FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
REGION VI			
ANTIQUE	SAN JOSE	CULASI	TIBIAO
	HAMTEC	SIBALOM	VALDERAMA
AKLAN	KALIBO	MAKATO	ALTAVAS
	BALETE	NEW WASHINGTON	NUMANCIA
	IBAJAY	NABAS	MALAY
	BURNANGAN	BATAN	LIBACAO
	MADALAG	BANGA	TANGALAN
CAPIZ	PANAY	PONTEVEDRA	PANITAN
	MAAYON	MAMBUENO	SIGMA
	DAO	CUARTERO	
GUIMARAS	NUEVA VALENCIA	BUENAVISTA	
ILOILO	ILOILO CITY	CARLES	AJUY
	POTOTAN	CABATUAN	OTON
	ANILAO	MINA	PAVIA
	NEW LUCENA	STA BARBARA	TUBUNGAN
	SAN MIGUEL	TIGBAUAN	ZARRAGA
	GUIMBAL	LOON	
NEGROS OCCIDENTAL	ILOG	HINIGARAN	BAGO
	KABANGKALAN	PONTEVEDRA	LA CASTELLANA
	HIMAMAYLAN		

FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
REGION VII			
CEBU	DANAO	COMPOSTELA &	CONSOLACION
	AREAS ALONG TANGONG RIVER	LILOAN AREAS ALONG COTCOT RIVER	AREAS ALONG CANSAGA RIVER
	TOLEDO CITY	MANDAUE CITY	CEBU CITY
SIQUIJOR	LARENA	SOQUIJOR	LAZI
	MARIA	TALINGTING	
NEGROS ORIENTAL	VALLE	AYUNGON	TAYASAN
	GUIH	BINDOY	SIBULAN
	TANJAY	STA CATALINA	SIATON
	DUMAGUETE CITY	BAYAWAN	BAIS
SIQUIJOR	LARENA	MARIA	SIQUIJOR
	TALINGTING	LAZI	

FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
REGION VIII			
LEYTE PROVINCE	ALANG-ALANG	BURAUEN	MAC ARTHUR
	BALBATNGON	CAPOOCAN	MAYORGA
	PALO	CARIGARA	PASTRANA
	SAN MIGUEL	DAGAMI	TABON-TABON
	STA FE	DULAG	TUNGA
	TACLOBAN	JARO	CALUBIAN
	TANAUAN	JULITA	ISABEL
	BARUGO	LA PAZ	LEYTE-LEYTE
	SAN ISIDRO	VILLABA	KANANGA
	TABANGO	ALBUERA	MATAG-OB
	ORMOC CITY	ABUYOG	JAVIER
	MAYORYA	MAHAPLAG	HILONGOS
	BATO	MATALOM	PALOMPON
	ISABEL	MARIDA	INOPACAN
	HINDANG	BAYBAY	MAHAPIG
	TOLOZA	SAN ISIDRO	
SOUTHERN LEYTE	SOGOD	SAN FRANCISCO	MAASIN
	HINUNANGAN	ANAHAWAN	BONTOC
	LIBAGON	MACROHON	PINTUYAN
	LILOAN	MALITBOG	SAN RICARDO
	LIMASAWA	PADRE BURGOS	SILAGO
	ST BERNARD	TOMAS OPPUS	SAN POLICARPIO
	SULAT	TAFT	HINUNDAYAN
	SAN JUAN	SAN RICARDO	
BILIRAN	NAVAL	ALMERIA	CULABA
	KAWAYAN	CABUCGAYAN	CAIBIRAN
	BILIRAN	MARIPIPI	
SAMAR	BASAY	PAGSANGHAN	CALBIGA
CAMIGUIN	ALL ISLANDS AND MUNICIPALITIES		
NORTHERN SAMAR	ALLEN	ROSARIO	LAO-ANG
	BIRI	SAN JOSE	LAPINIG
	BOBON	SAN VICENTE	LAS NAVAS
	CAPUL	SAN ANTONIO	MAPANAS
	CATARMAN	SAN ISIDRO	PALAPAG
	LAVEZARES	VICTORIA	PAMBUJAN
	LOPE DE VEGA	CATUBIG	SAN ROQUE
	MONDRAGON	GAMAY	SILVINO LOVOS
WESTERN SAMAR	ALMAGRO	STA MARGARITA	DARAM
	CALBAYOG	STO NIÑO	HINABANGAN
	CANDARA	TAGAPUI-AN	JIABONG
	MATUGUINAO	BASAY	MARABUT
	PAGSANJAN	CAIBIGA	MOTIONG
	SAN JORGE	CATABALOGAN	PARANAS
	PINABACDAO	SAN SEBASTIAN	TALALORA
	SAN JOSE DE BUAN	STA RITA	VILLAREAL
	ZUMARRAGA	TANANGAN	STA RITA
EASTERN SAMAR	BALANGIGA	BORONGAN	CANAVID
	LLORENTE	TAFT	DOLORES
	ORAS	BATANGIGA	BORONGAN
	ARTECHE	BALANGKAYAN	CAN-AVID
	DOLORES	LAWAAN	MERCEDES
	GIPOROS	LIORETTE	ORAS
	GULUAN	GEN MAC ARTHUR	GUINAPONDAN
	HERNANI	MASIOG	SALCEDO
	JIPAPAD	MAYDOLONG	SAN JULIAN
	ORMOC CITY	ABUYOG	HINDANG
	PALOMPON	BATO	INPACAN
	ISABEL	BAYBAY	MATALOM
	MARIDA	HILONGOS	JAVIER
	MAHAPIG	SAN POLI CARPIO	SULAT
NORTHERN SAMAR	CATARMAN	MONDRAGON	SAN ROQUE
	LAOANG	ALLEN	BIRI
	BOBON	CAPUL	LAVEZARES
	LOPE DE VEGA	ROSARIO	SAN JOSE
	SAN VICENTE	SAN ANTONIO	SAN ISIDRO
	VICTORIA	CATUBIG	GAMAY
	LAPINIG	LAS NAVAS	MAPANAS
	PALAPAG	PAMBUJAN	SILVINO LOVOS

FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
REGION IX			
BASILAN	ISABELA AGUADA BARANGAY COASTAL AREA OF MALUSO	LAMITAN LIMO-OK PORTION OF BALOBO TINAMBAKAN CAMANES SENGAL	UBIT PORTION OF LAMITAN PROPER
ZAMBOANGA DEL NORTE	DIPOLOG GOV. VILLAGE BRGY ESTARA BRGY MINAOG DIPOLOG CITY	LILOY PIAO RIVER SINDAGAN MUCAS RIVER SALUG	SIOCON SIOCON RIVER POBLACION SIOCON MALIPOT BUCANA SIBAKIL
ZAMBOANGA DEL SUR	PAGADIAN SIBATANG DAMPALAN PAGADIAN CITY NOBORAN BINAYAN DIPAYA LABANGAN MABOLO PANAGAAN GURIPAN MAHAYAG MOLAVE DIPOLO	BUUG BAYOG IMELDA SIBOGUEY ALICIA IPIL BRGY BULUAN TITAY VALLEY	ZAMBOANGA CITY STA BARBARA STA CATALINA LUSTRE CAMINO NUEVO SAN JOSE GUSU TUMAGA TUGBUNGAN GUIWAN PUTIK MAASIN SINUNUC LABUAN PATALON SINUBONG SAN RAMON BOALAN VITALI MANICAHAN

FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
REGION X			
BUKIDNON	ALONG THE COURSE OF PULANGI RIVER		KITAOTAO
	SAN FERNANDO		DANCAGAN
	VALENCIA		KIBAWE
	MARAMAG		KALILANGAN
	QUEZON		
	DON CARLOS		
CAMIGUIN	PORTION OF ALANGALAN LAOC & PUTI RIVERS OF CATARMAN		
	MABIAS		
	BALBAGON CREEKS OF MAMBAJAO		
	MAAC RIVERS		
	ALL ISLANDS AND MUNICIPALITIES		
MISAMIS ORIENTAL	CAGAYAN DE ORO CITY		
	ISLA DE ORO - DOWNSTREAM SECTION OF CARMEN RIVER		
	BRGY BAYABAS, CONSOLACION		
	KAUSWAGAN AND MACABALAN		
	LIM KET KAI AREA IN LAPASA		
	BPGY GUSA		
	VILLA ERNESTO SUBDIVISION		
	TAGALOAN		
	BALINGNING		
	GINOOG CITY		
	ODIONGAN, SAMAY		
MISAMIS OCCIDENTAL	PLARIDEL, LOPEZ JAENA		TANGUB CITY
	SAPANG DALAGA		
	PART OF BALIANGAO- ALONG DIOYO AND LANGARAN RIVER		
	OZAMIS CITY		TUDELA
	OROQUIETA CITY		CLARIN
SURIGAO DEL NORTE	ALL ISLANDS AND MUNICIPALITIES		
SURIGAO DEL SUR	ALL ISLANDS AND MUNICIPALITIES		
AGUSAN DEL SUR	TIVER TOWNS	ROSARIO	BUNAWAN
	SAN FRANCISCO	BAYUGAN	PROSPERIDAD
AGUSAN DEL NORTE	BUTUAN CITY	SANTIAGO	LAS NIEVES
	RTR		

FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
REGION XI			
DAVAO DEL NORTE	TAGUM	ASUNCION	NABUNTURAN
	STO TOMAS	NEW FORELLA	KAPALONG
DAVAO DEL SUR	TALOMO	CATALUNAN	ALL IN DAVAO CITY
	ULAS	PIQUEÑO	MALITA
	TUGBOK	MATINA APLAYA	JOSE ABAD SANTOS
	MINTAL	CENTRAL PARK	DIGOS
DAVAO CITY	TOLOMO	CAUNAN	LOGMOK
	TORI		
DAVAO ORIENTAL	LUPON	BRGY BITAONGAN	
	BRGY CUABO	BRGY TALISAY	
DAVAO DEL NORTE	ASUNCION	COMPOSTELA	MONTEVISTA
	CARMEN	NEW BATAAN	MONKAYO
	KAPALONG	NABUNTURAN	STO TOMAS
	MACO	MAAYAB	TAGUM
GSC/SAR	GSC	MALUNGUN	MAASIN
SOUTH COTABATO	POLOMOLOK	TUPI	TANTANGAN

FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
REGION XII			
SOUTH COTABATO	POLOMOLOK	TUPI	TANTANGAN
NORTH COTABATO	CARMEN KABACAN	PIKIT M'LANG	TULUNAN
GENERAL SANTOS CITY	MALUNGUN	GEN SANTOS	MAASIM
LANAO DEL NORTE	KAPATAGAN SPAD	LALA BALOI	SALVADOR

FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
ARMM			
SULTAN KUDARAT	ESPERANZA ISULAN	TACURONG LAMBAYOG	LUTAYAN
LANAO DEL NORTE	KAPATAGAN LALA	SALVADOR SAPAD	BALOI
MAGUINDANAO			

FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
CARAGA			
AGUSAN DEL NORTE	BUTUAN CITY - THE DELTA OF AGUSAN RIVER MAGALLANES- THE MOUTH OF AGUSAN RIVER TUBAY SANTIAGO CABADBARAN CALAMBA BALANG-BALANG	TAGBONGABONG CAPUDLUSAN	BAYANG
AGUSAN DEL SUR	MOST OF THE RIVER TOWNS OF AGUSAN DEL SUR, SITUATED WITHIN THE MID-SECTION OF THE 11,000 SQUARE KILOMETER AGUSAN RIVER BASIN STA JOSEFA LORETA VERUELA BAYUGAN	BUNAWAN ROSARIO PROSPERIDAD	TALANCOGON SAN LUIS SAN FRANCISCO
SURIGAO DEL NORTE	SURIGAO CITY MAINIT	ALEGRIA PORTION OF TUBOD	
SURIGAO DEL SUR	ALL ISLANDS & MUNICIPALITIES		

