



Netherlands Commission for
Environmental Assessment

Advisory Review of the EIA and Gender Action Plan for the Main River Flood and Bank Erosion Risk Management Programme

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BANGLADESH



26 June 2014





Netherlands Commission for
Environmental Assessment

Mr C. de Groot
1st Secretary Netherlands Embassy
Dhaka
Bangladesh

your reference

your letter

our reference

OS25-O98/AK/Lw

enquiries to

Arend Kolhoff

direct phone number

(030) 234 76 04

Date: 26 June 2014
Subject: Advice on the EIA and Gender action plan for Main river flood and bank erosion risk management programme, Bangladesh

Dear Mr. de Groot,

In February 2014, you requested the Netherlands Commission for Environmental Assessment (NCEA) to review the Environmental Impact Assessment (EIA) report and the Gender Action plan for the Main River Flood and Bank Erosion Risk Management Programme, in Bangladesh. It is my pleasure to submit herewith the advice.

I would like to draw your attention to the following main issue:

- The information that is essential for decision making on tranche 1 of the programme has been provided by the draft EIA report (May 2014) and the draft Gender Action Plan (May 2014). Although in the EIA report, the most essential information has been provided, a substantial amount is not covered. However, this lack of information can be put right in follow-up studies that have been planned already, such as the Strategic Environmental Assessment (SEA).
- In my view, SEA is an important process that through its integrated and participatory approach, in principle, can improve the quality of the

VISITING ADDRESS
Arthur van Schendelstraat 800
Utrecht
The Netherlands

POSTAL ADDRESS
P.O. Box 2345
NL - 3500 GH Utrecht
The Netherlands

T +31 (0)30 - 234 76 60
F +31 (0)30 - 230 43 82
E mer@eia.nl
W www.eia.nl

programme and secure that it contributes to the sustainable development of Bangladesh.

I can offer the advisory services of the NCEA to assure the quality of the planned SEA process and SEA report.

The NCEA would appreciate to be kept informed on how this advice will be used.

Yours sincerely,

Professor Rudy Rabbinge



Chairman of the Working Group – Advice on the EIA for the Main River Flood and Bank Erosion Risk Management Programme, Bangladesh

Advisory Review of the EIA and Gender Action Plan for Main River
Flood and Bank Erosion Risk Management Programme,
Bangladesh

Advice submitted to the Minister for Development Cooperation, by a working group of
the Commission for Environmental Assessment in the Netherlands.

The Technical Secretary



Arend Kolhoff

The Chairman



Rudy Rabbinge

Utrecht, 26 June 2014

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1. Introduction

1.1 Brief description of the initiative¹

The Flood and Riverbank Erosion Risk Management Investment Programme (FRERMIP) is a proposed Asian Development Bank (ADB)-funded multi-tranche financing facility (MFF) with the Bangladesh Water Development Board (BWDB) as the executing agency and the Department of Disaster Management (DDM) as implementing agency for community-based flood risk management measures.

FRERMIP aims to sustain incomes and livelihoods of people living along selected reaches of Jamuna, Ganges, and Padma Rivers. The expected benefits are: (i) reduced loss of agricultural and other land to river erosion, (ii) reduced flood damage to agriculture (etc) and (iii) increased agricultural production on less-flooded agricultural land.

After initially protecting critically eroding riverbanks at priority areas, the programme plans to move to more systematic riverbank stabilisation, potentially leading towards river-reach stabilisation during later tranches. The stabilisation approach will make use of the currently ongoing consolidation of the river morphology developing towards a more accentuated channel pattern similar to the one observed in the 1970s, before the dramatic widening (from the 1970s to 2000s) took place.

The programme outputs will be to (i) strengthen the flood and riverbank erosion management system, and (ii) establish, at priority erosion sites, sustainable, integrated non-structural and structural risk management measures. In total 50 km of riverbank protection, 53 km of embankment rehabilitation, and 36 km of embankment reconstruction or new construction are planned to be implemented through the BWDB. The total programme, approximately US\$ 375 million, is implemented in three tranches: tranche 1 (2014 - 2017), tranche 2 (2017 - 2020), tranche 3 (2020 - 2023). Due to requirements of the Government of Bangladesh and the ADB, an Environmental Impact Assessment (EIA) has been conducted for a number of activities implemented during tranche 1. The required environmental safeguards for tranches 2 and 3 are set forth in a separate Environmental Assessment and Review Framework (EARF) document.

