

Chapter III

Final Assessment of Flood 2004

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Background

Flood 2004 has been one of the most severe floods in the recent history of Bangladesh since the last major flood in 1998. In view of the severity of flood 2004, and its possible impact on the economy and implications for policies to be pursued in terms of post flood rehabilitation, CPD undertook a study in July-August 2004 on Rapid Assessment of Flood 2004 under its IRBD programme.

As the flood continued through August and there was heavy rainfall in early September in some of the areas of the country, CPD continued to work on updating the findings of the study including the damage estimates, and also has put under scrutiny developments as regards implementation of the government's rehabilitation programme.

In order to carry out the study, CPD has adopted the following methodology:

- i. Generation of information from primary sources;
- ii. Collection of information from secondary and unpublished sources; and
- iii. Validation of the information and study findings through dialogues with policy makers, experts and knowledgeable persons.

Primary information was collated from field surveys. Secondary sources of information included: (i) media (both print and electronic); (ii) government ministries and agencies; and (iii) private sectors and trade bodies.

In order to generate primary information from flood affected areas, CPD sent three teams, each consisting of two CPD researchers, to a number of flood-hit areas. CPD teams visited eleven Upazillas in nine districts of the country.

To discuss and validate an earlier draft of the findings, CPD held an in-house dialogue on 9 August 2004 with a number of high level policymakers working with the government, top level former bureaucrats, NGO leaders, experts and academics. CPD received important insights and information from this dialogue. The report was also shared with the print and electronic media through a press briefing on 12 August 2004 in

order to disseminate the findings of CPD's rapid assessment and recommendations which emerged from the study and dialogues with stakeholders. CPD also shared the findings and recommendations of the flood assessment study with the government.

In the second phase CPD members made reconnaissance field level visits in some of the areas which were visited by CPD members in August 2004 during the flood. In order to understand the coping mechanism of the flood victims and post-flood rehabilitation activities CPD sent a team of two members to two districts in November 2004.

Secondary information on updated damage estimates and post flood rehabilitation programmes was collected from government ministries and agencies. Information was also collected on damages caused to various sectors of the economy due to torrential rain in August.

On the basis of the updated information collected from various official sources, CPD has estimated the damages due to Flood 2004 and damages due to heavy rain. The second phase of the study also compares CPD's policy recommendations provided in CPD's initial Rapid Assessment of Flood 2004 with the GOB implementation policies.

Damage Assessment

Updated Damage Estimates: CPD's preliminary (up to 4 August 2004) estimates of damage due to Flood 2004 was to the tune of Tk 11,418.6 crore or US\$ 1.93 billion with an anticipation of ranging to Tk 15,000 crore (US\$2.5 billion) after the final assessment. The CPD study on assessment of Flood 2004 covers five major affected sectors for estimating the total damage caused by the flood. These broad sectors are: (1) Agriculture, (2) Infrastructure, (3) Industry, (4) Education, and (5) Health. Table 3 presents both the preliminary and updated damage estimates which show that CPD's updated damage estimate due to Flood 2004 stands at about Tk 11,760 crore (US\$ 1.99 billion). This is about Tk 341 crore more than CPD's earlier estimate. Ten districts were affected due to heavy rainfall that followed Flood 2004. If the impact of

heavy rainfall is accounted for, the damage for the agricultural sector (crop and fisheries) stands at Tk 1733.8 crore (US\$ 0.29 billion). Consequently, CPD's final damage estimates due to flood and rain increase to about Tk 13,493.8 crore or US 2.29 billion. This is about 4.05 per cent of total GDP for the FY2004.

Information on the impact of rainfall on other sections was not available. Apart from the infrastructure and residential sectors, all estimates of damage due to flood have remained unchanged in CPD's re-estimate.