FLOOD PRONE AREAS IN THE PHILIPPINES

PROVINCE	PRONE MUNICIPALITIES		
REGION-CAR			
ABRA	BANGUED	MANABO	SALLAPADAN
	BUCAY	LA PAZ	SAN ISIDRO
	TAYUM	LAGAYAN	PILAR
	LAGANGILANG	LANGIDEN	PIDIGAN
	SAN JUAN	SAN QUINTIN	PEÑARRUBIA
	DOLORES	DANGLAS	DAGUIOMAN
KALINGA	PASIL	BALBALAN	TANUDAN
	LUBUAGAN	TINGCAYAN	
IFUGAO	TINOC	ASIPULO	KIANGAN
	HUNGDUAN		
NCR			
MANILA	TONDO	STA MESA	SAMPALOC
	SAN JUAN	PACO	PANDACAN
	BLUMENTRITT	STA CRUZ	
QUEZON CITY	TALAYAN	LIBIS	GALAS
	TATALON ESTATE	ROXAS DISTRICT	PROJECT 6
LAS PINAS	MANUYO UNO	DANIEL FAJARDO	ILAYA
	BLKS. ALDANA	PULANG LUPA UNO	ZAPOTE
	PAMPLONA UNO	BF INT'L. CAA	
MANDALUYONG	NAMAYAN	MANWAY	SAN JOSE
	CORONADO	BARANGKA	
MAKATI CITY	CARMONA	LA PAZ	OLYMPIA
	PALANAN	SAN ANTONIO	SAN ISIDRO
	TEHEROS	VALENZUELA NUEVO	COMEMBO
	GUADALUPE VIEJO		
TAGUIG	LOWER BICUTAN	HAGONOY	TUKTUKAN
	BAGUMBAYAN	TIPAS	USUSAN
PATEROS	STA ANA	AGUHO	
PASAY CITY	MARICABAN AREAS	MALIBAY	SAN CARLOS VILLAGE
	SAN RAFAEL	SAN ROQUE	
PARANAQUE	BACLARAN	TAMBO	DON GALO
	VITALEZ	SAN DIONISIO	STO NINO
	LA HUERTA	SAN ISIDRO	BF
	MARCELO GREEN	SUN VALLEY	MERVILLE
CALOOCAN	10TH AVENUE	HERDES DEL 96	KAPAK
	LANGRAY	MAYPAJO	DAGAT-DAGATAN
	SANGANDAAN	MONUMENTO	BONIFACIO
MALABON	ACACIA	BARITAN	CATMON
	CONCEPCION	DAMPALIT	HULONG DUHAT
	LONGOS	MAYSILO	MUZON
	PANGHULO	SANTOLAN	TENEJEROS
	BAYAN BAYANAN	IBABA	
NAVOTAS	NORTH BAY BLVD.	SOUTH BLVD.	THANGOS
	TANZA	SAN ROQUE	BANCULASI
	BAGUMBAYAN N.	BAGUMBAYAN S.	NAVOTAS EAST
	SIPAC	ALMASEN	SAN JOSE
VALENZUELA	DALANDANAN	KARUHATAN	MALANDAY
	ARKONG BATO	BALANGKAS	CALOONG
	ISLA		
CAVITE	CAVITE CITY	KAWIT	NOVELETA
	BACOOR	ROSARIO	NAIC

付属資料 8　Steering Committee
及び Technical Working Group の構成

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Manila

APR 06 2006

SPECIAL ORDER) CREATION OF A STEERING COMMITTEE FOR THE STUDY
No. 56) ON NATIONWIDE FLOOD RISK ASSESSMENT AND THE
Series of 2006) FLOOD MITIGATION PLAN FOR SELECTED AREAS IN THE
) PHILIPPINES

To ensure the effectiveness and coordinated implementation of the Study on Nationwide Flood Risk Assessment and Flood Mitigation Plan for Selected Areas in the Philippines, with technical assistance from the Government of Japan (GOJ), under the Japan International Cooperation Agency (JICA), a Steering Committee for the said Study is hereby created with the following composition:

1.	RAUL C. ASIS Assistant Secretary for Planning, DPWH	-	Chairman
2.	MARIA CATALINA E. CABRAL, PhD OIC-Director, Planning Service, DPWH	-	Vice-Chairman
3.	RESITO V. DAVID Project Director, PMO-FCSEC, DPWH	-	Member
4.	PATRICK B. GATAN Project Director, PMO-MFCP I, DPWH	-	Member
5.	PHILIP MEÑEZ Project Director, PMO-MFCP II, DPWH	-	Member
6.	NEDA Representative	-	Member
7.	PAGASA Representative	-	Member
8.	PHILVOCS Representative	-	Member
9.	OCD Representative	-	Member
10.	DENR Representative	-	Member

The Resident JICA River Expert and the Chief Advisor for the Enhancement of Capabilities (ENCA-Project) shall be Honorary Members of the Committee.

