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THE WORLD BANK

Washington, D.C.

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The World Bank

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SUBJECT
ENVIRONMENTAL ASSESSMENT

8/89 - 11/92


8v



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ENVIRONMENTAL
ASSESSMENT



Record Removal Notice

File Title Environment Assessment - Correspondence		Barcode No. 1153461		
Document Date 12/13/1992	Document Type Memorandum			
Correspondents / Participants To: Executive Directors and Alternates From: T. T. Thahane				
Subject / Title Public Access to Environmental Assessment Reports				
Exception(s)				
Additional Comments Declassification review of this record may be initiated upon request.		The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group. <table border="1"><tr><td>Withdrawn by Bertha F. Wilson</td><td>Date May 19, 2023</td></tr></table>	Withdrawn by Bertha F. Wilson	Date May 19, 2023
Withdrawn by Bertha F. Wilson	Date May 19, 2023			

A L L - I N - 1 N O T E

DATE: 06-Nov-1992 05:02pm EST

TO: Hans Wyss (HANS WYSS)

FROM: Michael Cernea, ENVDR (MICHAEL CERNEA)

EXT.: 35089

SUBJECT: RESOURCES FOR BANKWIDE REVIEW

Hans:

1. Per your conversation with Mohamed, and our own discussion yesterday, here is the explanation for the revised (in fact bare bone) resources ENV has requested:

o	6 months consultant time -- general review	54,000
o	12 months consultants for operational work	108,000
o	Missions and travel costs	40,000
o	Supervision survey and report	40,000
o	Bank staff training and miscellaneous	80,000
o	Support staff	<u>15,000</u>

Total 337,000

2. ENV's memo also requested one staff position now for the review's task force. This is the minimum addition to the staff capacity existent in ENV now, indispensable for carrying out this comprehensive exercise. It cannot be obtained through redeployment in ENV, since there is neither a position nor other qualified staff. This Bank staff and approval of this position will enable ENV to bring him on board immediately, as he was already identified.

Resources needed by the Region

3. I understand the reasons you gave for separating out the resource request for ENV from the regions' request. At the same time, I am very concerned that the back and forth about the resources needed by the regions is creating a risky,

UR

It is been

"reduced" from

\$210,000 to 337,000!

d

perhaps insurmountable delay in carrying out the Bankwide review on time. I am told by the regions (Asia, Africa) that supervision missions are going out without the resettlement consultants who were supposed to be financed with these resources, because resources are not confirmed. For all regions and Legal Department, the total resource requests amounts to \$575,000. In their responses to OSP, the regions stated their inability to absorb these additional resource costs. They indicated that their limited staff specialized in resettlement is already fully committed to preparing the resettlement coming up in new projects (which are not under our review) and cannot be reallocated to the in-depth Bankwide review of ongoing projects.

4. The current reorganization and staff changes has created some difficulties in focusing the TDs' attention on this review.

5. Your final clarification of the resource matter for ENV and the region as soon as possible will greatly help the review, which is not as advanced at this time as we intended.

Michael

CC: Mohamed T. El-Ashry
CC: Andrew Steer
CC: Scott Guggenheim
CC: R&R Review Fil

(MOHAMED T. EL-ASHRY)
(ANDREW STEER)
(SCOTT GUGGENHEIM)
(PAPER MAIL)

OFFICE MEMORANDUM

DATE: November 2, 1992

TO: Mr. Ernest Stern, EXC

FROM: V. Rajagopalan, OSPVP

EXTENSION: 33419

SUBJECT: Resources for the Bankwide Resettlement Review

1. Thank you for your reply to our memo on the Bankwide review of involuntary resettlement.
2. While we agree that the Regions should take charge of the operational aspects of the review, in practice the regions have explained that they are simply unable to absorb the incremental work. The Asia region, for example, has 62 projects with resettlement under supervision, nearly 50 with resettlement under preparation, and only two professional anthropologists to handle this entire case load.
3. We also agree with you that the pipeline should not be part of the Bankwide review. The reason we mentioned the large number of new resettlement projects is that the regions are fully using their current resources for the preparation/preappraisal/appraisal of the new projects, and do not focus their limited resources on already appraised "past" projects with resettlement, now under active implementation. Yet it is these ongoing projects that run the highest risk of becoming problematic, especially in the absence of remedies, which need increased review attention.
4. The main review burden, including assistance to operations, is on ENV, who have no room for redeployment due to the many demands on their limited resources. ENV requested one staff slot for immediate use to organize and deliver the comprehensive Bankwide review and its follow-up. Your approval of the ENV position now would relieve the current bottleneck, and would help meet the great demand overload created by the after-effects of the Morse report.
5. We are also preparing a CF request, per your guidance, revised at slightly below two-thirds of the earlier submission.

cc: Messrs. M. El-Ashry, Cernea (ENVDR)

OFFICE MEMORANDUM

DATE: November 2, 1992

TO: Mr. Richard Lynn, PBDDR

FROM: V. Rajagopalan, OSPVP

EXTENSION: 33419

SUBJECT: Request for Contingency Funding

1. Mr. Stern has approved the use of contingency funds to carry out the Bankwide review of involuntary resettlement. The study will be coordinated by ENV and is expected to take 12 months.

2. The resettlement review involves an in-depth analysis of all projects with resettlement components now under implementation (approximately 100). The review entails increased staff and consultant time allocation to field missions in order to introduce corrective actions whose results have to be included in the final report to Management and the Board. Some sectoral/topical studies are also envisaged. Please see attached the more detailed description of the review, which management committed to submit to the Board.

3. Our substantially revised estimate (from that submitted earlier to Mr. Stern) is that \$1.0 million (slightly less than two-thirds of the original budget proposal) is the minimum required to carry out the review and remedial work. This is a downward revision of the resources requested by the regions for this special review. It includes salaries and mission costs, for additional expert consultants, but does not include yet the one staff slot that has been requested by ENV. Rough cost breakdowns are as follows:

Support to Operations,	560,000
divided as follows:	
South Asia	120,000
East Asia	110,000
LAC	50,000
Africa	100,000
ECA	50,000
MNA	50,000
Supervision review/report	80,000
ENV	210,000
Legal Department	50,000
Support staff	60,000
Miscellaneous in-house training contingencies	80,000
Total	1 million

4. The Contingency funds will be administered through a special account in the budget of the Environment Department and transferred to the regions for specific activities directly related to the Bankwide review.

5. We would be grateful for your speedy review and approval, given that the Bankwide resettlement review must proceed expeditiously to meet its tight deadlines.

cc: Messrs. M. El-Ashry, Cernea (ENVDR)

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Total	1 million

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5. We would be grateful for your speedy review and approval, given that the Bankwide resettlement review must proceed expeditiously to meet its tight deadlines.

cc: Messrs. M. El-Ashry, Cernea (ENVDR)

THE WORLD BANK

ROUTING SLIP		DATE: Nov. 2, 1992
FROM THE OFFICE OF THE VICE PRESIDENT, SECTOR AND OPERATIONS POLICY		
	NAME	ROOM NO.
Mr. Hans Wyss	① <i>Mr. M.</i>	11/2
	② <i>Mr. M.</i>	9C-A. 11/2
	③ <i>Mr. M.</i>	11/3
<i>→ Mr. Meyers - as discussed</i>		
APPROPRIATE DISPOSITION	NOTE AND RETURN	
APPROVAL	NOTE AND SEND ON	
CLEARANCE	PER OUR CONVERSATION	
COMMENT	PER YOUR REQUEST	
FOR ACTION	PREPARE REPLY	
INFORMATION	RECOMMENDATION	
INITIAL	SIGNATURE	
NOTE AND FILE	URGENT	
REMARKS:		
<u>Bankwide Resettlement Review</u>		
Dick Meyers spoke today with Mr. Rajagopal re the attached. Dick would like to discuss it with you and will call you shortly.		
Pauline		
FROM: Pauline Clephane	ROOM NO: S13-131	EXTENSION: 31402

The World Bank/IFC/MIGA
OFFICE MEMORANDUM

DATE: November 8, 1992 05:55pm

TO: Hans Wyss (HANS WYSS)

FROM: Michael Cernea, ENVDR (MICHAEL CERNEA)

EXT.: 35089

SUBJECT: OPERATIONS: CONTINGENCY FUNDING FOR RESETTLEMENT REVIEW

Hans,

1. This supplements my EM of Friday to you.

2. I thought Raj may wish to have with him (for his discussion with Mr. Stern on Monday) a breakdown of the resources (contingency fund) asked for by the regions (not only the ENV requests). We already revised downward the regions' requests, to a modest level. Mr. Stern has not seen this regional breakdown. Could this be attached as an Annex to the note from Raj to Earnie?

3. The resources requested by Operations, for sending resettlement consultants to the most complex projects over the next 10 months, amount to only some 610,000, divided as follows:

South Asia	120,000
East Asia	110,000
LAC	50,000
Africa	100,000
ECA	50,000
MNA	50,000
Legal Department Review	30,000
Total	<u>610,000</u>

4. If approved, these contingency funds will be administered through a special account by ENV and transferred to the regions only for incremental activities for the Bankwide review. /

5. Please clarify who will communicate to the regions the response on their requests -- OSP or Mr. Stern's office? X

CC: Mohamed T. El-Ashry (MOHAMED T. EL-ASHRY)
CC: Andrew Steer (ANDREW STEER)
CC: Richard Meyers (RICHARD MEYERS)
CC: Scott Guggenheim (SCOTT GUGGENHEIM)
CC: R&R Review File (PAPER MAIL)

The World Bank

Washington, D.C. 20433

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October 29, 1992

OFFICE OF THE OSPVP
SECTOR & OPERATIONS POL.

ERNEST STERN
Managing Director

Mr. Rajagopalan

1. Thank you for your note of 10/23 on the resettlement review.
2. I certainly agree that this review cannot exceed 12 months. In practice, I would suggest that we schedule the final draft for Senior Management review no later than September 7, 1993. This, of course, will be preceded by staff and regional reviews. I believe that the basic objective of the review is to focus on the 102 projects in the portfolio, identify any problems, and indicate the status of remedial action. I would like to have from you a date by which an initial management information report can be provided. I would assume that this is, by now, readily available or can soon be.
3. I am not sure why the 57 projects in the immediate pipeline should be part of this review. Presumably, guidelines are adequate and Regional Loan Committee meetings should be adequate fora for reviewing compliance.
4. If the focus of the review is the existing pipeline, and its problems, we need not delay completion pending remedial action. This will not be explained easily to the Board. It may be, however, that some field work is necessary to get a clear definition of the problem(s). That, however, should be done by the Regions and not by the Task Force. We can discuss this further on my return.
5. Re the staff issues, I agree with your approach in paragraph 7. No doubt, Regions will wish to reassess their needs in light of recent staffing changes.
6. Re the budget issue in paragraph 5, I should have thought most regional costs are small enough to be absorbed. OSP costs may be reduced, in light of above and, no doubt, ENV has redeployment capacity. However, I am not opposed, in principle, to modest use of CF. Please initiate discussion with PBD so they can prepare recommendation for consideration.


Ernest Stern



OFFICE MEMORANDUM

DATE: October 23, 1992

TO: Mr. Ernest Stern, EXC

FROM: V. Rajagopalan, OSPVP 

EXTENSION: 33419

SUBJECT: Bankwide Resettlement Review
Resources Needed

1. Following your June 25 memo to regional VPs (attached), and the Management's response to the Board on the Morse Review (para. 10a), ENV has prepared a draft approach paper for the Bankwide resettlement review. All regional VPs were consulted, and the approach paper was also extensively discussed at the working levels between ENV and relevant regional staff. Agreement was reached with all regions. The formal Initiating Memorandum will go out next week.
2. In practical terms, the review has in fact started. The initial tally identified 102 projects with resettlement in the portfolio currently under implementation. An additional new 57 projects with resettlement impact are now in the immediate project pipeline for FY93-95; there are also 8 GEF projects under preparation that involve resettlement. An OSP-interregional working group was created for this review, led by Mr. Cernea. Outgoing SPN missions and TMs are being directed to include resettlement issues in their TORs for the current/next supervision round, wherever appropriate.
3. Two recurrent issues have been raised by all regions and require your guidance:
 - (a) duration of review: several regional managers feel that in order to obtain the desired improvements in R&R prior to the report for the Board, more than 12 months may be necessary;
 - (b) resources: all regions pointed out that they are under-staffed for resettlement work. They specified: (i) the resources they need immediately for the corrective review exercise, and (ii) the resources needed for long term regular work on resettlement.
4. On duration, we took the position that 12 months from now should be enough to achieve progress and correction in many problem projects. ENV's report will reflect progress achieved by the 12 month deadline, and that the remedial work ~~would continue~~ after the report's submission, with possibly an updating report in Spring 1994.
5. On resources, the short term Bankwide needs for carrying out the intensified review and remedial work amount to some 6.6 incremental staff years, to be used over the following 12 months. The bulk of this additional time (4.5 staff years) will consist of intensified operational work and increased technical assistance to borrowers for improving R&R at project level, provided primarily through specialized consultants. By regions, the breakdown of these requests is: LAC and Africa - one staff year each; South and East Asia - 16 months together; MENA - 6 staff months; and ENV - three staff years for review coordination, analysis, preparing reports to management and the Board, and operational support to regions. In financial terms, this amounts to some \$1.6 million.

6. Regarding long term resource needs, your memo also requested all CDs to "ensure that our evolving understanding of the complexity of such operations (resettlement and environment) is appropriately reflected in our staffing patterns" and, specifically, to inform management on the adequacy of their current technical staff to handle the current and prospective portfolio of such projects. I received responses from all CDs and the initial request for resettlement was for 15 new staff positions, with the following breakdown: South Asia and East Asia - 3 each; ECA, MENA, LAC and ENV - 2 each; Africa - 1.

7. After my September 16, 1992 EM to you, we re-examined these responses with the regions. It appears that 10 new positions instead of 15 could meet the key immediate needs, distributed as follows: LAC, Africa, MENA, and ECA - one each; South Asia, East Asia, and ENV - 2 each. These are needs for staff in CDs or TDs, not consultants. Subject to senior management agreement, these could be phased in during the next two years through the normal budget process.


8. Immediate action needed now concerns the Bankwide review. We are not in a position to determine the feasibility for redeployment within the regions, but are concerned that this important review-cum-corrective exercise you requested may not be completed in reasonable time or with the degree of quality needed unless the estimated short term resources are made available through the President's contingency fund. A comparable recent precedent was the mid-year introduction of EAs, when \$3.5 million was approved from the President's contingency fund to meet immediate needs, before phasing the EA work into the following year's budget exercise.

9. Our estimate is that \$1.6 million would be required now for short term needs, including salaries, support and mission travel costs, basically for consultants, plus a minimum of one regular staff slot to be approved for immediate allocation and use in ENV. (The Morse review entailed a cost of some \$1 million for only one project with resettlement; the Bank review will cover the entire portfolio).

10. The regions' staffing requests for long term needs for resettlement and environment could be considered and resolved separately, but also before long, preferably in the context of the ongoing rearrangements in TDs and the new central vice presidencies.

cc: Messrs. M. El-Ashry, Cernea (ENVDR)

OFFICE MEMORANDUM

DATE: June 25, 1992
TO: Distribution
FROM: Ernest Stern 
SUBJECT: Technical Capacity for Resettlement and Environment

1. As you know, in the response to the Report of the Independent Commission on Narmada, we have committed ourselves to a review of all projects in the portfolio which involve resettlement. The Environment Department is responsible for this review which is to be available, in draft, early in 1993. The review will depend on the full cooperation of your staff.

2. We have also committed to a review by each Country Department of the adequacy of their technical staff to handle the current and prospective portfolio of projects with resettlement and environment impact. Please arrange for that appraisal expeditiously and forward your conclusions and recommendation to Mr. Rajagopalan, with a copy to Mr. El-Ashry, by August 30, 1992. Portfolios are diverse and there is no presumption that current units are inadequate as to size and composition. However, we would like to be sure that our evolving understanding of the complexity of such operations is reflected appropriately in our staffing patterns.

Distribution: Messrs. Husain, Kaji, Koch-Weser, Jaycox, Thalwitz

cc: Messrs. Alisbah, Wood, Rajagopalan, Wyss, El-Ashry

A L L - I N - 1 N O T E

DATE: 16-Sep-1992 06:04pm

TO: Ernest Stern (ERNEST STERN)

FROM: V. Rajagopalan, OSPVP, OSPVP (V. RAJAGOPALAN, OSPVP)

EXT.: 33419

SUBJECT: Technical Capacity for Resettlement and Environment

1. We have received responses from the Regions to your June 25, 1992 memorandum on the above. The submissions are of varying quality, and we are following up with bilateral meetings with Regional representatives to firm up the estimates.

2. The preliminary outcome is that 12-13 additional technical staff members are desired for social analysis, and 29 for environmental impact analysis. In some instances, these increases can be met through redeployment of staff from other activities. But the Regions argue that they will need incremental resources to meet the demands being placed on them.

3. The Regional breakdown is as follows:

	<u>Social</u>	<u>Environmental</u>
Africa	1	7
East Asia	3	11
South Asia	3	7
ECA	2	--
MNA	1-2	--
LAC	2	4
<hr/>		
Total	12-13	29

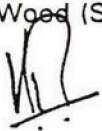
4. Meanwhile, we are preparing the draft Action Plan for the Bankwide Review of the Resettlement Portfolio. The Initiating Memorandum will be available for your review in October.