Tranche 1 consists of three subprojects: Jamuna Right Bank 1 (JRB-1), Jamuna Left Bank 2 (JLB-2), and Padma Left Bank 1 (PLB-1). JLB-2 and PLB-1 physical works consist of riverbank-erosion protection works along critically eroding areas. JRB-1 consists of very limited riverbank-erosion protection works in

¹ Description of the initiative is based upon the executive summary of the final report on EIA, tranche 1, February 2014.

support of existing works and the restoration of degraded and eroded flood embankments, specifically a section of the Brahmaputra Right Embankment.

The initial tranche 1 receives external financing of US\$ 75 million for total project cost of US\$ 104 million. The government of the Netherlands will provide US\$ 15 million as grant financing during the first tranche.

1.2 Role of the Netherlands Commission for Environmental Assessment

The Netherlands Commission for Environmental Assessment (hereafter referred to as 'the Commission') has been asked by the Netherlands Embassy (EKN) in Dhaka (on 22 February 2014) to review the quality of EIA for tranche 1. The objectives of tranche 1 are:

1. initial protection of critically eroding riverbanks at priority areas;
2. in parallel to restore and extend, existing, degraded or eroded embankment lines, such as the Brahmaputra Right Embankment, to arrive at reliable flood protection for the large population living on the floodplain along the main rivers.

This advice is prepared by a working group of experts that act on behalf of the Commission.

The group comprises expertise on the following disciplines: civil engineering, hydrology, land use, ecology, socio-economic- and gender aspects and fisheries. The composition of the working group can be found in Appendix 2.

1.3 Justification of the approach

First phase: Review of documents resulting in a draft advisory review

The Commission was requested to execute a desk review of the following documents:

1. Draft Report on Environmental Impact Assessment, Tranche 1; February 2014. Main River Flood and Bank Erosion Risk Management Programme².
2. Final Report, Annex I. Social Gender Equity Strategy & Action Plan; September 2013. Main River Flood and Bank Erosion Risk Management Programme³.
3. Final Report; Feasibility study; December 2013; Main River Flood and Bank Erosion Risk Management Programme. This report has been used as a background report and the sections on social and gender issues of this report

² Hereafter referred to as "EIA".

³ Hereafter referred to as "SG-plan".

have been reviewed; most comments have been provided on attachments 6:
Draft Gender Action Plan pp.238 – 241.

In the development of this advisory review the Commission used:

1. international good practice as a reference framework;
2. its long term practice experience with reviewing EIAs by applying the following review criteria: completeness of the information, quality of the information and relevance of the information for decision making.

The Terms of Reference for the EIA provided by the Bangladesh Department of Environment have not been used as a reference framework, because we considered those as very generic and not project specific.

The Commission does not assess the quality of the programme.

This review resulted in a draft advisory review that has been submitted to the EKN for comments dd. March 17th 2014. The EKN has informed the Asian Development Bank (ADB). The ADB, through the EKN, has responded by sending written comments to the Commission. Those comments have been discussed during a teleconference on May 8th 2014 in which the EKN, the ADB and the Commission were participating.

Second phase: Review of adjusted documents resulting in final advisory review

After the teleconference the ADB decided to adjust the existing draft report on EIA (version February 2014) in order to remedy the shortcomings observed by the Commission in the draft advisory report. Moreover, the ADB had already prepared a new version of the Gender Action Plan (April 2014) that has been reviewed.

The following documents have been reviewed:

1. Draft Report on Environmental Impact Assessment, Trance 1; May 2014. Main River Flood and Bank Erosion Risk Management Programme;
2. Gender Action plan; dated 17 May and the Facility Administration Manual dd. 17 May in which the activities identified in the GAP has been operationalised.

