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CARE - BANGLADESH

FY 96

TECHNICAL ASSISTANCE MISSION

TO

CARE-BANGLADESH FOR ENVIRONMENTAL ASSESSMENT AND FOR DEVELOPMENT OF POLICIES/PROCEDURES

INTEGRATED FOOD FOR DEVELOPMENT PROJECT (IFFD)

April 1993

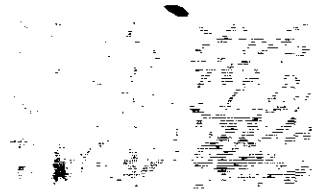
VOLUME III

INITIAL ENVIRONMENNTAL EXAMINATIONS

Submitted By:

Louis Berger International, Inc.

100 Halstead Street, East Orange, New Jersey 07019, U.S.A.



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VOLUME III

INITIAL ENVIRONMENTAL EXAMINATIONS

ACRONYMS AND ABBREVIATIONS

ANR =	Agriculture and Natural Resources
APC =	Assistant Project Coordinator/Bangladesh
BDG =	The Government of Bangladesh
BRAC =	Bangladesh Rural Advancement Committee
BWDA =	Bangladesh Water Development Board
CARE =	Cooperative for American Relief Everywhere
CFR =	United States Code of Federal Regulations
CIDA =	Canadian International Development Agency
DMU =	Disaster Management Unit
EA =	Environmental Assessment
EIS =	Environmental Impact Statement
EMU =	Environmental Management Unit
FAA =	Foreign Assistance Act
FAP =	Flood Action Plan
IFFD =	Integrated Food for Development Program
IFFW =	Integrated Food for Work Program
LBII =	Louis Berger International, Inc.
LGED =	Local Government Engineering Department
MORR =	Ministry of Relief and Rehabilitation
NEPA =	National Environmental Policy Act
NGO =	Non Government Organization
ODA =	Overseas Development Agency
PER =	Preliminary Environmental Review
PIC =	Project Implementation Committee
PIO =	Project Implementation Officer
RMP =	Rural Maintenance Program
SEA =	Scheme Environmental Assessment
UNDP =	United Nations Development Program
USAID=	United States Agency for International Development
WFP =	World Food Programme

INTRODUCTION

This is the third of a three volume report prepared for CARE-Bangladesh on the application of environmental procedures for the USAID funded, CARE administered Integrated Food For Work Project (IFFW) and the follow-on Integrated Food For Development Program (IFFD). The first volume is a review of CARE's procedures for environmental assessment and recommendations for their development, the second is the procedures for the environmental review of new activities or project components such canal re-excavation and municipal drainage rehabilitation. The third includes draft Initial Environmental Examinations (IEEs) for project subcomponents currently being considered by CARE and USAID. Each volume is designed a stand-alone document.

The draft Initial Environmental Examinations (IEEs) are designed to be used to facilitate the environmental review process of the following proposed IFFD subcomponents:

1. Roadside Tree Planting Subcomponent;
2. Country Boat Ghat Subcompoment;
3. Flood Proofing Subcomponent;
4. Municipal Drainage Rehabilitation Subcomponent; and,
5. Canal Re-Excavation Subcomponent.

These IEEs indicate that the roadside tree planting and the country boat ghat subcomponents do not have significant environmental effects if properly designed and implemented, following the general guidelines of the subject IEEs. Monitoring and quality control inspections are also highly recommended to assure that no significant environmental effects result from these proposed actions. As such, Negative Declarations are recommended for the roadside tree planting and the country boat ghat subcomponents.

The IEE for flood proofing identifies a significant environmental effect from the proposed activity pursuant to 22 CFR 216.2 (d). Small-scale earth raising and platforms however, have been determined not to have significant effects if they incorporate the general mitigating measures outlined in the IEE, and do not exceed 100 square meters of total disturbance per scheme. It is strongly recommended that monitoring and quality control be applied to assure that no significant environmental effects occur as a result of this action. The embankment flood proofing activities would require an Environmental Assessment (EA) prior to commitment of USAID funds. As such, a Negative Declaration is recommended for the small-scale earth raising and platform activities and a Positive Threshold Decision is recommended for the embankment activities.

