

PD-NAR-585
IN 40960

5320059

SUGGESTED PROCEDURES AND GUIDELINES FOR
ENVIRONMENTAL IMPACT STATEMENTS
JAMAICAN TRIP REPORT

by

Robert J. Gallagher
Supervisory Fisheries Biologist
Environmental Assessment Division
National Marine Fisheries Service

and

Ronald P. Phelps
Department of Fisheries and Allied Aquacultures
Auburn University, Alabama 36849

000104
S

Project Number: AID/DSAN-G-0053

DATES IN COUNTRY:
July 27-August 2, 1980

SUGGESTED PROCEDURES AND GUIDELINES FOR ENVIRONMENTAL
IMPACT STATEMENTS - JAMAICAN TRIP REPORT
Robert J. Gallagher and Ronald P. Phelps
August 5, 1980

I. INTRODUCTION

The Government of Jamaica (GOJ), with the assistance of the U.S. Agency for International Development (AID) has embarked on a program to increase food production, income, employment, improve nutrition in rural areas, and to mitigate its foreign exchange problem. The AID funded Inland Fisheries development Grant (532-0059) provides a detailed description of the Fish Production Development Project which was designed to accomplish these stated objectives. A review of these project documents indicated a lack of criteria for evaluation of possible environmental effects in reference to pond construction, particularly in wetlands and swampy areas. At the request of USAID/Jamaica Mr. Robert J. Gallagher of National Marine Fisheries Service and Dr. Ronald P. Phelps, Department of Fisheries and Allied Aquacultures, Auburn University, were in Jamaica July 27 to August 2, 1980, to assist in preparing guidelines and procedures for environmental impact studies. They also observed marsh and wetlands either being developed or programmed for development. Their itinerary is attached as an appendix.

II. ENVIRONMENTAL IMPACT STATEMENT: Suggested Procedures and Guidelines

A. Purpose

1. The purpose of these guidelines is to provide an outline to assist the Government of Jamaica agencies in preparing procedures for development of an environmental impact statement (EIS) and achieve the goals set forth in Section III.

2. The procedures insure that environmental information is available to public officials and citizens before decisions are made and action taken. The documents produced should concentrate on issues that are truly significant.

3. The guidelines are intended to assist GOJ in making decisions that are based on the understanding of environmental consequences and take actions that protect, restore, enhance or mitigate degradation of the environment.

B. Goals and Objectives

1. The development of an environmental impact statement should commence early in the planning process to insure appropriate consideration of environmental policies and to minimize delay. Cooperative consultation among appropriate agencies is encouraged prior to preparation of the EIS.

11

2. The guidelines should assist government agencies in providing for swift and fair resolution of agency disputes, identifying at an early stage significant environmental issues, narrowing the scope of the EIS process.

3. To meet the goals and objectives for the preparation of an EIS, each agency should:

a. Utilize a systematic, interdisciplinary approach to insure the integrated use of the natural and social sciences and the environmental design arts in project planning and in decision making which may have an impact on the environment.

b. Identify environmental effects and values in adequate detail to compare with economic and technical analyses.

c. Study, develop and describe appropriate alternatives to recommend courses of action in any proposal which involves unresolved conflicts concerning alternate uses of available resources.

C. Policy

Agencies of the Government of Jamaica should:

1. Utilize the EIS process in their planning and emphasize real environmental issues and alternatives. The EIS should be concise, clear and to the point, and should be supported where possible by evidence.

2. Encourage and facilitate public involvement in decisions which affect the quality of the human environment.

3. Use all practical means, consistent with the requirements of other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize possible adverse effects upon the quality of the human environment.

D. The Environmental Impact Statement and Agency Planning

1. Lead Agency Designation

The preparation of an EIS for projects involving more than one governmental agency requires the designation of a lead or supervisory agency. In general, the agency proposing an action should prepare the EIS. Joint lead agency designation can be accomplished. Disagreements on which agency will be the lead agency should be elevated to higher authority for resolution. Any of the concerned agencies may file a request with this authority requesting a determination as to which governmental agency shall be the lead agency.