The adjusted draft EIA was made available on the website of ADB on 21 May 2014. The draft advisory review prepared by the Commission has not been made publicly available because the ADB was ready to adjust the EIA within a few weeks' time. In addition, the adjusted EIA has not been subject to public participation, as the EIA (version February 2014) was already approved by ADB and has been subject to public participation according to the ADB regulations for EIA. Therefore, the Commission is of the opinion that it is important to pro-

vide an overview of the review process for each of the issues that have been identified in the (unpublished) draft advisory review report and to determine to what extent the adjusted reports have remedied the shortcomings identified. The structure of this advisory report is therefore, as follows:

1. In chapter 2 the main observations are presented;
2. In chapter 3 the main issues identified in the Commission's draft advisory review report are presented and for each issue the following information is provided:
 - Text copied from the draft advisory report (March 17th 2014)
 - EIA report (February 2014) / SG-plan (September, 2013) / GAP (December, 2013)
 - Observations
 - Recommendations
 - New text
 - EIA report (May 2014) and GAP (May 2014)
 - Observations
 - Recommendations, when relevant

This report is publicly available on our website www.eia.nl

2. Main observations on the EIA, SG-plan and GAP

The Commission concluded (on 17 March, 2014) in its draft advisory review of the EIA report (February 2014), SG-Plan (September 2013) and GAP (December 2013) that for a number of issues, shortcomings existed. However, for the following three issues it was concluded that those shortcomings were essential and it was recommended to remedy these before decision making on tranche 1 by adjusting the EIA, the SG-Plan and the GAP:

1. Justification and comparison of alternatives;
2. Downstream impacts;
3. Gender Action Plan.

The Commission concludes:

1. That the three essential shortcomings identified in the draft advisory review by the Commission (17 March, 2013) have been remedied or justified in the adjusted EIA (May 2014) and the adjusted GAP (May 2014) for the Flood and Riverbank Erosion Risk Management Investment Programme (FRERMIP). Therefore, it is concluded that those reports provide sufficient information for decision-making on tranche 1 of this programme;
2. That other shortcomings identified in the draft advisory review by the Commission (17 March, 2013) identified as non-essential for decision-making on tranche 1 have not been elaborated in the adjusted reports.

The Commission recommends that the remaining shortcomings, with regard to the following issues and described in this report, should be taken into consideration in the inception report or in studies that have already been planned, such as the Strategic Environmental Assessment (SEA):

- Justification and comparison of alternatives;
- Downstream impacts;
- Socio-economic aspects; livestock, fisheries and brick industry;
- Social and gender aspects; people affected;
- Biodiversity aspects, river sanctuary study;
- Other aspects; anti-erosive measure.

In our view SEA is an important process that through its integrated and participatory approach, in principle, can improve the quality of the programme and secure that it contributes to the sustainable development of Bangladesh.

3. Review findings and recommendations

3.1 Justification and comparison of alternatives

EIA report – February 2014

The Commission observed that alternatives have not been studied in the EIA nor in the feasibility study. In the EIA, reference is made to a study and plan that are still under preparation and that will research alternative options/solutions: "The feasibility study of Capital Dredging and Sustainable River Management, investigating one single and one multiple-channel option/alternative for Jamuna and Padma, report to be expected early 2014. Building on the Capital Dredging Study and the initial Morphological Assessment of Potential Future Channel Patterns, conducted as part of the feasibility study, the FRERMIP will conduct a comprehensive stabilisation plan to identify potential stabilisation solutions, to be implemented in an adaptive manner, with minimal impact on the river and char environment". It appears that alternatives are studied in the Capital Dredging Study and in the Stabilisation Plan that will be conducted as part of the FRERMIP. However, in principle those types of alternatives should have been elaborated in the EIA study. Subsequently, the environmental, social and economic effects of the different alternatives should have been compared and a cost-benefit analysis should justify this comparison. This essential information is lacking in the EIA report.

The Commission recommended to either justify in the EIA report that the choice for one of the alternative options (single- and multiple channels) does not have significant consequences for the activities and the expected impacts as included in tranche 1. If the expectations are that the different options will have consequences for the activities in tranche 1, the EIA should include a comparative assessment of all relevant impacts.

EIA report – May 2014

The ADB informed the Commission that the feasibility study of Capital Dredging and Sustainable River Management which was supposed to be ready early 2014 is not yet available.

The Commission recommends to include the findings of the above mentioned feasibility study in the development of the planned SEA study.

