A-3865

Impact Evaluation Study of the "Emergency Disaster Damage Rehabilitation (Sector) Project, 2007 (Part D : Roads)"

Carried out by

EVALUATION SECTOR

IMPLEMENTATION MONITORING AND EVALUATION DIVISION (IMED)

MINISTRY OF PLANNING

GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

Conducted by

Pathmark Associates Limited

6/A/1, Segunbagicha, Dhaka

June, 2013

Impact Evaluation Study of the "Emergency Disaster Damage Rehabilitation (Sector) Project, 2007 (Part D : Roads)"

Pathmark Associates Ltd. Professionals

Mr. Golam Mowla
Evaluation Specialist – Team Leader
Mr. Shishir Kumar Shil
Civil Engineer
Syed Abdus Sobhan
Water Resource Expert
Mr. S.M. Shahjahan
Statistician

IMED Officials

Syed Md. Haider Ali
Director General
Mr. Md. Abdul Quiyum
Director
Quamrun Nessa
Director
Mr. Md. Mosharaf Hossain
Assistant Director

Conducted by

Pathmark Associates Limited

6/A/1, Segunbagicha, Dhaka

June, 2013

EXECUTIVE SUMMARY

Background

Bangladesh is one of the most disaster prone and densely populated country in the world. The country suffers from disasters like floods, cyclones, typhoons, storms, etc. Due to impact of climate change, frequency and severity of the disasters are increasing. The country experienced devastating floods in 1988, 1998, 2000, 2004 and 2007 causing serious damage to the infrastructure, public assets and private properties. The flood of 2007 affected almost the whole country. Of the 64 districts, 40 were seriously affected. The flood devastated the country twice within a period of little over one month. The first havoc of flood lasted for about 20 days from 4th quarter of July and the duration of the second attack was about 15 days starting from first quarter of September 2007. A total of 2344.02 km of roads out of 21560.04 KM, RHD roads were damaged.

A flood damage rehabilitation project was proposed to be implemented through the support of Asian Development Bank. In line with this proposal, the "Emergency Disaster Damage Rehabilitation (Sector) Project, 2007" was formulated.

Objectives of the Project

The main objective of the project is to sustain economic development by supporting the Government's efforts to rehabilitate high-priority and essential roads damaged by the 2007 Food in Bangladesh.

Specific objectives of the project are:

- Emergency rehabilitation of 2007 flood damaged National, Regional and District Roads to restore the road network at pre-flood level or to a higher standard and to make appropriate protective measures to minimize future flood damage.
- Restoration of economic and social activities at normal level in the flood affected areas.
- Creation of direct and indirect employment opportunities for the poor through rehabilitation of the flood damaged physical infrastructure in the project area.

Salient features of the project

Salient features of the project are given below:

01.	Project Title	:	Emergency Disaster Damage Rehabilitation (Sector) Project, 2007" (Part D: Roads)
02.	(a)Sponsoring Ministry/Division	:	Ministry of Communications / Roads & Railway Division
	(b)Executing Agency	:	Roads and Highways Department
03.	Location of the Project:		
	Division		**District**
	Dhaka		Gazipur, Manikganj, Munshiganj, Tangail, Faridpur, Netrokona, Dhaka, Madaripur, Shariatpur, Mymensingh
	Chittagong		Comilla, Noakhali, B.Baria, Laximpur, Feni
	Rajshahi		Pabna, Serajganj, Joypurhat, Bogra, Gaibandha, Kurigram
	Sylhet		Sunamganj, Sylhet
04.	Project Implementation Period|		
	a) According to original DPP : 2007 – 2008 to 2009 – 2010 b) According to revised DPP : 2007-2008 (January, 2008) to December, 2010)		
05.	a) Revised Project Cost		i. Total: 43,630.71 (In Lac Taka) ii. GOB: 8,069.61 (In Lac Taka) iii. P.A : 35,561.10 (In Lac Taka)

Impact Evaluation Study of "Emergency Disaster Damage Rehabilitation (Sector) Project, 2007 (Part D: Roads)" was carried out to determine the impact of project benefits on the socio-economic situations in the project areas.

The Objectives of the Assignment are:

According to the Terms of Reference of the study the assignment had the objectives mentioned below:

- To review the implementation status of the project in respect of financial aspect and the rehabilitated flood damaged roads and to see how far the roads are restored to pre-flood level.
- To assess impact of the project activities on restoration of economic and social activities to normal level of the flood affected areas.
- To assess how far the rehabilitation works of road networks helped creation employment of poor people in the affected areas

- To identify the strengths, weaknesses, opportunities and threats towards project activities.

- To see how lessons learnt from project activities could be recommended for improving the rehabilitation of flood-affected roads/infrastructures and minimizing damaging effects of floods in future.

Impact Evaluation Study of "Emergency Disaster Damage Rehabilitation (Sector) Project, 2007 (Part D: Roads)" was conducted in 12 districts. The study covered national highway, regional highway and district road. There were 821 km of roads that were covered under the impact evaluation.

The study is a socio-economic impact study under technical sector. To ensure that the study adequately covers both technical and socio-economic aspects the investigators were chosen from a combination of Diploma Engineers and Persons having degrees in Social Science disciplines. The field investigators were given practical training by a team consisting of IMED officials and study team members. The investigators conducted in-depth field investigation through interview, survey and observation of real situations onsite. Data collection work was supervised and guided by supervisors, the consultants and IMED officials.

