MEMORANDAM OF UNDERSTANDINGS
ON
THE 2nd PREPARATORY STUDY (PROGRAM FORMULATION)
IN
DISASTER PREVENTION SECTOR
IN
THE PEOPLE’S REPUBLIC OF BANGLADESH
AGREED UPON
BETWEEN
BANGLADESH WATER DEVELOPMENT BOARD
AND
JAPAN INTERNATIONAL COOPERATION AGENCY

DHAKA, 7 July 2009

Japan International Cooperation Agency (hereinafter referred to as “JICA”) dispatched the 2nd preparatory study (Program Formulation) team headed by Mr. Kanzo Nakai, Director of South Asia Division 5, South Asia Department, JICA, to the People’s Republic of Bangladesh from 28th June 2009 to 7th July 2009 in order to discuss on the request of JAPAN’S TECHNICAL COOPERATION in the field of Disaster Prevention in Water Sector (hereinafter referred to as “the Study”).

During its stay in Bangladesh, the JICA team carried out the field surveys and held the series of discussions with Economic Relations Division, Ministry of Water Resources, Bangladesh Water Development Board (hereinafter referred to as “BWDB”) and other concerned organizations. The Study aimed to confirm intention of BWDB to submit the official request to the government of Japan in the field of river management, and to elaborate an idea of TOR of the request.

The main issues discussed and agreed were summarized below.

Proposed assistance program for 10 years in water-related disaster prevention sector in Bangladesh
1. Based on the result of the 1st preparatory study (Program Formulation) in Disaster Prevention Sector conducted in March 2009 (hereinafter referred to as “1st Study”), JICA
team explained the tentative framework and short-term technical cooperation of JICA which are designed to provide necessary assistance in the following three sub-fields as shown in Attachment 1 for the purposes of improving the capacity of BWDB and relevant organizations for natural disasters.

a) Revision of “National Water Management Plan(2004)” and related activities

b) Sustainable development for Meghna-Dependent Area (MDA)

c) Assist for Coastal Zone and South West Area

2. Bangladesh side explained such additional needs to be tackled as restorations and reactivates of several rivers (old Brahmaputra, Buriganga, Dhaleswari, Surma, Kustara, etc.), and both sides agreed to pay more attention to them in the preparation of proposals.

Basic study for formulating basin-wide plan of river management

3. JICA team had discussions on short-term river management project with BWDB, and also made feedback of the result of discussions with other relevant organizations/agencies and of field surveys in Meghna river area. Through the discussions and surveys, JICA team confirmed the characteristics and importance of MDA as follows;

1) The area is a hydrologically complicated and affected by three types of floods namely Haor, Flash Flood, Monsoon Flood, the integrated river management is quite necessary.

2) Though there were studies such as FAP 6 and JICA Development Studies in this area, these studies need to be updated in more extensive manner. In addition, comprehensive studies which have not been carried out for implementation so far for urgent projects are needed.

3) Compared to the other main rivers, it will be manageable for Bangladesh side to implement overall river management activities under the concept of Integrated Water Resource Management (IWRM). This will be a good chance for BWDB to acquire enough knowledge and techniques of it.

4) Piecemeal projects have been implemented without considering the entire MDA.

5) As the linkage between flood control and water use is very close, comprehensive river management is expected to contribute to the economic development in this area.

6) No major donors have provided large scale technical assistances to this area.

4. Both sides had mutual understanding of necessity to implement JICA’s technical cooperation(s) to this area in the field of river management based on the above mentioned reasons and current conditions in this basin.

5. JICA team explained the tentative framework of cooperation and an idea of the Terms of Reference (TOR) to BWDB as attached hereto as Attachment 2, and BWDB accepted them. And both sides had common understanding that BWDB will play a main role as an executing agency for most projects mentioned in the proposed assistance program for 10 years, especially river management.

6. Concerning the implementation office/division for the project for which JICA team explained the idea of TOR, both sides had a discussion and BWDB promised to assign
and set up the most suitable one before submitting the official request to the government of Japan.

Others

7. BWDB had submitted an official request for technical adviser (expert) in the field of water management policy in 2008, but it has not been approved on Japanese side. Through the discussions with BWDB, JICA team showed a revised TOR of the adviser, and BWDB agreed to it. JICA can not promise but will take necessary process in Japan for the approval of the request after the completion of this study.