3.2 Downstream impacts

EIA report – February 2014

The riverbank protection works of JRB-1, JLB-2 and PLB-1, including the reconstructed Brahmaputra Right Embankment in JRB-1 can potentially have important impacts downstream. Rivers in general and in particular in Bangladesh are very dynamic and an intervention in the natural dynamics (e.g. by riverbank protection) in one place, will have consequences in another. How important those consequences will be, can only be determined by extensive hydrodynamic and morphological studies. The report refers to such studies carried out as part of the feasibility study which concludes that the impacts of the riverbank protection on the overall morphology of the Jamuna are small (page 170). The Commission has not yet assessed those background studies and offers to do this, if required.

EIA report – May 2014

The Commission noticed that risks of the strengthening of the selected sites, including the downstream impacts are adequately assessed for JLB-2 and PLB-1. However, the downstream hydraulic impacts of the Brahmaputra Right Embankment project under JRB-1 are not presented in the report.

The Commission recommends to study the downstream hydraulic impacts of the Brahmaputra Right Embankment project under JRB-1 in the long-term morphological/stabilisation study that will be carried out during Tranche 1 and the findings could be presented in the SEA

3.3 Socio-economic aspects

3.3.1 Livestock

EIA report – February 2014

The Commission observed that:

1. the present use of the flood plains by livestock and the economic importance for the people owning livestock is insufficiently described and assessed in the EIA report given the fact that grazing on chars and floodplains provides food of sufficient nutritive value to livestock. The EIA should have presented the possible impact of the proposed interventions on the livestock sector.

2. the feasibility study suggests the promotion of livestock grazing on the river side of embankments, but also proposes to protect the riverside with CC blocks which is of course not compatible with grazing. Grazing on vegetated embankments should not be encouraged anyway as it accelerates erosion.

The Commission recommended:

1. to include a description of floodplain use by livestock in the EIA report, and to assess the influence of the proposed interventions on the availability and quality of grazing land, and develop mitigating or compensatory measures to remedy possible negative changes.
2. that this information will be elaborated in the inception phase.

EIA report – May 2014

The Commission noticed:

a. The ADB informed the Commission that this is not a major issue under tranche 1. The Commission noticed that the information asked for has not been included in the EIA report. The ADB stated that this issue will be included in the SEA.

b. This information has not been included in the EIA report. We did not ask for it either.

The Commission recommends:

1. to include a description of floodplain use by livestock in the SEA study, and to assess the influence of the proposed interventions on the availability and quality of grazing land, and develop mitigating or compensatory measures to remedy eventual negative changes.
2. the information asked for in the inception phase.

3.3.2 Fisheries

EIA report – February 2014

The Commission noticed:

1. Only for the JBR-1 on page 92, an indication is given for the number of fishers: “The two types of fishers found in the study area are commercial and subsistence fishers, however, no part-time fishers have been recorded. The

number of commercial fish commercial fishers have been recorded in Daulatpur (22 per cent) and Horirumpur (49 per cent) of Manikganj district. Subsistence fishers have been found as 11 per cent of total fishers". It is unlikely that the number of subsistence fishers is less than the number of commercial fishers as it is well documented that the majority of the landless households are involved in fishing during several parts of the year. The information on fishers is not provided for the other sub reaches, while this information can be obtained and is important for the formulation of mitigation measures.

2. As mitigation measures for fisheries losses, the development of aquaculture is proposed. This is the classic approach in Bangladesh, the losses in kilograms can be mitigated by aquaculture. But from a socio-economic point of view they are not real mitigation measures for the households where the losses are occurring (the fishing and landless households) as they do not possess the land and means to develop aquaculture. The development of community based aquaculture or aquaculture in Khas burrow pits failed continuously due to existing power structures in rural Bangladesh.

The Commission recommended to elaborate this information in the inception report.

EIA report May 2014

The Commission noticed that information as recommended has not been included in the EIA report.

The Commission recommends to elaborate this information in the inception report.

3.3.3 Brick industry

EIA report - February 2014

The Commission observed that the EIA report does not address the brick industry, which is very active in the floodplains. The brick manufacturing sector contributes significantly to destruction of floodplains by excavating clay and it contributes significantly to Bangladesh's carbon emissions. As considerable quantities of concrete (CC) produced for FRERMIP embankment protection will be made from brick chips, the indirect impact on floodplain and carbon emissions need to be assessed.

