRICANE MITCH RECONSTRUCTION
COMPLETION REPORT

1. SUMMARY: United States Government (USG) financed reconstruction assistance has significantly enhanced rural productivity, health and sanitary conditions in affected areas in Guatemala achieving program targets set in nearly all areas. USG assistance has moreover been effective in strengthening both national and local disaster preparedness through the effective partnership of USAID and other USG agencies. This cable documents how \$71 million in total USG assistance was utilized, results achieved, and lessons learned from this successful emergency response and reconstruction program. Direct damages to infrastructure, crops, housing, schools and clinics was estimated at \$550 million plus another \$280 million lost due to disrupted exports and reduced economic activity. To this was added the human toll of 268 dead, 106,000 evacuated and a total of 750,000 people affected. Public infrastructure, private housing, and economic activity led by agriculture, were hard hit. Following the storm, USAID responded initially with emergency assistance and rehabilitation support and subsequently with a two-year reconstruction program. The \$71 million of total USG Hurricane Mitch assistance was implemented through USAID, \$34.8 million; Department of Defense (DOD), \$30.0 million; USAID's Office of Foreign Disaster Assistance (OFDA), \$2.0 million; U.S. Department of Agriculture (USDA), \$1.6 million; U.S.

Geological Survey (USGS), \$1.3 million; national Oceanic and Atmospheric Administration (NOAA), \$1.2 million; Federal Emergency Management Agency (FEMA) \$0.5 million. All USG assistance programmed for Mitch reconstruction was completed by December 31, 2001, except for one irrigation rehabilitation activity that concluded in January 2002. Through local initiative to extend and expand projects, benefits will continue to accrue after Mitch Reconstruction is completed.
END SUMMARY.

2. EMERGENCY ASSISTANCE PHASE: After the Government of Guatemala (GOG) declared a disaster, the USG through USAID and DOD, provided \$9.5 million in emergency assistance. This assistance consisted of \$1.5 million in emergency water supply and housing materials provided through USAID/OFDA; \$4.0 million in PL 480 Title II food commodities to help the GOG minimize loss of life and to help affected villages begin to recover; \$4.0 million went for U.S. Army helicopter support for search and rescue operations and for the distribution of emergency supplies.

3. REHABILITATION PHASE: Following the initial emergency, the GOG implemented a 100-day program designed to focus assistance on efforts to normalize living conditions in affected communities. The USG provided \$30 million during this phase. The first \$2.8 million was redirected from ongoing USAID programs help the Ministry of Health distribute medicines and supplies to prevent the spread of cholera and acute diarrheal diseases and to help the Ministry of Agriculture repair small irrigation systems. A total of \$26 million was provided through the Department of Defense's New Horizons program to help communities begin rebuilding schools and health posts. Finally \$1.2 million in monetized food aid under the US Department of Agriculture's Section 416B was program used to assist the Ministry of Agriculture construct flood control dikes. The rehabilitation phase was intended as a bridge between the emergency response and the more permanent reconstruction period that would follow, once greater amounts of international resources were obtained to initiate a formal reconstruction program. The international donor community, led by the Inter-American Development Bank (IDB) held a Consultative Group (CG) meeting May 25-29, 1999 in Stockholm, Sweden to address Hurricane Mitch Reconstruction in the Central America Region.

4. RECONSTRUCTION PHASE: The GOG presented a reconstruction plan at the May 1999 CG meeting that centered on three broad areas: Enhancing the country's capacity to prepare for and

respond to disasters, rehabilitating the agricultural economy, and strengthening health systems as a component of disaster preparedness. The USG pledged and delivered \$32.5 million of assistance to help the GOG achieve targets laid out in its reconstruction plan. The USG package consisted of \$5.5 million directed at improving disaster preparedness; \$24 million for rehabilitating agriculture and restoring important watersheds; and \$3 million for improving community health systems in the areas of water and sanitation, hygiene education and malaria and dengue fever control. The program was implemented between June 1, 1999 and December 31, 2001. By the December completion date, the program had achieved most of its expected targets in all three components.