CC: Sven Sandstrom (SVEN SANDSTROM)
CC: Mohamed T. El-Ashry (MOHAMED T. EL-ASHRY)

OFFICE MEMORANDUM

DATE: September 24, 1992

TO: Messrs. S. Husain (LACVP); G. Kaji (EAPVP); C. Koch-Weser (MNAV); K. Jaycox (AFRVP);
W. Thalwitz (ECAVP); J. Wood (SASVP)

FROM: V. Rajagopalan, OSPVP 

EXTENSION: 33419

SUBJECT: Bankwide Review on Resettlement

1. As you know, among the measures taken to respond to the Morse Report on Narmada, Bank senior management has requested the Environment Department to carry out, in cooperation with the regions, an analysis of all ongoing projects entailing resettlement with respect to the quality of project implementation by the borrower, and the consistency of project implementation with the Bank's resettlement guidelines and loan/credit agreements. A report on that review will be submitted to Management, and subsequently to the Board. More details about the actions decided by senior management are in the document issued by the Secretary (No. M92-849, June 23, 1992).
2. The Environment Department has prepared the attached proposed working arrangements for this review. I should be grateful for any feedback and suggestions you may have before we finalize these proposals.
3. I would appreciate receiving comments from your region by October 2, with a copy to Mr. El-Ashry. Thank you.

cc: Messrs. Sandstrom, Stern (EXC); El-Ashry (ENVDR)

Attachment

OFFICE MEMORANDUM

DATE: September 24, 1992

TO: Mr. V. Rajagopalan, OSPVP

FROM: Mohamed T. El-Ashry, ENVDR *MTE*

EXTENSION: 33202

SUBJECT: The Bankwide Review of Resettlement

1. **Background.** Senior management informed the Board of its decision to initiate a set of Bankwide remedial actions on resettlement in response to the Morse Review (see Management Response to the Board, Sec.M92-849, June 23, 1992). Management committed to a Bankwide analysis of all projects with resettlement, and has asked ENV to carry it out, in cooperation with the regions. This review is intended to update the management's 1986 resettlement review and corrective actions exercise, which achieved a considerable improvement of the project portfolio. Progress and final reports on the new review will be submitted to Bank senior management within one year. Subsequently, Management will present a report on the resettlement review to the Board.
2. **Objectives.** Management has indicated that the objective of the Bankwide review is to ensure the consistency of resettlement implementation with Bank policies and guidelines and with loan/credit agreements. It should provide consolidated information to management on the status of the Bank's resettlement portfolio, including projects in the pipeline. The exercise should: (a) be an in-depth analysis carried out primarily by the CDs themselves, with participation and assistance from ENV and the regional Environment Divisions; and (b) initiate actual improvements in project quality, whenever needed, within the review period, through defining appropriate remedies and implementing them.
3. We propose the following review process and work arrangements for carrying out this exercise. In this, we have had preliminary consultations with our regional and legal colleagues.
4. **Timetable.** The review would start with an initial desk assessment and analysis by each CD on a project-by-project basis. The review would then be continued at the field level through the normal project supervision process, focusing on the next two rounds of regular supervision missions that will occur during this period. After the desk assessment, the first supervision round (Fall 1992) would analyze the situation in the field and agree with borrowers on specific remedies, when needed, to be carried out over the next 5-6 months. The subsequent supervision round (Spring 1993) would evaluate and report on progress in implementing the remedies and on the actual improvements achieved. Based on information received from the regions, ENV would prepare the initial (progress) report to senior management at midterm, and a final report at the end, followed by a report from management to the Board.
5. During the exercise, ENV would provide policy guidance and prepare standardized indicators and data-formats for assessments of projects with resettlement. ENV would place strong emphasis on cross regional and cross sectoral transfer of best practices and on the development of a Bank inventory of innovative solutions to recurrent issues.
6. In parallel, the review and remedial exercise would be supported by other activities such as: (a) training courses on resettlement for Bank staff; (b) contributions from relevant sectoral OSP departments, OED, and the Legal Department; and (c) training for borrowers to be offered by EDI. Working/organizational arrangements are suggested below.

7. Working Arrangements. To carry out this exercise, it is suggested that an ad hoc working group on resettlement (RG) be created in each region, led by the regional TD director, and comprising the RED Chief and representatives of relevant CDs. A resettlement work group would be created in ENV to link with the regions and to provide assistance as required. Each region would work out its own timetable to match the overall Bank timetable for submitting the reports to management. Each RG would carry out the initial project-by-project review and would prepare the data sheets and initial regional report on the region's portfolio, SPN missions, and measures initiated with borrowers. These reports will be inputs into ENV's Bankwide initial report to management. After the next supervision round (Spring 1993) and based on the SPN reports about actual improvements, best practices, innovations, etc., the RGs would prepare the phase II regional reports, to serve as inputs into the final consolidated report to management.

8. In between the two supervision rounds, technical assistance to borrowers can also be arranged as needed by the relevant CDs and RGs, for projects with major R&R operations. For some projects, a longer time frame than this one year exercise may be needed to implement remedies in midstream and the work would therefore continue at the project level as necessary.

9. Projects now in the pipeline (forthcoming in FY94-96) with significant resettlement components would also be covered by the review, as a specific subcategory. In this case, attention would be focused on adequate preparation and preappraisal of the R&R component.

10. Cooperation with Central Departments. Contributions from the central sectoral departments, plus Legal and OED, are needed on sector-specific issues and adequate R&R approaches in those domains, as inputs into the overall Bank report to management. During this exercise, it would be important to engage the participation of OSP departments directly, since resettlement is part and parcel of lending for these sectors. The relevant central departments are INU, AGR, IEN. In addition, important inputs are needed from OED on lessons learned from past projects and from LEG on the R&R provisions in the legal loan/credit agreements.

11. Special training activities will be set up to parallel the above project-focused work. Training for Bank staff working on resettlement will be designed and offered by PMDTR jointly with ENV. In turn, EDI, with assistance from ENV, will organize courses for borrower project staff, and for policy/decision makers in countries with large resettlement portfolios.


12. Outcomes. The main expected benefits of the review will be: (a) overall Bank/country portfolio improvement; (b) revisions in Bank policy, if needed; (c) better trained Bank staff and borrower project level staff; and (d) improved technical guidelines or instruments for operational work for staff and borrowers. The key specific products will be the three reports to senior management and the Board, which will synthesize the portfolio analysis, the Bankwide remedial process, and the improvements achieved. The regional synthesis reports and consolidated data will serve regional managers in follow up work.

13. We should be grateful for guidance from you and the Regional Vice Presidents on the above proposed approach. An action plan would then be prepared.

14. We propose that the formal Initiating Memorandum for this exercise be sent out in early October.

cc: Messrs. Steer, Cernea (ENVDR)

THE WORLD BANK INTERNATIONAL FINANCE CORPORATION
OFFICE MEMORANDUM

DATE: June 25, 1992
TO: Distribution
FROM: Ernest Stern 
SUBJECT: Technical Capacity for Resettlement and Environment

RECEIVED
016
92 JUN 26 PM 2:09
OFFICE OF THE VICE PRESIDENT
SECTION POLICY & RESEARCH

1. As you know, in the response to the Report of the Independent Commission on Narmada, we have committed ourselves to a review of all projects in the portfolio which involve resettlement. The Environment Department is responsible for this review which is to be available, in draft, early in 1993. The review will depend on the full cooperation of your staff.
2. We have also committed to a review by each Country Department of the adequacy of their technical staff to handle the current and prospective portfolio of projects with resettlement and environment impact. Please arrange for that appraisal expeditiously and forward your conclusions and recommendation to Mr. Rajagopalan, with a copy to Mr. El-Ashry, by August 30, 1992. Portfolios are diverse and there is no presumption that current units are inadequate as to size and composition. However, we would like to be sure that our evolving understanding of the complexity of such operations is reflected appropriately in our staffing patterns.

Distribution: Messrs. Husain, Kaji, Koch-Weser, Jaycox, Thalwitz

cc: Messrs. Alisbah, Wood, Rajagopalan, Wyss, El-Ashry



Record Removal Notice

File Title Environment Assessment - Correspondence		Barcode No. 1153461		
Document Date 7/20/1992	Document Type Memorandum, Board Record			
Correspondents / Participants To: Arnold Clift, SECGE From: M. A. Syed, EDS12				
Subject / Title Public Access to Environmental Assessment (EA) Reports				
Exception(s)				
Additional Comments Declassification review of this record may be initiated upon request.		The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.		
		<table border="1"><tr><td>Withdrawn by Bertha F. Wilson</td><td>Date May 19, 2023</td></tr></table>	Withdrawn by Bertha F. Wilson	Date May 19, 2023
Withdrawn by Bertha F. Wilson	Date May 19, 2023			



Record Removal Notice

File Title Environment Assessment - Correspondence		Barcode No. 1153461		
Document Date 21 12/13/1992	Document Type Memorandum			
Correspondents / Participants To: Executive Directors and Alternates From: T. T. Thahane				
Subject / Title Public Access to Environmental Assessment Reports				
Exception(s)				
Additional Comments Declassification review of this record may be initiated upon request.		The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group. <table border="1"><tr><td>Withdrawn by Bertha F. Wilson</td><td>Date May 19, 2023</td></tr></table>	Withdrawn by Bertha F. Wilson	Date May 19, 2023
Withdrawn by Bertha F. Wilson	Date May 19, 2023			



Record Removal Notice

File Title Environment Assessment - Correspondence		Barcode No. 1153461		
Document Date 1/24/1992	Document Type Memorandum			
Correspondents / Participants To: Executive Directors and Alternates From: T. T. Thahane				
Subject / Title Environmental Data Sheets				
Exception(s)				
Additional Comments Declassification review of this record may be initiated upon request.		<p>The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.</p> <table border="1"><tr><td>Withdrawn by Bertha F. Wilson</td><td>Date May 19, 2023</td></tr></table>	Withdrawn by Bertha F. Wilson	Date May 19, 2023
Withdrawn by Bertha F. Wilson	Date May 19, 2023			



Record Removal Notice

File Title Environment Assessment - Correspondence		Barcode No. 1153461		
Document Date 1/14/1992	Document Type Memorandum			
Correspondents / Participants To: E. Patrick Coady, U.S. Executive Director From: Mohamed T. El-Ashry				
Subject / Title Environmental Assessment Summaries				
Exception(s)				
Additional Comments Declassification review of this record may be initiated upon request.		The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.		
		<table border="1"><tr><td>Withdrawn by Bertha F. Wilson</td><td>Date May 19, 2023</td></tr></table>	Withdrawn by Bertha F. Wilson	Date May 19, 2023
Withdrawn by Bertha F. Wilson	Date May 19, 2023			

THE WORLD BANK

ROUTING SLIP		DATE: Jan. 10, 1992
FROM THE VICE PRESIDENT, SECTOR AND OPERATIONS POLICY		
NAME		ROOM NO.
Mr. Sven Sandstrom		
APPROPRIATE DISPOSITION		NOTE AND RETURN
APPROVAL		NOTE AND SEND ON
CLEARANCE		PER OUR CONVERSATION
COMMENT		PER YOUR REQUEST
FOR ACTION		PREPARE REPLY
INFORMATION		RECOMMENDATION
INITIAL		SIGNATURE
NOTE AND FILE		URGENT
REMARKS:		
<p>I would like to discuss with you some comments made to me by Hans Wyss and the Legal Department. Please give me a call.</p>		
<p>FROM: V. Rajagopalan</p>		<p>ROOM NO: S5-055</p>
		<p>EXTENSION: 33419</p>

OFFICE MEMORANDUM

DATE: January 10, 1992

TO: Mr. Sven Sandstrom, EXC

FROM: V. Rajagopalan, OSPVP

EXTENSION: 33419

SUBJECT: Operational Directive 4.01; Environmental Assessments

Attached please find for your review and comments a draft note which I propose for issuance by Secretary's Department.

In our view, the proposed procedure, which would make Category B and C Data Sheets available to the Executive Directors in a manner analogous to publication in the MOS, is entirely in line with the spirit of OD 4.01, as reflected in the present publication of Category A Environmental Data Sheets. Therefore, a simple format for notification is suggested.

If the attached note is approved and issued, we will, as a next step, issue instructions to staff, most importantly to assure that (as in the case of the Category A Environmental Data Sheets) the Category B and C Environmental Data Sheets would also not divulge any information considered as confidential. With regard to confidential information, the normal procedures of the Bank would continue to apply.

There is one possible concern with this note. While publication of the Category B and C Environmental Data Sheets may satisfy an immediate information need, the extent to which it meets US-internal requirements will remain a matter of interpretation. Again, if you wish, this could be explored further with the US Executive Director.

It is our view that further enhancing the transparency of the environmental classification of proposed projects is in any event highly desirable. I recommend that we therefore proceed as suggested.

Attachment

↓
ok, as per
our discussion
this morning

SSF
1-10



Record Removal Notice

File Title Environment Assessment - Correspondence		Barcode No. 1153461		
Document Date N/A	Document Type Memorandum			
Correspondents / Participants To: Executive Directors From: Timothy Thahane				
Subject / Title Operational Directive 4.01				
Exception(s)				
Additional Comments Declassification review of this record may be initiated upon request.		<p>The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.</p> <table border="1"><tr><td>Withdrawn by Bertha F. Wilson</td><td>Date May 19, 2023</td></tr></table>	Withdrawn by Bertha F. Wilson	Date May 19, 2023
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In our view, the proposed procedure, which would make Category B and C Data Sheets available to the Executive Directors in a manner analogous to publication in the MOS, is entirely in line with the spirit of OD 4.01, as reflected in the present publication of Category A Environmental Data Sheets. Therefore, a simple format for notification is suggested.

If the attached note is approved and issued, we will, as a next step, issue instructions to staff, most importantly to assure that (as in the case of the Category A Environmental Data Sheets) the Category B and C Environmental Data Sheets would also not divulge any information considered as confidential. With regard to confidential information, the normal procedures of the Bank would continue to apply.

There is one possible concern with this note. While publication of the Category B and C Environmental Data Sheets may satisfy an immediate information need, the extent to which it meets US-internal requirements will remain a matter of interpretation. Again, if you wish, this could be explored further with the US Executive Director.

It is our view that further enhancing the transparency of the environmental classification of proposed projects is in any event highly desirable. I recommend that we therefore proceed as suggested.

Attachment



Record Removal Notice

File Title Environment Assessment - Correspondence		Barcode No. 1153461		
Document Date N/A	Document Type Memorandum			
Correspondents / Participants To: Executive Directors From: Timothy Thahane				
Subject / Title Operational Directive 4.01				
Exception(s)				
Additional Comments Declassification review of this record may be initiated upon request.		The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.		
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Withdrawn by Bertha F. Wilson	Date May 19, 2023			

URGENT

MKW,

I like the first version better.

However, here is a compromise. I really don't believe Raj should be saying

Addressed to: Sven Sandstrom...

From: S. Rajagopalan....

Subject: Operational Directive 4.01; Environmental Assessments

what I deleted here. The President said resolve the issue. It doesn't matter who initiated it. MTE

Attached please find for your review and comments a draft note which I propose for issuance by Secretaries.

^{P3}
^{of Background} → If the attached note is approved and issued, we will, as a next step, issue instructions to staff, most importantly to assure that (as in the case of the Category A Environmental Data Sheets) the Category B and C Environmental Data Sheets would also not divulge any information considered as confidential. With regard to confidential information, the normal procedures of the Bank would continue to apply. This needs to be fully understood by concerned Executive Directors. Therefore, you may consider asking Messrs. Tahane and El-Ashry to consult with some of the Executive Directors, as Mr. Tahane may indicate, ahead of the issuance of the attached note.

Legal

There ^{is one} ~~are two~~ possible concerns with ~~issuing~~ this note. ~~One is that it may not fully meet expectations of the US Executive Director.~~ While publication ~~also~~ of the Category B and C Environmental Data Sheets may satisfy an immediate information need, the extent to which it meets US-internal requirements will remain a matter of interpretation. Again, if you wish, this could be explored further with the US Executive Director. ~~On the other hand, there is also a concern that the provision of access to Category B and C Data sheets at this particular point in time might be interpreted by some of the Executive Directors as unduly responsive to the interest of a single shareholder.~~

It is ^{my} ~~my~~ view, ~~however,~~ that further enhancing the transparency of the environmental classification of proposed projects is in any event highly desirable. I recommend that we therefore proceed as suggested, regardless of the above mentioned caveats.

Tahane



Record Removal Notice

File Title Environment Assessment - Correspondence		Barcode No. 1153461		
Document Date 12/31/1991	Document Type Memorandum			
Correspondents / Participants To: Visvanathan Rajagopalan From: Hugh N. Scott				
Subject / Title Environmental Assessment Procedures				
Exception(s) Attorney-Client Privilege				
Additional Comments		The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.		
		<table border="1"><tr><td>Withdrawn by Bertha F. Wilson</td><td>Date May 19, 2023</td></tr></table>	Withdrawn by Bertha F. Wilson	Date May 19, 2023
Withdrawn by Bertha F. Wilson	Date May 19, 2023			

EA File

The World Bank/IFC/MIGA
O F F I C E M E M O R A N D U M

DATE: December 20, 1991 05:53pm

TO: Visvanathan Rajagopalan (VISVANATHAN RAJAGOPALAN)

FROM: Hans Wyss, CODDR (HANS WYSS)

EXT.: 82851

SUBJECT: EA Procedures: Comment on Memo of 12/20/91

1. From the discussion of yesterday, I took it that we would distinguish in this memorandum between making Category B/C data sheets available to EDs versus outside the Bank, and ask Mr. Shihata for guidance on the two audiences. I also believe it is helpful for Mr. Shihata to know that it is only Part I EDs who have asked for this information, and not Part II EDs.