2. Cooperating Agency

Any agency which has special expertise with respect to any environmental issue may be a cooperating agency. An agency may request the lead agency to designate it as a cooperating agency.

3. Scoping

The determination of the scope of issues to be addressed and the identification of significant issues related to the proposed action is an integrated part of the environmental impact statement process. As part of the scoping process the lead agency should:

- a. Invite the participation of affected governmental agencies, the proposer of the action and other interested persons.
- b. Determine the scope of significant issues to be analyzed in depth in an environmental impact statement.
- c. Identify and eliminate from detailed study issues which are not significant.
- d. Discuss assignments for preparation of an environmental impact statement with cooperating agencies, with the lead agency retaining responsibility for the statement.
- e. Identify other environmental reviews and requirements so that the lead and cooperating agencies may prepare analyses and studies concurrently with and integrated with the environmental impact statement.
- f. The scoping meeting should be held early in the project planning process to increase the effectiveness of the environmental impact statement as a decision document.

3. Time Limits

Governmental agencies are encouraged to set time limits appropriate to individual actions. In multiple agency project planning, this is the responsibility of the lead agency. The limits must be consistent with other essential considerations of normal policy.

Factors to determine time limits include:

- a. Potential for environmental harm
- b. Size of the proposed action
- c. State of the art of analytical techniques
- d. Degree of public need
- e. Number of persons and agencies involved

- f. Degree to which relevant information is known or time required to obtain it.
- g. Degree to which action is controversial
- h. Other time limits set by law or regulation

D. Methods

1. Types of evaluations

After a general assessment of possible effects of the project has been made as a part of the scoping procedure, then an initial environmental examination (IEE) should be made and a decision made based on the IEE.

a. Initial environmental examination

An initial environmental examination is a preliminary study of the reasonably foreseeable effects of the proposed action on the human environment. Its function is to provide the basis for a threshold decision as to whether an Environmental Assessment or an Environmental Impact Statement will be required or whether a Negative Declaration is more appropriate. If an Environmental Assessment or Environmental Impact Statement is required the IEE will also provide the basis for its preparation. The IEE should identify and describe: (i) the nature, scope and magnitude of any reasonably foreseeable effects of an action or any part of an action on the human environment; (ii) the reasonably foreseeable effects of any environmental impact on organisms in the biosphere including proposed action which should be addressed in detail in the Environmental Assessment or Environmental Impact Statement.

b. Threshold decision

Based on the IEE, an official decision (threshold decision) should be made and put into writing as to whether the proposed action or project will or will not have a significant effect on the human environment and if an Environmental Impact Evaluation is required or whether a Negative Determination or Negative Declaration should be prepared.

c. Environmental Assessment

An Environmental Assessment is a detailed study of reasonably foreseeable environmental effects, both positive and negative of a proposed action and its reasonable alternatives in the immediate area and nearby regions.

d. Environmental Impact Statement

An EIS is a detailed study of the reasonable foreseeable environmental impacts, both positive and negative of a proposed program or project and its reasonable alternatives, prepared when the proposed actions significantly affect the environment locally, regionally and/or nationally.

e. Negative Determination

A Negative Determination is a formal written document stating that a proposed action will not have a significant effect on the human environment and therefore an environmental assessment or an environmental impact statement will not be required.

It should be kept in mind that the definition of significant effect is determined by the agency preparing the study. The effects need not be large to be important, but significance of the effects depend on the agency's interpretation. It also should be noted that even though there may be many beneficial impacts as a result of the project, a few significant adverse impacts could have serious or deleterious effects on the environment.

f. Negative Declaration

A negative declaration is an official written document which states that the agency involved will not develop an environmental assessment or an environmental impacts statement which would normally be required. The decision for this is based on overriding considerations such as emergencies or the fact that a substantial number of Environmental Assessments or Environmental Impact Statement relating to similar activities have been made in the past.