The Commission recommended to assess to what extent the proposed interventions will affect brick manufacturing and its contribution to floodplain destruction and carbon emissions. In the EIA report the use of "Green CC" or use of sustainable alternatives to CC for river bank protection should have been elaborated as an alternative option.

EIA report – May 2014

The Commission noticed that the information asked for has not been included in the EIA report. The ADB stated that this information will be provided in the SEA study.

The Commission recommends: to assess to what extent the proposed interventions will affect brick manufacturing and its contribution to floodplain destruction and carbon emissions. In the SEA study the use of "Green CC" or use of sustainable alternatives to CC for river bank protection should have been elaborated as an alternative option.

3.4 Social and gender aspects

3.4.1 People affected

EIA report – February 2014

The Commission observed that in addition to the group of people that needs to be resettled, the potential negative impact of the project interventions on other people that will be affected in the study area is insufficiently described. Apart from losing grazing land as discussed above, this may include, sharecroppers or other farmers without official land titles who may lose access to land due to more influential people claiming the land due to its higher production potential.

The Commission recommended to make an inventory of potential negative social impacts other than resettlement and compare these with the expected benefits of the interventions.

EIA report – May 2014

The Commission noticed that the information asked for has not been included in the EIA report. The ADB stated that this information will be addressed in the preliminary Master Plan Study.

The Commission recommends to include in the SEA an inventory of potential negative social impacts on the group of people, other than the group of people that will be resettled and compare these with the expected benefits of the interventions.

3.4.2 Gender aspects

Gender Action Plan (September 2013)

The Commission observed that the Gender Action Plan is incomplete, lacks clear implementation arrangements and in its present form, does not guarantee that the objective of the programme of effective gender mainstreaming (EGM) will be achieved. This is important because without an effective gender action plan, adequate women's participation in relevant activities cannot be ensured. Especially, for community-based flood risk management related activities it is important that men and women are both involved.

The Commission recommended to develop a good quality Gender Action Plan before the start of the programme and therefore, it was suggested that:

1. A gender expert join the project team in order to improve the Gender Action Plan during the inception phase;
2. The following responsibilities concerning the implementation and monitoring of the gender action plan should be clear: implementation arrangements and responsible organisations / persons at programme level and on a daily basis; role and responsibilities of NGOs regarding the implementation of the Gender Action Plan;
3. the gender capacity of responsible organisations such as BWDB and the new DDM need to be strengthened in order to enable the implementation and monitoring of the Gender Action Plan. In the view of the Commission both organisations need to have a certain 'in-house' gender capacity. However, for DDM it is probably even more important because due to their mandate they work more directly with people. At local level, gender capacity needs to be built at the

Disaster Management Committees (DMCs) and Grievance Redress Committees. The programme foresees in capacity development of the members of the boards of the DMCs (composition of the board should be gender balanced) and gender training should be part of this development.

Gender Action plan (April 2014)

The Commission noticed that the Gender Action Plan of May 2014 is acceptable. The Facility Administration Manual provides insight in the implementation arrangements for gender mainstreaming, but raises some concerns whether the foreseen gender expertise will be adequate.

The Commission recommends that implementation of the GAP by BWDB will most likely require close supervision. Support to strengthen gender expertise within BWDB, for example by the Dutch funded Gender and Water Alliance Project, should be considered.

3.5 Biodiversity aspects

EIA report – February 2014

Regarding the impact of the programme on biodiversity aspects the following categories of biodiversity need to be assessed: (i) protected areas; (ii) protected species and (iii) species and their essential habitats that are not protected but that need to be addressed because they have an economic value and/or are for example listed on the Bangladesh Red List or the Convention on Migratory Species (CMS).

The Commission observed that:

1. the EIA report does not give insight in the impact of the programme on protected areas. In the feasibility study an initiative is presented to include a river sanctuary study in the tranche-1 phase of the programme. A river sanctuary would provide a framework for sustainable management for crucial environmental conservation issues such as protection of migratory species, wetland protection and fisheries, while offering an opportunity to adopt co-management.
2. For some of the protected species the impacts of the programme are adequately assessed such as for the Ganges Dolphin. For other protected species and their habitats it is not possible to determine whether the impacts have adequately been assessed because the baseline information does not

give sufficient insight in crucial habitats for the survival of all protected species of national and global significance, and the extent to which these species and habitats might be influenced by the programme. The bird list in Annex 1 does not indicate the Bangladesh Red List, IUCN Red List and CMS conservation status. Moreover, the impact of resettlement (loss of habitat) has not been included in the assessment.