The main functions of the Steering Committee are as follows:

a. to monitor the progress of the study;
b. provide guidance, resources and support in the formulation of guidelines for the Flood Risk Assessment and the Flood Mitigation Plan for Selected Areas; and,
c. ensure the success and outcome of the Study.

The Steering Committee shall hold meetings during the presentation of Status Reports and as may be requested by the Study Team.

A Technical Working Group (TWG) is hereby correspondingly created to be composed of the following:

1.	REBECCA T. GARSUTA Engineer V, DPD-Planning Service, DPWH	-	Head
2.	DOLORES M. HIPOLITO Project Manager II, PMO-FCSEC, DPWH	-	Co-Head
3.	PMO-MFCP I Representative	-	Member
4.	PMO-MFCP II Representative	-	Member
5.	NEDA Representative	-	Member
6.	PAGASA Representative	-	Member
7.	PHILVOCS Representative	-	Member
8.	OCD Representative	-	Member
9.	DENR Representative	-	Member

The TWG shall assist the Steering Committee in its functions. It shall hold regular monthly (or as the need arises) coordination meetings with the JICA Study Team to discuss/monitor the progress of the Study.

This Order shall take effect immediately.

HERMOGENES E. EBDANE, JR.
Acting Secretary

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4.	PMO-MFCP II Representative	-	Member
5.	NEDA Representative	-	Member
6.	PAGASA Representative	-	Member
7.	PHILVOCS Representative	-	Member
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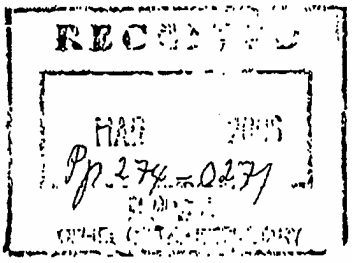

付属資料９　見積書

East Compound, Paraiso St.,
Parang, Marikina City
Tel. Nos. 9412770/9340665

A. CLAVERIA SURVEYING

QUOTATION FOR SURVEY SERVICES

A. SCOPE OF WORK

This financial quotation pertains to the conduct of river cross-section survey. The necessary survey activities pertinent to this are as follows:

1. Establish at least two principal horizontal control points of primary precision.
2. Establish a suitable vertical datum (elevation) to be employed in the project.
3. Locate critical points within the project site along which river cross-section survey is to be made. The location of these critical points shall be decided by the consultant.
4. Conduct cross-section survey at these critical points.
5. Process the raw field data and present them in a suitable format according to the requirements of the consultant.

B. METHODOLOGY

1. Horizontal Control Survey

A minimum of two primary horizontal control points shall be established at the start and end of the project site. These control survey shall be done by GPS observation using a three-receiver set-up in static mode. Coordinates of the primary horizontal controls shall be in Philippine Reference System (PRS-'92) or World Geographic System (WGS-'84) and projected to map coordinates using the Transverse Mercator Projection.

2. Vertical Control Survey

A vertical datum shall be established for the project, either assumed or mean sea level (msl). Project controls shall be referred to this datum by three-wire geodetic level network of secondary precision. The previously established primary horizontal control points shall be used as project benchmarks. Level errors shall not exceed 12 mm X $K^{1/2}$, where K is the length of level line in kilometers.

3. Location of River Cross-Sections

Approximately 30 critical points within the project site shall be identified by the consultant and shall be properly marked on the ground. These points shall be connected to the horizontal/vertical project controls either by an open loop traverse of tertiary precision or GPS survey in kinematic mode.

Kinematic GPS survey shall be employed at portions of the project site where there is limited vegetation to interfere with satellite tracking.

For heavily vegetated portions of the project site, open loop traverse shall be employed using electronic total stations. Traverse closure shall be made by coordinates only, using the transit rule, and shall have a relative error of 1:2000 or better.

Elevations of these critical points shall be observed by the same method as vertical control, and if possible, shall be an integral part of the vertical control network.