2. The attached draft instructions to staff need some further work. It is not clear whether these are proposed as an amendment to OD 4.01. Alternatively, there would be a need to amend the OD accordingly. It would be useful to indicate the proposed procedure in this respect on the eventual instruction sheets to staff. Since the RVPs have been fully part of the decision process on the OD 4.01, and are the ones to whom the instruction is addressed, it is important that before these instructions are finalized, they have an opportunity to review.

CC: Mohamed T. El-Ashry (MOHAMED T. EL-ASHRY)



Record Removal Notice

File Title Environment Assessment - Correspondence		Barcode No. 1153461		
Document Date N/A	Document Type Board Paper <i>Record</i>			
Correspondents / Participants				
Subject / Title Handwritten comments				
Exception(s)				
Additional Comments Declassification review of this record may be initiated upon request.		The item(s) identified above has/have been removed in accordance with The World Bank Policy on Access to Information or other disclosure policies of the World Bank Group.		
		<table border="1"><tr><td>Withdrawn by Bertha F. Wilson</td><td>Date May 19, 2023</td></tr></table>	Withdrawn by Bertha F. Wilson	Date May 19, 2023
Withdrawn by Bertha F. Wilson	Date May 19, 2023			

OFFICE MEMORANDUM

DATE: September 11, 1991

TO: Mr. Mopen A. Qureshi, OPNSV

FROM: Hans Wyss, CODDR

EXTENSION: 82851

SUBJECT: Questions about Quality and Regional Distribution of Environmental Assessments (EA)

RECEIVED
047
91 SEP 13 PM 1:50
SECTION POLICY & RESEARCH

1. This is in response to the concerns on the quality of many environmental assessments and the numerical imbalance among regions raised in Mr. Conable's August 26 memorandum to you and to Mr. Thalwitz approving the OD 4.01, Annex A revision. We have reviewed the available information on the two issues and consulted with management and senior staff in OPNs, and ENV. My colleagues' judgement is that there is no need for serious concern about either issue. I agree.

Quality

2. We have been unable to find out where the comments regarding poor quality of EAs originated. My suspicion is that the reference to poor quality pertained to the review of Bank experience with environmental assessments undertaken by ENV, but this was mistakenly attributed to the EAs themselves. Management and other senior staff of ENV and the REDs have not heard comments on the poor quality of EAs, and agree that any concerns in this regard are unfounded. I have advised Mr. Rajagopalan about the request you made on August 28 at a meeting in Mr. Conable's office to Mr. Thalwitz to look into the subject.

3. The review of Bank experience with EAs which is underway in ENV has not directly addressed the EA quality question. It will in the future. The ENV staff acknowledge that we now have too few EA reports out to carry out a meaningful study to assess this question usefully.^{1/}

4. The REDs have reviewed EA reports submitted to the Bank by countries in their respective regions and, although some requests for revisions, expansion, etc. have been necessary, there is a consensus that the EA quality has been substantively adequate. The variability of EA reports (which, of course, are the borrower's formal responsibility rather than Bank's), and some presentation deficiencies, are well within what would be expected, especially during start-up of the program. The Regions are all working to upgrade EA work through training (formal and informal) and project-specific technical assistance and EA review. In COD we have read the EA summaries that have been forwarded to the Executive Directors and found them to address the pertinent issues and indicate appropriate action.

^{1/} A brief desk study on a small number of EAs carried out by ENV in spring 1991 was of limited use (please see para. 8 in the attached minutes of the August 5 OC meeting).

Regional Distribution

5. The data from the spring 1991 ENV study indicating imbalance in EA activity among regions are from a limited sample that does not accurately reflect the actual level of environmental work on projects, which is given in the following table summarizing EA work on projects that were approved by the Board in FY91.

	<u>Investment</u>	<u>EAs Completed a/</u>		<u>EAs/Total Projects</u>	
	<u>Projects Approved</u>	<u>A Projects</u>	<u>Total</u>	<u>A Projects</u>	<u>Total</u>
				(in percent)	
AFRICA	59	4	26	7	44
ASIA	51	4	25	8	49
EMENA	33	2	11	6	33
LAC	31	2	11	6	35
TOTAL	<u>170</u>	<u>12</u>	<u>73</u>	<u>7</u>	<u>43</u>

a/ The total EAs include lesser "analysis" done on some B, and even C and D projects, and reported in the MIS and MOS databanks as EAs completed.

6. The data illustrate that EA activity is more balanced across regions than indicated in the ENV review totals. All regions had similar levels of EA work completed, ranging from 6% of all projects in LAC and EMENA to 8% Asia. Asia also led in the total of EAs plus other environmental analyses done, but deviations from the average of about 40% of all projects are not excessive, and are explained by the different types of loan/credit portfolios among regions. Africa, EMENA and LAC have been more involved in human resource projects than has Asia--about 30% of all projects in Africa, EMENA and LAC compared to 20% in Asia.

7. An analysis of the future investment lending program gives results similar to FY91. Of FY92 and 93 projects under processing in Asia, 18% are category A projects. In Africa, EMENA and LAC A projects are 10%, 12% and 9%, respectively, for an overall average of 12%. The total of projects in both A and B categories (requiring some environmental analysis) ranges from 50% in Africa to 72% in EMENA, with a 59% average for all regions.

Attachment

cc: Messrs./Mmes. Thalwitz (PRESV); Rajagopalan (PRSVP); Husain (LACVP); Jaycox (AFRVP); Karaosmanoglu (ASIVP); Wapenhans (EMNVP); El-Ashry (ENVDR); Sandstrom (EXC); Bock, Okonjo-Iweala, (OPNSV); Heron (COD)

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MAY 01 2023

WBG ARCHIVES

The World Bank
OPERATIONS COMMITTEE

CONFIDENTIAL

Minutes of the Operations Committee to consider
Revision of Operational Directive 4.00 Annex A,
Environmental Assessment
August 5, 1991, 4:30 p.m.

A. Present

Committee

Messrs./Ms. E. Jaycox (Chairman)
G. Kaji (ASIVP)
W. Wapenhans (EMNVP)
K. Marshall (AFRVP)
S. Ettinger (LACVP)
J. Niehuss (CFSVP)
H. Scott (LEGVP)
J. Wood (FPRVP)
C. Robless (OPNSV)

Others

Messrs./Mmes. M. El-Ashry (ENVDR)
G. Reif (PRDRA)
A. Raczynski (CENDO)
P. Ofosu-Amaah (LEG)
B. Lausche (ENV)
M. Koch-Weser (ENV)
R. Goodland (ENV)
S. Burmester (SECGE)
H. Wyss (CODDR)
R. Schneider (LATEN)
J. Richardson (CPBVP)
R. Harris (CODOP)
S. El Serafy (EAS)
A. Heron (CODOP)
R. Morino (FRM)

B. Issues

1. The Committee discussed the main issues raised in the Agenda dated August 1, 1991. These were: (a) the impact of the revisions to the guidelines for environmental classification of projects; (b) the prescriptive nature of the consultation/disclosure requirements; (c) the justification for the extension of the environmental assessment (EA) requirements to global impacts and GEF projects; (d) the application of the EA process to adjustment lending; and (e) whether the bank has sufficient experience at this time to support the proposed revisions to the Directive.

C. Introduction

2. Invited by the Chairman to make an introductory statement, the Environment Department (ENV) said that the Board had requested a review of experience under OD 4.00 Annex A. This had been carried out by a steering group chaired by ENV, which had prepared the revised OD. There had been extensive comments on the draft OD and it had not been possible to reach a consensus on all the revisions. The revisions therefore were ENVs' best judgments and represented a modest upgrading of the OD's requirements. Comments of NGOs had been taken into consideration in the revision, and on balance it was believed their requirements had been satisfied. ENV added that it wanted a formal consultative role in the environmental assessment (EA) classification process.

D. Discussion

Classification

3. One member said that there had not been enough experience with completed EAs to justify such far reaching changes in the classification system. That Region expected a massive increase in projects classified as "A" under the new system, with investment projects upgraded as well, together with the inclusion of previously exempt global projects and adjustment operations. The representative of another Region estimated that the number of As would go from 5% at present to 30-50%. There was general agreement that these higher numbers of As would create a significant increase in resource requirements and could result in significant delays in the lending program, and that no revisions in the OD should be approved until they are costed. ENV did not agree that the number of As would automatically increase as a result of the proposed changes in classification, but recognized the need for more resources for environmental work generally.

Prescriptive Nature of Draft OD

4. One member noted that the focus and tone of the OD were to force compliance with the prescribed process. He thought that (a) the emphasis should be more on substance than on procedures and that the OD should be designed to create a better climate for staff to deal with environmental issues in project design; (b) the OD should be the principal instrument for ensuring the right conclusions are reached on environmental issues; (c) the first line of support is the REDs, and a mandatory consultation process with ENV (on classification) would be overly bureaucratic; and (d) the present tightening of requirements might serve to frighten staff, rather than to ensure this support. ENV agreed that the OD should not be bureaucratic, should improve environmental decision making, and that it needs to be revised so as not to alarm Task Managers. There was, however, the need to focus on process as the OD is a public document and given the lack of trust in the Bank's handling of environmental issues by outsiders, there is need to inform them of our processes which should ensure proper attention is given to environmental issues.

Consultation/Disclosure

5. One member noted that the requirements for consultation with affected parties and disclosure of information were much too prescriptive and did not take into account legislation and processes in individual countries. Another member thought that requiring a borrower to agree to releasing the EA

before seeing a draft was not fair and should be changed. Also, there needed to be some flexibility for proceeding with a project in the event the borrower has good reasons for not wishing to release the EA.

Global Impacts/GEF

6. Several members expressed concern about inclusion of global impacts in the OD requirements. One questioned the practicality of asking borrowers to quantify the global impacts of alternative technical approaches to the project, particularly where the Bank could not follow through on grant financing for the incremental costs of the preferred alternative from a global perspective. Insofar as GEF projects are concerned, he thought they should only be covered by the OD when they are a component of a Bank financed project. ENV responded that where feasible the global impacts should be ascertained for use down the line and it is not intended that the borrower must select the most globally benign alternative. A speaker indicated that the EA requirements for GEF would better be placed in a separate GEF OD.

Adjustment Lending

7. One member noted that it did not seem plausible to include adjustment lending in the OD. It may be desirable to build environmental features into adjustment lending, but they should not be forced. ENV responded that adjustment lending is designed to address policy issues and could therefore have a greater impact on the environment than project lending. If the language of the OD is not clear on how environmental issues are to be incorporated in adjustment lending, it should be revised rather than deleted.

Experience under Existing OD

8. Several members noted that the "Review of the Bank's Experience with Environmental Assessment" was based on minimal experience and insufficient evidence for, and linkages to, the revisions proposed for the OD. Substantial further work is needed over a period of time during which a number of EAs are produced before revisions should be considered. All members endorsed this view. ENV agreed that the Review was too narrow and did not answer the critical questions, but would be completed to satisfy this deficiency.

9. One speaker said the review of experience under the OD should answer the questions the Board will likely ask. Specifically: has the Bank made progress in incorporating environmental measures into project design and in avoiding environmentally unsound projects; what issues have arisen in disclosure of EA information, consultation with affected parties, and project classification; what is the state of dialogue between the Bank and NGOs and the borrowers; what is the capacity of the borrowers to carry out EA work; are EA issues delaying project processing; and what has been the resource impact of applying the OD provisions.

Review of OD by Executive Directors

10. A member noted that the revised OD was a management document and should not be reviewed by the Executive Directors even though the original OD had been discussed in a Board Seminar. Staff clarified that what had been promised the Board was a review of experience under OD 4.00 Annex A, and that the OD would be modified in light of this review.

IFC

11. The representative from IFC advised that while it followed the Bank's policies on environment and EAs, it had its own guidelines based on the different nature of its operations, and wished this to be noted in OD 4.00 Annex A.

E. Conclusions

12. The Chairman said the discussion had identified the need for the following steps: First, the Board was owed a review of the Bank's experience under the 1989 OD 4.00 Annex A for discussion at a Board seminar. The Chairman noted that all members had serious reservations about the adequacy of the review made on the Bank's EA experience. He emphasized that the review of experience should not be rushed to meet Board deadlines. It should cover a sufficient period for analysis, deal with all areas expected to be of concern to management and to the Executive Directors, and its conclusions for eventual recommendations must be supported by Operations. ENV estimated that such a review could be completed by the end of FY92.

13. Second, the Chairman concluded that while the limited review of the Bank's experience so far had not raised major issues that would require a substantial revision of the present OD, the environment in which the Bank is operating still makes it advisable to strengthen and update the OD. The objective of these changes should be to provide a framework to improve the quality of the Bank's environmental assessment work, including through advice sought voluntarily by task managers from ENV and others. But importantly, there was a need to de-emphasize the bureaucratic procedures set forth in the draft OD submitted for OC consideration, taking into account fully the oral comments presented at the meeting as well as written comments from the Regions.

14. However, before such a revision of OD 4.00, Annex A, is presented to the President's Council, the issue of resources needed to be fully addressed. The Chairman prefaced his remarks by noting that Operations wants to have a positive impact on the environment and to have its environmental work be above responsible criticism. This objective must be balanced against resource availability and the skills mix of staff, which are already insufficient to meet the demands of the present OD. The Bank management cannot, therefore, make a commitment to new procedures for EA where the incremental costs are not known. We must first get a clear picture of the costs of the present EA inputs and then quantify the incremental costs required by the revisions. If the revisions to the OD result in additional inputs, then they should be undertaken only if Operations is provided with additional resources or resources are freed up by eliminating other activities. The estimates of the impact of the proposed revision will need to be based on a project-by-project review of the lending program as to the specific EA requirements. Moreover, full allowance should be made for inputs that would be needed under structural adjustment operations. The Chairman concluded that it was not appropriate for the draft OD to be submitted to the Executive Directors for review.

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

BARBER B. CONABLE
President

August 26, 1991

Messrs. Qureshi and Thalwitz

Environmental Assessment: Revised OD4.00, Annex A

The revised Operational Directive 4.00, Annex A, on Environmental Assessment should be issued after incorporating the minor changes in language suggested at the President's Council last week. Given the modest revisions to the original version issued in October 1989 and the limited experience to date with the policy and procedures stipulated therein, I do not believe there is any need for an Executive Directors' seminar on the subject at this time. We should explain to interested EDs the "living" nature of the Operational Directives and tell them that we expect to make periodic revisions to OD 4.00, Annex A, as our experience with its provisions evolves.

Clearly, a meaningful review of our experience must cover not only the environmental assessments conducted for Category A projects but the totality of the Directive's provisions for environmental analysis of all categories of projects. Such a review should be conducted during FY92 and should address the basic questions raised in Mr. Rajagopalan's covering note of August 16.

Finally, I am worried by comments regarding the poor quality of many environmental assessments and the serious imbalance across the four regions in the number of environmental assessments completed. I trust you will ensure that all Regional Management Teams are fully committed to sound and timely environmental analysis of projects financed by the Bank.

Barber B. Conable

cc: Members, President's Council
Messrs. Alisbah, Picciotto, Rajagopalan, Summers
Bock, El-Ashry, Isenman, Wyss

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

BARBER B. CONABLE
President

RECEIVED
009
91 AUG 27 PM 4:47

August 26, 1991

OFFICE OF THE VICE PRESIDENT
SECTOR POLICY & RESEARCH

Messrs. Qureshi and Thalwitz

Environmental Assessment: Revised OD4.00, Annex A

The revised Operational Directive 4.00, Annex A, on Environmental Assessment should be issued after incorporating the minor changes in language suggested at the President's Council last week. Given the modest revisions to the original version issued in October 1989 and the limited experience to date with the policy and procedures stipulated therein, I do not believe there is any need for an Executive Directors' seminar on the subject at this time. We should explain to interested EDs the "living" nature of the Operational Directives and tell them that we expect to make periodic revisions to OD 4.00, Annex A, as our experience with its provisions evolves.

Clearly, a meaningful review of our experience must cover not only the environmental assessments conducted for Category A projects but the totality of the Directive's provisions for environmental analysis of all categories of projects. Such a review should be conducted during FY92 and should address the basic questions raised in Mr. Rajagopalan's covering note of August 16.

Finally, I am worried by comments regarding the poor quality of many environmental assessments and the serious imbalance across the four regions in the number of environmental assessments completed. I trust you will ensure that all Regional Management Teams are fully committed to sound and timely environmental analysis of projects financed by the Bank.

Barber Conable

cc: Members, President's Council
Messrs. Alisbah, Picciotto, Rajagopalan, Summers
Bock, El-Ashry, Isenman, Wyss

THE WORLD BANK

ROUTING SLIP

Date
August 20, 1991

OFFICE OF THE PRESIDENT

Name	Room No.
Members, President's Council	

	To Handle	Note and File
	Appropriate Disposition	Prepare Reply
	Approval	Per Our Conversation
	Information	Recommendation

Remarks

President's Council Meeting: August 21, 1991
Revised OD on Environmental Assessment

Attached are the Agenda and Minutes of the OC Meeting on this subject which may be useful as background for tomorrow's discussion.