8. Both sides confirmed that this MOU would not bind any future assistance from JICA.

Attachment 1: Proposed Assistance Program for 10 years
Attachment 2: Suggestion on idea of TOR
Attachment 3: Revised TOR of the technical cooperation expert (adviser)

Mr. Abul Kalam Mohd Azad
Director General,
Bangladesh Water Development Board,
Ministry of Water Resources

Mr. Kanzo Nakai
Director,
South Asia Division 5,
South Asia Department,
Japan International Cooperation Agency
<table>
<thead>
<tr>
<th>Position in development strategy</th>
<th>Field of assistance</th>
<th>Envisaged projects</th>
<th>Assistance type</th>
<th>Implementing agency</th>
<th>Implementation years</th>
<th>Other donors</th>
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<tr>
<td>Optimum use of water resources</td>
<td>NWMP</td>
<td>Capacity improvement for water management (incl. Assistance in updating NWMP)</td>
<td>Technical cooperation expert</td>
<td>WARPO</td>
<td>2009 – 2018</td>
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<td>Study on water demand and supply balance</td>
<td>Technical cooperation project</td>
<td>WARPO</td>
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<td>Incl. strengthening national water resources database system</td>
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<td>Reduction of water-related disaster</td>
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<td>Capacity improvement for river management</td>
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<td>River management for Meghna River dependent area</td>
<td>Technical cooperation project</td>
<td>WARPO/BWDB</td>
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<td>Incl. MP/TS study, technical cooperation project, loan/grant-based project</td>
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<td>Incl. MP/FS study, loan/grant-based project</td>
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<td>Management of coastal zone &amp; south-west areas</td>
<td>Coastal zone development (land reclamation, erosion control, etc.)</td>
<td>Technical cooperation project</td>
<td>BWDB</td>
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<td>LCG</td>
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<td>Incl. drainage improvement, flood management, water conservation, etc.</td>
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<td>Technical cooperation project</td>
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<td>Incl. MP/FS study, loan-based project</td>
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<td>Grant-based project</td>
<td>BWDB</td>
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<td>WB</td>
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Note: * strategic goal in PRSP for Bangladesh
TOR (Idea)

(1) TITLE OF THE STUDY

Basic Study for Formulating Plan of River Management in Meghna Dependent Area

(2) BACKGROUND INFORMATION

The basin/nation-wide studies on river management focused on water-related disaster prevention in other countries have been conducted with Japanese assistance and funding mainly from JICA, which is known for its technical expertise in studies of this nature. In view of the necessity to complete the Study at the shortest time possible, it is proposed for GOJ financing since they have the technical expertise and financial capacity to assist the Bangladesh Government in this undertaking.

(3) OBJECTIVES OF THE STUDY

1. To identify and study problems/issues for river management in Meghna through collection and analysis of data and information,
2. To prepare a TOR of master plan study on river management focused on water-related disaster prevention in Meghna River,
3. To prepare TOR(s) of feasibility study on urgent river management project(s) focused on water-related disaster prevention in Meghna River,
4. To identify urgent river management project(s) focused on water-related disaster prevention in Meghna River which would be suitable as technical cooperation project(s) and loan/grant-aid project(s),
5. To conduct feasibility studies of a couple of pilot projects for future investment among the projects identified in 4. above, and
6. To transfer technology and knowledge on river management focused on water-related disaster prevention to the Bangladesh counterparts through their direct participation in the Study and training program.

(4) STUDY AREA

The study area covers basically the area of the Upper Meghna River basin within Bangladesh country (as shown in the location map). However, the other related areas are also included, if required for the Study.

(5) SCOPE OF THE STUDY

(a) Collection and analysis of existing data and information,
(b) Review of past studies related to water-related disaster prevention in Meghna River dependent area,
(c) Field reconnaissance on basin conditions,
(d) Specific surveys (topographic/river survey, flood inundation and damage survey, river movement survey, inventory survey of river facilities, water use survey, land use survey, environmental survey),
(e) Analysis (flood/inundation, riverbank erosion, river channel discharge capacity, sediment runoff and sedimentation, water demand projection),
(f) Identification and study of problems/issues for river management,
(g) Formulation of framework and TOR for a master plan study on river management focused on water-related disaster prevention in Meghna River,
(h) Formulation of TOR(s) for feasibility study on urgent river management project(s) focused on water-related disaster prevention in Meghna River,

(i) Identification of urgent river management project(s) focused on water-related disaster prevention in Meghna River which would be suitable as technical cooperation project(s) and loan/grant-aid project(s), and

(j) Feasibility studies of a couple of pilot projects for future investment among the projects identified in (i) above.

(6) EXPECTED OUTPUTS

1. A TOR of master plan study on river management focused on water-related disaster prevention in Meghna River,

2. TOR(s) of feasibility study on urgent river management project(s) focused on water-related disaster prevention in Meghna River,

3. Reviewing previous studies and identifying urgent river management project(s) focused on water-related disaster prevention in Meghna River which would be suitable as technical cooperation project(s) and loan/grant-aid project(s), and

4. Feasibility studies of a couple of pilot projects for future investment among the projects identified in 3. above.
1. **Discipline**

   River Basin Management

2. **Expected Activities**

   The activities expected to be performed by the Adviser are:

   1. To review the past studies on water resources development and management, particularly on river improvement, in Bangladesh,
   2. To help BWDB approve and coordinate the project proposals of river training works, which are to be prepared by its district offices, from the viewpoint of basin-wide river management,
   3. To organize and coordinate seminars on water disaster prevention for the BWDB staff that could support technical knowledge transfer and dissemination,
   4. To work closely with the BWDB staff to study a monitoring system of river channel stabilization and management,
   5. To identify and generate opportunities for forming close cooperation among the government organizations concerned with the aim of effective and efficient river management,
   6. To provide advice for formulating future JICA project proposals on water-related disaster management in Bangladesh,
   7. To support BWDB's coordination for studies/projects implemented under assistance of JICA and other donors
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PUBLIC WORKS DEPARTMENT, MINISTRY OF HOUSING AND PUBLIC WORKS