4. **River Cross-Section**

River cross-section shall be done along the pre-determined critical points and perpendicular to the river channel. This shall be done by direct observation of the cross-section line by an electronic total station. Depth of the water shall be observed using electronic depth finders.

River cross-section shall have a maximum length of 150 meters. Cross-section points shall be taken at 10-meter intervals and at points of changing slope. The ordinary water level, ordinary flood level and maximum flood level shall be determined from the local residents and shall be observed.

5. **Data Processing and Plan Preparation**

Cross-section points shall be computed using trigonometric leveling. All ground points shall be converted in a mapping (rectangular) coordinate system.

All survey plans shall be made using Land Development Desktop (LDD) and shall conform to a scale and format to be decided by the consultant.

C. SUBMISSION OF SURVEY RETURNS

Survey returns for the project shall consist of the following:

a. Index plan showing the location of project controls and the cross-section lines and plotted on NAMRIA topographic map.

b. River cross-section plans plotted at a suitable scale containing pertinent water level information

c. GPS adjustment report

d. Leveling computation

e. Traverse computation

f. Control point descriptions and reference points

g. Cross-section data

h. Reference control points as certified by NAMRIA

i. Site photographs

j. Electronic files of plans and survey data

D. COST

Project costs shall be computed according to actual quantities surveyed and shall be computed according to the following:

ITEM	QTY.	UNIT	UNIT COST	TOTAL
1. Horizontal Control (GPS)	2	Pts.	P 25,000.00	P 50,000.00
2. Horizontal Control (Traverse)	3	Km	15,000.00	45,000.00
3. Vertical Control	3	Km	12,000.00	36,000.00
4. River Cross-Section	30	Sections	7,000.00	210,000.00
5. Plan Preparation	1	Lump Sum	20,000.00	20,000.00
TOTAL				P 361,000.00 Say **P 360,000.00** Or **P 10,000.00 / Cross-Section**

This amount shall be paid according to the following schedule:

30 % of the Total Cost as advance payment upon receipt of the official notice to proceed.

70 % of the Total Cost as final payment upon submission of survey returns.

付属資料 10　事業事前評価表

事業事前評価表（開発調査）

作成日：平成１８年　６月　６日

担当グループ：フィリピン事務所

１．案件名

フィリピン国全国洪水リスク評価及び特定地域洪水被害軽減計画調査

２．協力概要

（１）事業の目的

（ａ）国家災害調整評議会が指定する洪水常襲地域の中から、優先的に洪水対策が求められる洪水危険地域が選定され、同地域間の対策事業実施上の優先順位付けが行われる。

（ｂ）選定された洪水危険地域の中からモデル地域が選定され、同地域に対する洪水防御･被害軽減計画が策定される。

（ｃ）上記（ａ）（ｂ）の共同作業を通して、C /P の行政能力が向上する。

（２）調査期間

2006 年 9 月から 2008 年 3 月

（３）総調査費用

1.8 億円

（４）協力相手先機関

フィリピン国公共事業道路省

（５）計画の対象（対象分野、対象規模等）

対象分野：治水

対象地域：フィリピン国全土

３．協力の必要性・位置付け

（１）現状及び問題点

フィリピン国は、自然災害、特に台風等による水害を極めて受けやすい国となっている。台風による、1970 年から 2003 年までの 34 年間の年間平均死者は 544 人／年、行方不明・負傷者は 1478 人／年に上る。また、年間平均影響世帯数約 55 万件（影響人口 280 万人）、全壊家屋数 7 万件、半壊家屋数 16 万件、損害額は 46 億ペソになる。およそ 6 年に 1 回の割合で、被害額 100 億ペソ（約 200 億円）を超える被害が起きている。

治水事業に関しては、1982 年に大河川流域を対象とした基本計画を策定し、順次フィージビリティ調査を実施して、ODA を中心とした資金を投入して着手はしてきているものの、未だ 4 水系で事業化されているに過ぎない。

フィリピン国のように公共投資の財源に限りがある場合、全国的に見て対策事業の優先化を図る必要があるが、現時点では、各河川の氾濫リスク域の同定や、人口・資産・経済活動など事業便益の視点から評価されたデータの整備は、殆どなされていない。フィリピン国の洪水対策行政を担う公共事業道路省も、社会便益に基づく事業戦略を策定した経験がなく、治水事業の優先化、戦略化が図れない状況にある。