Khanna

Anupam Khanna

From

OFFICE MEMORANDUM

DATE: August 1, 1991

TO: Operations Committee Members

FROM: Randolph L.P. Harris, ^{AM} Acting Director, COD

EXTENSION: 84010/11

SUBJECT: Revised Operational Directive 4.00, Annex A, Environmental Assessment
Agenda for Meeting on August 5, 1991

1. On July 26, PRSVP circulated a revised draft OD 4.00, Annex A, *Environmental Assessment*, to the members of the Operations Committee which will meet to discuss it on Monday, August 5, at 4:30 p.m. in Room E 1243.

Background

2. OD 4.00, Annex A, was issued in October 1989 after being discussed at a Board seminar. The Executive Directors asked that a review of experience be prepared for Board discussion during FY91, with the Directive to be modified based upon the lessons learned. The review of experience and the revision to the OD was undertaken by a Steering Committee headed by ENV with representation from the Regions and COD.

3. The basic conclusion of the review of experience under the OD was that it has been a workable and effective guideline for ensuring the incorporation of environmental issues into project design. The proposed revisions to the OD represent a modest tightening up of Bank and borrower environmental assessment (EA) requirements. The six main changes to the OD described in the draft Memorandum to the Executive Directors cover (a) disclosure of information, (b) Bank roles in EA processing, (c) broadening the scope of the EA, (d) classification of projects, (e) environmental panels, and (f) new annexes.

4. An earlier version of the revised draft was circulated to Task Managers who had experience with processing projects with environmentally sensitive components. There were wide ranges of views expressed by the Steering Committee members and other reviewers on most of the proposed changes, and it was not possible to reconcile all the conflicting views. The main issues which the Operations Committee may wish to discuss are set forth in the following paragraphs.

Issues for Discussion

5. Need for Revisions. Given the basic conclusion of the Steering Group that the existing OD 4.00, Annex A has been an effective and workable guideline for the EA process, the Committee may wish to discuss whether the Bank has sufficient experience at this time to support the proposed modifications to the Directive.

6. Consultations/Disclosure of Information. The existing OD states that the Bank "expects the borrower to take the views of affected groups and local NGOs fully into account" and "encourages the borrower to release relevant information (on a project) to appropriate interested parties." The revised OD is more prescriptive, requiring consultations (para. 12) and requiring the borrower to provide project information (including the draft and final EA reports) to affected groups and local NGOs prior to consultations (para. 13). The objective here is to ensure that the affected people are consulted and have adequate information about a project to be able to evaluate its impact on their lives. The key issue is the extent to which flexibility is to be allowed in meeting the borrower's consultation/disclosure requirements. (Example: the exception previously allowed for proceeding with work on a project if the borrower does not agree to release the EA report to Executive Directors has been removed [para. 14]).
7. Environmental Classification. Three changes were made in the guidelines for assigning an environmental classification to a project (para. 22). First, old Category D (environment a major focus of the project) has been dropped. Second, clearer criteria for environmental screening of projects has been provided (Annex A5). Third, there is now a requirement to revise project classification as the project concept changes (para. 24). The issues are: (a) the new screening criteria may result in a larger number of Category A projects requiring full EAs; and (b) the reclassification of a project upwards may lead to the need for consultation and disclosure of information before further steps are taken.
8. Global Impacts. The OD expects global environmental issues to be addressed in EA Reports and makes Global Environmental Facility (GEF) projects or components of projects subject to its requirements (paras. 9 and 18). The issues are: (a) to what extent should global impact of projects, such as the global warming effects of thermal power plants, be addressed in EAs?; (b) even if global impact can be measured is consultation with, and disclosure of information to, those affected by global impacts relevant or meaningful?; and (c) since GEF is not part of the Bank, should its projects be subject to the provision of the Bank OD?
9. International NGO Concerns. The existing OD has come under heavy criticism from NGOs. Some of their concerns have been addressed in the revised OD, but its requirements will certainly fall short of what these NGOs would like for the Bank and its borrowers. Specifically, they would want inter alia (a) that the fundamental purpose of the EA would be to determine whether or not to proceed with a project (rather than to ensure that the development options are environmentally sound and sustainable as provided in the revised OD); (b) a stronger requirement for public participation (and decision making) in environmental aspects of projects at every stage of the project cycle; (c) the Bank to require that the borrower disclose to affected people all documentation relating to a project; (d) to eliminate Category B (requiring only environmental analysis rather than a full EA) and classify these projects as As; and (e) the new OD to apply to all IFC projects. Since these, and other issues, will likely be raised at the Board Seminar on September 19, the Committee may wish to discuss (a) to what extent the criticisms of the NGOs are valid; and (b) whether the revised OD strikes the right balance between the demands of the NGOs and the interests of the Bank and its Borrowers.
- 10 Other. Following are additional issues which the Committee may wish to discuss:
- (a) IFC does not wish to be referred to in the OD (Footnote 1 states that "IFC follows its own environmental assessment procedure"). MIGA may also wish to have references to it deleted (Footnote 1).

- (b) How is the prescribed EA process to be followed in the case of adjustment lending (para. 13)?
- ✓ (c) The role of ENV in assigning EA Categories (para. 23) *
- (d) Is there need for more guidance on preparing for supervision in project design and in supervising the environmental aspects of projects (para. 35)?
- (e) Should more flexibility be allowed to rely on borrower country EA procedures where they can be interpreted to meet the basic EA requirements of the Bank (para. 21)?

Operations Committee

Messrs. Jaycox (Acting OPNSV); Qureshi (o/r)(OPNSV); Husain (LACVP); Karaosmanoglu (ASIVP); Wapenhans (EMNVP); Rajagopalan, Summers (PRE); Shihata (LEGVP); Kashiwaya (CFSVP); Wood (FPRVP); Bock (OPNSV)

cc: Messrs./Mmes. Thahane, Burmester, Picciotto, Goldberg, Grilli (o/r), Wyss (o/r), Sandstrom, Isenman, Linn, Stoutjesdijk, Okonjo-Iweala, Parmar, Rao, Kavalsky, Pfeffermann, Liebenthal, Kilby, Robless, Walton, Khanna, Kaffenberger, Riddle, Colaco, Husain, Yenal, Hasan, Selowsky, Shakow, El-Rifai, El-Ashry, M. Koch-Weser, Lausche, Goodland, El-Serafy

The World Bank
OPERATIONS COMMITTEE

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WBG ARCHIVES

Minutes of the Operations Committee to consider
Revision of Operational Directive 4.00 Annex A,
Environmental Assessment
August 5, 1991, 4:30 p.m.

A. Present

Committee

Others

Messrs./Ms. E. Jaycox (Chairman)
G. Kaji (ASIVP)
W. Wapenhans (EMNVP)
K. Marshall (AFRVP)
S. Ettinger (LACVP)
J. Niehuss (CFSVP)
H. Scott (LEGVP)
J. Wood (FPRVP)
C. Robless (OPNSV)

Messrs./Mmes. M. El-Ashry (ENVDR)
G. Reif (PRDRA)
A. Raczynski (CENDO)
P. Ofosu-Amaah (LEG)
B. Lausche (ENV)
M. Koch-Weser (ENV)
R. Goodland (ENV)
S. Burmester (SECGE)
H. Wyss (CODDR)
R. Schneider (LATEN)
J. Richardson (CPBVP)
R. Harris (CODOP)
S. El Serafy (EAS)
A. Heron (CODOP)
R. Morino (FRM)

B. Issues

1. The Committee discussed the main issues raised in the Agenda dated August 1, 1991. These were: (a) the impact of the revisions to the guidelines for environmental classification of projects; (b) the prescriptive nature of the consultation/disclosure requirements; (c) the justification for the extension of the environmental assessment (EA) requirements to global impacts and GEF projects; (d) the application of the EA process to adjustment lending; and (e) whether the bank has sufficient experience at this time to support the proposed revisions to the Directive.

C. Introduction

2. Invited by the Chairman to make an introductory statement, the Environment Department (ENV) said that the Board had requested a review of experience under OD 4.00 Annex A. This had been carried out by a steering group chaired by ENV, which had prepared the revised OD. There had been extensive comments on the draft OD and it had not been possible to reach a consensus on all the revisions. The revisions therefore were ENVs' best judgments and represented a modest upgrading of the OD's requirements. Comments of NGOs had been taken into consideration in the revision, and on balance it was believed their requirements had been satisfied. ENV added that it wanted a formal consultative role in the environmental assessment (EA) classification process.

D. Discussion

Classification

3. One member said that there had not been enough experience with completed EAs to justify such far reaching changes in the classification system. That Region expected a massive increase in projects classified as "A" under the new system, with investment projects upgraded as well, together with the inclusion of previously exempt global projects and adjustment operations. The representative of another Region estimated that the number of As would go from 5% at present to 30-50%. There was general agreement that these higher numbers of As would create a significant increase in resource requirements and could result in significant delays in the lending program, and that no revisions in the OD should be approved until they are costed. ENV did not agree that the number of As would automatically increase as a result of the proposed changes in classification, but recognized the need for more resources for environmental work generally.

Prescriptive Nature of Draft OD

4. One member noted that the focus and tone of the OD were to force compliance with the prescribed process. He thought that (a) the emphasis should be more on substance than on procedures and that the OD should be designed to create a better climate for staff to deal with environmental issues in project design; (b) the OD should be the principal instrument for ensuring the right conclusions are reached on environmental issues; (c) the first line of support is the REDs, and a mandatory consultation process with ENV (on classification) would be overly bureaucratic; and (d) the present tightening of requirements might serve to frighten staff, rather than to ensure this support. ENV agreed that the OD should not be bureaucratic, should improve environmental decision making, and that it needs to be revised so as not to alarm Task Managers. There was, however, the need to focus on process as the OD is a public document and given the lack of trust in the Bank's handling of environmental issues by outsiders, there is need to inform them of our processes which should ensure proper attention is given to environmental issues.

Consultation/Disclosure

5. One member noted that the requirements for consultation with affected parties and disclosure of information were much too prescriptive and did not take into account legislation and processes in individual countries. Another member thought that requiring a borrower to agree to releasing the EA

before seeing a draft was not fair and should be changed. Also, there needed to be some flexibility for proceeding with a project in the event the borrower has good reasons for not wishing to release the EA.

Global Impacts/GEF

6. Several members expressed concern about inclusion of global impacts in the OD requirements. One questioned the practicality of asking borrowers to quantify the global impacts of alternative technical approaches to the project, particularly where the Bank could not follow through on grant financing for the incremental costs of the preferred alternative from a global perspective. Insofar as GEF projects are concerned, he thought they should only be covered by the OD when they are a component of a Bank financed project. ENV responded that where feasible the global impacts should be ascertained for use down the line and it is not intended that the borrower must select the most globally benign alternative. A speaker indicated that the EA requirements for GEF would better be placed in a separate GEF OD.

Adjustment Lending

7. One member noted that it did not seem plausible to include adjustment lending in the OD. It may be desirable to build environmental features into adjustment lending, but they should not be forced. ENV responded that adjustment lending is designed to address policy issues and could therefore have a greater impact on the environment than project lending. If the language of the OD is not clear on how environmental issues are to be incorporated in adjustment lending, it should be revised rather than deleted.

Experience under Existing OD

8. Several members noted that the "Review of the Bank's Experience with Environmental Assessment" was based on minimal experience and insufficient evidence for, and linkages to, the revisions proposed for the OD. Substantial further work is needed over a period of time during which a number of EAs are produced before revisions should be considered. All members endorsed this view. ENV agreed that the Review was too narrow and did not answer the critical questions, but would be completed to satisfy this deficiency.

9. One speaker said the review of experience under the OD should answer the questions the Board will likely ask. Specifically: has the Bank made progress in incorporating environmental measures into project design and in avoiding environmentally unsound projects; what issues have arisen in disclosure of EA information, consultation with affected parties, and project classification; what is the state of dialogue between the Bank and NGOs and the borrowers; what is the capacity of the borrowers to carry out EA work; are EA issues delaying project processing; and what has been the resource impact of applying the OD provisions.

Review of OD by Executive Directors

10. A member noted that the revised OD was a management document and should not be reviewed by the Executive Directors even though the original OD had been discussed in a Board Seminar. Staff clarified that what had been promised the Board was a review of experience under OD 4.00 Annex A, and that the OD would be modified in light of this review.

IFC

11. The representative from IFC advised that while it followed the Bank's policies on environment and EAs, it had its own guidelines based on the different nature of its operations, and wished this to be noted in OD 4.00 Annex A.

E. Conclusions

12. The Chairman said the discussion had identified the need for the following steps: First, the Board was owed a review of the Bank's experience under the 1989 OD 4.00 Annex A for discussion at a Board seminar. The Chairman noted that all members had serious reservations about the adequacy of the review made on the Bank's EA experience. He emphasized that the review of experience should not be rushed to meet Board deadlines. It should cover a sufficient period for analysis, deal with all areas expected to be of concern to management and to the Executive Directors, and its conclusions for eventual recommendations must be supported by Operations. ENV estimated that such a review could be completed by the end of FY92.

13. Second, the Chairman concluded that while the limited review of the Bank's experience so far had not raised major issues that would require a substantial revision of the present OD, the environment in which the Bank is operating still makes it advisable to strengthen and update the OD. The objective of these changes should be to provide a framework to improve the quality of the Bank's environmental assessment work, including through advice sought voluntarily by task managers from ENV and others. But importantly, there was a need to de-emphasize the bureaucratic procedures set forth in the draft OD submitted for OC consideration, taking into account fully the oral comments presented at the meeting as well as written comments from the Regions.

14. However, before such a revision of OD 4.00, Annex A, is presented to the President's Council, the issue of resources needed to be fully addressed. The Chairman prefaced his remarks by noting that Operations wants to have a positive impact on the environment and to have its environmental work be above responsible criticism. This objective must be balanced against resource availability and the skills mix of staff, which are already insufficient to meet the demands of the present OD. The Bank management cannot, therefore, make a commitment to new procedures for EA where the incremental costs are not known. We must first get a clear picture of the costs of the present EA inputs and then quantify the incremental costs required by the revisions. If the revisions to the OD result in additional inputs, then they should be undertaken only if Operations is provided with additional resources or resources are freed up by eliminating other activities. The estimates of the impact of the proposed revision will need to be based on a project-by-project review of the lending program as to the specific EA requirements. Moreover, full allowance should be made for inputs that would be needed under structural adjustment operations. The Chairman concluded that it was not appropriate for the draft OD to be submitted to the Executive Directors for review.

OFFICE MEMORANDUM

① DM ✓ ② NR o/r ✓ ③ FXCV o/r ✓
7/31 ✓
cc: El-ashry ✓
AOH ✓
LVP ✓
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91 JUL 31 PM 2:05
OFFICE OF THE PRESIDENT
SECTION OF RESEARCH

DATE: July 31, 1991

TO: Operations Committee

FROM: Salah El Serafy, Acting Director, EAS

EXTENSION: 81940

SUBJECT: Revised Environmental Assessment Operational Directive
Notice of Meeting

A meeting to consider the Revised Environmental Assessment Operational Directive will take place on Monday, August 5, 1991, at 4.30 p.m. in Room E-1243. The document was circulated to you under cover of Mr. Colaco's memorandum of July 26. An agenda for the meeting will be prepared by the Country Operations Department and circulated to you shortly.

Operations Committee:

Messrs. Jaycox, Acting OPNSV
Qureshi, OPNSV (o/r)
Husain, LACVP
Jaycox, AFRVP
Karaosmanoglu, ASIVP
Wapenhans, EMNVP
Rajagopalan/Summers, PRE
Shihata, LEGVP
Kashiwaya, CFSVP
Wood, FPRVP
Bock, OPNSV

cc: Messrs/Mmes Thahane/Burmester, Picciotto, Goldberg, Grilli (o/r),
Wyss, Sandstrom, Isenman, Linn, Stoutjesdijk, Okonjo-
Iweala, Parmar, Rao, Kavalsky, Pfeffermann, Liebenthal,
Kilby, Robless, Walton, Khanna, Kaffenberger, Riddle,
Colaco, Husain, Yenal, Hasan, Selowsky, Shakow, El-Rifai,
El-Ashry, Goodland.

SESerafy/lcu

OFFICE MEMORANDUM

DATE: August 1, 1991

TO: Operations Committee Members

FROM: Randolph L.P. Harris, ^{AH} Acting Director, COD

EXTENSION: 84010/11

SUBJECT: Revised Operational Directive 4.00, Annex A, Environmental Assessment
Agenda for Meeting on August 5, 1991

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SECTION
PRESIDENT
RESEARCH

1. On July 26, PRSVP circulated a revised draft OD 4.00, Annex A, *Environmental Assessment*, to the members of the Operations Committee which will meet to discuss it on Monday, August 5, at 4:30 p.m. in Room E 1243.

Background

2. OD 4.00, Annex A, was issued in October 1989 after being discussed at a Board seminar. The Executive Directors asked that a review of experience be prepared for Board discussion during FY91, with the Directive to be modified based upon the lessons learned. The review of experience and the revision to the OD was undertaken by a Steering Committee headed by ENV with representation from the Regions and COD.