AND

JAPAN INTERNATIONAL COOPERATION AGENCY

DHAKA, 6 July 2009

Japan International Cooperation Agency (hereinafter referred to as “JICA”) dispatched the 2nd preparatory study (Program Formulation) team headed by Mr. Kanzo Nakai, Director of South Asia Division 5, South Asia Department, JICA, to the People’s Republic of Bangladesh from 28th June 2009 to 6th July 2009 in order to discuss on the request of JAPAN’S TECHNICAL COOPERATION in the field of Disaster Prevention.

During its stay in Bangladesh, the JICA study team carried out the field surveys and held the series of discussions with Economic Relations Division, Public Works Department (hereinafter referred to as “PWD”) and other concerned organizations. PWD submitted a request for JAPAN'S TECHNICAL COOPERATION (hereinafter referred to as “the Project”) in 2008. This study aimed to confirm PWD's intention to submit the request to Japanese Government again, and to elaborate the TOR of the Project for the preparation of the new proposal.

The main issues discussed and agreed were summarized below.

1. Based on the result of the 1st preparatory study (Program Formulation) in Disaster Prevention Sector (hereinafter referred to as “1st Study”), the JICA study team explained that it identified strong necessity to improve earthquake resilience of existing public buildings as the bases in natural disasters.
2. The JICA study team submitted “Background of the Project” which describes its understandings on the emergent necessity of the Project, and PWD accepted it. Both sides shared main issues and key factors over the background of the Project.

3. As the purpose of the Project, the JICA study team proposed to include the strengthening of the capacity to conduct retrofit works against wind and water disasters in addition to seismic retrofitting. PWD agreed to this proposal.

4. The JICA study team submitted “Tentative TOR for the Project” as attached hereto as Attachment. PWD received it and announced that it would start preparation for the request with referring this tentative TOR.

5. PWD explained that it would prepare future plan for retrofitting works of existing public buildings after the building inventory for retrofit works prepared through the Project. PWD also expressed its idea that it would conduct retrofitting works of existing public buildings every year from revenue budget, starting 2 years later after the commencement of the Project. The JICA study team confirmed PWD’s strong commitment to continue the retrofitting works.

6. PWD explained that it would set up a project unit as counterpart (hereinafter referred to as “C/P”) team for the Japanese experts. The JICA study team explained that the preferable C/P structure would be consisted with 1) mid level engineers as main C/P, 2) junior engineers for supporting the main C/P.

7. Both sides confirmed that this MOU would not promise/bind any future assistance from JICA.

Attachment: Tentative TOR for the Project

Mr. Rafiqul Islam Chowdhury
Chief Engineer,
Public Works Department,
Ministry of Public Works and Housing

Mr. Kanzo Nakai
Director,
South Asia Division 5,
South Asia Department,
Japan International Cooperation Agency
Tentative TOR of the Project

1 Project Purpose

The purpose of the proposed Project is to improve capacity of PWD engineers for the retrofit works of existing public buildings, which are designated to be bases in natural disaster such as earthquake, cyclone, flood and high tide.

2 Outputs and Activities

Output 1: The capacity on Probable Damage Evaluation for existing public buildings is developed

Activities,
1) To produce building inventory with GIS
2) To categorize (rank up) existing public buildings
3) To select buildings and to collect documents such as design drawings
4) To study foreign codes, and to develop criteria and index for damage evaluation
5) To establish damage evaluation method against each type of disaster
6) To produce manual for probable damage evaluation of existing public buildings
7) To conduct damage evaluation and prepare analysis reports

Output 2: Retrofit design for existing public buildings against disaster can be planned

Activities;
1) To study foreign codes, manuals and other existing literatures related to retrofit design
2) To study design experience for appropriate retrofit techniques
3) To prepare manual for retrofit design
4) To select/prioritize buildings to be prepared retrofit design
5) To develop basic policy and to produce retrofit design documents
6) To produce manual for retrofit design
Output 3: Construction management capacity in retrofit is strengthening

Activities;
1) To conduct theoretical training on construction work for retrofit
2) To study experiences on retrofit works
3) To develop construction method
4) To construct sample works and to test materials
5) To produce manual for retrofit works

Output 4: Monitoring capacity for retrofit of existing public buildings is strengthening

Activities;
1) To produce check list and judgment guidelines for quality assurance
2) To prepare training materials
3) To prepare monitoring database
4) To review and feedback monitoring results

Output 5: Training course for damage evaluation and retrofit plan is established

Activities;
1) To conduct needs assessments
2) To prepare curriculum, materials, plan (budget) and schedule for the trainings
3) To conduct seminars, workshops and on the job training
4) To review training courses
5) To make relationship with other institutes