2. Preparation of an Environmental Impact Statement

The EIS should include a description of the environment under present conditions, the nature of the proposed project and the proposed action to be made, the effects of the project on the environment and the alternatives available.

a. Description of the Environment

In describing the present status of the environment, the following areas should be addressed:

Terrestrial example: soil type, geology, hydrology, extent of erosion, land use pattern, etc.

Water Quality example: physical, chemical and biological aspects.

Natural Resources example: plant and animal resources, aquatic and terrestrial habitats threatened or endangered species, etc.

Atmospheric example: physical and chemical quality, climatology, etc.

Social example: health, demographic and population characteristics, community attitudes, etc.

Economics example: economic base of the area, employment patterns, etc.

Cultural example: historical and archeological significance, esthetics, etc.

b. Description of the Project

The project should be described in detail clearly stating the purpose and goals of the project and the methods to be used in obtaining them. All proposed modifications should be identified. The time frame and life expectancy of the project should be stated.

c. Environmental effects

The environmental consequences of the project should address: any adverse environmental effects which cannot be avoided should the project be implemented; alternatives to the proposed action; the relationship between local short-term uses of a man's environment and the maintenance and enhancement of long-term productivity; and any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

In considering the effects of the proposed action, the following factors should be addressed where appropriate: air quality; water quality; noise quality; solid waste disposal; hazardous substances; vegetation and wildlife effects; energy supply and natural resources effects; natural hazards and geological effects; land management effect; socioeconomic and cultural effects.

d. Alternative actions

The Environment Impact Statement should give full consideration to alternative actions. These actions would include the alternative of making no changes, actions which are not related to the proposed actions but are feasible alternatives, and modifications of the initially proposed action. The environmental consequences of these alternatives should be detailed.

e. Recommended format

Agencies should use a format for environmental impact statements which will encourage good analysis and clear presentation of the alternatives including the proposed action; the following standard format is recommended:

1. Cover sheet
2. Summary
3. Table of Contents
4. Purpose and need for action
5. Alternatives including proposed action
6. Affected environment

7. Environmental consequences
8. List of preparers
9. List of agencies, organizations and persons to whom copies of the statement are sent
10. Index
11. Appendices (if any)

F. Review Procedure

1. Negative determinations and negative declarations should be forwarded to affected concerned agencies and persons for information.

2. Environmental assessments should be forwarded to affected and concerned agencies and persons for information.

3. After preparing a draft environmental impact statement and before preparing a final environmental impact statement, the preparatory agency should:

a. obtain the comments of any agency which has jurisdiction by law or special expertise with respect to the environmental impact or which is authorized to develop and enforce environmental standards.

b. request the comments from any agency which has requested that it received statements on actions of the kind proposed.

G. Referral Procedures

1. This part establishes procedures for referring interagency disagreements concerning major actions that might cause unacceptable environmental effects.

2. Environmental referrals should be made only after concerted timely but unsuccessful attempts to resolve differences with a lead agency. In determining what environmental objects are appropriate to refer, an agency should weigh potential environmental impacts considering:

- a. possible violations of national environmental standards or policies
- b. severity
- c. geographical scope
- d. duration
- e. importance as precedents
- f. availability of environmentally preferable alternatives

3. Procedure for referral; an agency making a referral should:

- a. advise the lead agency at the earliest possible time of its intention.
- b. include any advice in the referring agencies comments on the draft EIS, except in cases where adequate information for assessment of environmental acceptability is lacking.
- c. identify any essential information that is lacking and request that it be made available at the earliest possible time.
- d. The referral shall consist of: a copy of the letter signed by the head of the referral agency to the lead agency informing the head agency of the referral, the reasons for it, and requesting that no action be taken to implement the project until the referral is acted upon.