3. The basic conclusion of the review of experience under the OD was that it has been a workable and effective guideline for ensuring the incorporation of environmental issues into project design. The proposed revisions to the OD represent a modest tightening up of Bank and borrower environmental assessment (EA) requirements. The six main changes to the OD described in the draft Memorandum to the Executive Directors cover (a) disclosure of information, (b) Bank roles in EA processing, (c) broadening the scope of the EA, (d) classification of projects, (e) environmental panels, and (f) new annexes.

4. An earlier version of the revised draft was circulated to Task Managers who had experience with processing projects with environmentally sensitive components. There were wide ranges of views expressed by the Steering Committee members and other reviewers on most of the proposed changes, and it was not possible to reconcile all the conflicting views. The main issues which the Operations Committee may wish to discuss are set forth in the following paragraphs.

Issues for Discussion

5. Need for Revisions. Given the basic conclusion of the Steering Group that the existing OD 4.00, Annex A has been an effective and workable guideline for the EA process, the Committee may wish to discuss whether the Bank has sufficient experience at this time to support the proposed modifications to the Directive.

6. Consultations/Disclosure of Information. The existing OD states that the Bank "expects the borrower to take the views of affected groups and local NGOs fully into account" and "encourages the borrower to release relevant information (on a project) to appropriate interested parties." The revised OD is more prescriptive, requiring consultations (para. 12) and requiring the borrower to provide project information (including the draft and final EA reports) to affected groups and local NGOs prior to consultations (para. 13). The objective here is to ensure that the affected people are consulted and have adequate information about a project to be able to evaluate its impact on their lives. The key issue is the extent to which flexibility is to be allowed in meeting the borrower's consultation/disclosure requirements. (Example: the exception previously allowed for proceeding with work on a project if the borrower does not agree to release the EA report to Executive Directors has been removed [para. 14]).

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8. Global Impacts. The OD expects global environmental issues to be addressed in EA Reports and makes Global Environmental Facility (GEF) projects or components of projects subject to its requirements (paras. 9 and 18). The issues are: (a) to what extent should global impact of projects, such as the global warming effects of thermal power plants, be addressed in EAs?; (b) even if global impact can be measured is consultation with, and disclosure of information to, those affected by global impacts relevant or meaningful?; and (c) since GEF is not part of the Bank, should its projects be subject to the provision of the Bank OD?

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10 Other. Following are additional issues which the Committee may wish to discuss:

- (a) IFC does not wish to be referred to in the OD (Footnote 1 states that "IFC follows its own environmental assessment procedure"). MIGA may also wish to have references to it deleted (Footnote 1).

- (b) How is the prescribed EA process to be followed in the case of adjustment lending (para. 13)?
- (c) The role of ENV in assigning EA Categories (para. 23)
- (d) Is there need for more guidance on preparing for supervision in project design and in supervising the environmental aspects of projects (para. 35)?
- (e) Should more flexibility be allowed to rely on borrower country EA procedures where they can be interpreted to meet the basic EA requirements of the Bank (para. 21)?

Operations Committee

Messrs. Jaycox (Acting OPNSV); Qureshi (o/r)(OPNSV); Husain (LACVP); Karaosmanoglu (ASIVP); Wapenhans (EMNVP); Rajagopalan, Summers (PRE); Shihata (LEGVP); Kashiwaya (CFSVP); Wood (FPRVP); Bock (OPNSV)

cc: Messrs./Mmes. Thahane, Burmester, Picciotto, Goldberg, Grilli (o/r), Wyss (o/r), Sandstrom, Isenman, Linn, Stoutjesdijk, Okonjo-Iweala, Parmar, Rao, Kavalsky, Pfeffermann, Liebenthal, Kilby, Robless, Walton, Khanna, Kaffenberger, Riddle, Colaco, Husain, Yenal, Hasan, Selowsky, Shakow, El-Rifai, El-Ashry, M. Koch-Weser, Lausche, Goodland, El-Serafy

~~LDA~~ (2) VR ofr

INTERNATIONAL FINANCE CORPORATION
OFFICE MEMORANDUM

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91 AUG -6 PM 1:44
OFFICE OF THE PRESIDENT
SECTOR POLICY & RESEARCH

DATE: August 2, 1991
TO: Mr. M. El-Ashry, ENVDR
FROM: Andreas M. Raczynski, CENDD *A. Raczynski*
EXT: 30634
SUBJECT: Revision of the Environmental Assessment Operational Directive

The revised Environmental Assessment Operational Directive as circulated on July 26 by Mr. Colaco, makes reference to IFC and its environmental assessment procedure in footnote 1, page 1.

We propose that the footnote be modified to read as follows:

IFC follows its own environmental review procedure. In addition, IFC ensures that projects comply with relevant Bank environmental policies and guidelines, adapted to its special needs.

We would appreciate inclusion of this wording in the next draft of the OD.

cc: Messrs. Dehejia, Kaffenberger, Jabre, Riddle, Garrity, Constantine,
Rajagopalan, Wyss, Colaco

OFFICE MEMORANDUM

DATE: July 31, 1991

TO: Mr. Edward V. K. Jaycox, Regional Vice President

FROM: Cynthia Cook, Acting Chief, AFTEN *cc*

EXTENSION: 34341

SUBJECT: Revised Environmental Assessment Operational Directive

~~1. DM~~ 2. VR 0/15
3. Fx 0/14
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91 AUG -1 PM 4:09

SECTION: RESEARCH

1. This memo responds to your request for comments on the Revised EA OD which is to be considered by the OC meeting on August 5.

2. This revision is the product of lengthy consultations between the Environment Department and the interregional Environmental Assessment Steering Committee, of which I am a member. These consultations have surfaced some important differences of opinion. While many of our views have been taken into account in the current draft, some differences still remain. The current draft, in our opinion, is not entirely satisfactory.

3. Through the EA Steering Committee, a broader consultation with regional managers and Task Managers was organized a few weeks ago. The Operations Committee should take into account the fact that the draft presented for your review differs in some key details from the draft which was circulated for review at that time, and which the EA Steering Committee found acceptable. The present draft has not been reviewed in its entirety by regional managers and Task Managers.

4. The main point to note is the changes which have been made in the Annex A5 on "Environmental Screening" (Annex A3 in the current OD). This Annex was not included in the draft circulated for review by regional managers and Task Managers. The present draft cover memo from Mr. Conable to the Executive Directors lists the annexes which have been added to the OD, but fails to mention the fact that significant changes have been proposed in this "old" annex.

5. Annex A5 proposes the following changes:

- elimination of the "D" category for environmentally focussed projects. We are in agreement with this change. However, it implies a need for a considerable amount of additional environmental work to be done by both the REDs and Task Managers; first, we must reclassify all the "D" projects (most of which are likely to become "A"s under the new rules), and second, we must institute EA processes for many of those projects. It should be noted that GEF projects, previously classified "D," will now require substantial EA work to be done.

- determination of the "A" category based on considerations of location, scale, and "sensitivity," as well as on the sectoral guidelines presently in use. The effect of these new criteria will be to move many of our "B" and "D" projects into the "A" category. This also implies a major effort for reclassification and much additional work both for the AFTEN EA team and for Task Managers.

- classification of projects according to the component with the greatest adverse impact. Thus, a project that is generally positive for the environment, but that contains one or more components for which full EA would be required, will be classified as an "A" project. This rule will also require reclassification of some of our "B" and possibly even "C" projects.

6. The draft revised OD also calls for the classification of structural and sectoral adjustment operations on the basis of their "obvious" effects (para. 17). Previously, such operations were not covered by the EA OD. We anticipate difficulties in applying this policy and advising Task Managers on carrying out EAs of adjustment operations, as there is no operational guidance available. This change will also significantly increase the EA workload of the region.

7. Taken together, we project that the application of these rules will result in the proportion of the Africa Region portfolio in "A" projects rising from the present 5% to at least 30% and possibly as much as 50%. This will have significant short-term implications for the regional budget and for the workload of Task Managers as well as for the Regional Environment Division. It will have even more significant long-range implications for regional staffing and supervision resources.

8. You should also be aware that the language of the OD on inter-agency coordination, involvement of affected groups, and disclosure of information (paras. 10-14) has been considerably strengthened in the new draft. We support these changes. However, successful implementation will require a long and difficult dialogue with some of our Borrowers, which could result in a significant slowing of the lending program in those countries.

9. On disclosure, there is one change that has been introduced since the draft was last reviewed by us. In para. 14, the present draft says that "when an EA report is received from a borrower, a copy is made available..." The preceding draft, following Mr. Qureshi's instructions, stated that "... a copy of an English language summary of the report is made available..." It further stated that "When an Executive Director (ED) so requests, Bank staff should provide a copy of the full EA report to the ED." This sentence has been deleted from the present draft. We prefer with the earlier formulation, especially as there has been no consultation within the Bank on this proposed change.

10. The regional environmental staff believes that it is too early to revise the EA OD, which in its original form has proved a valuable tool. The revision proposed at this time is not so much based on the lessons of experience as it is on a desire to respond to external pressures. We anticipate that the EA OD will need to be further revised in another two years, when there will be a meaningful basis for making judgements about its usefulness in enhancing project performance.

11. It is unfortunate that a draft of the proposed "Manual Transmittal Memorandum" has not been circulated with the draft revised OD. It is in this Memorandum that provisions were made for "grandfathering" of projects in preparation when the first EA OD came out in October 1989. The Operations Committee may wish to discuss what provisions should be made to "grandfather" projects currently in preparation, including "D" projects and adjustment operations, before the revised EA OD goes into effect.

12. The draft revised OD has attached to it a document entitled "Review of Bank's Experience with Environmental Assessment," with an Annex on "Project-Level Guides for Environmental Sustainability." We assume that these attachments are for your further information and are not meant to be part of the revised OD. They would not be appropriate as such.

cc: L. Christoffersen, R. Tillman, W. Lusigi, A. Dalfelt, A. Cabal (AFTEN); G. Davis (ASTEN); N. Birdsall (LATEN); A. Seth (EMTEN); M. El-Ashry, M. Koch-Weser, R. Goodland (ENV); H. Wyss (COD)

THE WORLD BANK / IFC / MIGA

OFFICE MEMORANDUM

DATE: July 26, 1991

TO: See Distribution Below

FROM: Francis X. Colaco, Acting PRSVP

EXTENSION: 33422

SUBJECT: Revision of the Environmental Assessment Operational Directive

~~① Dick A.~~ ② VR

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Enclosed is a copy of the draft revision of the Environmental Assessment Operational Directive scheduled for discussion at the OC meeting on August 5.

El-Jabry to attend

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- A. Shakow (EXT)
- G. El-Rifai (MIGPA)

BARBER B. CONABLE
President

DRAFT
July 26, 1991

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WBG ARCHIVES

MEMORANDUM TO THE EXECUTIVE DIRECTORS

SUBJECT: Revised Environmental Assessment Operational Directive

When the Bank adopted the Operational Directive (OD) on Environmental Assessment (EA) for pilot use in October 1989, Executive Directors requested information on our experience after we had tested it. Our conclusion is that environmental assessment has proved to be an effective tool in improving the quality of economic development. So much so that we have finetuned the OD based on our experience to date. This experience is seasoned by voluminous advice, comments and criticism from Bank staff. The EA OD Steering Committee, led by ENV with major representatives from the regions and COD, have listened carefully to and benefitted from comments inside and outside the Bank. Following extensive consultations within the Bank, I recommend six main changes in the OD (roughly ranked 1 through 6 below), the revised draft of which is attached for your consideration. The other revisions are minor, editorial or self-evident clarifications with no major policy implications. A review of the Bank's experience with EAs to date is attached as a separate document.

1. **Disclosure of Information:**

The Bank's policy on disclosure is evolving, and environment is no exception. You will remember our discussion of the language proposed for the October 1989 OD. The new OD provides that as soon as the EA summary is received from the borrower, the Bank shall make it available to the Board (paras. 14 - 15). In addition, the full EA report shall be made available to you on request.

As the EA remains the property of the borrower, the Bank seeks agreement from the borrower for such disclosure upon reaching the decision to prepare an EA.

The Bank recognizes that participation of affected people in decisions affecting their lives cannot be meaningful unless they have adequate information about the project. The Bank now interprets this as sharing the project description and objectives with the affected people and local NGOs for their comments and input at the outset, then subsequently making the draft EA reports available for review and comments.

2. **Bank Roles in EA Processing:**

Although the Borrower is responsible for preparing the EA, the Bank is responsible for seeing that all needed environmental work is carried out by the Borrower, and that it is adequate when received by the Bank. We have clarified

responsibilities within the Bank for EA processing. The Country Department and Task Manager (TM) continue to bear the overall responsibility for projects in general. The TM raises the environmental issues, supported by and with the concurrence of the Regional Environmental Division. In turn, the RED is supported by and consults with ENV.

3. Broadening the Scope of EA:

The October 1989 OD specifically excluded global environmental externalities and adjustment operations from the purview of EA. Since then, global issues have risen on the Bank's agenda. In addition, now that the GEF is operational, we want to ensure that anything it finances is environmentally scrutinized. While we are not able to predict all global environmental effects, nor all those provoked by adjustment operations, we feel we must try, at least where feasible. Therefore, this OD requires that obvious effects be addressed to the extent feasible. Meanwhile, we propose to mount research to facilitate such predictions.

4. Classification:

We have received more criticism on the amount of EA work needed on a given project, including from yourselves, than for any other aspect of EA. We therefore propose two changes. The first is dropping the old "D" category, which did not fit into the scale of EA work needed. This simplifies project classification. All projects will be assigned to one of three categories, A through C, depending on the extent of environmental impacts, and therefore the amount of environmental analysis needed. "A" projects need a full environmental assessment. "B" projects need environmental analysis, but not a full assessment. "C" projects are categorically excluded from environmental analysis. We have added language requiring re-classification of EA categories, upwards or downwards, as soon as the project concept changes or new information becomes available.

5. Environmental Panels:

Long experience with the use of panels in the case of dam safety, and our experience to date with similar panels to deal with environmental aspects for major dam and reservoir projects has been salutary. Therefore, we now propose that highly risky and contentious projects with potentially serious and multi-dimensional environmental concerns should engage the services of a specialist panel, along the lines of the successful dam safety panel, to reduce environmental risks.

6. New Annexes:

In order to clarify and simplify the OD, we have added three brief annexes. The first defines the "area of influence" of the project as related to EA needs. The second outlines a sample mitigation or management plan for a Category B project. The third new annex systematizes EA reporting for the Monthly Operational Summary.

Operational Directive 4.00, ANNEX A: Environmental Assessment

Introduction

1. This annex outlines Bank policy and procedures for the environmental assessment (EA) of Bank lending operations, and related types of environmental analysis.^{1/} EA is a flexible procedure, which should vary in breadth, depth, and type of analysis, depending on the project. It may be carried out at one point in time, or in discrete stages. EA is carried out during project preparation, before appraisal, and should be closely linked to the feasibility study. For the purpose of this annex, EA covers project-specific and other environmental impacts in the "area of influence" of a project (Annex A1).^{2/} EAs utilize the findings of country environmental studies and action plans which cover nationwide issues, the overall policy framework, legislation, and institutional capabilities in the country.

Purpose and Nature of EA

2. The purpose of EA is to ensure that the development options under consideration are environmentally sound and sustainable.^{3/} Any environmental consequences should be recognized early in the project cycle and taken into account in project siting, planning and design. EAs identify ways of improving projects environmentally, by preventing, minimizing, mitigating, or compensating for adverse impacts. By alerting project designers, implementing agencies, and borrower and Bank staff to issues early, EAs (a) enable them to address environmental issues in a timely and practical fashion, (b) reduce the need for project conditionality, because appropriate steps can be taken in advance or incorporated into project design, or alternatives to the proposed project can be considered, and (c) help avoid costs and delays in implementation due to unanticipated environmental problems. EAs also provide a formal mechanism for inter-agency coordination, and for addressing the concerns of affected groups and local nongovernmental organizations (NGOs). In addition, the EA process should play a major role in building environmental capability in the country.

3. Like economic, financial, institutional, and engineering analyses, EA is part of project preparation, and is therefore the borrower's responsibility. Close integration of EA with these other aspects of project preparation ensures that (a) environmental considerations are given adequate weight in project selection, siting, and design decisions, and (b) carrying out EAs does not delay project processing.

^{1/} Unless the context otherwise requires, "EA" means the environmental review process required by this OD, including the formal environmental assessment and other environmental analysis. References to the Bank include IBRD and IDA; "loans" include credits. IFC follows its own environmental assessment procedure. In addition, IFC follows all specific Bank environmental policies (eg: wildlands, indigenous peoples, involuntary resettlement, pesticides). adapted to its special needs. Bearing in mind its special circumstances, MIGA will cooperate with the Bank to ensure, to the extent possible, that the objectives of this directive are met in its operation.

^{2/} The Environmental Assessment Sourcebook provides guidance on all topics mentioned in this OD and should be used for guidance throughout. For Bank policies regarding related impacts, see Annex A3.

^{3/} More guidance on sustainability is provided in OMS 2.34, in the EA Sourcebook, and in the forthcoming OD 4.00.

