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B. PROGRAM OVERVIEW

A. PROGRAM ACCOMPLISHMENTS

1) National Demonstration Projects

Activities lead specifically towards progress on:

- **Program Objective: Establishment of sustainable public and private mechanisms for disaster mitigation in Asia.**
- **Result No. 1: Improved capacity of municipal officials to manage risk and apply mitigation skills and technologies.**

BANGLADESH

Bangladesh Urban Disaster Mitigation Project (BUDMP)

Site(s): Tongi and Gaibandha

Hazard(s): Floods

Lead Institution: Bangladesh Disaster Management Unit, CARE-Bangladesh
Gana Unnayan Kendra (GUK), Gaibandha
Committed Organization for Development Extension Services (CODES),
Tongi

Accomplishments:

Under BUDMP Phase II disaster Awareness Booklets on different hazards of B'desh were under preparation. Opportunities have been created for project staff to participate in regional training programmes conducted by the ADPC. AUDMP has also arranged a study tour for the municipality chairmen of Tongi and Gaibandha to visit Philippines to see the community based initiatives for mitigation and flood impact in and around Manila. Phase II activities have been scheduled to complete by the end of December 2002.

Awareness Program on "Urban Flood"

In order to raise awareness on "Urban Flood" among primary school students, an art exhibition on urban flood was organized in a school in Tongi Municipality. Boards with relevant messages on "Urban Flood & Arsenic Hazard Mitigation" for school students have also been displayed in different educational institutes in Gaibandha Municipality.

To promote broad awareness among community, message on "Urban Flood Mitigation" have been disseminating through the following tools:

- Cable network and movie halls in the two municipalities.
- Wall paintings with message on "Urban Flood" were completed in the two municipalities.
- Billboard with awareness messages as well as relevant pictures on urban flood was displayed at the premises of Gaibandha Municipality.
- Training modules.
- Disaster awareness booklet on various hazards of Bangladesh, to be published under BUDMP Phase II

Structural Mitigation Measures Implementation

The Structural mitigation measures under BUDMP have been implemented since March 2002. In Gaibandha, a total of 20 structural mitigation schemes were completed. In Tongi, 25 structural interventions were completed and 2 were in progress.

The structural interventions were implemented with community-based schemes and dummy showpiece will be displayed in impending workshops, seminars, organized by BUDMP.

A two-day cross visit with other two municipality office bearers of Sariakhandi and Singra and an idea-sharing workshop were organized in July 2002 in Gaibandha as these two municipalities are also vulnerable to flood and situated in neighboring districts of Gaibandha.

With the aim to disseminate the BUDMP concept and approach to a wider audience, CARE-Bangladesh organized a one-day meeting in August 2002 with the office bearers of the Municipality Chairman Association of Bangladesh. Through open discussions, valuable suggestions regarding mechanisms for replication were obtained from all participants.

BUDMP Replication Phase.

Replication Proposal of the BUDMP is being finalized and is scheduled to commence in early 2003. Under this phase BUDMP expects to replicate the project activities in 5 small scale municipalities which are highly vulnerable for floods.

CAMBODIA Cambodian Community-Based Flood Mitigation and Preparedness Project (CBFMP)

Site(s): Provinces of Kampong Cham, Prey Veng, and Kandal
Hazard(s): Floods
Lead Institution(s): PACT-Cambodia, Cambodian Red Cross (CRC) and the International Federation of the Red Cross and the Red Crescent Societies (IFRC)

Accomplishments:

Project Replication and Consolidation

The project ended in 2001. Two case studies were developed under ADPC's Safer Cities series to capture the knowledge and experiences gained under the CBFMP. The case studies are titled:

- Safer Cities 2: Coping with flood in Cambodian communities, June 2002
- Safer Cities 3: Mitigating flood risk in Cambodian communities, July 2002

There has been ongoing discussions between ADPC, CRC and PACT on further replicating and consolidating the CBFMP approach. The possibility of combining activities or having synergy with ongoing initiatives of other ADPC implemented projects such as DANIDA-funded Disaster Reduction Program for Cambodia, Lao PDR and Vietnam (DRP-CLV) were discussed.

After Cambodian Community-Based Flood Mitigation and Preparedness Project (CBFMP) was completed, two projects implemented by ADPC continue some of the activities undertaken by CBFMP. PDR-SEA has helped training team of CRC to further enhance the training skills and also

to develop training manuals. At present DRP-CLV project is continued with the CRC and implementing Risk Communication Strategy for flood prone provinces on the bank of Makong River. These activities will be continued.

INDIA Ahmedabad Disaster Mitigation Project (ADMP)

Site(s): Ahmedabad

Hazard(s): Multiple disasters

Lead Institution(s): Centre for Environmental Planning & Technology, Ahmedabad Municipal Corporation, Ahmedabad Urban Development Authority and Environmental Planning Collaborative

Accomplishments:

Project Proposal

A proposal for the Ahmedabad Disaster Mitigation Project (ADMP) was developed. The project will be based in Ahmedabad with the goal of reducing the disaster vulnerability of population, infrastructure, and economic assets. The proposed project includes seven components namely hazard and vulnerability assessment; promoting safer buildings; school safety program; preparation of mitigation measures; social marketing; replication; and comprehensive disaster mitigation strategy.

Issues of avoiding duplications with existing projects undertaken by USAID mission in India and for optimization of resources have been discussed among the Core Group members. Further dialogue on the proposal will be made with the USAID-India mission.

INDONESIA Indonesian Urban Disaster Mitigation Program (IUDMP)

Site(s): Bandung

Hazard(s): Earthquakes

Lead Institution(s): Institute for Research, Institute of Technology Bandung (ITB)

Accomplishments:

Rapid Risk Assessment

Rapid risk assessment for the City of Bengkulu was completed by the end of July 2002. In order to give a wide perspective and understanding of disaster management as well as disaster mitigation with emphasis on earthquake disaster; and as a follow-up to the request of Mayor of Bengkulu, the IUDMP team represented by Dr. Harkunti P. Rayahu, Dr. I. Wayan Sengara, Ir. Engkon K. Kertapati, and Ir. Praherdian Putra, M.T. made a presentation session in the House of Representative of city of Bengkulu during their visit to the city. The presentation includes Introduction to Disaster Mitigation; Earthquake and Seismic Hazard; City Vulnerability and Seismic Risk of Urban Area, Initiative of Earthquake Disaster Mitigation in Indonesia; and Seismic Risk Assessment of City of Bengkulu.