5. DISASTER PREPAREDNESS: The GOG immediate response to Hurricane Mitch pointed out clear weaknesses in the national network of disaster response, from poor communications between central and local disaster coordination committees to the absence of pre-identified logistical support channels and arrangements. Notwithstanding a 1996 law creating a civilian, decentralized national emergency management agency (known locally as CONRED) little had been done to implement the new system. Following Hurricane Mitch, the GOG made the systematic preparation for future disasters one of its highest priorities. The USG committed \$5.5 million for enhancing disaster preparedness. USAID directly managed \$1.5 million, and the other \$4 million were implemented through other USG agencies including NOAA, USGS, FEMA, CDC, and the USDA/Forest Service. The highly specialized technical expertise drawn from multiple USG agencies has enabled Guatemala to significantly strengthen its technical capacity and put in place more modern disaster alert systems.

6. DISASTER PREPAREDNESS RESULTS INCLUDE:

- CONRED, the GOG's national emergency management agency, strengthened through the design, construction and equipping of a modern Emergency Operations Center in Guatemala City.
- One hundred fifty-two local community and 6 municipal disaster reduction coordination committees formed as part of the CONRED national system.
- INSIVUMEH, the national meteorological institute, strengthened through the installation of modern equipment and training that included: 8 automatic weather and rain gage stations; 2 automatic tide gages; 10 manual weather stations; 4 telemetric stream-flow networks; 5 UHF radios and 1 repeater station; 1 flood warning system for the Polochic river watershed area; installation of a local area computer network;

2 satellite imagery receiving stations; 5 staff trained in satellite meteorology, hydrological forecasting, tropical weather and flood forecasting. INSIVUMEH also received landslide and volcano risk mapping capacity that included digitized maps, computers and technical training.

- CONRED and INSIVUMEH both benefited from aerial photography and satellite imagery in the development of geographic information systems for improved disaster planning.

- National health laboratories improved their disease prevention and response capability through epidemiological training provided by the CDC and the Association for Public Laboratories.

- Forest fire management plans and prevention, weather data collection and analysis, and landslide mitigation infrastructure developed for the Sierra de Las Minas biosphere forest reserve.

At the close of the two-year Hurricane Mitch Reconstruction program, USAID/Guatemala is very confident that CONRED is much better prepared to respond to future disasters. Equally important, a national system has begun to take shape with a hierarchy of responsibilities becoming manifest in the form of municipal and local disaster coordination units. Finally, the efforts to strengthen both CONRED and INSIVUMEH, have laid a solid foundation for the implementation of activities directed not only at disaster response, but to mitigation and prevention as well.

7. AGRICULTURAL PRODUCTIVITY RECOVERED: In the northern and eastern departments of Guatemala, Hurricane Mitch destroyed agricultural productivity, affecting thousands of already impoverished rural families. Over 17,000 small farmers lost their crops and seed stocks, and damage to irrigation systems left over 20,000 small farmers without irrigation service. Hillside farmers were affected by landslides, damage to farm to market roads, and the loss of small holder coffee stands.

In response, USAID programmed \$24 million to help the GOG recover small farmer productivity. Activities included rehabilitation of irrigation systems, construction of stream bank protection and flood control infrastructure, restoration of crucial farm to market roads and bridges, the rebuilding of basic grain seed stocks, rehabilitation and reconstruction of coffee processing facilities, and the rehabilitation and reforestation of important watershed and hillside areas.