II. SUMMARY OF SITE VISITS

In reviewing the marsh and lowland areas visited the following assessments were made.

Mitcheltown (Photos 1-4)

The fish production station at Mitcheltown is located in an area of former sugarcane fields which have become an acassia scrubland. The station is located inland of a mangrove marsh with the drainage canals entering the marsh. The presence of the station appeared to be a positive alternative to the acassia scrubland. The ponds were providing a suitable habitat for a variety of aquatic and shore birds.

Upper Morass in the area of Elim (Photos 5 and 6)

In the Upper Morass an area of approximately 100 acres of freshwater marsh and floodplains of the Black river has been drained and diked for sugar cane and rice production. Additional draining and diking was being conducted to make available approximately 3,000 acres for rice production. The habitat had been extremely altered making it difficult to determine what the original habitat conditions may have been. The existing fish population in the drainage canals included Tilapia mossambica, Tarpon, and mudfish, a type of gobie.

It has been proposed that part of the land in the drainage project be made available for fish ponds. The proposed area is at the lower end of the drainage system and is subject to severe flooding and would not be suitable for pond construction until the flooding problem could be solved. The natural habitat of the area of the site has already been so severely disturbed that the addition of fish ponds wouldn't significantly do any additional damage to the environment. An alternative action would be not to supply any additional drainage for the lower portion of the drainage project and let it revert back into its natural state. Such an area could provide excellent waterfowl habitat.

The Lower Morass in the area of the Broad River (Photos 7 and 8)

This area appeared to be relatively undisturbed with some minor intrusions of man in the hummock areas. Time did not permit more than a superficial view of the marsh. It appeared to be a mixture of hummocks, grasslands and freshwater marsh with mangroves along the streams. The hummocks were generally limestone uplifts with palmetto, logwood and other small trees the common vegetation. The grass and marshlands were mixture of cattails, reeds, grasses and other semiaquatic and aquatic plants. There was artisanal shrimp fishery in the marsh as well as some exploitation of the mangroves for their bark as well as the wood for charcoal.

The Lower Morass is a relatively undisturbed marsh and a detailed Environmental Impact Study should be made for any proposed project. In regard to the construction of fish ponds in the Lower Morass, it is not considered to be desirable either economically or in terms of its environmental effects.

Meylorsfield (Photos 9 thru 15)

The Meylorsfield project is located on the floodplain between the Cabanita and Styx Rivers, to the west of Savanna La Mar. A 1300 acre area of marsh is being drained and diked for rice production. The natural habitat in this area has been drastically altered.

It is proposed that a 10-15-acre portion of this drainage project be developed in fish ponds to serve as the fish seed and food fish center for the western portion of Jamaica. Because the drainage project has already severely altered the environment the addition of fish ponds should have no significant detrimental effects on the environment. However, before any construction begins, an environmental assessment should be made.

The Great Morass (Photos 16-19)

The Great Morass is a large saltwater marsh located to the east of Negril and Negril Harbor. No extensive drainage projects have begun in the marsh other than the straightening of some portions of the South Negril River, Orange River and a north-south drainage canal on the eastern edge of the morass.

The morass consisted of sawgrass marsh hummock going inland from mangroves along the seaward edge. The morass was separated from the sea by a sandy berm which was developed to serve tourism. Plant and animal communities in the center of the morass, did not appear to be significantly altered by man's actions, although some hummocks had been settled by men. There were areas which had been drained east of the north-south canal for sugar cane. In these areas there were significant habitat modifications.

A proposed plan of mining the morass for its peat deposits was considered. The suitability of the mined out areas for fish production was questioned.

In all probability these proposed areas would not be acceptable to intensive fish culture, but some type of extensive culture might be possible. It should be pointed out that the Great Morass is one of the few extensive salt marshes remaining in the country and that before any proposed mining be permitted, a detailed Environmental Impact Study should be conducted. This is a unique habitat and all due consideration should be given to its preservation.