The response from the members of House of Representatives was positive, as they would consider including the seismic vulnerability issue in the city development program.

TOT Earthquake Preparedness Program for Schools

IUDMP was able to attract funds from UNICEF and the National Education Department to conduct 2 Teachers' trainings on **Earthquake Preparedness Program for Schools** during September 29 – October 3, 2002 and 8-12 October, 2002. Sixty participants were trained for each batch. The participants were from school community: teachers/principals, Local Education Office personnel, and representatives from Teacher Training Center that were selected from earthquake prone regions in Indonesia.

The program's goal was to increase awareness, capacity and preparedness of the school society in earthquake disaster from the most prone regions throughout the country, and also to prepare the schools in implementing school safety program.

The training was conducted using the Training for Trainers format. The teaching methods mainly relied on simulations, role-play, experiments and earthquake drill activities, while lectures only occupied a third of the whole time.

The program benefitted not only the participants, but also school students and other school community such as parents and School Board Members as it is expected that after the training the participants/teachers could convey the information/materials and implement it to students whereas students could convey the lessons learned from school to their parents.

Institutionalization of Disaster Mitigation at ITB

A strategic plan for institutionalization of disaster mitigation within ITB was developed in December 2002 to prepare for the phase-out of IUDMP. A strategic planning workshop was held on December 19 involving various stakeholders, which provided input to the plan.

LAOPDR

Lao PDR Urban Disaster Mitigation Project (LUDMP)

Site(s)

Vientiane

Hazard(s):

Fire and other urban hazards

Lead Institution(s):

The National Disaster Management Office (NDMO) and the Urban Research Institute (URI)

Accomplishments:

The Lao PDR Urban Disaster Mitigation Project (LUDMP) started since July 1, 2002 and completed its Phase I on December 31, 2002. The proposal for Phase II is being finalized and is scheduled to commence early 2003.

The main project activities of Phase I can be summarized as follows: -

Vientiane Fire Risk Assessment and Risk Reduction Planning

1. Stakeholders Workshop

A Stakeholders Workshop was organized on July 19, 2002 with the objectives to introduce the project to the Vientiane Community and to obtain support and inputs from the community for project implementation and activities. Forty participants from the National Disaster Management

Committee, the four urban districts of Vientiane, Lao Red Cross, US Embassy, Ministries of Education, Foreign Affairs, Transportation, National Security, Finance, Defense, Agriculture, Industry, Information and Culture, and Public Health attended the workshop.

At the discussion session, participants offered a number of suggestions including community self-help and woman involvement in fire prevention/preparedness, strategy to disseminate project information by using media, role of town planners, adoption of a national day as fire safety day, emergency services improvement (fire and road accident rescue), and participation of Lao Red Cross in the project.

2. Vientiane Fire Risk Map

The Urban Research Institute (URI) with technical assistance from AUDMP has produced a Fire Risk Map for Vientiane. One hundred communities in four districts of Vientiane: Sikhottabong, Chanthabouli, Sisattanak, and Xaysettha have been covered in the risk mapping.

3. Fire Prevention Planning Workshop

On 17 October 2002, a Fire Prevention Planning Workshop was held to present the preliminary finding of the Vientiane Fire Risk Map and to strategize for fire risk reduction measures at the city and national levels. The workshop was attended by 45 participants, mainly from the Fire Department at the headquarters and from three provinces, namely Luang Prabang, Savanakheth and Champasak. The key resource person was Mr. Mark Swiney, Senior Station Officer from the

Melbourne Fire Brigade, who assisted AUDMP in the capability assessment of the Fire Service in Vientiane in 1999.

Four selected areas for the project implementation were identified and prioritized by the participants. They included Regulatory Development, Community Education/outreach, Fire Service Equipment, and Training and Exchange Program.

4. Second Stakeholders Workshop

On December 4, 2002, the Second Stakeholders Workshop was organized with the aims to present to the Vientiane community the planned fire prevention/preparedness measures for the city of Vientiane and for the high risk communities in Vientiane and to solicit comments and inputs from the stakeholders on the proposed measures. The workshop was attended by 50 participants from the Ministry of National Security, Transport Department, Traffic Police Department, Urban Development Authority of the four districts in Vientiane, Water Supply Authority, Electricity of Lao, Lao Red Cross, and International NGOs.

During the workshop, the participants provided comments on fire prevention and road accident reduction measures, which NDMO, URI and the Fire Department will have discussion and make necessary refinement in the Project Phase II proposal.

Community Fire Risk Assessment and Risk Reduction Planning

1. Community Fire Risk Mapping Workshop

A demonstration project on community risk mapping and risk reduction planning was conducted in one high-risk community. From a list of four priority communities identified by the LUDMP team, Ban Hatsdy in Chantabouly was selected as the community wherein to undertake the community risk assessment mapping due to its appropriate size for a pilot site with possible further replicability, potential future financial support, and its past experience with fire disaster.

A brief Training Needs Assessment was conducted, followed by the Community Fire Risk Mapping Workshop at Ban Hatsdy Tay on October 24-28, 2002. Twenty-seven community representatives attended the workshop.

The community risk map was produced based on the same attributes as used in the Vientiane city risk mapping with some modifications to suit the community situation. The attributes were comprised of fire history; fire sources related to livelihood; building material and density; quality of electrical wiring system; access in and out of fire trucks, vehicles and people in the event of a fire; houses in which there are young children and elderly. The participants discussed on fire history and conducted a community survey for other attributes.

2. Community Fire Risk Reduction Planning Workshop

Based on the community risk assessment, a one-day Fire Risk Reduction Planning Workshop was held on November 10, 2002 with the same group of participants to identify fire safety measures.

Participants were divided into four groups to discuss in further details of strategies for fire prevention, preparedness and response. Results of the group discussion regarding the key strategies will be shared among other community members so that they can actively involve in the implementation of the fire risk reduction plan. The project implementing organizations will work closely with the community to undertake selected activities, based on the recommendations derived from the workshop.

Urban Disaster Mitigation Course

The Third Urban Disaster Mitigation Course (UDM) was jointly conducted by the URI, NDMO and the ADPC at the URI Office during 16-21 December 2002. The course materials were developed into Laotian before the conduct of course. The course was attended by 22 officials from Vientiane municipality, few other municipalities, departments of fire services, university professors and other concerned. The URI plan to continue the conduct of course as part of its annual training calendar, through its training budget, upon completion of AUDMP project support.