The IEEs for the canal re-excavation and the municipal drainage rehabilitation subcomponents

identify significant environmental effects from these proposed subcomponents pursuant to 22 CFR 216.2 (d). The primary issues are irrigation and drainage. The municipal drainage rehabilitation subcomponent is drainage by definition, and the canal re-excavation subcomponent has a very high potential to be utilized for drainage and/or irrigation as well as navigational transport. An Environmental Assessment (EA) for both these subcomponents would be required prior to the commitment of USAID funds. As such a Positive Threshold Decision is recommended for these two subcomponents.

As indicated in Volume I, environmental consideration should be part of a holistic approach to the design of an activity and become an integral part of it. Only then can the activity be designed to have the greatest environmental benefit while measures to mitigate unavoidable adverse impacts are taken at least cost. This will also make the preparation of additional IEEs and PEAs much easier. Difficulties in preparing these environmental documents stem largely from difficulties in relating the environmental impacts to the project design and arriving at a reasonable assessment of their magnitudes.

1. PURPOSE

The focus of the IFFD project is to use available wheat resources under Title II to support sustainable development activities, the primary purpose of which is to bring increased food security of vulnerable groups through developmental interventions which benefit them and their communities. It is likely that appropriate interventions will be identified during the implementation of the project. The primary purpose of this document is to provide the draft IEEs necessary to expedite and facilitate the environmental review process for the recently identified subcomponents of IFFD.

2. CANAL RE-EXCAVATION DRAFT INITIAL ENVIRONMENTAL EXAMINATION

DRAFT INITIAL ENVIRONMENTAL EXAMINATION
February 23, 1993

SUBJECT: Integrated Food For Development (IFFD) Project
Additional Project Subcomponents
CANAL RE-EXCAVATION SUBCOMPONENT

BACKGROUND:

In July 1990 and January 1991 an Initial Environmental Examination (IEE), and an Environmental Assessment (EA) were respectively prepared for the earthworks and structures component (the primary component) for rural road reconstruction. In January 26, 1993 revised IEEs were submitted for a 40 - 60 foot structures subcomponent and a disaster preparedness activity subcomponent. Additional subcomponents are proposed, and an additional IEE for the re-excavation subcomponent is enclosed herein.

In accordance with 22 CFR Part 216.3 (a)(2) and 216.3 (a)(6)(i) and (ii),The Mission Director's approval of this IEE's recommendations is required prior to its transmittal to the Asia Bureau Environmental Coordinator in AID/Washington DC for concurrence. This IEE may be submitted after authorization of financing of the previously reviewed IFFD project in accordance with 22 CFR Part 216.3 (a)(7)(i).

THE PROPOSAL:

CARE proposes the canal re-excavation subcomponent. It is for the maintenance of existing canals for the primary purpose of maintaining navigability, and canal re-excavation primarily for improved drainage and irrigation. Since no pesticide procurement or use assistance is involved with this subcomponent, the pesticide procedures (22 CFR 216.3 (b)(1)) do not apply. In order to determinethe extent to which this subcomponent avoids impacts to endangered species and their critical habitats((22 CFR 216.5), undegraded forests, national parks, and other protected lands (FAA secs. 118,119) additional evaluation is needed. The two major types of canal re-excavation activities consist of maintenance for transportation and re-excavation for irrigation/drainage. These types are described below:

Canal Maintenance for Transportation:

This activity is designed for the the removal of accumulated sediments from existing canals and the minor modification of the side slopes to prevent soil erosion and further sedimentation. The dimensions of the original canal should not be substantially enlarged as sediment removal will end when the parent material is reached. This activity will improve water transport in Bangladesh, which is not only the traditional means of transport, but also the most cost and fuel efficient means available. Drainage and irrigation uses are often important additional by-products of the improved navigation canal. Discussions with CARE field personal would indicate that in practice major excavations may be neccessary. Drainage and irrigation activities are normally considered to have significant effects on the environment as outlined in 22 CFR Part 216.2 (d)(1).