Types of Environmental Analysis

Project-Specific EAs

4. Project-specific environmental assessments or other analyses are used to analyze specific investment projects (e.g., dams, factories, irrigation systems). The detail and sophistication of analysis should be commensurate with the expected impacts. When a project has been classified as a Category A (see para. 22), formal project-specific environmental assessment is required and should cover: (a) existing environmental "baseline" conditions; (b) potential environmental impacts, direct and indirect,^{4/} including opportunities for environmental enhancement; (c) systematic environmental comparison of alternative investments, sites, technologies, and designs; (d) preventive, mitigatory, and compensatory measures, generally in the form of an environmental mitigation or management plan; (e) environmental management and training, and (f) monitoring. To the extent possible, capital and recurrent costs, environmental staffing, training, and monitoring requirements, and the benefits of proposed alternatives and mitigation measures, should be quantified. Annex A2 outlines a project-specific environmental assessment report, and Annex A3 lists specific environmental issues to be covered where relevant.

Regional and Sectoral EAs

5. Regional EAs may be used where a number of similar but significant development activities with potentially cumulative impacts are planned for a reasonably localized area. In such cases, regional EAs are generally more efficient than a series of project-specific EAs, and may identify issues that the latter might overlook (e.g., interaction among effluents, or competition for water or land). Regional EAs compare alternative development scenarios, and recommend environmentally sustainable development and land use patterns and policies. Impacts may sometimes extend across national boundaries; however, regional EAs with an institutional focus might follow administrative boundaries. Regional EAs are particularly useful preceding the first in a series of projects or development interventions in an undeveloped region, where a region is slated for major developments, where cumulative impacts are anticipated, or in regional planning or agro-ecological zoning. The Bank is willing to consider financing regional and sectoral EAs.

6. Sectoral EAs may overlap with regional EAs. Sectoral EA should be used for the design of sector investment programs. They are particularly suitable for reviewing (a) sector investment alternatives; (b) the effect of sector policy changes; (c) institutional capacities and requirements for environmental review, implementation, and monitoring at the sectoral level; and (d) the cumulative impacts of many relatively small, similar investments which do not merit individual project-specific EAs. Sectoral EAs should strengthen the environment management capability of the sectoral or other relevant agencies.

7. Although regional or sectoral EAs facilitate the subsequent preparation of project-specific EAs, they usually do not cover all requirements of project-specific EAs. Normally, the latter are needed for major investments (see para. 16 on sector investment loans), but regional or sectoral EAs will have identified the relevant issues, collected much of the data, and, in general, greatly reduced the work needed in subsequent project-specific EAs.

^{4/} Indirect impacts are the induced consequences of the project which occur later or in another part of the environment, e.g., if a river is channelled or dammed, its capacity for self-purification may be reduced and the original aquatic ecosystem damaged or destroyed.

Alternatives

8. Alternative approaches to the EAs described above may occasionally be acceptable for some types of projects. Typically, these projects are smaller and not in environmentally sensitive areas and present issues that are narrow in scope, well-defined, and well-understood. These approaches may be more effective in integrating environmental concerns into the borrower's planning process, and are useful in focusing the environmental work needed. Such alternative approaches^{2/} include, for example:

- (a) specific environmental design criteria and pollution standards, acceptable to the Bank, for small-scale industrial plants;
- (b) specific environmental design criteria and construction supervision programs for small-scale rural works projects, and
- (c) specific environmental siting criteria, construction standards, and inspection procedures for housing projects.

Consideration of Global Issues

9. A number of specialized agencies -- inside and outside the U.N. system -- carry out scientific investigations of global environmental issues (ozone depletion, global warming, sea level rise, ocean dumping, transport of hazardous wastes, biodiversity, etc.) The Bank is developing its own environmental, economic, sectoral and investment policies and programs, with a view to minimizing possible adverse impacts on global systems. The Bank expects such issues to be addressed in regional, sectoral and project-specific EAs, where relevant and to the extent feasible. Where there are global issues, effort should be made to estimate for each project alternative, the relative magnitude of any contribution to global change for consideration in the selection of alternatives. The Bank's Environment Department (ENV) is available for consultation on these issues.

Institutional Aspects of Projects

Inter-Agency Coordination

10. Because environmental issues generally involve national, regional, and local government agencies, and cover a broad range of responsibilities (wildlife, health, water and land use, tourism, etc.), coordination among government agencies is crucial. This is best achieved through inter-agency meetings, convened by the proponent agency at key points, i.e, once the decision has been reached to carry out a formal environmental assessment, and once the draft EA report has been completed. The first meeting provides an opportunity to identify the issues, types of analysis required, sources of relevant expertise, responsibilities and schedule for the EA, and mitigatory measures to be considered.

Involvement of Affected Groups and Nongovernmental Organizations

11. The Bank expects the borrower to take the views of affected groups and local nongovernmental

^{2/}

In some cases, adherence to existing directives is an acceptable alternative to an EA (e.g., OPN 11.01, Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and their Procurement when Financed by the Bank, to be reissued as OD 4.00 Annex C, Agricultural Pest Management, and Selection and Use of Pesticides).

organizations (NGOs)^{6/} fully into account in project design and implementation, and in particular in the preparation of EAs. This is important in order to understand both the nature and extent of any social or environmental impact, and the acceptability of proposed mitigatory measures, particularly to affected groups. Consultations also are a valuable way to improve decision-making, to obtain feedback on the environmental assessment process and draft report, and to increase community cooperation in implementing the recommendations of the EA.

12. Such consultations should occur at least at two stages of the environmental assessment process for all projects that have been classified as Category A projects (pursuant to para. 22): a) after the EA category has been assigned, but before the terms of reference for the EA have been finalized, and b) once a draft EA has been prepared, but before it has been finalized. In addition, further consultations are encouraged at other appropriate points during EA preparation, after EA finalization and throughout project implementation. Updates and information feedback between meetings are best when systematic and routine. One approach which has proven effective in many countries for the initial consultation is to follow the first inter-agency meeting (para. 10), with a consultation session with affected groups and local NGOs. Where a Category A project has major social components which require consultations pursuant to other Bank Operational Directives^{7/}, the socially-related consultations and environmental assessment consultations may be linked.

Disclosure of Information

13. In order for meaningful consultations to take place between the borrower and affected groups and local NGOs pursuant to paras. 11 and 12, it is necessary that the borrower provide relevant information prior to consultations in a timely manner and in a form that is meaningful for the groups being consulted. Such information should include: a) for the initial consultation, a summary of the project description and objectives, and the bases for classification of the project as a Category A, and b) once the draft EA report has been prepared, a summary of its conclusions in a form and language meaningful to the group being consulted. Any consultation should pay particular attention to those issues most likely to affect the people being consulted. In addition, both the draft and final EA reports shall be made available by the borrower at some public place reasonably accessible to affected groups and local NGOs for their review and comment. When the borrower finds it is unable to make a report available to its affected groups and local NGOs, the Bank will assess whether alternative means used to convey relevant information is sufficient to facilitate meaningful consultation for purposes of this paragraph.

14. Because an important purpose of the environmental assessment process is informed decision-making, the Task Manager for the project should ensure that when an EA report is received from a borrower, a copy is made available, without Bank endorsement, for all Executive Directors. It is Bank policy to request the borrower's advance permission for release of the report to the EDs since it is the borrower's property. The Task Manager should seek permission from the borrower for release of the report to the EDs as early as possible in the project cycle, normally when the need for an EA is identified but no later than when the terms of reference for the EA are discussed with the borrower (para. 28). If the borrower indicates that it is not prepared to release the EA report to the Executive Directors, the Bank should not proceed with further work on the project.

Strengthening Environmental Capabilities

15. The ultimate success of EA depends upon the development of environmental capability and understanding in the agencies concerned. Therefore, as part of the EA process, it is necessary to identify relevant environmental agencies and their capability for carrying out required EA activities. Projects with major potential impacts normally require the strengthening of several environmental functions, e.g., environmental monitoring, inspection, management of mitigatory measures, EA scientific and technical review,

^{6/} See OD 14.70, Involving Nongovernmental Organizations in Bank-Supported Activities for the Bank's overall approach to NGOs.

^{7/} E.g., Involuntary Resettlement, OD 4.30, June, 1990; Indigenous Peoples, OD 4.20, expected September, 1991.

and cross-sectoral coordination. In addition, policy strengthening is often needed through the development of legal or regulatory measures, including incentives, to ensure adequate environmental performance standards. These functions are best located in one or more units and at one or more administrative levels, depending on the country and project. The first level of environmental involvement is on-site; a second, at the level of the implementing or executing agency, such as a Department of Agriculture, or Health; and a third at a central policy level, such as an environmental agency or other central policy-making body to oversee and coordinate intersectoral aspects. Early focus on institutional involvement in the EA process (a) helps ensure that the executing agency's and central policy entity's knowledge and perspectives are taken into account in the EA; (b) provides on-the-job training for staff; and (c) provides continuity for the implementation of the EA's recommendations. In addition, to help develop EA capability in the country, the Bank should (a) encourage the use of local expertise, and (b) promote EA training for local staff and consultants.^{8/}

Sector and Financial Intermediary Lending

16. For sectoral investment loans and loans through financial intermediaries, subproject details may not be known at the time of project appraisal, and it therefore may not be possible for the borrower to prepare an EA as part of project preparation. In such cases, the project implementing institutions will need to screen proposed subprojects (see para. 22) and carry out appropriate environmental analyses prior to subloan approval. To ensure that this can be done, the Bank should appraise and strengthen where necessary the implementing agencies' capabilities to (a) screen subprojects, (b) obtain the necessary expertise for EA preparation, (c) review EA reports, (d) implement mitigation plans and (e) monitor environmental conditions during project implementation. The appraisal mission should develop clear arrangements with the borrower for carrying out those functions during the project, indicating the sources of required expertise and the proper division of responsibilities among the ultimate borrower, the financial intermediary or sector agency, and the agencies responsible for environmental management and regulation.^{9/} These arrangements should ensure that subprojects that do not comply with accepted environmental standards are not financed under the project. In cases where subprojects are known prior to appraisal, they should be subjected to the normal procedures described in this directive.

Adjustment Lending

17. Sector and structural adjustment loans are covered by this OD. The Bank recognizes that the environmental impacts of adjustment loans may be difficult to assess, and that the speed and confidentiality of adjustment lending complicates the process. The Bank expects any obvious environmental and social implications to be analyzed to the extent possible during loan preparation. The analysis should focus on a) identification and mitigation of any obvious adverse environmental effects including cross-sectoral effects; b) identification of major negative impacts that may be suspected but are uncertain, and recommendations on how to monitor the situation; and c) identification of opportunities for environmental policy strengthening.^{10/}

Global Environment Facility

18. GEF projects or GEF components of normal projects are subject to the requirement of this OD.

^{8/} Further guidance on institutional strengthening is in the EA Sourcebook.

^{9/} Further guidance is provided in the EA Sourcebook on appraising environmental aspects of sector and financial intermediary lending.

^{10/} Such loans also are subject to the general policies in OMS 2.36, Environmental aspects of Bank Work (to be reissued as OD 4.00, Environmental Policies).

Environmental Advisory Panels

19. For highly risky and contentious projects with serious and multi-dimensional environmental concerns, the borrower should normally engage an advisory panel of independent, internationally recognized, environmental specialists to advise on: a) key issues and methodology for preparing the EA, b) recommendations and finding of the draft EA, c) implementation of final EA recommendations and d) development of environmental capacity in the implementing agency.^{11/}

EA Procedures

Overview

20. Though EA preparation is the responsibility of the borrower, the Bank's Task Manager (TM) assists and monitors the EA process, with support from the Regional Environment Division (RED), and the Environment Department (ENV) as needed. The borrower and the Bank should agree as early as possible after issuance of the Initial Executive Project Summary (IEPS) on the selection of consultants or borrower staff to prepare the EA, and the EA procedures, schedule, and outline. Major steps in the EA process include: (a) screening, (b) decisions based on the IEPS, (c) notification to the Board through the Monthly Operational Summary (MOS), (d) preparation of terms of reference (TORs) for the EA, (e) EA preparation, (f) EA review and incorporation of environmental measures into the project, (g) supervision, and (h) ex-post evaluation.

21. Since project and country conditions, national legislation, and institutional experience vary among borrowers, both the borrower and the Bank must exercise judgement in using these procedures to design and implement projects which are both environmentally and economically sound, and consistent with the environmental laws, policies, and procedures of the borrower. The Environment Department (ENV), Legal Department, and the REDs maintain information on these requirements.

Screening

22. Projects should be screened for environmental issues at identification and assigned, prior to issuance of the IEPS, to one of three categories: A, B or C, commensurate with expected environmental impacts (Annex A5).^{12/}

Category A: A complete environmental assessment is required.

Category B: Although a complete EA is not required, environmental analysis is required.

Category C: No environmental analysis required.

23. The EA category should be assigned by the TM, with the concurrence of the RED, in consultation with ENV. The categorization should be based on the best judgment of Bank environmental staff.^{13/} In projects with several components, those components with the most serious environmental issues should receive principal focus in the screening process and subsequent environmental assessment or other analysis. The results of the screening should be reported on a separate environmental data sheet (see Annex A6 for sample

^{11/} See OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, para. 18, for more detail on the selection and functions of the panel.

^{12/} An environmental project (former Category D) may fall into any of the categories. Projects classified in Category D at the time of issue of this OD must be reclassified by the TM with concurrence from the RED.

^{13/} The EA Sourcebook gives further guidance on screening.

data sheet).

Revision of EA Categories

24. The EA category assigned to the project as part of the screening is based on best judgement and information then available at that early stage. TMs, with concurrence of the REDs, and in consultation with ENV, should adjust the category up or down if the project is modified or new information becomes available to justify reclassification. Reasons for any reclassification should be recorded in the environmental data sheet (see Annex 6).

Emergency Recovery Projects

25. Because emergency recovery projects need to be processed rapidly, and seek mainly to restore existing facilities, they normally would not require a formal environmental assessment. However, the extent to which the emergency was precipitated or exacerbated by inappropriate environmental practices should be determined, and corrective measures built into either the emergency project or a future lending operation.^{14/}

Initial Executive Project Summary (IEPS)

26. In the IEPS, the TM, in consultation with the RED and ENV, should (a) identify key environmental issues, (b) indicate the category (A-C) and the type of environmental work needed, and (c) provide a preliminary EA schedule. In exceptional cases, if an EA cannot be available prior to appraisal, the IEPS should propose special procedures to address the situation. The IEPS meeting should confirm the type, timing, and issues of environmental analysis.

Monthly Operational Summary

27. The TM should ensure that the Monthly Operational Summary (MOS), which is used to alert the Executive Directors to forthcoming projects, contains the following information in the environmental data sheet (see Annex 6): (a) the category assigned (A-C); (b) the main issues to be examined; (c) whether agreement with the borrower has been reached on EA preparation; and (d) the EA schedule. The MOS entry should be updated, as needed, to reflect changes in the environmental data sheet, including progress of the EA, any reclassification of categories, and related Bank and borrower decisions.

Preparation of TORs for the EA

28. Following the IEPS meeting, the Bank should discuss with the borrower the scope of the EA, and assist the borrower, as necessary, in preparing TORs for the EA. For this purpose, a field visit by Bank environmental staff or environmental consultants is normally required. The Bank should ensure that the TORs provide for adequate inter-agency coordination (para. 10) and consultation with affected groups and local NGOs (paras. 11 and 12). For category A projects, it is advisable for Bank staff to attend the scoping and draft EA review meetings.

EA Preparation

29. EA should be closely linked to the feasibility study or prepared in parallel. An EA for a major project typically takes 6-18 months to prepare and review. EA drafts should be available to Bank staff at key points in the project cycle, and to other groups as required in paras. 13 and 14. The final EA should be received by the Bank one month prior to departure of the appraisal mission, and a summary circulated with the FEPS/white cover SAR, to minimize the risk of project design changes and resultant delays at a late stage.

^{14/} See OD 8.50. Emergency Recovery Assistance.

30. The EA should form part of the overall feasibility study, or project preparation work, so that the EA's findings are directly integrated into project design. When the EA is prepared separately by specialists, they should liaise closely with the project preparation or feasibility teams. For projects with major adverse environmental impacts, such as large dams or projects involving large scale resettlement, the borrower should retain independent EA experts not affiliated with the project. Borrowers may request Bank assistance for financing EAs through a Project Preparation Facility (PPF)^{15/} advance, or from the Technical Assistance Grant Program for the Environment.

31. For some projects, a full year of baseline data is essential to capture seasonal effects of certain environmental phenomena, such as rainy and dry seasons or species migrations. In contrast, other effects, e.g., hydroclimatic variation, may require multi-year data. However, so as not to delay critical project decisions in these cases, short-term monitoring should be used to provide conservative estimates of environmental impacts where such short-term data can be a surrogate for annual data, while longer-term data collection is being undertaken. Since special care in designing the baseline monitoring program is warranted, the borrower should be encouraged to discuss the matter with the Bank.

EA Review and Project Appraisal

32. For category A projects, the borrower should submit the final EA report to the Bank at least one month prior to departure of the Bank's appraisal mission. This report should follow the sample outline for project-specific EA-reports provided in Annex A2, to the extent relevant, and should include a separate English summary.