Project Phase II Proposal

The project phase II proposal was developed and submitted to the AUDMP Core Group for approval at the end of December.

<u>NEPAL</u>	Kathmandu Valley Earthquake Risk Management Project (KVERMP)
Site(s):	Kathmandu Valley
Hazard(s):	Earthquakes
Lead Institution(s):	National Society for earthquake Technology of Nepal (NSET-Nepal) and GeoHazards International (GHI)

Accomplishments:

ADPC's Safer Cities 4

A case study on the School Earthquake Safety Program (SESP) in Kathmandu Valley was developed as part of the Safer Cities case study series.

The case study explains the rationale for focusing on schools and the comprehensive process of developing and implementing SESP in Kathmandu Valley including details of: a survey and vulnerability assessment of public school building through school headmasters; retrofitting and reconstruction of schools; local masons' training on earthquake-resistant construction; a participatory community-based approach to earthquake mitigation; awareness raising and education on earthquake safety for teachers, school children and parents; empowerment of communities and general improvement of safety and livelihood; and institutionalizing SESP in local government.

Earthquake Vulnerability Reduction for Cities (EVRC-2) Course

The Regional Training Course on Earthquake Vulnerability Reduction for Cities (EVRC-2) was offered during 11-22 November 2002 by ADPC, International Institute for Geoinformation Science and Earth Observation (ITC), the Netherlands and NSET-Nepal. The course was conducted for the second time, based on its curriculum and materials from its first delivery held in Kathmandu in May 2002 by ADPC. The EVRC-2 was attended by 30 participants from Bhutan, China, India, Iran, Malaysia, Nepal, Pakistan, the Philippines and Thailand.

Fourth Asian Seismological Commission 2002

The Fourth General Assembly of Asian Seismological Commission 2002 (ASC) was organized by the Asian Seismological Commission, a regional scientific organization affiliated to the International Association of Seismology and Physics of the Earth's Interior (IASPEI); National Society for Earthquake Technology-Nepal (NSET-Nepal) and Asian Disaster Preparedness Center (ADPC) during 24-26 November 2002. Over 200 participants from 20 different countries of the Asia and Pacific nations converged at the event in Kathmandu to discuss and share their experiences on earthquake hazard assessment and risk management.

ASC recognized the high seismicity and very large population that combine to create the earthquake risk in Asia and the need to improve cooperation countries in Asia and Pacific region to mitigate the catastrophic effects of large earthquakes. The first assembly of ASC was held in August 1996 in China, second and third were held in India and Iran, respectively.

The ASC 2002 was inaugurated by Dr. Upendra Devkota, Honorable Minister for Health, Science and Technology, Nepal. More than 100 papers were presented and discussed in three parallel sessions. A poster session, the ASC Council Meeting, and a Shake-Table Demonstration also took place.

Consolidation Phase

NSET-Nepal developed a proposal for the project consolidation phase. This phase aims to bring experience and success of KVERMP to other Nepalese municipalities of high earthquake risk. Project components include development of: earthquake risk scenario and action planning; training and capacity building; and implementation of earthquake vulnerability reduction measures.

Proposal on consolidation phase of KVERMP has been approved. It was decided at the Core Group Meeting that implementation could be commenced with effect from January 2003.

PHILIPPINES Philippine Cities Disaster Mitigation Project (PCDMP)

Site(s): Naga City and San Carlos

Hazard(s): Floods and multiple hazards

Lead Institution(s): The Philippine Business for Social Progress (PBSP) and the League of Cities of the Philippines (LCP)

Accomplishments:

National UDM Course in Philippines

ADPC in collaboration with DAP, an AUDMP national training partner (NPTI), will organize the National Training Courses in Philippines. The first National UDM course in the Philippines will be held from 24-31 March 2003 and the second UDM course will be conducted during 26-30 May 2003. The DAP is designing the course syllabus in collaboration with UDM alumni and other partners.

SRI LANKA Sri Lanka Urban Multi-Hazard Disaster Mitigation Project (SLUMDMP)

Site(s): Ratnapura, Nawalapitiya, Kandy, Colombo, Cities along Kelani River

Hazard(s): Multiple hazards

Lead Institution(s): The Center for Housing, Planning and Building (CHPB), National Building Research Organization (NBRO), and Urban Development Authority (UDA)

Accomplishments:

Replication to Colombo Municipal Council

The flood mapping of Colombo Municipal Council was completed in July 2002. The Colombo MC has found the map useful in supporting its public awareness campaigns. A draft Emergency Management and Response Plan (EMRP) has also been developed and training provided

Promoting Awareness among Mayors and Chairmen

SLUMDMP conducted a seminar on "Natural Disaster Mitigation" for newly elected mayors and chairmen of selected local authorities on 27 August 2002. All participants requested a wider coverage of activities by SLUMDMP to other municipalities and were willing to extend their cooperation.

Academic Integration of Urban Disaster Mitigation (UDM)

In an attempt to integrate the subject of Urban Disaster Mitigation into the curricula of university courses under the replication activities of the project, SLUMDMP commenced its action with two academic institutes, namely University of Moratuwa and University of Ruhuna. To pursue this

initiative, a workshop to present curricula of proposed disaster mitigation modules of university courses was conducted on September 10, 2002 with objectives to provide the opportunity for the universities to present the draft curricula proposed for respective courses and to create awareness among the other universities to initiate similar action for integration.

Fifteen participants from University of Moratuwa, University of Ruhuna and University of Sabaragamuwa attended the workshop. The representatives from University of Moratuwa and Ruhuna presented their draft curricula, which covered the overall program for integration indicating the undergraduate and postgraduate courses; module on Natural and Built Environment II and Natural Hazard Management indicating credit rating, number of hours, course objectives, learning outcomes, outline syllabus and indicative references; assessment method and marking system; and modules summary/outline.

Questions were raised about the structural aspects of mitigation and how to accommodate those in the curriculum. SLUMDMP Project Director explained the relevance of disaster mitigation subject to professionals in different specialized areas. SLUMDMP planned to include the subject in three programs of University of Moratuwa, namely M.Sc. in Town Planning and Architecture, PG Diploma in Housing Development and Urban Development and B.Sc. in Town Planning, Built Environment and Building Economics, to different extent as appropriate.