The study investigation covered both treatment group and control group. In treatment group, 900 households and 120 enterprises / organizations and in control group 420 households and 96 enterprises / organizations were surveyed. Opinions of 180 drivers belonging to project area were taken as well. In addition to these the physical observation covered roads, 10 bridges and 23 culverts. Opinions were also taken from field level officials of Roads and Highways Department.

A Focus Group Discussion (FGD) session was conducted in each of 11 districts. A local level workshop was conducted in Manikgonj district.

Summary of Key Findings:

1. The project has reduced carrying cost of products significantly. Before implementation of the project, carrying cost was 14.77% of the value of the products and after implementation the project, it is now 9.94%

2. The Project has increased sales of perishable products. Before implementing the project, 35.42% of the perishable products could be sold and at present 48.55% of the perishable products can be sold.

3. The project has increased number of markets. In the project area it has increased by 44.6%.

4. There has been mentionable increase in number of small industries in project area. It increased by 75.6%. Number of workers increased by 77.8%. The number of female workers increased by 89%.

5. Number of roadside shops increased by 100.5%. Number of workers increased by 77.6%.

6. Business transactions during rainy season improved substantially during rainy season because of improvement in transport facilities due to improved road conditions.

7. Access to health care facilities improved significantly. It is evident from 18.67% respondents that the access is very good and 78.22% mentioning it as good after implementation of the project compared to 10.78% and 9.44% before the project was implemented.

8. The vehicle drivers mentioned that before the rehabilitation work their vehicles used to remain off the road for an average of 6 days every month for repair work. Their monthly average loss was Tk.4,666.11.

9. The representatives of industries and businesses in project areas mentioned that the project had been able to restore the economic activities at a level similar to or higher than that of the pre-flood days. They mentioned that they were getting the following benefits:
   - Sales are continuously increasing because of good condition of roads.
   - It has become easy to carry goods to and from district towns.
   - Supply of goods has increased and cost has reduced
   - Number of buyers has increased

10. Physical observation reveals that 12.31% of the roads have depressed portion, 4.61% do not have cambers and 12.13% have washed away parts.

11. On physical verification of bridges it has been found that of the observed bridges the width of the bridges are in conformity with the width of the roads near the bridge. Only one bridge has the same width with the road near it.

12. The study covered physical observation of 23 culverts and of those, 26.99% were on regional highways and 73.01% on district roads. None of the culverts has been found to be of submerged type.

13. Deliberations of FGD sessions and local level workshops give an indication that maintenance work is not evenly done at all points of the roads.

14. There is a finding that work of rehabilitation started quite late after the havoc of 2007 flood affected the areas.

Major Recommendations:

Based on the findings a number of recommendations are made. The major recommendations are:

1. Flood is a recurring phenomenon in Bangladesh. The project started after 3 months of havoc caused by the flood of 1997. The time gap between the occurrence of damage and starting of emergency rehabilitation work should be lessened.

2. The Project management structure as given in DPP showed that the project was managed through involvement of RHD officials to do the job in addition to their own jobs. All authority were concentrated in the office of Project Co-ordinator who was Head of RHD. Such an emergency project should be managed by a full time Project Director and a Project Management Unit. The Project Director should not be replaced during the Project implementation period. This could have reduced the Project duration.
3. There were not many bridges and culverts compared to the length of roads. The project should have included more bridges and culverts for reconstruction / rehabilitation.
4. Roads are lifeline of an economy. Because of the impact of climate change, frequencies of natural calamities that damage roads will increase. To facilitate quick rehabilitation, there should be provisions for Emergency Fund to do the emergency rehabilitation work. The emergency work should be done in such a way that a damaged road can remain operational till large scale work is undertaken.
5. Revision of a project delays its implementation. The delay in implementation of an infrastructure project retards socio-economic growth. Emergency Projects should be prepared in such a way that they can be implemented with absolutely minimum revision.
6. In this project monitoring and supervision was done by consultants. The RHD authority should closely monitor the work of the consultants in similar projects.

7. There should be an organizational arrangement within RHD to conduct research on refinement of materials needed for construction of roads and bridges. Research programs among other things should include making materials flood tolerant.
8. Opinion of local people can help any infrastructure project meet the local needs properly. Before undertaking such projects opinion of local people should be taken by conducting local level seminars.
9. There is a practice of providing "Power of Attorney" through which the main contractor transfers the work to another firm and that firm does the work. This

hinders the quality of work. This practice of transferring the contract should be stopped to ensure the quality of work.

10. There are complaints of undue interference by local influentials. Involvement of community should be ensured to minimize undue local influence and to ensure quality of work.

11. Preventive maintenance should be a regular practice by RHD for proper utilization of roads by users.

12. The project had a time overrun. It has become a practice to extend duration of project on no-cost extension basis. Steps may be taken to avoid time and cost overrun. This can be achieved through taking strategic and innovative approaches to project management.

13. In some developing countries there are Independent Road Research Institutes that conduct research on design, construction and maintenance of roads and runways, traffic and transportation planning of cities, management of roads in different terrains. Such an institute of some countries conduct research on using industrial waste in road construction. In Bangladesh there is a serious crisis of soil for use in road construction: example of Dhaka-Chittagong four lane project can be cited here. It is strongly recommended that an Independent Road Research Institute should be established to conduct research on design, construction, maintenance, drainage and road safety. To facilitate the research environment such an institute can be a constituent of Bangladesh Council for Scientific and Industrial Research (BCSIR).