Comparison of Damage Estimates: CPD's preliminary assessment was the first one of its kind to come up with a damage estimate of flood 2004 with

the application of a scientific methodology. Following CPD's study a number of attempts have been made by other organisations to estimate the damages incurred due to flood such as the joint assessment by the Asian Development Bank and World Bank and the Institute of Cost Management Accountant (ICMA). The UN

Table B1: Comparison of Preliminary Damage Estimates

Organisations	Total Damage(Tk crore)	Total Damage (US\$ billion)
Centre for Policy Dialogue (CPD) <i>Source: Report on Rapid Assessment of Flood 2004</i>	(a) 11,418.6 (till 4 August 2004) (b) 13,493.8 (Updated, includes rain)	1.93 2.29
Asian Development Bank-World Bank <i>Source: Report on Damage and Needs Assessment</i>	13,450	2.28
United Nations <i>Source: Quoted in the newspaper</i>	40,000	6.6
Government of Bangladesh <i>Source: Quoted in the newspaper</i>	42,000	7.0
Institute of Cost Management Accountant <i>Source: Study Report on Damages Caused by Flood 2004</i>	49,864	8.0

TABLE B2: SUMMARY OF CPD'S DAMAGE ESTIMATES

Sector	Preliminary Damage Estimate		Updated Damage Estimate		Damage from Heavy Rainfall (Tk Crore)	Total Damage due to Flood and Rain (Tk Crore)
	Amount (Tk Crore)	Share (%) of Total Damage	Amount (Tk Crore)	Share (%) of Total Damage		
	1	2	3	4	5	
Agriculture	2920.0	25.6	2920.0	24.8	1733.8	
Infrastructure	3867.0	33.9	4017.6	34.2		
Residential	3706.0	32.5	3896.8	33.1		
Industry	531.7	4.7	531.7	4.5		
Education	345.4	3.0	345.4	2.9		
Health	48.5	0.4	48.5	0.4		
Aggregate	11418.6 (US\$1.93 billion)	100.0	11760.0 (US\$1.99 billion)	100.0	1733.8 (US\$0.29 billion)	13,493.8 (US\$2.29 billion)
Public Sector	4303.0	37.7	4453.6	37.9		
Private Sector	7115.6	62.3	7306.4	62.1		
GDP (2003-04)	332567.0		332567.0			
Damage as % of GDP	3.4		3.5			4.05

Note:

1. Agriculture sector includes crops, fisheries and livestock. Infrastructure sector includes roads, bridges and culverts, railways, embankments, irrigation canals.
2. Income loss due to flood is not considered. Private sector Industry data is partial.
3. Damage in agriculture sector due to heavy rainfall includes the crop and fisheries sectors.

Memo:

1. Estimated Damage of 1998 flood was 4.7% of the GDP of 1998-99 (Chowdhury, Islam and Bhattacharya 1998).
2. The upper bound of the initial CPD damage estimates was predicted to be Tk 15,000 crore (4.5% of GDP).

mission in Bangladesh and the GOB had also quoted some damage estimates. Except the ADB-World Bank assessment all the other estimates are much higher than the CPD estimates and the methodology of these estimates is either unclear or unscientific.

Relief and Rehabilitation

Relief: All types of relief distributed among the flood victims in cash and kind by the Ministry of Food and Disaster Management (MOFDM) were converted into monetary value. Relief distributed by the Prime Minister's Office and by the private sectors could not be included due to unavailability of data. The monetary value of relief distributed to the flood victims by the MOFDM was Tk 192.5 crore. It is observed that the national average of per capita relief distribution has been higher (Tk 51.15) in the updated estimation compared to the earlier estimation (Tk 19.97). The monetary value of relief distributed in the rain affected districts is Tk 6.7 crore and the per capita availability of relief is Tk 14.57.