Fourth National Course on Natural Disaster Mitigation

The Fourth National Course on Natural Disaster Mitigation (NDM-4) was conducted during 27 December 2002 by the Center for Housing Planning and Building (CHPB), an AUDMP National Partner Training Institute (NPTI) with the assistance of the Asian Disaster Preparedness Center (ADPC). Ms. Zenaida Delica Willision and Dr. Buddhi Weerasinghe participated in the course as resource persons from the ADPC. The course was supported by the Government budget.

Awareness Creation among Vulnerable Community to Landslides

To response to the request made by the Divisional Secretary of Matugama to conduct an awareness seminar to vulnerable communities living in Matugama Division, SLUMDMP with the assistance of NBRO conducted an awareness seminar on “Mitigation and Preparedness of Landslides Hazard” on November 9, 2002. Sixty representatives living in the areas vulnerable to landslides participated in this program.

The program was organized and coordinated by the Divisional Secretariat with the financial assistance from the Matugama Pradeshiya Subha, the respective Local Authority.

Seminar on Good Engineering Practices for Construction in Landslide Prone Areas

Awareness seminar on “ Good Engineering Practices for Construction in Landslide Prone Areas” was organized and conducted by CHPB in collaboration with NBRO and ITDG South Asia, Colombo. The activity is carried out by CHPB as a part of the project implemented by NBRO under “ Livelihood Options for Disaster Risk Reduction in South Asia”

The seminar was conducted for professionals (Engineers, Architects, Planners, Quantity Surveyors, Senior Technical Officers, Managers etc.) involved in the field of construction, housing, infrastructure development in the Central Province.

TOT Program on Community Based Disaster Preparedness

Sri Lanka Red Cross Society (SLRCS) in collaboration with Spanish Red Cross/ECHO organized a Training of Trainers Program on Community Based Disaster Preparedness for the SLRCS' volunteers in selected eight districts prone to floods in Sri Lanka. The series of TOT courses were commenced from August 2002 and planned to complete in February 2003. The project Manager of SLUMDMP, Mr. Lionel Hewawasam, was appointed Technical Consultant cum Lead Resource Person by SLRCS/Spanish Red Cross to provide guidance to the Curriculum Development Committee (CDC) and conduct the TOT program.

Consolidation Phase

CHPB developed a proposal for the consolidation phase of SLUMDMP. Proposed activities include:

- Community and school awareness programs
- Awareness workshop for municipalities along Kelani River prone to floods and in the eastern province to encourage replication
- Training of municipality officials involved in building approval process.
- Training for UDA planners on hazard mapping
- Continuation of efforts for integrating the urban disaster mitigation subject area in university curricula
- Glossary of technical terms in disaster mitigation
- Activities with the National Institute of Education (NIE) to carry out training of school teachers

Proposal on consolidation phase of SLUMDMP has been approved following minor modifications. It was decided at the Core Group Meeting that implementation could be commenced with effect from January 2003. However, since the Project has \$11,000 remaining at the end of the replication phase because of the gain from exchange rate, additional replication activities were proposed to be undertaken until March 2003. Therefore, the consolidation phase will start in April.

THAILAND Thailand Urban Disaster Mitigation Project (TUDMP)

Site(s): Hat Yai
Hazard(s): Floods
Local Institution(s): Prince of Songkla University (PSU)

Accomplishments:

Project Start-up

Phase 1 of TUDMP commenced on October 1, 2002 and will be of 8 months duration. Phase 2 will be undertaken after reviewing the proposed activities in consultation with the Government of Thailand.

Prince of Songkla University (PSU) located in Hat Yai district of Songkla Province in southern region of Thailand, is selected to be a sub-grantee with the following tasks:

- Establishment of Regional Disaster Management Study Center (RDMSC) and Demonstration Project Management Team

- Hazard and Vulnerability Assessment
- Establishment of Disaster Management Committee
- Training and Capacity Building at city level
- Information Dissemination and Networking

Institutionalization of Foundation Level Disaster Management Courses

According to the TUDMP proposal, two courses, namely Community Based Flood Risk Reduction (CBFR) and Natural Disaster Mitigation Course (NDM) will be implemented in the first phase of TUDMP. The course outlines were developed based on existing CBDM and FRM courses but to be shortening to one -week duration. Development of course materials is underway.

VIETNAM Vietnam Urban Disaster Mitigation Project (VUDMP)

Site(s): Quang Tri and Thua Thien Hue
Hazard(s): Floods and Typhoons
Local Institution(s): To be identified

Accomplishments:

Workshop on Safer Shelter in Vietnam

ADPC in collaboration with the Ministry of Construction, the Vietnam Red Cross and the International Federation of Red Cross and Red Crescent Societies as well as the Disaster Management Center, Central Committee for Flood and Storm Control organized a workshop on Safer Shelter in Vietnam during 4-5 September 2002 to develop Vietnam Urban Disaster Mitigation Project under the AUDMP. The workshop aimed to provide a forum to identify project components; discuss strategies, opportunities and activities. Identifiable components of VUDMP from workshop outputs include: integration of risk assessment in planning for development; development of shelter delivery systems; capacity building; knowledge networking for disaster mitigation; and replication.

Based on a rapid assessment of the nature, frequency and vulnerability to disasters, there was consensus at the Workshop to select Central Vietnam as the site for the VUDMP with priority given to typhoon and flood hazards. The provinces identified as the most vulnerable by the participants were Quang Tri and Thua Thien Hue.

To implement a sustainable mechanism for delivery of shelter in Vietnam, the participants came up with four key needs including the need for developing guidelines in selecting design options for flood and typhoon prone areas; the need for environment sensitive guidelines in the selection and use of locally available materials; the need for simple construction guidelines understandable by a layperson; and the need for a public awareness and capacity building strategy for the effective preparation, use and implementation of these guidelines, as well as for construction and quality control.

Policies and plans require resources: financial, human, information and material to put them into practice. As techno-financial approaches for shelter delivery is a new concept in Vietnam, the workshop explored different techno-financial possibilities, particularly for lower and middle -

income groups. It was agreed that further research is required on the type of techno-financial approaches suitable to Vietnam; flood and typhoon prone design options for relocation, replacement and upgrading; and issues relating to land allocation policies and infrastructure development.

The VUDMP proposal was developed based on the information and suggestions gained from the workshop. Considering the limitations in funding and time, the scope should be reduced to make the proposal implementable. The project can be started only in case OFDA/USAID agrees to grant extension to AUDMP with sufficient additional funding.