Potential adverse environmental effects of removing sediments may result from the improper placement of the dredge spoils which sometimes act as dikes which prevent water movement from the canals to the adjacent fields and conversely creates waterlogging in the fields by blocking drainage back to the canal. This potential problem can be alleviated by spreading the soil upon the agricultural fields if the farmers prefer this, or cut drainages every 10 meters or so to promote proper drainage. Each individual activity will be reviewed by CARE engineers and subjected to CARE's environmental review process prior to project approval to avoid any potential adverse environmental effects.

Canal Re-Excavation for Drainage and Irrigation:

This activity focuses on the re-excavation and enlargement of existing drainage canals to reclaim former agricultural fields which were lost to inundation resulting primarily from the regional sedimentation problem. This activity can increase the productivity of the land and thus aid in reducing the pressures on forested and other natural lands for conversion to agriculture. Drainage and irrigation projects however, are generally determined to have significant impacts (22 CFR 216.2 (d)(1).

THRESHOLD DETERMINATION:

In accordance with 22 CFR Part 216.2 (d)(1)and 216.3 (a)(2)(iii), a Positive Threshold Decision is recommended. Drainage and irrigation activities, whether they be the primary stated purpose of a specific action or an important by-product of the action, are generally considered to have a significant environmental effect. Since pesticide procurement or use assistance is not part of this subcomponent, the pesticide procedures outlined in 22 CFR 216.3 (b)(1) do not apply.

An Environmental Assessment (EA)is required for this subcomponent. This assessment should include,but not be limited to the following issues:

1. Loss of land due to canal widening.
2. Adverse impacts on beels,haors and other wetlands.
3. Loss of potential fish and wildlife habitat.
4. Increased discharges downstream.
5. Adverse impact on groundwater recharge and maintenance.
6. Impacts to endangered species or their critical habitats.
7. Impacts to undegraded forests,national parks or other protected areas.

Potential mitigation measures may include the following:

1. Identify and map undegraded forests, national parks and other protected areas, and restrict subcomponent activity in these areas.
2. Identify endangered species and map their critical habitats, and restrict subcomponent activity in these areas.
3. Identify and map natural beels,haors and other wetlands,and restrict subcomponent activity negatively impact them.
4. Evaluate the hydrologic regime influencing each action and design accordingly.
5. Avoid actions requiring sluice gates and other fish migration blockages without evaluating their impacts.

3. FLOOD PROOFING DRAFT INITIAL ENVIRONMENTAL EXAMINATION

DRAFT INITIAL ENVIRONMENTAL EXAMINATION
February 23, 1993

SUBJECT: Integrated Food For Development (IFFD) Project
Additional Project Subcomponents
FLOOD PROOFING SUBCOMPONENT
1. Earth raising activities
2. Embankment activities

BACKGROUND:

In July 1990 and January 1991 an Initial Environmental Examination (IEE), and an Environmental Assessment (EA) were respectively prepared for the earthworks and structures component (the primary component) for rural road reconstruction. In January 26, 1993 revised IEEs were submitted for a 40 - 60 foot structures subcomponent and a disaster preparedness activity subcomponent. Additional subcomponents are proposed, and additional IEEs for the earth raising activities and embankment activities are enclosed herein. In accordance with 22 CFR Part 216.3 (a)(2) and 216.3 (a)(6)(i) and (ii),The Mission Director's approval of this IEE's recommendation is required prior to its transmittal to the Asia Bureau Environmental Coordinator in AID/Washington DC for concurrence. This IEE may be submitted after authorization of financing of the previously reviewed IFFD project in accordance with 22 CFR Part 216.3 (a)(7)(i).