8. THE TWO YEAR AGRICULTURAL PROGRAM PRODUCED THE FOLLOWING RESULTS:

- With design assistance provided by the US Army Corps of Engineers (USACE), USAID, through the Ministry of Agriculture (MAGA), implemented 9 irrigation rehabilitation and flood control infrastructure projects benefiting a total of 15,000 hectares of farmland. Over 20,000 small producers were again productive after these projects were completed.
- Through the national coffee association, USAID rehabilitated 1,600 hectares of coffee plantations, and reconstructed or rehabilitated 18 coffee processing plants benefiting a total of 14,000 small coffee growers.
- With USAID financial support, the MAGA implemented a seed recovery program to bring improved corn, bean, rice, potato, and sesame seed to 17,000 producers who lost seed stocks to Mitch. The program produced certified seed for each kind. Total seed quantities produced include 430,000 lbs. of corn, 204,000 lbs. of rice, 15,000 lbs. of sesame, 72,000 lbs. of black bean, and 150,000 lbs. of potato.
- A total of 13,200 small rural enterprises benefited from \$2 million worth of micro-credit loans.
- The program rehabilitated 202 kilometers of rural farm to market roads (28 additional kilometers will be completed in 2002 by beneficiary municipalities), and reconstructed or repaired 13 bridges.
- Working through private voluntary organizations and local non-governmental organizations, USAID successfully reforested 1,198 hectares of land, and implemented agro-forestry activities on another 1,863 hectares, all in Mitch-affected watershed areas.
- Hallmark achievements in this component begin with a successful Participating Agency Service Agreement (PASA) with the US Army Corps of Engineers. The PASA led to the design of twenty-two irrigation rehabilitation and flood control infrastructure projects. USACE's willingness to work with USAID in scaling their work to fit the environment of rural Guatemala, without compromising on design and construction standards, created the ingredients for success. USAID-managed Mitch funds were sufficient to implement nine of USACE's designs. The eleven unimplemented designs are fully developed including budgets, and are ready to go as the Government of Guatemala secures funding for them, and the Mission and MAGA will have a continuing relationship with USACE to call upon their services, if needed.

Finally rehabilitation targets for roads, bridges, hectares of watershed, hectares of farmland, coffee mills, and small enterprises were met, and often exceeded. The productive lives of people were restored.

9. COMMUNITY DISEASE PREVENTION AND CONTROL SYSTEMS

STRENGTHENED: In many parts of Guatemala, infectious diseases such as malaria, dengue, cholera and other diarrheal diseases have long been serious problems. Hurricane Mitch created greater vulnerability in areas directly affected by the storm. In addition, many rural areas lack access to potable water and proper sanitation. Hurricane Mitch exacerbated this situation as well.

USAID programed \$3 million to improve malaria prevention and case detection and treatment, help relieve some of the water and sanitation deficit, and help develop a dengue response plan for Guatemala.

10. THE TWO YEAR PROGRAM PRODUCED THE FOLLOWING RESULTS:

- With assistance from the CDC, an insecticide-treated bed net program was developed that included the production, treatment and distribution of 11,275 bed nets to 38 malaria affected communities.
- Malaria case detection and treatment was facilitated by the training of 414 volunteer community collaborators who visited over 40,000 homes.
- Epidemiological surveillance of malaria was initiated in the project area to identify positive cases and to monitor treatment.
- A vector-monitoring component was initiated to better understand the effect of insecticide-treated bed nets on the vector population.
- With the assistance of US private voluntary organizations, a total of 40 water systems, 109 water wells, and 5,449 latrines were constructed or repaired.
- Over 8,000 five-gallon water receptacles with chlorine applications were distributed.
- Hygiene education was imparted in more than 200 communities.
- The CDC assisted the Ministry of Health in the development of Guatemala's "National Offensive for the Prevention and Control of Dengue."

All three dimensions of the health component led to strengthened community disease prevention and control by improving community disease response and better household health practices. CARE and CRS, principal partners in this component for water and sanitation activities, achieved their respective work plan targets, and MERTU-CDC met its targets of supporting CARE and CRS in their water and sanitation efforts as well as meeting malaria and dengue control targets.

11. LESSONS LEARNED AT THE SPECIAL OBJECTIVE LEVEL:

- 1) Washington pressures to meet quarterly expenditures target to meet the Hurricane Mitch reconstruction deadline as prescribed under the Central America and Caribbean Emergency Disaster Relief Fund (CACEDRF) of December 31, 2001, diverted attention from quality management and control.
- 2) The Mission's choice of existing mechanisms to obligate funds and implement activities was well taken. It took advantage of the presence of existing partners in the Hurricane Mitch affected areas, such as CARE, CRS, ANACAFE and CHF, so that within six months after receiving CACEDRF funding, activities were up and running. The Mission employed Cooperative Agreements, Project Implementation Letters and a PASA, which achieved excellent results.
- 3) The Mission also initiated innovative approaches like Fixed Amount Reimbursable (FAR) contracts. The FAR arrangement employed for the implementation of construction projects worked very efficiently. Ten projects (nine designed by USACE and one by CARE) totaling \$4,354,672, were implemented under FAR arrangements through MAGA. Concurrent audits confirmed the efficacy of the FAR approach.
- 4) When addressing a disaster, a mission should not pay undue attention to sustainability and institutional strengthening. Bypass mechanisms to get things rebuilt quickly are acceptable, if not preferred.
- 5) During emergency response projects, support and follow up to technical and operational exchange among partners has to be provided. Partner's institutional capacity is strengthened through the exchange of knowledge, tools and experience. The Mission's role in facilitating partner coordination during an emergency response is critical.