33. The Final Executive Project Summary (FEPS) should summarize the EA's status and describe how major environmental issues have been resolved or are to be addressed, noting any proposed conditionality. Prior to the FEPS meeting, the RED should review and comment on the EA, with copies to ENV. If the RED is not satisfied with the EA, it may recommend to the Country Department that a) the appraisal mission be postponed, b) the mission be considered as pre-appraisal, or c) certain issues be re-examined during the appraisal mission. The appraisal mission should review both the procedural and substantive elements of the EA with the borrower, resolve any issues, assess the adequacy of the institutions responsible for environmental management in light of the EA's findings, ensure the mitigation plan is adequately budgeted, and determine if the EA's recommendations are properly addressed in project design and economic analysis.

Loan Documents

34. The findings of the EA process should be summarized in the text of SAR, and in the Memorandum and Recommendation of the President. An SAR annex should be provided for category A projects which summarizes the EA more fully, covering, *inter alia*, environmental baseline conditions, alternatives considered, preventive, mitigatory and compensatory actions, capability of environmental units and measures to strengthen them, environmental monitoring arrangements, and the borrower's consultations with affected groups and NGOs. These factors will provide the basis for the RED's formal environmental clearance, in consultation with ENV, prior to the authorization of negotiations by the Regional Vice President. Measures critical to sound project implementation may require specific loan conditionality.

Supervision

35. EA recommendations provide the basis for supervising the environmental aspects of the project during implementation. Compliance with environmental commitments, the status of mitigatory measures, and the findings of monitoring programs should be part of borrower reporting requirements and project supervision. When major issues arise, special supervision missions with adequate environmental expertise should be

^{15/} See OMS 2.15, Project Preparation Facility, to be reissued as OD 8.00.

programmed and budgeted, where possible, in advance.

Ex Post Evaluation

36. The project completion report^{16/} submitted to the Operations Evaluation Department should evaluate (a) environmental impacts, noting whether they were anticipated in the EA report, and (b) the effectiveness of mitigatory measures taken, and (c) institutional development and training.

^{16/} See the OPNSV memoranda, Guidelines for Preparing Project Completion Reports, June 7, 1989, and OMS 3.58, General Guidelines for Preparing Project Completion Reports, which are to be combined and reissued as OD 13.55, Project Completion Reports.

The Area of Influence of a Project

The area of influence of a project as defined for the purposes of this OD includes:

1. The catchments contributing to the project, or to any of the project's ancillary features, from water divide to the coast, and offshore.
2. All ancillary aspects of the project such as access, maintenance or inspection roads, transmission corridors, pipelines, canals, tunnels, relocation sites, borrow and disposal areas, and construction camps.
3. Offsite areas used for the project, such as for resettlement or compensation.
4. The airsheds of the above, where airborne materials, such as smoke, fumes, dust, or pollutants may enter or leave the project area.
5. Migratory or staging routes of humans, wildlife or fish, including where they relate to public health, economics or environmental quality.
6. Significant secondary, cumulative, or other induced impacts of the project and of any significant ancillary activities. Non-project activities indirectly stimulated by any part of the project are specifically included, such as squatter settlements or shanty towns adjacent to the new project area, or unplanned settlement along project-financed access roads.
7. This is an inclusive definition providing for maximum flexibility on the part of the EA specialists, who should use best judgment as to where to focus most attention.

Sample Outline of a Project-Specific EA Report

1. Formal EA reports should be concise and focussed on the significant environmental issues. The detail and sophistication of report should be commensurate with the potential impacts. The target audience should be project designers, implementing agencies, and borrower and Bank staff.
2. The EA report should include:
 - (a) Executive Summary. Concise discussion of significant findings and recommended actions.
 - (b) Policy, legal, and administrative framework within which the EA is prepared. The environmental requirements of any cofinanciers should be explained.
 - (c) Project description in a geographic, ecological, social, and temporal context, including any off-site investments that may be required by the project (e.g. dedicated pipelines, access roads, power plants, water supply, housing, and raw material and product storage facilities).
 - (d) Baseline Data. Dimensions of the study area and description of relevant physical, biological, and socio-economic conditions, including any changes anticipated before the project commences. Current and proposed development activities within the project area (but not directly connected to the project) should also be taken into account.
 - (e) Environmental Impacts. The positive and negative impacts likely to result from the proposed project should be identified and assessed. Mitigation measures and the residual impacts that cannot be mitigated should be identified. Opportunities for environmental enhancement should be explored. The extent and quality of available data, key data gaps, and uncertainties associated with predictions should be identified/estimated. Topics that do not require further attention should be specified.
 - (f) Analysis of Alternatives. Proposed investment design, site, technology, and operational alternatives should be compared systematically in terms of their potential environmental impacts; capital and recurrent costs; suitability under local conditions; and institutional, training, and monitoring requirements. To the extent possible, for each of the alternatives, the environmental costs and benefits should be quantified, and economic values attached where feasible. The basis for the selection of the alternative proposed for the project design must be stated.
 - (g) Mitigation Plan. Feasible and cost-effective measures which may reduce potentially significant adverse environmental impacts to acceptable levels should be proposed, and the potential environmental impacts, capital and recurrent costs, and institutional and training requirements of those measures estimated. The plan (sometimes known as an "action plan" or "environmental mitigation or management plan" outlined in annex A3) should provide details on proposed work programs and schedules, to ensure that the proposed environmental actions are in phase with engineering and other project activities throughout implementation. The plan should consider compensatory measures if mitigation measures are not feasible or cost-effective.

- (h) Environmental Management and Training. The existence, role, and capability of environmental units at the on-site, agency, and ministry level should be assessed, and recommendations made concerning the establishment and/or expansion of such units, and the training of staff, to the point that EA recommendations can be implemented.
- (i) Monitoring Plan regarding environmental impacts and performance. The plan should specify the type of monitoring, who would do it, how much it would cost, and what other inputs (e.g., training) are necessary.

Appendices

- (i) List of EA preparers--individuals and organizations.
- (ii) References--written materials used in study preparation. This is especially important given the large amount of unpublished documentation often used
- (iii) Record of Inter-Agency/Forum/ Consultation Meetings, including list of both invitees and attendees. The record of consultations to obtain the informed views of the affected people and local NGOs should be included. Where the views of affected groups and local NGOs were obtained by other means, these should be specified.

Checklist of Potential Issues for an EA

1. Where applicable, EAs should address the following issues, which are subject to the Bank policies and guidelines identified below.

- (a) Agrochemicals. The Bank promotes the use of integrated pest management (IPM) and the careful selection, application, and disposal of pesticides (see OPN 11.01, Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and Their Procurement when Financed by the Bank, to be reissued as OD 4.00, Annex C, Agricultural Pest Management, and Selection and Use of Pesticides). The use of fertilizers, due to their impacts on surface and groundwater quality, must also be carefully assessed.
- (b) Biological Diversity. The Bank promotes conservation of endangered plant and animal species, critical habitats, and protected areas (para. 9b, OMS 2.36, Environmental Aspects of Bank Work, and OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).
- (c) Coastal and Marine Resources Management. Guidelines are available from the Environmental Department (ENV) on the planning and management of coastal marine resources including coral reefs, mangroves, and wetlands.
- (d) Cultural Properties. OPN 11.03, Management of Cultural Property in Bank-Financed Projects (to be reissued as OD 4.50, Cultural Property), confirms the Bank's commitment to actively protect archaeological sites, historic monuments, and historic settlements.
- (e) Dams and Reservoirs. OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, provides specific guidance for addressing environmental issues in the planning, implementation, and operation of dam and reservoir projects.
- (f) Hazardous and Toxic Materials. Guidelines are available from ENV on the safe manufacture, use, transport, storage, and disposal of hazardous and toxic materials.
- (g) Induced Development and Other Socio-Cultural Aspects. Secondary growth of settlements and infrastructure, often referred to as "induced development" or "boomtown" effects, can have major indirect environmental impacts, which relatively weak local governments may have difficulty addressing.
- (h) Industrial Hazards. All energy and industry projects should include a formal plan to prevent and manage industrial hazards. (See Techniques of Assessing Industrial Hazards - A Manual, World Bank Technical Paper No. 55.)
- (i) International Treaties and Agreements on the Environment Natural Resources EAs should review the status and application of such current and pending treaties and agreements, including their notification requirements. The Legal Department maintains a list of international treaties, and could obtain, whenever required, information on applicable law in individual countries.

- (j) International Waterways. OMS 2.32, Projects on International Waterways (to be re-issued as OD 7.50), provides guidance. This OMS exempts from notification requirements rehabilitation projects which will not affect the quality or quantity of water flows.
- (k) Involuntary Resettlement. OD 4.30, issued June 29, 1990. and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects, June 29, 1990.
- (l) Land Settlement. Due to the complex physical, biological, socio-economic, and cultural impacts, land settlement should generally be carefully reviewed (see OD 4.31, Land Settlement, to be issued).
- (m) Natural Hazards. EAs should review whether the project may be affected by natural hazards (e.g., earthquakes, floods, volcanic activity), and should propose specific measures to address these concerns when appropriate (see OD 8.50, Emergency Recovery Assistance).
- (n) Occupational Health and Safety. All industry and energy projects, and projects in other sectors where relevant, should include a formal plan to promote occupational health and safety (Occupational Health and Safety Guidelines, World Bank, 1988).
- (o) Indigenous Peoples. OMS 2.34, Tribal People in Bank-Financed Projects (to be reissued as OD 4.40, Indigenous People), provides specific guidance for addressing the rights of indigenous peoples, including traditional land and water rights.
- (p) Tropical Forests. The Bank's July 1991 Forest Policy should be followed. OPN 11.02, Wildlands: Their Protection and Management in Economic Development (to be reissued as OD 4.00, Annex D), also addresses issues relating to tropical forests.
- (q) Watersheds. Bank policy is to promote protection and management of watersheds as an element of lending operations for dams, reservoirs, and irrigation systems (OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, para. 6).
- (r) Wetlands. The Bank promotes conservation and management of wetlands (e.g., estuaries, lakes, mangroves, marshes, and swamps). This is covered by OPN 11.02 on Wildlands (see (s) below).
- (s) Wildlands. The Bank is committed to protect wildlands, including through compensatory measures when lending could result in adverse impacts (see OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).

Sample Environmental Mitigation or Environmental Management Plan

1. A project's mitigation or environmental management plan consists of the set of measures to be taken during implementation and operation to eliminate or offset adverse environmental impacts or reduce them to acceptable levels, together with the actions which need to be taken to implement them. Mitigation plans are essential elements of category A projects (see Annex A5), and may on occasion be sufficient for category B projects on their own. During preparation of the mitigation plan, project sponsors and their EA design team identify the set of responses to potential adverse impacts. They determine the requirements to ensure that those responses are made effectively and in a timely manner and describe the means for meeting those requirements.
2. A mitigation or management plan should include the following items:
 - (a) Identification and summary of all anticipated significant adverse environmental impacts.
 - (b) Description and technical details for each mitigation measure, including the type of impact to which it is related, the conditions under which it is required (e.g: continuously or in the event of contingencies), together with designs, equipment descriptions, and operating procedures as appropriate;
 - (c) Institutional arrangements: the assignment of the various responsibilities for carrying out the mitigatory measures, including operation, supervision, enforcement, monitoring of implementation, remedial action, financing, reporting and staff training.
 - (d) Implementation schedule for measures which must be carried out as part of the project, showing phasing and coordination with overall project implementation plans;
 - (e) Monitoring and reporting procedures to ensure early detection of conditions which necessitate particular mitigation measures, and to provide information on progress and results of mitigation.
 - (f) Cost estimates and sources of funds for both initial investment and recurring expenses for implementing the mitigation plan should also be integrated into the total project cost tables.
3. Most mitigation plans cover one or more of the additional topics identified below, to strengthen environmental management capability in the responsible implementing agencies:
 - (a) technical assistance programs
 - (b) staff development
 - (c) procurement of equipment and supplies
 - (d) organizational changes
4. The borrower's decision to proceed with a project, and the Bank's decision to support it, will be in part predicated on the expectation that the mitigation plan will be executed effectively. Consequently, it is important that the plan be integrated into the overall project planning, design, budget, and implementation.

This should be achieved by establishing the mitigation plan as a component of the project. This ensures that the plan will receive funding and supervision along with the other investment components.

5. There should be specific links for (i) funding; (ii) management and training (strengthening local capabilities), and (iii) monitoring. The purpose of the first link is to ensure proposed actions are adequately financed. The second link helps embed training, technical assistance, staffing and other institutional strengthening needed to implement the mitigatory measures in the overall management plan. The third link is necessary to provide a critical path for implementation and to enable sponsors and the Bank to evaluate the success of mitigation as part of project supervision and as a means to improve future projects. These linkages may be part of conditionality in loan agreements or in the minutes of negotiations.

Environmental Screening

Introduction

1. Projects should be screened at identification by the TM, agreed to by the RED, in consultation with ENV, and, prior to the IEPS, assigned to one of three categories: A, B or C. The justification for the classification should be published in the MOS summary sheet (Annex 6). The EA categorization indicates the level of environmental analysis needed: best professional judgement is essential throughout.
2. ENV should be kept fully informed of screening decisions and subsequent environmental assessments or analyses, and environmental reviews. As it determines appropriate, ENV may pursue special consultations with the corresponding RED and TM on specific issues.

Screening Criteria

3. The categorization should be based on best judgment of Bank environmental staff. Four main criteria relevant in reaching judgments for "A" categories are: a) location; b) scale; c) sensitivity of the issues; and d) sector or type of project.

a) **Location:** If the project may harm an environmentally sensitive area (such as mangroves, tropical forest, conservation units, or wetlands), then the project is likely to be an A.

b) **Scale:** If the scale of the project is large, then it is likely to be an A; if the project is small it may be a B or even a C project. Determining what constitutes a large and small project, and evaluating the potential impacts of medium scale projects, requires best judgment.

c) **Sensitivity:** If the environmental issues are sensitive, then the project is likely to be an A. Thus, such issues as irreversible impacts, vulnerable ethnic minorities, involuntary resettlement, and impacts on tropical forest indicate that the project would be an A.

d) **Sector:** Bank experience indicates that projects in some sectors generally require more environmental work than projects in other sectors. The levels of environmental work required for certain sectors are indicated below. These lists stress the need for best judgment.

4. Category B is a broad category containing projects with adverse environmental impacts, but less significant than those of category A projects. Because of the adverse impacts, environmental analysis is needed. Such analysis is less detailed, shorter, and less resource-intensive than category A assessments, but is still effective in design improvements. The minimal category B project requirement is the preparation of a mitigation plan, outlined in Annex 4. Category B environmental analyses may be a separate chapter or volume of the project preparation or feasibility study. They are often the subject of a separate annex in the SAR, and should be summarized in the text of the SAR. Some Bs may require a separate environmental report. As with category A projects, project appraisal is possible only after the environmental analysis has been received by the Bank.

5. Category C projects have negligible or no adverse impacts. Environmental analysis is not required for such projects.

6. EA normally deals with the whole project, but focuses most time and attention on the components with the main negative impacts, and their links with the rest of the project. Dual categories (eg: A/C) should not be used. Projects are categorized according to the component with the greatest adverse impact. A relatively benign project with a single category A component is therefore a category A project. Any of the above three categories may contain environmentally benign components.

7. Category A Projects/Components:

A full EA is required as the project is likely to have significant adverse impacts, which may be sensitive, irreversible, difficult to quantify, and diverse. The impacts are likely to be comprehensive, broad, sector-wide, or precedent-setting. Impacts generally result from a major component of the project and affect the area as a whole or an entire sector.

- (i) Aquaculture/mariculture;
- (ii) Dams and reservoirs;
- (iii) Electrical transmission, large scale;
- (iv) Production forestry projects (those producing timber); including tree plantations (eg: for charcoal, timber, pulp)
- (v) Industrial plants (large scale) and industrial estates;
- (vi) Irrigation, drainage, channel training, and flood control;
- (vii) Land clearance and leveling;
- (viii) Mineral development (including oil and gas);
- (ix) Pipelines (oil, gas, and water);
- (x) Port and harbor development;
- (xi) Reclamation and new land development;
- (xii) Resettlement, and all projects with negative impacts on people
- (xiii) River basin development;
- (xiv) Rural roads, including upgrading;
- (xv) Thermal and hydropower development;
- (xvi) Tourism, large scale;
- (xvii) Transportation (airports, railways, roads, waterways), including substantial upgrading;
- (xviii) Urban development, large scale;
- (xix) Urban water supply and sanitation, large scale;
- (xx) Manufacture, transportation, and use of pesticides or other hazardous and/or toxic materials; and
- (xxi) Projects which pose serious accident risks.

8. Category B Projects/Components:

More limited environmental analysis is required, as the project is likely to have adverse environmental impacts, but less significant than category A impacts. Few if any category B impacts are irreversible; these impacts are not as sensitive, numerous, major or diverse as category A impacts. Impacts are more localized than category A impacts, and result from a particular component, or aspect of the project, rather than from the whole operation.

- (i) Agroindustries (small scale);
- (ii) Electrical transmission (small scale);
- (iii) Industries (small scale);

- (iv) Irrigation and drainage (small scale);
- (v) Mini hydro-Power;
- (vi) Public facilities;
- (vii) Renewable energy; small scale;
- (viii) Rural electrification; small scale
- (ix) Telecommunications; small scale
- (x) Tourism (small scale);
- (xi) Urban development (small scale); and sites and services
- (xii) Rural water supply and sanitation; small scale
- (xiii) Watershed projects; management or rehabilitation, small scale
- (xiv) Rehabilitation, maintenance and upgrading projects, small scale.