THE PROPOSAL:

CARE proposes flood proofing actions to reduce the extent of loss of life and property which is associated with the flooding problems in Bangladesh. Two flood proofing action types are proposed. they are small-scale earth raising (and platforms) to provide safe emergency shelter in times of floods for small isolated villages, and embankments which afford some protection to existing residential, commercial/industrial and agricultural areas. Neither of these flood

proofing actions involve pesticide procurement or use assistance, and as such the pesticide procedures (22 CFR 216.3 (b)(1)) do not apply. Since this subcomponent focuses on protecting existing developed areas there will be no significant environmental effect concerning endangered species and their critical habitats, undegraded forests, national parks or other protected areas(22 CFR 216.5).

Earth Raising Activities:

The earth raising and platforms activities focus on utilizing existing high land adjacent or in close proximity to isolated villages in flood prone areas. Such areas are raised to a level a few feet above the 1988 flood levels. Earth for these projects are often taken from a central borrow pit which is then used as a fish pond. The raised area is then stabilized with vegetation. Fruit and other multi-use trees are planted to prevent soil erosion and provide additional emergency supplies. The size is designed to accommodate the local village in times of flood emergency. Adequate sanitary (pit latrine) and water (well) facilities are also designed into the shelter.This project type is not normally considered to have significant effects on the environment as outlined in 22 CFR Part 216.2 (d)(1). The fish ponds created from the borrow pits associated with the earth raising, although may be considered impoundments which generally have significant effects, will be of such small-scale as proposed in this subcomponent as to not have a significant effect on the environment. The definition of small-scale is that of an individual earth raising or platform scheme covering less than 100 square meters.

Although this activity is not likely to have any significant adverse environmental effects,under-design or poor design may result in over crowding and instability of the structure. Such potential problems can be alleviated by CARE's environmental review process which is to be completed prior to activity initiation. Additional mitigation measures to reduce or eliminate impacts on flood storage volume include piped connections between the pond and the surrounding floodplain at ground level, and design adjustments to assure that there is no net fill of the flood storage capacity.

Embankment Activities:

The embankment activities are designed to add a level of flood protection in flood prone areas. Existing residential, commercial/industrial and agricultural areas are usually the focus of these protective measures. Since embankments are forms of river basin development and (flood) water management, they are determined generally to have significant environmental effects (22 CFR 216.2 (d)(1). Case studies on past embankment projects in Bangladesh have illustrated the potential for significant environmental effect and risk of failure.

THRESHOLD DETERMINATION:

Earth Raising Activities:

In accordance with 22 CFR Part 216.3 (a)(2)(iii), a Negative Declaration is recommended for the earth raising and platform activities due to the fact that they will not have a significant effect on the environment. Any potential adverse effects will be mitigated or avoided through the application of CARE's environmental review process prior to project approval and on-site monitoring and construction quality control measures within the construction process. There are no pesticide procurement or use assistance (22 CFR 216.3 (b)(1)) or significant endangered species effects (22 CFR 216.5) intended to be associated with this activity.

Embankment Activities:

In accordance with 22 CFR Part 216.2 (d)(1) and 216.3 (a)(2)(iii) a Positive Threshold Decision is recommended, as is an Environmental Assessment (EA) for this subcomponent activity. Along with an appropriate analysis of the hydrologic regimes of the activity areas, the following issues may also be addressed:

1. Loss of soil and land to embankments.
2. Potential for waterlogging within the embankments.
3. Decreased flood security for downstream and peripheral areas.
4. Declines in dry season residue soil moisture.
5. Reduced soil nutrient deposits from seasonal floods.
6. Loss of flood induced pest control.
7. Loss of fish breeding,spawning,nursery,and feeding habitats.
8. Increased dependence on agricultural inputs (i.e. fertilizer,pesticides)
9. Build-up of river channel due to sedimentation increasing the risk of sudden embankment failures and over topping.
10. Potential impact to endangered species or their critical habitat.
11. Potential need for pesticide assistance and pesticide procedures compliance (22 CFR 216.3 (b)(1).