Rehabilitation Programmes: In an effort to rehabilitate the affected people and reconstruct the flood affected economy the GOB has recently approved a two-year massive flood rehabilitation programme for Tk 1,429 crore, of which ADB will provide a loan of Tk 1,045 crore (US\$180 million). The rest will be provided by the GOB. ADB's programme will start in January 2005 and will be allocated for the improvement of five sectors such as rural infrastructure, city, roads, railway and water development. Among the other major donors, the World Bank is planning for a loan of about US\$200 million of which US\$40 million is new assistance and US\$ 160 million is old money which remained unutilised and will be cancelled if not utilised. The UN flash appeal for US\$ 210 million to help the flood victims for six months could generate about US\$ 42 million till October 2004.

Insights from the Field on Rehabilitation: CPD team visited Dhunat and Sirajganj Sadar upazillas of Bogra and Sirajganj districts respectively during the second round of information collection. The team found that the reconstruction of road and bridges has not started as yet though the preparation to call for tenders is almost complete. The schools and colleges which have started to operate after the flood also need to be renovated. Small dams have been reconstructed by the local people. The rehabilitation programme for the agriculture sector which included distribution of seed for *ropa aman*, *boro*, wheat, maize, lintels, mustard,

chilli, fingerlings for fisheries and cash to buy goat and poultry has been appreciated by the people. NGOs undertook similar programmes. In Dhunat upazilla 16,000 VGF cards were distributed till date for an amount of 160 metric tonnes of rice. A few houses were built with the support of the government and NGOs. About 80-100 houses were built in Dhunat with the help of a non-resident Bangladeshi. The presence of NGOs in Sirajganj is less compared to Dhunat.

✓ CPD's Recommendations and GOB Initiatives

In its preliminary report CPD presented a policy package for addressing the post flood situation during the fiscal year 2004-05 which was derived from revisiting the experience of the earlier flood, taking note of the macroeconomic parameters and performance of the real economy, and reviewing the emerging trend of the global economic environment. This policy package included both short-term measures (August-October 2004, i.e. till *aman* is harvested) to deal with relief activities and medium-term measures (August 2004-June 2005 i.e. till end of the fiscal year) to address rehabilitation and reconstruction programmes. CPD's policy package were related to macroeconomic framework, public finance, credit expansion and inflation, external sector, real economy (agriculture, industry, infrastructure), safety net, government microcredit and utilisation of foreign aid. During the last few months GOB has undertaken various programmes for relief and rehabilitation many of which are in line with CPD's recommendations. However, many more are yet to be undertaken to address the flood affected people and areas.

CPD recommended for an expansionary macroeconomic framework which essentially includes increased public expenditure (investment) and greater flow of credit (both industrial and agricultural) to the private sector. CPD recommended that at least Tk 5,000 crore has to be disbursed as agricultural credit and recovery may be suspended till harvesting of *aman* crop while a special programme for *boro* crop has to be undertaken as well. The government has decided to disburse Tk 5,537.91 crore during FY2004-05 through nationalised commercial banks and specialised banks. NCBs and specialised banks disbursed Tk 1,154.78 crore during July-October 2004, which was 58 per cent higher than that of the same period during the last fiscal year.

CPD's report clearly stated that domestic resources can, by and large, finance the reconstruction work. Available information suggests that the government mostly relied on its own budgetary resources. CPD also recommended that within the public expenditure portfolio, activities and projects related to rehabilitation and reconstruction should get priority. The government has taken the decision to reallocate 10 per cent of the ADP for rehabilitation and reconstruction activities, which is about Tk 2,200 crore. Though it is too early to make any assessment as regards the utilisation of the block allocations kept in the ADP, such allocations remained unutilised till September 2004.