The Commission recommended to include the following information in the EIA report:

1. Provide a map with all protected areas, national parks, sanctuaries, reserved forests and community conservation areas under the new Wildlife Act (around the project- and study area including the distribution of (non-protected) habitats important for those species and that are protected or have a status as “vulnerable” according to the Bangladesh Red List, IUCN global Red List and the Convention on Migratory Species (Bangladesh is signatory since 2005);
2. Execute an assessment of all species and their habitats that are protected or listed as “threatened” by the Bangladesh Red List and identify possible mitigating or compensatory measures;
3. Map wetlands in the programme area and determine their importance for biodiversity, particularly migratory species and identify the opportunities for wetland conservation to secure the integrity of the flyway;
4. Concerning the initiative to execute a river sanctuary study, it would be important to include the wider floodplain into such a sanctuary, covering the landscape and wetlands on the "dry side" of the embankments which will be affected by the programme. The adoption of a co-management approach would support sustainable management for the benefit of the populations concerned, and may contribute to exclusion of undesired developments.

EIA report – May 2014

The Commission noticed that the information asked for in recommendation 1 has not been included in the EIA report, information asked for in recommendation 2 and 3 has partly been included in the EIA report. Concerning recommendation 4, the ADB informed the Commission that the information asked for will be considered in the planned detailed study for the sanctuary programme.

The Commission recommends:

1. To include in the SEA a map with all protected areas, national parks, sanctuaries, reserved forests and community conservation areas under the new Wildlife Act (around the project and study area including the distribution of (non-protected) habitats important for those

species and that are protected or have a status as “vulnerable” according to the Bangladesh Red List, IUCN global Red List and the Convention on Migratory Species (Bangladesh is signatory since 2005);

2. Concerning the initiative to execute a river sanctuary study, it would be important to include the wider floodplain into such a sanctuary, covering the landscape and wetlands on the "dry side" of the embankments which will be affected by the programme. The adoption of a co-management approach would support sustainable management for the benefit of the populations concerned, and may contribute to exclusion of undesired developments.

3.6 Other aspects; anti-erosive measure

EIA report – February 2014

The plantation of trees is presented as an effective anti-erosive measure. On slopes however, trees are not very appropriate to reduce erosion. Protection with shrubs and low vegetation is generally more effective for rain and wind erosion on such places. Trees are effective against lateral (river) erosion, but the riverside of the embankments are proposed to be protected with CC.

The Commission recommended to include this in the inception report.

EIA report – May 2014

The Commission noticed that the information on adequate anti-erosive measures has already been included in the EIA report in an adequate manner.

APPENDICES

Advisory Review of the EIA and Gender Action Plan
for Main River Flood and Bank Erosion Risk
Management Programme, Bangladesh

(appendices 1 & 2)

APPENDIX 1

Information on the project and working group

Project information:

On 21 February 2014 the Netherlands Embassy in Dhaka (Mr Carel de Groot) requested the Commission to review the following documents:

- Final report on Environmental Impact Assessment, Trance 1; February 2014. Main River Flood and Bank Erosion Risk Management Program.
- Final Report, Annex I. Social Gender Equity Strategy & Action Plan; September 2013. Main River Flood and Bank Erosion Risk Management.

Project number:

Netherlands Commission for Environmental Assessment, OS25-098

Composition of the working group of the NCEA:

Mr E. (Eelco) van Beek, hydrology and civil engineering expert
Ms C.L.M. (Kitty) Bentvelsen, gender equality and development expert
Mr F.D. (Floris) Deodatus, ecology expert
Mr G.J. (Gert Jan) de Graaf, aquaculture and fisheries expert
Mr A.J. (Arend) Kolhoff, Technical secretary
Mr R. (Rudy) Rabbinge, Chairman

APPENDIX 2

Embankment reinforcement of Hatiya Island, Meghna River



Photo's by Floris Deodatus