（２）相手国政府国家政策上の位置づけ

現行の中期フィリピン開発計画（MTPDP 2004-2010）においては、洪水対策として構造物対策のみならず、非構造物対策にも力点をおいており、非常に厳しいフィリピン国の財政事情も勘案すると、本調査の実施により、今後は大規模な治水事業のみならず、地域の実情に配慮した洪水対策事業を計画的に展開していくことが求められている。

また、2006 年 2 月、国家災害調整評議会の下に国家洪水管理委員会が設立され、同委員会は 2006 年 7 月までに洪水管理に係る国家計画の枠組みを大統領に提出することになっているが、その後同枠組みを具現化するため、本調査の実施が求められている。

（３）他国機関の関連事業との整合性

現時点では、我が国以外の援助機関による構造物対策治水事業は殆ど行われていない。

（４）我が国援助政策との関連、JICA 国別事業実施計画上の位置づけ

現行国別援助計画においては、「環境保全と防災」は援助重点分野･課題の１つであり、現行 JICA 国別事業実施計画においても、防災対策実施能力強化への支援を実施していくこととしている。

４．協力の枠組み

（１）調査項目

（ａ）既存資料・情報の収集
（ｂ）現地踏査
（ｃ）洪水危険地域の類型化
（ｄ）洪水危険地域の評価・スクリーニング
（ｅ）選定された洪水危険地域における洪水防御・被害軽減事業の優先順位付け、実施スケジュール案の策定
（ｆ）モデル地域における洪水防御・被害軽減計画の策定
（ｇ）環境社会配慮
（ｈ）C/P への技術移転

（２）アウトプット（成果）

（ａ）優先洪水防御・被害軽減事業の実施スケジュール案
（ｂ）モデル地域における洪水防御･被害軽減計画

（３）インプット（投入）: 以下の投入による調査の実施

（ａ）コンサルタント（分野／人数）
１）総括/洪水防御・被害軽減計画　1 名
２）河川技術１（洪水リスク評価１/構造物対策）　1 名
３）河川技術２（洪水リスク評価２）　1 名
４）非構造物対策　1 名
５）GIS　1 名
６）施工計画/積算　1 名
７）環境社会配慮　1 名

（ｂ）その他
１）C /P 研修
２）技術移転セミナー、教育訓練ワークショップ

５．協力終了後に達成が期待される目標

（１）提案計画の活用目標

洪水防御・被害軽減事業の実施スケジュール案、モデル洪水防御・被害軽減計画に基づき、洪水危険地域における治水計画が作成される。

（２）活用による達成目標

フィリピン国における治水事業が戦略的に実施される。

６．外部要因

（１）協力相手国内の事情

（ａ）政策的要因：政権交代等により治水セクターの優先度が低下しないこと

（ｂ）行政的要因：関係省庁･実施機関間での調整の遅延がないこと

（ｃ）経済的要因：経済状況の悪化等による更なる緊縮財政及び資金不足が生じないこと

（ｄ）社会的要因：治安の更なる悪化がないこと

（２）関連プロジェクトの遅れ

特になし。

７．貧困・ジェンダー・環境等への配慮（注）

計画段階から適切な配慮を心掛け、必要な情報公開を行うとともに、モデル洪水防御･被害軽減計画に関するステークホルダーミーティングの実施を支援する。

８．過去の類似案件からの教訓の活用（注）

・洪水危険地域のスクリーニングに際しては、大河川流域の大規模治水事業が想定される地域ばかりではなく、中小河川流域であっても早急に対策が取られるべき地域が含まれるよう留意する。

・本調査結果を活用しフィリピン側が治水計画を立案できるよう十分な技術移転を行う。

９．今後の評価計画

（１）事後評価に用いる指標

（ａ）活用の進捗度

洪水防御・被害軽減事業の実施スケジュール案、モデル洪水防御・被害軽減計画に基づき、洪水危険地域において治水計画が作成されている度合い

（ｂ）活用による達成目標の指標

本調査結果を活用し策定された治水計画の実施数

（２）上記（ａ）および（ｂ）を評価する方法および時期

フォローアップ調査によるモニタリング（2008 年度以降）

（注）調査にあたっての配慮事項