CPD recommended that there should be a plan beyond aman season and provision for seed, fertiliser and irrigation during aman and boro seasons at free of cost to the marginal farmers. CPD report added that in view of the rise in global price of oil and upward revision of domestic prices of gas and electricity, the government should consider an ad hoc relief for farmers using diesel operated irrigation. The government has decided to provide seeds free of cost and fertiliser at reduced rates to the farmers through a scheduled subsidy amounting to Tk 271 crore. However, the government has not considered the suggestion regarding the price of diesel for irrigation. Instead, it has increased the price of diesel from Tk 20 to Tk 23 per litre since December 2004. The decision to hike the price of diesel will have adverse impact on boro production since boro relies heavily on irrigation and 83 per cent irrigation is done through diesel operated engines in Bangladesh. This will, in turn, raise the price of rice and have a negative impact on the availability of food. It may be noted that the total import of foodgrains (rice and wheat) by the government and the private sector during July-December 2004 was 1,550 thousand mt compared to 1,851 thousand mt during the same period in the previous year (FY2004). In other words, the total food import in FY2005 is 16.3 per cent less than that of the last fiscal year (FY2004). The decrease in import can be attributed mainly to higher and rising international prices of foodgrains which are expected to increase further in the coming months. This is due to lower production prospect of rice in Thailand, Vietnam and India as a result of abnormal drought. The government should review the decision of increase in diesel price to ensure food security.

CPD's policy package suggested the following measures for export oriented industries: (i) provision of cash compensation scheme and expeditious steps towards timely release of funds under CCS initiative;

(ii) support air cargo shipment of exportables including RMG, charter cargo planes, if needed; and (iii) advise banks for deferment of loan recovery for 3-6 months from export-oriented units which have been affected. The government has increased the CCS support to agricultural and agro-processing goods from 25 per cent to 30 per cent, and has taken an initiative to release Tk 150 crore for the knit sector from the CCS fund. The government has also decided for deferment of bank loan recovery from the affected export oriented units.

In order to ensure food availability and food security of marginal families, repair, reconstruction and maintenance of flood damaged rural roads through FFW programme have always been useful. CPD recommended that the amount of foodgrains to be distributed through non-priced channels such as VGD, VGF, FFW, TR and GR should be increased from the planned level of 744 thousand tonnes. The short-term rehabilitation programmes of the government of Bangladesh included creation of a Disaster Risk Mitigation Fund of Tk 75 crore (US\$ 12.7 million) for families with a monthly income of less than Tk 3,500, allocation of Tk 170 crore (US\$ 28.5 million) and 195 thousand mt of foodgrains for FFW, and operation of TR programme for repairing and reconstruction of schools and basic infrastructures. The government also declared that it would feed 40 million people till December 2004 under the VGF programme. An analysis of the distribution of foodgrains through public foodgrains distribution system (PFDS) reveals that the distribution of foodgrains through FFW and VGD was lower in July-December 2004 (101 thousand mt) than that of July-December 1998 (366 thousand mt) following Flood 1998. This needs to be corrected. The amount of foodgrains distributed through non-priced channels during July-December 2004 was 511 thousand mt and the government has a plan to distribute another 353 thousand mt during January-June 2005. Total distribution of the priced and non-priced foodgrains through the PFDS during July-December 2004 was 637 thousand mt against 631 thousand mt in July-December 1998.

As regards foreign aid, CPD's policy package stated that the government should take initiative to receive food aid as much as possible for keeping the safety net programmes, including VGD and VGF. CPD report added that although the government has recently received a budgetary support of about US\$200 million from the World Bank under the Development Support Credit II, it will be worthwhile to negotiate expeditiously for a quick-disbursing budgetary-cum-