2) Information and Networking

Activities lead specifically towards progress on:

- **Result No. 2: Improved access to hazard mitigation information and skills (e.g. techniques, methodologies, experience throughout the region)**

Regional Workshop on Best Practices in Disaster Mitigation

The regional workshop was held from 24 to 26 September 2002 in Bali, Indonesia with about 150 participants from national governments, various donor agencies, city government officials and others interested/involved in disaster mitigation. ADPC partnered with BAKORNAS PBP, CITYNET, Institute of Technology Bandung, ISDR, and TUGI in organizing the workshop. The workshop was organized around eight fundamental themes:

1. Hazard Mapping and Risk Assessment
2. Mitigation Planning and Implementation
3. Policy, Legal and Institutional Arrangements
4. Public Awareness and Social Marketing
5. Capacity Building
6. Promoting Safer Building Construction
7. Community Based Approaches to Disaster Mitigation
8. Climate Applications and Preparedness

Proceeding of the Workshop was published in December 2002 and sent to all the workshop participants and selected interested groups. Outputs from the workshop will contribute towards the development of Primer on Urban Disaster Mitigation in Asia.

Disaster Mitigation Primer

This serves to promote replication of the AUDMP methodology and results framework, to provide a reference for practitioners, academics, trainers, city government officials and others interested in working on disaster mitigation. An outline of the primer was drafted and discussions were held during the **Mini-workshop on Urban Disaster Mitigation Primer** held in Bali, Indonesia on 27 September 2002. A concept paper outlining the details such as process, time frame, etc. on development of the Primer has been prepared for finalization.

Case Studies

“Safer Cities” is a series of case studies that present strategies and approaches to urban disaster mitigation derived from analyses of real-life experiences, good practices and lessons learned under

the AUDMP and in its replications. This user-friendly resource is designed to provide decision-makers, planners, city and community leaders and trainers with an array of proven ideas, tools, policy options and strategies for urban disaster mitigation. The case studies are published in a variety of formats in hardcopy, CD-ROM, and in hypertext and PDF formats on the AUDMP website.

Three Safer Cities case studies have been published since January 2002. They include:

- Safer Cities 1: Community Based Initiatives in Kathmandu Valley, January 2002
- Safer Cities 2: Coping with Flood in Cambodian Communities, June 2002
- Safer Cities 3: Mitigating Flood Risk in Cambodian Communities, July 2002

A guideline for developing the Safer Cities case studies have also been published.

In the pipeline are case studies from Indonesia and Nepal on their School Earthquake Safety Program, Indonesia and Sri Lanka on public awareness, and Bangladesh and Sri Lanka on its community-based initiatives. Other themes include: risk assessment, action planning, emergency management and response planning, risk-based urban planning, information and networking, and training.

Support for Social Marketing Strategy

AUDMP is developing Disaster Risk Communication guidelines for implementation of such programs in its partner countries. The guidelines will provide the local partners with step-by-step methodologies for systematic formulation and execution of disaster risk communication programs so that all resources are efficiently and effectively used. It is planned that the guidelines will be presented and elucidated at the 8th AUDMP Working Group Meeting in March 2003.

AUDMP also encourages its partners in the countries of Cambodia, Indonesia, Nepal and Sri Lanka, where AUDMP projects have been completed, to continue undertaking awareness-fostering activities during the consolidation phase. For the ongoing project in Bangladesh, public awareness promotion is recommended to be included in the replication phase of the project. Furthermore, AUDMP supports public awareness to be one of the components in the demonstration phase of new projects in the countries of Lao PDR, India and Thailand.

AUDMP Website

The AUDMP website has been redesigned and restructured, and continues to be updated with additions of new information in an effort to make it a useful and active tool for information sharing and exchange. All monthly, quarterly and bi-annual reports are archived in <http://www.adpc.net/audmp/m&e.html>.

3) Training, Resource Materials and Continuing Education

Activities lead specifically towards progress on:

- **Result No.2: Improved access in hazard mitigation information and skills (e.g. techniques, methodologies, experience throughout the region); and**
- **Result No.3: Improved policy environment for disaster mitigation**

Flood Risk Mitigation (FRM) Course

Following the successful second delivery in Quezon City, the Philippines in September 2001, the Flood Risk Mitigation (FRM) was organized for the third time by ADPC during 16-27 September 2002 in Bangkok, Thailand. Seventeen participants from flood-prone countries of Bangladesh, Cambodia, Fiji, Lao PDR, Malagasy, Malaysia, Thailand and Vietnam attended the course.

The FRM-3 coincided with the severe floods in the north and northeastern parts of Thailand. To gain a firsthand experience on flood mitigation from the Royal Irrigation Department of Thailand, the participants were taken to Chaophraya Dam and Pasak Dam in Chainat and Lop Buri provinces, respectively, which are two vital reservoirs in the north of Thailand.

Earthquake Vulnerability Reduction for Cities (EVRC) Course

An evaluation workshop for the Earthquake Vulnerability Reduction for Cities (EVRC) training course was organized on September 27, 2002 following the Regional Workshop in Bali, Indonesia. Four key experts in shaping up the EVRC-1 including Ms. Shirley Mattingly, Urban Risk Management Advisor; Dr. Fouad Bendimerad, Chairman of the Earthquake Megacities Initiatives (EMI); Mr. Amod Dixit, Secretary General of the National Society for Earthquake Technology-Nepal (NSET-Nepal); and Dr. Buddhi Weerasinghe, Curriculum Materials Development Manager of AUDMP presented at the workshop.

The expert team agreed that the current curriculum and materials need to be improved to ensure good quality of the course for the EVRC-3 by identifying and incorporating case studies relevant to EVRC into existing materials; inclusion of a demonstration session on Geographic Information Systems (GIS) into the curriculum. However, the main focus should be kept on Risk Assessment Tools for Diagnosis of Urban Areas against Seismic Disasters (RADIUS) as in EVRC-1.

The Third Regional Training Course on Earthquake Vulnerability Reduction for Cities (EVRC-3) is scheduled for 9-18 June 2003 in Dhaka, Bangladesh. It is jointly organized by Asian Disaster Preparedness Center; the National Society for Earthquake Technology-Nepal; World Seismic Safety Initiative; Earthquake and Megacities Initiative; and BRAC University, Bangladesh.

Disaster Risk Communication (DRC) Course

Following the successful application in the field of health education and other social causes, the concept of Social Marketing was first introduced at the 7th AUDMP's Working Group Meeting held in March 2002 as the theme of the meeting.