4. GHAT CONSTRUCTION DRAFT INITIAL ENVIRONMENTAL ASSESSMENT

DRAFT INITIAL ENVIRONMENTAL EXAMINATION
February 23, 1993

SUBJECT: Integrated Food For Development (IFFD) Project
Additional Project Subcomponents
COUNTRY BOAT GHAT (landing) SUBCOMPONENT

BACKGROUND:

In July 1990 and January 1991 an Initial Environmental Examination (IEE), and an Environmental Assessment (EA) were respectively prepared for the earthworks and structures component (the primary component) for rural road reconstruction. In January 26, 1993 revised IEEs were submitted for a 40 - 60 foot structures subcomponent and a disaster preparedness activity subcomponent. Additional subcomponents are proposed, an additional IEE for the country boat ghat (landing) proposal is enclosed herein.

In accordance with 22 CFR Part 216.3 (a)(2) and 216.3 (a)(6)(i) and (ii).The Mission Director's approval of this IEE's recommendation is required prior to its transmittal to the Asia Bureau Environmental Coordinator in AID/Washington DC for concurrence. This IEE is to be submitted after authorization of financing of the previously reviewed IFFD project in accordance with 22 CFR Part 216.3 (a)(7)(i).

THE PROPOSAL:

CARE proposes to construct small-scale country boat ghat structures at pre-existing landing sites adjacent to villages and market places. Many of these existing landings consist of bare and eroding earthen side channel slopes. The proposed structures will promote soil erosion and sedimentation control. Stable landing structures will provide additional safety benefits for the boat using public. Such landings also benefit water transport in Bangladesh, which is not only the traditional means of transport, but also the most cost and fuel efficient means available. This

project type is not normally considered to have significant effects on the environment as outlined in 22 CFR Part 216.2 (d)(1). Since no pesticide procurement or use assistance is involved with this sub component the pesticide procedures (22 CFR 216.3 (b)(1) do not apply.The activities of this subcomponent will focus on pre-existing developed areas and will not effect endangered species or their critical habitats (22 CFR 216.5). Undegraded forests, national parks and other protected areas will also be avoided.

The only potential adverse environmental effects may result from the improper construction of the individual structure. Hydrologic restrictions/blockage may result from poor/improper construction practices. The structural designs will be reviewed by CARE engineers and subjected to CARE's environmental procedures prior to project approval to avoid any potential adverse environmental effects.

THRESHOLD DETERMINATION:

In accordance with 22 CFR Part 216.3 (a)(2)(iii), a Negative Declaration is recommended for the ghat construction subproject due to the fact that it will not have a significant effect on the environment. Any potential adverse effects will be mitigated or avoided through the application of CARE's environmental review process prior to project approval and on-site monitoring and quality control measures within the construction process. There are no pesticide procurement or use assistance (22 CFR 216.3 (b)(1)) or endangered species effects (22 CFR 216.5) intended to be associated with this subcomponent.

5. MUNICIPAL DRAINAGE DRAFT INITIAL ENVIRONMENTAL EXAMINATION

DRAFT INITIAL ENVIRONMENTAL EXAMINATION
February 23, 1993

SUBJECT: Integrated Food For Development (IFFD) Project
Additional Project Subcomponents
MUNICIPAL DRAINAGE REHABILITATION SUBCOMPONENT

BACKGROUND:

In July 1990 and January 1991 an Initial Environmental Examination (IEE), and an Environmental Assessment (EA) were respectively prepared for the earthworks and structures component (the primary component) for rural road reconstruction. In January 26, 1993 revised IEEs were submitted for a 40 - 60 foot structures subcomponent and a disaster preparedness activity subcomponent. Additional subcomponents are proposed, and an additional IEE for the Municipal Drainage subproject is enclosed herein. In accordance with 22 CFR Part 216.3 (a)(2) and 216.3 (a)(6)(i) and (ii), The Mission Director's approval of this IEE's recommendation is required prior to its transmittal to the Asia Bureau Environmental Coordinator in AID/Washington DC for concurrence. This IEE may be submitted after authorization of financing of the previously reviewed IFFD project in accordance with 22 CFR Part 216.3 (a)(7)(i).