Table B3: Comparison of CPD's Recommendations and GoB Implementation

<i>Areas of Intervention</i>	<i>CPD's Recommendations</i>	<i>GOB Initiative and Implementation Policy</i>	<i>Timeline of Implementation</i>
<i>Reconstruction and Rehabilitation</i>	<ul style="list-style-type: none"> * Activities and projects for rehabilitation and reconstruction should get priority * Domestic resource can, by and large, finance the reconstruction work 	* GOB will reallocate 10 per cent of ADP (Tk 2,200 crore) for rehabilitation and reconstruction	* Block allocation in the ADP unutilised till September 2004
<i>ADP Implementation</i>	<ul style="list-style-type: none"> * Implementation of foreign aided projects should not be disturbed * A moratorium should be imposed on all domestically financed new projects for FY2005 which are yet to incur expenditures * Projects for implementation of PRSP should be protected * Size of ADP may be revised if non-debt creating resources are available 	* Implementation of low-priority development projects will be staggered and may even be carried over to the next fiscal year to make funds available for rehabilitation and reconstruction	
<i>Revenue and Fiscal Deficit</i>	<ul style="list-style-type: none"> * GOB may negotiate with IMF and WB regarding relaxation of the cap on domestic borrowing if there is shortfall in the revenue collection and fiscal deficit 		
<i>Inflation</i>	<ul style="list-style-type: none"> * Monitor the rise of inflation carefully, resort to Open Market Sale (OMS), if necessary 	<ul style="list-style-type: none"> * Rising food prices due to poor harvest of aman results in high inflation * OMS to be started soon 	* Towards the end of January 2005
<i>Exports</i>	<ul style="list-style-type: none"> * Support for air cargo shipment of exportables * Timely release of funds under Cash Compensation Scheme (CCS) * Deferment of bank loan recovery for 3-6 months from affected export-oriented units 	<ul style="list-style-type: none"> * Allocation of Tk 150 crore from Cash Compensation Scheme (CCS) * Bank loan recovery for the affected export-oriented units deferred 	
<i>Imports</i>	<ul style="list-style-type: none"> * Imports of CI sheet and cement may be facilitated * Import of foodgrains needs to be facilitated 	* During October foodgrain imports were 108 thousand metric tonnes higher than that of the same period in 2003	
<i>Agriculture</i>	<ul style="list-style-type: none"> * Seed, fertiliser and irrigation for aman and boro crop at free of cost to the marginal farmers * At least Tk 5,000 crore has to be disbursed and recovery may be suspended till harvesting of aman crop and a special programme for boro crop * Funds to the SMEs, particularly those without fixed assets as collateral * Increase flow of funds to NGOs through PKSF, NGO Foundation and commercial banks 	<ul style="list-style-type: none"> * Government provided farmers with seed free of cost and fertiliser at reduced rates * Agricultural sector will get Tk 271 crores as subsidy * Nationalised commercial banks and specialized banks disbursed Tk 1,154.78 crore during July-October 2004. This is 58% higher than during the same period in last fiscal year * GOB targets to disburse Tk 5,537.91 crore during FY 2004-05 through NCBs and specialised banks 	* 20% of the targeted loans disbursed during July-October 2004
<i>Industry</i>	<ul style="list-style-type: none"> * No new financing facility but improve the efficiency of the existing units * Financial support to SMEs * Cash incentives to export-oriented industries 		
<i>Infrastructure</i>	<ul style="list-style-type: none"> * Prioritise rehabilitation over reconstruction * Reallocation of ADP for repairing and reconstruction * Loans at low interest rate for purchasing house building materials 	<ul style="list-style-type: none"> * Rehabilitation and reconstruction have started * Operation of TR programme for repairing and reconstruction of schools and basic infrastructures 	* Being implemented
<i>Safety Net</i>	<ul style="list-style-type: none"> * Increase the amount of foodgrains in VGD, VGF, FFW and TR, and monitor properly * Full utilization of special funds * Expansion of micro-credit through the NGOs 	<ul style="list-style-type: none"> * Creation of a disaster mitigation fund of Tk 75 crore * Allocation of Tk 170 crore and 195,000 mt of food for FFW * 40 million people will be fed till December under VGF programme 	Being implemented
<i>Foreign Aid</i>	<ul style="list-style-type: none"> * GOB may receive food aid as much as possible for safety net programmes * Negotiate for quick disbursement of budgetary-cum-BOP support from the WB 	* Received from ADB and World Bank	ADB's programme scheduled to start in January 2005