Deemed as a creative and innovative approach to disseminate the message of disaster mitigation that could bring about attitude and behavior changes, Social Marketing concept has been envisioned to become the 5th training course of AUDMP as a tool to promote public awareness in disaster risk management and its sustainability.

The first brainstorming meeting was conducted on October 4, 2002 with an objective to provide a forum for brainstorming the application of Social Marketing for disaster management and planning direction for developing the course on Disaster Risk Communication.

The generic course outline, course contents and materials with experts and scholars identified are being developed. The pilot run of DRC-1 is scheduled for mid 2003.

National Training

There has been a major shift in the approach towards national level and project training, during the period covered by this report. The Evaluation of AUDMP has suggested that the NPTI strategy should be changed. Instead of developing standalone standard national courses on Urban Disaster Mitigation, specific short courses shall be designed for various sectors. For example a course for municipality officials, contractors, urban planners, NGOs and others. In addition to that it has been decided that the national training shall be used as a tool to promote the replication and adaptation of AUDMP country projects to wider audiences within the country.

The training team of TRMCE is working closely with CARE Bangladesh and NSET Nepal to translate the project experiences into training modules. In Bangladesh the existing BUDMP modules for training of Municipality officials, volunteers, Scheme Implementation Committees and partner NGOs are being revised in this regard. The English version has been completed and later on they will be translated into Bangla. In Nepal TRMCE Team and NSET are working on designing two courses of 3-4 days. One module would be for Municipality officials and the other for Contractors. Manuals will be developed in the national language. This process will be completed before August 2003. After the completion of training manuals, NSET will start offering the training to other municipalities. A number of courses on various aspects of disaster mitigation are being designed for Thailand under the Thailand Urban Disaster Mitigation Project. The courses are being developed in Thai language. In Indonesia ADPC and BAKORNAS plan to design one course for the Department of Public Works and another for municipality officials.

Meanwhile, partners in India and Sri Lanka have continued to offer national UDM courses. In India, Human Settlements Management Institute (HSMI) offered the 2nd and 3rd, Disaster Management Programs. In Sri Lanka, CHPB conducted the 4th National Natural Disaster Management Course. A major development was the conduct of third course on Urban Disaster Mitigation in Lao PDR in December 2002. The course materials were developed into Laotian before the conduct of course and in December, the course was attended by 22 officials from Vientiane municipality, few other municipalities, departments of fire services, university professors and other concerned. The URI plan to continue the conduct of course as part of its annual training calendar, through its training budget, upon completion of AUDMP project support. The first UDM course in the Philippines will be held from 24-31 March. The DAP is designing the course syllabus in collaboration with UDM alumni and other partners.

On the basis of feedback from the AUDMP evaluation team, the program will focus on the existing project countries and will not extend to other countries. Therefore Cambodia and Vietnam will not be considered for any project activities including the training.

4) Program Management and Administration

Activities offer critical support to progress on the program objectives and all three results.

AUDMP Monitoring

During September to November a monitoring mission team comprised of Ms. Rebecca Scheurer, OFDA USAID, Mr. Michael Lippe and Ms. Jeanne Moulton monitored the achievements of AUDMP and made recommendations for future activities. The team focused on three main questions during its visits and reviews: (1) What is the status of activities; (2) What remains to be

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done before the August 2003 closing date; and (3) What are the options for continuing AUDMP activities.

Overall the monitoring mission team concluded that AUDMP has had an important impact and tangible results in a number of countries in Asia and has been instrumental in helping to bring disaster mitigation a higher profile in the region. It has raised awareness of disaster mitigation and has developed a number of models and approaches to address disaster mitigation in a variety of situations. That said, much remains to be done in most of the AUDMP countries to ensure the sustainability of the mitigation concept. The team believes that this should be the focus of AUDMP's efforts over the remaining life of the program.

Core Group Meeting

The bi-annual AUDMP Core Group Meeting was held during December 12-13, 2002 at Pinehurst Golf Club in Pathumthani, Thailand. The meeting objectives of the core group were to provide AUDMP with guidance on implications of recent adjustments to OFDA priorities and to agree on ways and means of ensuring AUDMP's effectiveness given uncertainty of OFDA's response to the recent monitoring report recommendations and to grant approval for pending country demonstration project proposals, which has been forwarded to core group members for review.

During the meeting, AUDMP members presented a brief overview of AUDMP including its accomplishments since the second-term evaluation conducted in May 1998, and planned future activities, particularly at the country level. Recommendations made by the monitoring team and actions proposed to be taken up by AUDMP under each component as well as pipeline analysis on three scenarios were presented and discussed. AUDMP also presented its replication and consolidation proposals as well as new country projects to the core group.

The meeting was attended by the AUDMP Core Group members, USAID representatives, AUDMP national partners, the AUDMP team and ADPC senior staff members. The Core Group includes Mr. Thomas Dolan, Senior Regional Advisor for Asia, USAID/OFDA – Philippines; Mr. A.S. Dasgupta, Project Management Specialist, RUDO/SA – India; Dr. Suvit Yodmani, AUDMP Senior Program Manager, ADPC; Mr. Merrick Chatfield, Regional Program Director, ADPC; and Mr. N.M.S.I. Arambepola, Deputy Program Manager, AUDMP. Other USAID representatives who attended the meeting were Mr. James Stein, Director, RUDO/SA – India and Mr. Philip Tjakranata, Program Specialist, RUDO/SEA – Indonesia.

III. CONCLUSIONS AND RECOMMENDATIONS

The successful implementation of the program during the second half of the year 2002 creates a significant impact in target cities of partner countries. Different projects in different countries are progressing well with positive results and could generate implementable solutions for urban disaster mitigation in selected cities. The ongoing projects in Bangladesh continue their tasks in replication phases with many accomplishments whereas Indonesia, Nepal and Sri Lanka would commence their consolidation phase in January 2003. Lao PDR demonstration project successfully completed Phase I with significant inputs from all stakeholders while Thailand project began its Phase I in October 2002 with a promising start.

Information and Networking component plays an important role in replicating successful hazard mitigation practices from the demonstration projects throughout the region. To enhance its effectiveness in achieving this goal, AUDMP plans to increase its accessibility of I&N products

using multi-media sources and to include public awareness as one of the activities of the future projects throughout the life of the program.