The Hague

A saltwater marsh along the Martha Brare River near Falmouth is in the process of being drained and diked for rice production. After the drainage project had begun it was found that a large portion of the land was too salty for rice production.

Fish culture has been suggested as an alternative use of this land. Although the site could be used for fish culture much additional draining diking structures and pumping facilities would be needed. It would be more practical to develop fish culture operations at other sites and let the area of the Hague revert back into marsh.

In general it is not considered to be justified to take extensive areas of marshland and convert them into fish ponds. In areas where marshes have been significantly altered through drainage projects, fish culture is a good use of this land if no extensive amounts of additional drainage and flood control are necessary.

Inland Fisheries Headquarters (Photos 20 thru 30)

The Headquarters of the Ministry of Agriculture, Division of Inland Fisheries Development is located at Twickenham Park immediately west of Kingston. Some 40 ponds are located at this site which are primarily used for research. Limited fingerling production and distribution occurs here. This station is currently attempting to crossbreed Tilapia mossambica in an effort to improve the stock. Limited grass crop production is present. The station also provides for training of division personnel as well as students from the Jamaican School of Agriculture. No extensive increase in facilities are planned for this site.

Distribution List for Auburn-Jamacia Trip Report

State Department Library (1), Rm 1656 N.S.
D. Peterson DS/AGR (1), Rm 409 RPC, AID
T. Babb, DS/DAA/FN (1), Room 409 RPC, AID
Edna Falbo, DS/DIU/DI (4), Rm, 105 RPC, AID
K. Osborn, DS/AGR/F (1)
D. Caton, PPC/PF/PR, (1), Rm 2937 N.S.
R. Olson, NE/TECH (1), Rm 6484 N.S.
R. Morrow, NE/TECH (1), Rm. 6484 N.S.
D. Balls, LAC/DR (1), Rm 2242 N.S.
A. Hankins, LAC/DR (1), Rm 2242 N.S.
W. Johnson, AFR/DR (1), Rm 2491 N.S.
B. Whittle, AFR/ARD (1), Rm 2941 N.S.
D. Pluchnett, ASIA (1), Rm 606 RPC, AID
V. Mezainis, ACTION (2), Rm M-701, 806 Conn. Ave., N.W.
Washington, D.C. 02525
T.V.R. Pillay, Aquaculture Programme (2)
Fisheries Dept. FAO, via delle Terme di Caracalla, 00100 Rome, Italy
E. W. Shell, Int. Cntr. for Aquaculture (2), Auburn Univ., Auburn, ALA 36860
J. Donovan, ICMRD (2), Woodward Hall, URI, Kingston, R.I. 02881
T. Murray, Int. Sea Grant (1), NOAA 6010 Executive Blvd.
Rockville, Maryland 20852
C. Idyll, NMFS (2), NMFS, Office of International Fisheries Affairs.
Washington, D.C. 20235
D. Wiedner, NMFS (1) F4, NMFS Office of International Fisheries Affairs
Washington, D.C. 20235
R. Wildman, Sea Grant, NOAA (1), 6010 Executive Blvd.
Rockville, Maryland 20852
M. Kravanja, NMFS (1) F4, NMFS, Office of International Fisheries Affairs
Washington, D.C. 20235
D.W. Thomas, DS/BIFAD (1), Rm 3720 N.S.
J. Storer, OES/OFA/FA (1), Rm 5806 N.S.
F. Laney, NMFS, Office of International Fisheries Affairs
Washington, D.C. 20235
Donor Lion, USAID/Kingston
Kenneth Ellis, USAID/Kingston
Kenneth Randolph, USAID/Kingston
Archibald Withers, LAC/CAR, Rm. 3242 N.S.
Robert Otto, LAC/DR Rm 2252 N.S.
Dr. R. Phelps, Dept. of Fisheries, Auburn Univ., Auburn, Ala 36830