THE PROPOSAL:

CARE proposes a municipal drainage rehabilitation subproject which focuses on cleaning, obstruction removal and rehabilitation of main drainage canals in medium-sized cities. The drainage canals discharge a combination of domestic and industrial effluents (grey waters) and storm water. This subproject is designed to improve the health and sanitary conditions in selected

secondary cities. Drainage projects normally have a significant effect on the environment as outlined in 22 CFR Part 216.2 (d)(1).

The municipal drainage subproject will involve working with sediments and debris which are highly unsanitary. Adequate training and special assurances that protective clothing will be worn by the trained workers needs to be in place, or at least thoroughly scoped out prior to initiation of this subproject. The potential impacts on the health of workers not wearing protective clothing needs to be evaluated. This is of special concern if destitute (possibly pregnant or nursing) women are intended to be a major labor source. Transport and disposal of the waste material is also an environmental concern. Rehabilitated main drains will also permit a greater volume of effluent flow which may prevent flooding insitu but create increased discharges down stream. The potential toxic effects of this discharge on down stream irrigation needs to be evaluated.

Socio-economic impacts need to be evaluated if wheat resources are transferred from other activities. this may lead to a negative impact in that unhealthy work opportunities are substituted for relatively healthy rural activities. Although each scheme will be reviewed by CARE engineers and subjected to CARE's environmental reviews prior to project approval to avoid any potential adverse environmental effects, the potential magnitude of the effects require additional environmental analysis.

The potential for pesticide procurement or use assistance(i.e. insecticides,rodenticides,etc.) needs to be determined. If pesticide procurement assistance is recommended then the pesticide procurement procedures outlined in 22 CFR 216.3 (b)(1) need to be followed. Because of the urban nature of this subcomponent no effects on endangered species or their critical habitats are foreseen (22 CFR 216.5). However, the effects of the effluent discharges need to be evaluated prior to a determination that no significant effect will occur.

THRESHOLD DETERMINATION:

In accordance with 22 CFR Part 216.3 (a)(2)(iii), a Positive Threshold Decision and an Environmental Assessment are recommended for the Municipal Drainage Rehabilitation subproject due to the fact that it is a drainage activity with the size, scope and complexity to be determined before mitigation and health/safety measures can be adequately proposed. The need for pesticide procurement or use assistance needs to be determined, and if determined to be positive, then the pesticide procedures (22 CFR 216.3 (b)(1)) need to be followed.

Specific issues to be addressed in the Environmental Assessment for this subcomponent should include but not be limited to:

1. The size, extent and complexity of the subject main drain system.
2. The nature (toxicity) of the materials to be cleared and possibly

released from the drains.
3. Health and safety issues of the proposed workers involved.
4. Waste removal, transport and disposal issues.
5. The impact of creating urban employment on urban migration.
6. The probable increase in effluent discharge downstream and use of contaminated water for drinking/irrigation.
7. Other Socio-economic impacts.

Possible mitigation measures applied to minimize the adverse effects of this subcomponent may include:

1. Complete main drain mapping effort before initiating rehabilitation.
2. Test sediment and debris to determine toxicity levels before rehabilitation.
3. Design and test health/safety course for workers and supervisors.
4. Insist that appropriate protective clothing is worn and that health/safety rules are adhered to by participants.
5. Establish a waste removal/transport/disposal plan prior to rehabilitation.
6. Discourage employment of recently emigrated rural persons.
7. Discourage pregnant and nursing mothers from participating.
8. Locate, Identify and analyze discharge locations and develop appropriate means to prevent increased downstream contamination.