Training, Resource Materials and Continuing Education component has also had several achievements in delivering regional training courses during the second half of the year. Moreover, TRMCE also put a lot of efforts in improving the current curricula and materials to ensure good quality of the courses. This could be seen in the organization of the evaluation workshop for EVRC training course on September 27, 2002, where four experts worked to further improve on the EVRC curriculum.

C. PROGRAM OVERVIEW

AUDMP Overview

1) Program Description

Asia is the most disaster-prone region of the world, where loss of life and property from natural hazards is very high, hindering sustainable, broad-based development. As population and economic activity concentrate in rapidly-growing cities, urban areas become increasingly vulnerable to disasters. Where properly managed, however, cities also represent a critical opportunity to mitigate the damage from natural hazards.

The Asian Urban Disaster Mitigation Program (AUDMP) is an eight-year program designed to respond to the need for safer cities. The ultimate goal of the program is to reduce the disaster vulnerability of urban populations, infrastructure, critical facilities, and shelter in targeted cities throughout Asia. The purpose of the program is to:

- establish sustainable public and private sector mechanisms for disaster mitigation that will measurably lessen loss of life, reduce the amount of physical and economic damage, and shorten the post-disaster recovery time; and
- promote replication and adaptation of successful mitigation measures within target countries and throughout the region.

The AUDMP is being implemented by the Asian Disaster Preparedness Center (ADPC) in Bangkok, Thailand, with core funding from the Office of Foreign Disaster Assistance (OFDA) of the United States Agency for International Development (USAID). Management oversight for the program is provided by USAID's Regional Urban Development Office for South Asia (RUDO/SA). A Core Working Group, including representatives from OFDA, the RUDOs for South Asia and Southeast Asia, USAID's Office of Environment and Urban Programs, and the ADPC, provides periodic advice and recommendations on the progress of the program.

2) Program Strategies

Working in conjunction with collaborating institutions in each target country, the program strategy takes a three-tiered approach:

- a) **National demonstration projects** in each of the target countries will serve to provide a working example of urban hazard mitigation. In a selected urban area in each country, a hazard or set of hazards will be assessed, followed by the design and implementation of appropriate disaster mitigation measures.
- b) The **Information and Networking** component aims to help build public and private networks as a forum for exchanging information and experience on urban disaster management, with the goal of replicating successful hazard mitigation practices from the demonstration projects throughout the region.
- c) The **Training, Resource Materials, and Continuing Education** component provides an opportunity to further institutionalize hazard mitigation practices through seminars for national level decision makers, as well as by using an in-country and regional “train the trainers” approach for passing on technical skills via a core curriculum in hazard assessment and mitigation. Courses will be offered by in-country partner institutions and on a distance learning basis.

OVERVIEW OF NATIONAL DEMONSTRATION PROJECTS

BANGLADESH Bangladesh Urban Disaster Mitigation Project (BUDMP)

Site(s): Tongi and Gaibandha
Hazard(s): Floods
Lead Institution: Bangladesh Disaster Management Unit, CARE-Bangladesh
Gana Unnayan Kendra (GUK), Gaibandha
Committed Organization for Development Extension Services (CODES),
Tongi

Overview: The Bangladesh Urban Disaster Mitigation Project (BUDMP) aims to reduce the vulnerability of flood prone communities in Tongi and Gaibandha Municipalities. *CARE-Bangladesh* works in collaboration with its partner NGOs, the *Gano Unnayan Kendra (GUK)* in Gaibandha and the *Committed Organization for Development Extension Services (CODES)* in Tongi, to establish community-based flood mitigation and preparedness systems to improve the capacity and skills of communities to manage flood risks and apply mitigation strategies. One of the major successes of the project is the reactivation of Municipality Disaster Management Committees in both municipalities. BUDMP is currently working to replicate its success to other selected communities in the country.

CAMBODIA Cambodian Community-Based Flood Mitigation and Preparedness Project (CBFMP)

Site(s): Provinces of Kampong Cham, Prey Veng, and Kandal
Hazard(s): Floods
Lead Institution(s): PACT-Cambodia, Cambodian Red Cross (CRC) and the International Federation of the Red Cross and the Red Crescent Societies (IFRC)

Overview: The Cambodian Community Based flood Mitigation and Preparedness Project (CBFMP) was designed to reduce the vulnerability of flood-prone communities in Kampong Cham, Prey Veng and Kandal provinces. The *Cambodian Red Cross (CRC), IFRC and PACT Cambodia*

collaboratively worked on implementing this project by establishing sustainable mechanisms for disaster mitigation and preparedness through CRC ~~V&W~~ ~~RUNRI~~ ~~5 HG&URV~~ ~~ROXMHU5~~ &9 V

CBFMP focused on developing a curriculum and conducting training for RCVs to organize community involvement in carrying out risk assessments, developing preparedness plans and facilitating the implementation of small-scale mitigation solutions to minimize communities' exposure to flooding. CRC has replicated project activities in other provinces of Cambodia.

INDIA Ahmedabad Disaster Mitigation Project (ADMP)

Site(s): Ahmedabad
Hazard(s): Earthquakes
Lead Institution(s): Centre for Environmental Planning & Technology, Ahmedabad Municipal Corporation, Ahmedabad Urban Development Authority and Environmental Planning Collaborative

Overview: The Ahmedabad Disaster Mitigation Project (ADMP) aims to reduce the vulnerability of the city of Ahmedabad and other cities to multiple hazards by developing appropriate disaster mitigation strategies based on the results of risk assessment; promoting safer building construction; introducing a School Safety Program; designing an effective system for disaster risk communication and advocating replication of activities in other cities. ADMP is collaboratively implemented by the *Centre for Environmental Planning and Technology* and *Ahmedabad Municipal Corporation*. This project builds on the experiences of the Indian Urban Disaster Mitigation Project on technological/industrial hazards in Baroda and metropolitan Calcutta.

INDONESIA Indonesian Urban Disaster Mitigation Program (IUDMP)

Site(s): Bandung
Hazard(s): Earthquakes
Lead Institution(s): Institute for Research, Institute of Technology Bandung (ITB)

Overview: The Indonesian Urban Disaster Mitigation Project (IUDMP) aims to reduce the vulnerability of Indonesian cities to earthquake hazards. Bandung was selected as the demonstration project site where the *Institute of Technology Bandung (ITB)* is implementing the

IUDMP. The project has undertaken many activities, the highlights of which include Bandung action plan, a rapid risk assessment methodology and the training for teachers program on school earthquake preparedness. At the national level, ITB works closely with the National Coordinating Board for Disaster Management (BAKORNAS PBP) in drafting a new National Policy on Urban Disaster Mitigation in Indonesia. Since mid-2002, IUDMP has been replicating the best practices to Bengkulu and other Indonesian cities. Currently, the team is working towards setting up a Center for Research on Disaster Prevention and Mitigation at the ITB campus to continue promotion of disaster mitigation in Indonesia.