12. LESSONS LEARNED: DISASTER PREPAREDNESS ENHANCED

- 1) This activity was a novel experience for USAID/Guatemala and its partners. While the successes are considerable in terms of quality and quantity, the duration and funding was too short and limited. Particularly with respect to the formation of local and municipal coordination units, additional time and resources would have led to not only a greater number of community disaster committees being formed, but a greater consolidation of a national system.
- 2) The collaboration of USG agencies under the Mitch Reconstruction program proved to be very valuable in this component. The different agencies brought different strengths and capabilities to the task. Most obvious were the technical strengths of NOAA and USGS, but the most surprising was FEMA, complementing OFDA's traditional disaster response capability with effective organizational talents and mitigation and prevention approaches.
- 3) In Guatemala, there is no prior experience with the concept of disaster mitigation; the concept was introduced through this activity.
- 4) Both CARE and CRS gained entry-level experience with disaster preparedness. Consequently, both agencies acquired an appreciation for the importance of the concept and have stated they will be incorporating disaster preparedness and risk management in all future development projects.

13. LESSONS LEARNED: AGRICULTURAL PRODUCTIVITY RECOVERED ON MORE SUSTAINABLE BASIS

- 1) The Mission entered into infrastructure construction activities while not having an engineer on the staff. This slowed down implementation, and put the Mission at a disadvantage when technical issues arose. However, once on board, an engineer proved invaluable in improving efficiency and implementation of infrastructure activities.
- 2) The Mission had as many as eleven Recipient-Contracted Agreements (audits) going on during the implementation of the program, which occupied more staff time than anticipated. However, implementation and accountability was deemed to have worked well, and USAID partners' internal systems were strengthened as a result.
- 3) The partnership between the U.S. Army Corps of Engineers and the Ministry of Agriculture in completing critical infrastructure protection and flood control infrastructure proved to be very timely and efficient. USACE identified critical needs and completed timely designs. MAGA contracted with private construction firms under a FAR arrangement with

USAID while USACE continued to provide construction supervision and final inspection and certification. MAGA and the private contractors were impressed with the innovativeness of the USACE designs, the strict application of specifications for local materials, and the application of U.S. work place safety standards. MAGA requested that USACE conduct a successful streambank protection course for local engineers.

The Mission extended the USACE PASA using regular funding for an additional year and a half after the completion of the Mitch program to provide on-call assistance to evaluate the response of the completed structures to climatic events as well as to provide follow up assistance to MAGA and local communities for the operation and maintenance of the structures.

14.LESSONS LEARNED: COMMUNITY DISEASE PREVENTION AND CONTROL DISEASE PREVENTION AND CONTROL SYSTEMS STRENGTHENED

1) Water quality and educational activities must be closely monitored in emergency response projects. The participation of partners whose strength is monitoring and evaluation can support timely information and response to water quality issues and also the development of behavior change educational material.

2) At USAID's initiative, extensive water and sanitation experience in Honduras was shared and used to improve the quality of water and sanitation activities in Guatemala, with assistance from the Regional Water and Sanitation Network for Central America (RRAS-CA).

3) Having an independent agency to test water quality, e.g., Medical Entomology Research Training Unit in Guatemala of the Centers for Disease Control (MERTU/CDC), was effective.

4) Sustainability of chlorination and how to set up community chlorine banks needs more work.

5) Some innovative and very affordable locally made latrines were designed which were easier for preschool children to use.

6) CDC malaria bednet production now needs to be paired with microenterprise know how from elsewhere in the Mission to be sustained as small businesses for women.

15. CONCLUSION:

The USAID/Guatemala Mitch reconstruction program has been very successful. The Mission is especially proud of the overall approach it adopted early on for reconstruction, which it believes laid the foundation for success. That approach consisted mainly of working with existing partners to take

advantage of their proven skills and abilities, and to complement that by obtaining needed technical assistance from other USG agencies and private contractors. USAID's clear vision for reconstruction coupled with help from other agencies created a collegial and productive atmosphere.

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