6. ROADSIDE TREE PLANTING DRAFT INITIAL ENVIRONMENTAL EXAMINATION

DRAFT INITIAL ENVIRONMENTAL EXAMINATION
February 23, 1993

SUBJECT: Integrated Food For Development (IFFD) Project
Additional Project Subcomponents
ROADSIDE TREE PLANTING SUBCOMPONENT

BACKGROUND:

In July 1990 and January 1991 an Initial Environmental Examination (IEE), and an Environmental Assessment (EA) were respectively prepared for the earthworks and structures component (the primary component) for rural road reconstruction. In January 26, 1993 revised IEEs were submitted for a 40 - 60 foot structures subcomponent and a disaster preparedness activity subcomponent. Additional subcomponents are proposed, and an additional IEE for this proposal is enclosed herein for roadside tree planting activities.

In accordance with 22 CFR Part 216.3 (a)(2) and 216.3 (a)(6)(i) and (ii),The Mission Director's approval of this IEE's recommendation is required prior to its transmittal to the Asia Bureau Environmental Coordinator in AID/Washington DC for concurrence. This IEE may be submitted after authorization of financing of the previously reviewed IFFD project in accordance with 22 CFR Part 216.3 (a)(7)(i).

THE PROPOSAL:

CARE proposes the planting of appropriate (emphasizing regionally native) multi-use/product trees along the side slopes of the rural roads which have been reconstructed under IFFD. This project type is not normally considered to have significant effects on the environment as outlined in 22 CFR Part 216.2 (d)(1). In fact the proposed tree planting subcomponent is applied as a mitigation measure to prevent side slope soil erosion and to provide additional sources of wood and other tree byproducts to alleviate exploitation pressures on the remaining forests of Bangladesh. Tree species selection will include those species which have root structures which act as soil binders, have canopies which are dense enough to block road traffic generated dust, but not too dense as to block the essential sunlight from the adjacent farmlands, are pest, disease and browse resistant, are nitrogen fixing (leguminous), and are tolerant of flooding and poor soil conditions. The trees will be planted by the rural poor during the dry/slack season to provide

rural employment and food distribution. Since this subcomponent involves no pesticide procurement or use assistance, the pesticide procedure 9(22 CFR 216.3 (b)(1) does not apply. The activities of this subcomponent will not be conducted in critical endangered species habitat, undegraded forests, national parks or other protected areas and are most unlikely to have an environmental effect on endangered species (22 CFR 216.5) or on undegraded forests and other protected areas (FAA secs. 118,119).

With the appropriate species selection there will be no significant adverse environmental effects resulting from execution of this subcomponent. There is clear evidence that environmental benefits will accrue from this action.

Potential adverse environmental effects may result from the over planting of one tree species, thus increasing the potential for a pest or disease out-break. Inappropriate tree species, especially single use exotics which may become "weeds" can also become a problem if such trees are permitted. The shading of crops, especially on the north side of east-west running roads may be a problem if an improper tree species is used. The tree species selection will be reviewed by CARE prior to project approval to avoid any potential adverse environmental effects. No planting of exotic tree species is planned for any undegraded forest, national park or other protected area. An extensive treatise on this subject, entitled "YOU BUILD AS YOU TRAVEL, Roadside Tree Planting as a Revenue Generating Activity for Union Parishad Road Maintenance", has been prepared for CARE Bangladesh, and will be used as a guide for this subcomponent.

THRESHOLD DETERMINATION:

In accordance with 22 CFR Part 216.3 (a)(2)(iii), a Negative Declaration is recommended for the roadside tree planting subproject due to the fact that it will not have a significant adverse effect on the environment. Any potential adverse effects will be mitigated or avoided through the selection of appropriate multi-use (emphasizing native regional species) trees,and by planting schemes which avoid monoculture situations which encourage pest and disease out-breaks. No pesticide procurement or use assistance (22 CFR 216.3 (b)(1)) or significant endangered species effects (22 CFR 216.5) are intended to be involved with this subcomponent.

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