LAO PDR Lao PDR Urban Disaster Mitigation Project (LUDMP)

Site(s) Vientiane
Hazard(s): Fire and other urban hazards

Lead Institution(s): The National Disaster Management Office (NDMO) and the Urban Research Institute (URI)

Overview: The Lao PDR Urban Disaster Mitigation Project (LUDMP) aims to reduce the disaster vulnerability of population, infrastructure, and economic assets in Lao urban areas to fires by establishing systems for hazard assessment and disaster mitigation for the city of Vientiane, the project ~~VGP RQWDMRQMWIDQGRVHU DRFLWVWQCFRP P XQWVW RQFFRP SQWVWVWH~~ Lao National Disaster Management Office (NDMO) in collaboration with the Urban Research Institute (URI) and the Fire Protection and Prevention Department focuses on conducting a risk assessment of Vientiane, both at the city and community levels; building capacity for prevention and response within the city ~~VHP HJHQF\ VUYIEHGHSUW HQWVWECMKIQ DSXEOF DZ DUHQWVDP SDIJQDQ~~ improving the regulatory system for fire mitigation.

NEPAL Kathmandu Valley Earthquake Risk Management Project (KVERMP)

Site(s): Kathmandu Valley
Hazard(s): Earthquakes
Lead Institution(s): National Society for earthquake Technology of Nepal (NSET-Nepal) and GeoHazards International (GHI)

Overview: The Kathmandu Valley Earthquake Risk Management Project (KVERMP), implemented by the National Society for Earthquake Technology (NSET-Nepal) in association with GeoHazards International (GHI) of USA, aimed to reduce earthquake vulnerability in Kathmandu. Project implementation could be divided into four main areas: 1. Development of an Earthquake Scenario and Action Plan for Kathmandu; 2. School Earthquake Safety Program including the retrofit of schools and training of masons; 3. Public Awareness Promotion, the highlight of which is the establishment of Earthquake Safety Day on the anniversary of the 1934 earthquake; and 4. Institutional Building and Training. During the past years, NSET-Nepal has established itself as a competent professional institute and was able to launch numbers of activities aimed at earthquake vulnerability reduction in Kathmandu Valley.

PHILIPPINES Philippine Cities Disaster Mitigation Project (PCDMP)

Site(s): Naga City and San Carlos
Hazard(s): Floods and multiple hazards

Lead Institution(s): The Philippine Business for Social Progress (PBSP) and the League of Cities of the Philippines (LCP)

Overview: The Philippines Cities Disaster Mitigation Project (PCDMP) aims to reduce vulnerability to natural hazards by addressing flood and typhoon mitigation in Naga City and San Carlos City. In addition to hazard mapping and mitigation planning, the project emphasizes land use planning, the formation of disaster management standards, and the training of urban professionals. Representing a new trend in corporate sector involvement in disaster management, the Philippine Business for Social Progress in association with League of Cities managed the

demonstration phase. The project has successfully completed preparation of hazard and risk assessments in the two selected cities. Under the next phase, the project intends to place emphasis on the disaster mitigation action planning process by city governments.

SRI LANKA Sri Lanka Urban Multi-Hazard Disaster Mitigation Project (SLUMDMP)

Site(s): Ratnapura, Nawalapitiya, Kandy, Colombo, Cities along Kelani River
Hazard(s): Multiple hazards
Lead Institution(s): The Center for Housing, Planning and Building (CHPB), National Building Research Organization (NBRO), and Urban Development Authority (UDA)

Overview: The Sri Lanka Urban Multi-Hazard Disaster Mitigation Project (SLUMDMP) aims to reduce the vulnerability of Sri Lankan cities by identifying hazards including landslides and floods. The project focuses on developing tools and skills for incorporating risk management into urban development planning in the demonstration city, Ratnapura and in replication cities, namely Kandy, Nawalapitiya, Colombo and cities along Kelani River. Also, SLUMDMP advocates policy enhancement by revising the Emergency Management and Response Plan in collaboration with the Disaster Management Steering Committee of Ratnapura as well as attempts to institutionalize the subject of Urban Disaster Mitigation in the academic discipline. The SLUMDMP is implemented by the *Centre for Housing, Planning and Building*, in partnership with the *National Building Research Organization* and the *Urban Development Authority*.

THAILAND Thailand Urban Disaster Mitigation Project (TUDMP)

Site(s): Hat Yai
Hazard(s): Floods
Local Institution(s): Prince of Songkla University (PSU)

Overview: The Thailand Urban Disaster Mitigation Project (TUDMP) aims to reduce disaster vulnerability of urban populations, lifeline facilities, infrastructure and shelter to natural hazards through demonstration activities and training. Hat Yai and Klong Luang are the TUDMP ~~VSUMFW~~ sites due to their history of annual catastrophic floods. The partner for implementing the project is the *Faculty of Natural Resources, Prince of Songkla University*, Hat Yai, Songkla Province. TUDMP targets to establish disaster management committee at the city level to prepare action plans for flood mitigation, which focuses mainly on non-structural mitigation measures. The project also aims to establish a Regional Disaster Management Study Center at Prince of Songkla University to act as a research center on disaster management and related topics in order to sustain mitigation activities initiated under TUDMP.

VIETNAM Vietnam Urban Disaster Mitigation Project (VUDMP)

Site(s): Quang Tri and Thua Thien Hue
Hazard(s): Floods and Typhoons
Local Institution(s): To be identified

Overview: The Vietnam Urban Disaster Mitigation Project (VUDMP) aims to promote sustainable human settlements in Vietnam by reducing the vulnerability of urban populations, lifeline facilities, and infrastructure to floods and typhoons. Quang Tri and Thua Thien Hue, two provinces in Central Vietnam, are identified as the project area. The project will integrate and coordinate with existing reconstruction and mitigation projects implemented by other organizations, including the Vietnam Red Cross and IFRC. The project activities include: Integration of Risk Assessment in Development Processes; Development of Shelter Delivery Systems; Capacity Building; Knowledge Networking for Disaster Mitigation; and Replication.