9. Category C Projects/Components:

Environmental analysis is normally unnecessary, because the project is unlikely to have adverse impacts. Professional judgment finds the project to have negligible or insignificant environmental impacts.

- (i) Education (except school construction);
- (ii) Family planning;
- (iii) Health (except hospital construction);
- (iv) Nutrition;
- (v) Institutional development;
- (vi) Technical assistance;
- (vii) Most human resource projects; except for large hospitals and hotels.

SAMPLE ENVIRONMENTAL DATA SHEET FOR CATEGORY A AND B PROJECTS
(To be kept up to date in the MOS)

Country : ID :
 Project : Cost :
 Board Date : Loan/Credit Amount :
 Sector : Division :
 Lending Instruments :

PROJECTED DATE FOR COMPLETION OF ENVIRONMENTAL ASSESSMENT:

Major Project Components:

[Short description of project components]

Major Environmental Issues:

[Describes major environmental issues identified or suspected in project]

Other Environmental Issues:

[Describes environmental issues of lesser scope associated with the project]

Proposed Actions:

[Describes actions proposed to mitigate environmental issues described above]

Justification/Rationale for Initial Environmental Category:

[Presents reasons for environmental categorization; e.g. "This is a B project rather than an A or C because....".]

Justification/Rationale for Any Reclassification:

[Includes explanation of any changes in environmental category (e.g., design of project mitigates or exacerbates major issues, moving project from A to B, B to C, or reverse.)]

Status of Formal Environmental Assessment [applicable to Category A]:

[Indicates expected date of completion or current status of Environmental Assessment]

Remarks:

[Status of any other environmental studies; local groups consulted; local NGOs consulted; whether Borrower has given permission to release EA, etc.]

Signed by: (Operations Chief)

(Regional Environmental Chief)

Review of Bank's Experience with Environmental Assessment

Introduction

1. The purposes of this review are : a) to discover the extent to which environmental assessments (EAs) have resulted in changes in project design that avoid or mitigate the problems identified in the EA; and (b) to see what progress has been made toward operationalizing the criterion of sustainability in the EA experience (Annex 1). This review is not a detailed technical review of projects, but an overview of how environmental assessments are influencing project design. Annex 2 (available on request from ENV) consists of individual reviews of twenty projects.

2. The two main conclusions of the review are : first, that EA has frequently led to mitigatory changes in project design, and that such engineering changes have been the principal mode of dealing with environmental issues. Since design changes are usually not expensive when done very early, there is usually no impact on C/B analysis when engineering specifications are altered for environmental reasons. Resettlement is of course an exception, being both expensive and mandatory. Treating environmental issues in engineering specifications, on analogy with safety, is by and large a good procedure in that it pushes environmental considerations as far "upstream" as possible, and second, that so far there has been very little incorporation of the sustainability criterion in EA. This is not surprising, given that guidelines for operationalizing the goal of sustainability have not yet been developed. This study therefore made a first attempt at such operational guidelines (see Annex 1). Much more remains to be done, and this work is recommended as a priority for ENV. The idea of sustainability has been incorporated indirectly in some EAs through the concept of carrying capacity applied most directly to rangelands in livestock projects, but also imaginatively extended to coal-fired power plants, and industrial activity in general in several of the EAs reviewed.

3 Of the 146 completed environmental reports listed in the ENVIS database, 20 EAs for Category A projects (i.e., projects likely to have significant major environmental impacts) were available for review, and are listed in Figure 1. Of these 20 projects, two were in LAC, four in Africa, two in EMENA, and twelve in Asia.

Figure 1: LIST OF PROJECTS REVIEWED ¹ (In Annex 2)

1. Ecuador -- Lower Guayas Flood Control
2. Uganda -- Livestock Services
3. Botswana -- Tuli Block Roads
4. Uganda -- Power Project III
5. Nigeria -- OSO Condensate (offshore oil)
6. China -- Daganba Multipurpose Project
7. China -- Shuikou Hydroelectric
8. China -- Yanshi Thermal Power
9. India -- Second Petrochemicals Project
10. India -- Private Power Utilities (Tata Electric)

11. Bangladesh -- Jamuna Multipurpose Bridge
12. Pakistan -- Fourth Karachi Port Project
13. Bolivia -- Bolivian Pipeline and Power Plant
14. Thailand -- Third Power System Development Project
15. Cyprus -- Southeast Coast Sewerage and Drainage Project
16. India -- Second Private Power Utilities -- Dahanu Station
17. China -- Ertan Hydroelectric Project
18. India -- Gas Flaring Reduction Project
19. Korea -- Seoul Solid Waste Management Program
20. Indonesia -- Java (Suralaya) Thermal Power Plant

Conclusions

Lack of Access

4. Information on EAs is difficult to extract from the Bank's system of internal records. The Bank's internal documentation system is inadequate for the following four reasons: a) some regional environmental units keep their own records, while others deposit the EAs in the regional information centers; b) regional information centers often file EAs with correspondence; c) there is no separate documentation category for EAs; and d) the project identification number used in ENVIS does not enable librarians or task managers to locate project files.

5. Clearly, the Bank's internal documentation system needs improvement. EAs should have a filing category of their own, even if they are double filed as an annex to the SAR, and should be automatically filed with the regional information centers upon receipt by the Bank, so that they become available on request. As a result, ENVAP is allocating space for a complete collection of EAs and related materials. This will form the basis for dissemination of best practice and for subsequent reviews.

Informal Environmental Inputs.

6. In many cases (see Annex 2), EAs or less formal environmental reviews completed prior to OD 4.00 have

¹ This sample is unlikely to be fully representative, but comprises all EA category A project reports available. Therefore, the conclusions are tentative and subject to modification as more EAs are reviewed. This review does not examine the major inter-regional inconsistencies of use of the "A" category, nor the wide variation of environmental treatment of category "B" projects. This review is based on the information in EAs and SARs, supplemented by interviews with Bank staff and consultants. No site visits were undertaken; such visits would be essential for a thorough review of the EA process, especially monitoring of compliance, which most of those interviewed feel is the key to the whole EA effort.

resulted in improvement of project design and implementation. Generally these environmentally oriented improvements are treated as a part of sound project design, as are engineering standards, and are not costed independently as separate environmental investments. This approach has the major advantage of placing environmental considerations far upstream in the project cycle. However, it is not clear whether environmental criteria should be given the same weight as safety criteria, or the extent to which they should be kept distinct and subjected to a separate auxiliary cost/benefit analysis. In many cases the costs of including an environmental correction are small and would not affect the overall cost/benefit analysis. In other cases, these costs may be large but unavoidable e.g., resettlement costs. If the environmental costs are either small or non-discretionary, including them with general project costs seems justified. If they are large and discretionary, however, they should be subjected to separate cost/benefit analysis.

Sustainability.

7. Sustainability is mandated for all Bank-supported projects by OMS 2.36 of 1984, a requirement reinforced by OD 4. This review concludes that addressing sustainability can be a fundamental contribution of a successful EA and can improve the economic development process as a whole. However, the term "sustainability" has not generally been used explicitly in project evaluation. The idea may be reflected in specific environmental recommendations, e.g., that livestock development projects include a study of carrying capacity of the rangelands. **Possibly the most important conclusion of this review is that work on defining the criteria for sustainability at the policy and project levels is required.** ENV proposes to lead on this major need. This is discussed in Annex 1.

Engineering Specifications.

8. The main observation from the experience summarized in Annex 2 is that engineering specifications defining what is an acceptable bridge, dam, road, port, etc. have long provided implicit environmental assessment. Environmental standards and safety standards are similar in many ways, particularly concerning the level of uncertainty and the need to calculate for a margin of error. For safety standards, engineers take a reasonable worst case scenario and multiply it by a safety factor. For example, they might calculate the strength required for a bridge to support all lanes filled with loaded busses during a 50-year hurricane, and then design the bridge with double or triple that strength. The use of such broad rules of thumb have resulted in great discrepancies in the amounts of money spent to save a statistical life.

9. Economists argue that to maximize the number of statistical lives saved we should equate the marginal lives saved per dollar invested in all alternatives. Although a logical approach, the information requirements for such calculations are much more severe than for the more intuitive and piecemeal approach to safety standards described above. Most people may have an intuitive notion of how safe a bridge should be, and would not need to resubmit that judgment to a cost/benefit study every time another bridge is built. However, for many environmental consequences we do not have a good intuitive feel for their severity or likelihood. One role of EA therefore would be to gain enough familiarity with environmental consequences that some of them can routinely be treated through engineering specifications, at the earliest stage of the project cycle.

Need for Environmental Cost/Benefit.

10. From the cases reviewed it is also clear that even a "clean" project in an engineering sense can affect an ecological function, and that function must be explicitly or implicitly valued and weighed against the value of the project. For example, loss of river navigability, loss of fisheries, loss of agricultural land, loss of whitewater rapids, disruption of a local community, etc., may result from the construction of a hydropower dam. These effects cannot be addressed through engineering specifications, and in some cases the benefits of the dam will not outweigh the loss of these ecological and social benefits. Here the EA must include an explicit cost/benefit analysis. Whether

the EA treats environmental considerations implicitly as engineering criteria, or explicitly as competing values in a cost/benefit study, the discipline of EA is indispensable. Allowing for the limited information available for review, and for the time required to implement and fine-tune any new procedure, experience to date suggests that EAs for Bank projects are resulting in improvements in project design and implementation.

EA Reclassification.

11. One effect of EA which this review did not address is the number of A-projects which have been reclassified as B-projects as a result of incorporating features identified in the EA (e.g., Tanzania Forestry and Nigeria Fadama Irrigation). A more thorough review of A-projects which have subsequently been reclassified to B as a result of modifications inspired by EA may assist in determining the extent to which the EA process has affected project design.

12. For example, a task manager might want to avoid the expense and time required to conduct a full EA, and may therefore design the project to reduce environmental impacts. There may well be a tacit bargaining process in which the task manager is willing to alter the project in such a way that it would be classified as a B rather than an A. Thus, the impact of requiring EAs on the total environmental sensitivity of Bank project design is more extensive than may be evident from the recommendations contained in actual completed EAs. For these reasons, the finetuned EA OD contains a new paragraph facilitating the reclassification -- up or down -- of the EA category.

13. It should also be noted that the existence of special funds earmarked to finance environmental measures may tend to create an incentive to pull specifically environmental features out of the engineering definition of an acceptable project in order to treat them as environmental "add ons" and therefore eligible for the special funds. Such funds would therefore provide a perverse incentive by pushing environmental considerations downstream and later in the project cycle.

Project-level Guides for Environmental Sustainability

14. The Bank's OD on environmental assessment states that sustainability is a requirement that Bank projects must meet. "The purpose of EA is to ensure that the development options under consideration are environmentally sound and sustainable..." (OD 4.00 para. 3, October 1989). This mandate does not treat sustainability as one value to be traded off against others in an economic analysis. Rather, it states that the "development options under consideration" must be sustainable, and that any non-sustainable project should not even be included among the options to be ranked economically.

15. Some guidance on the operational meaning of sustainability was given in OMS 2.36, (May, 1984) in para. 9a under the general heading of The Bank's Environmental Policies: "The Bank endeavors to ensure that each project affecting renewable natural resources (e.g., as a sink for residues or as a source of raw materials) does not exceed the regenerative capacities of the environment." The following guides seek to elaborate this principle and extend it, in so far as possible, to nonrenewable resources. It is a matter of judgment for EA teams to apply the rules of thumb described below in a reasonable way to diverse projects. Where the EA team finds wide divergence from sustainability, it should work with the project designers to narrow the gap as early in the project cycle as possible.

16. The use of the terms "assimilative or regenerative capacity" does not necessarily imply that there is a discontinuous threshold of use intensity below which there is no effect on the ecosystem. Capacity may be thought of as a level of a particular ecosystem service beyond which further use will cause unacceptable (e.g., cumulative, irreversible, excessive) degradation of the ecosystem and loss of its future services. Capacity also refers to the affected ecosystem as a whole, not to individual species in isolation.

17. **Output Guide:** Waste emissions from a project should be within the assimilative capacity of the local environment to absorb without unacceptable degradation of its future waste absorptive capacity or other important services.

18. **Input Guide:** (a) harvest rates of renewable resource inputs should be within regenerative capacity of the natural system that generates them; (b) depletion rates of nonrenewable resource inputs should be equal to the rate at which renewable substitutes are developed by human invention and investment.

Discussion: Output Guide. If each project obeyed this rule then the sum of all projects would also conform to the rule. In other words, the sum of projects may obey the rule even though a particular project fails to. Of course, it is easier for earlier projects to meet this condition than for later ones, as assimilative capacities decline over time. There are several ways to approach this; once capacity has been reached, a new project might be "paired" with an old one that is removed to make room for it. Alternatively, a new project may be paired with a second new project which absorbs waste outputs up to the amount emitted by the first new project. Under the "bubble concept", such rules are enforced through trading permits, which allows for effective pairing of projects in the compensatory manner just described. The total emissions for an area must be set collectively, but the market can allocate that total among competing uses by exchange of emission permits.

19. **Input Guide.** The inputs of interest are the primary inputs from nature, not the interindustry or intermediate inputs from other firms. This rule then only applies to the extractive sector, whereas the previous rule applies to all sectors. Inputs from nature are of two kinds, renewable and nonrenewable.

20. **Renewable Inputs:** For renewable inputs, harvest rates should not exceed regeneration rates. In other words sustainable yield exploitation should be the rule. There are many difficulties in defining sustainable yield, just as there are many analogous difficulties in defining income. But to answer the unavoidable question -- How much can we consume this year without reducing our capacity to produce next year? -- requires that we at least give a prudent rule of thumb.

21. The sustainable yield concept presents two problems: measurement difficulties, and the affect of population size on sustainable yields. The measurement problem is similar to that faced by the income accountant, who must measure income in a way that keeps capital (productive capacity) intact and prevents inadvertent impoverishment by overconsumption. In both cases, a prudent rule of thumb is needed to avoid overconsumption, not to find the "theoretically unique scientifically precise number."

22. Choosing the population size that gives maximum sustainable yield does not provide sufficient guidance, although it is relevant consideration. The economically optimum yield generally does not coincide with the biological maximum yield (they coincide only when harvest costs are constant with respect to the amount harvested). One can not assume that the existing population size of an exploited species is optimal. It can be quite reasonable up to a point to cut down forest for farmland. But when we do this we must be clear that the trees from the virgin forest cut in excess of replacement represent capital consumption, not income.

23. If total capital is to be maintained intact the net receipts from the cut virgin timber should be treated as a depreciation fund to be reinvested in some alternative renewable resource that is more valuable at the margin.

24. **Nonrenewable Inputs.** Non-renewable inputs can be depleted at a rate equal to the rate of development of renewable substitutes. Thus, extractive projects based on nonrenewables must be paired with a project that develops the renewable substitute. Net receipts of nonrenewable exploitation are divided into two components (income and a capital set-aside) such that the capital set-aside, when invested in a renewable substitute each year will, by the time the nonrenewable is depleted, have grown to a stock size whose sustainable yield is equal to the income component that was being consumed all along. The capital set-side will be greater the lower the growth rate of the renewable substitute (real or biological discount rate) and the shorter the lifetime of the nonrenewable reserves (i.e., the reserve stock divided by annual depletion).

25. This has been worked out in the context of national income accounting, but apply with equal relevance to accounting at the project level. The true rate of return of the project pair would be calculated on the basis of the income component only as net revenue. Difficulties remain in the question of whether to define "substitute" narrowly or broadly. A broad definition would be indicated initially -- at least broad enough to encompass improvements in energy efficiency as a renewable substitute for petroleum depletion, and improvements in recycling as a renewable substitute for copper depletion.

26. **Further Discussion:** In the case of renewables, capital consumption is treated as depreciation of a productive asset (the sacrificed base population that was producing a permanent yield). Depreciation should be deducted from gross income to get net income. In the case of nonrenewables the reduction of stocks is treated as a liquidation of existing inventories rather than as running down of capacity for future production, and consequently should not even be a part of gross income.

27. Although the input and output rules of thumb have been treated independently, it should be noted that, thanks to the law of conservation of matter, the reduction of inputs to a sustainable yield level will help in the reduction of outputs to a sustainable absorption level. But, given the spatial separation of input production and output disposal, and especially the generation of many new and toxic substances in the production process, the output rule cannot be avoided. Nevertheless, the mere fact of mass balance would lead us to suspect that, in some cases, the input rule will be binding and the output rule redundant, and in other cases vice versa.

28. Some writers have advocated the pairing rule in theory, but have immediately backed off in practice, concluding that "at the level of each project such a requirement would be stultifying. Few projects would be feasible." They advocate applying the principle at a program (multi-project) level, so that the nondegradation of natural capital stock criterion would only hold on the average for the set of projects in the program and not for each project. This does not really help and in fact sacrifices efficiency by "socializing" the costs of sustainability among all the projects in a program instead of making each project bear its own full marginal social opportunity cost. In any event, it is not sufficient to say that sustainability is a macroeconomic criterion that is irrelevant at a project level, unless we are able and willing to limit the aggregate throughput of matter and energy (by severance taxes or depletion quotas) to a flow volume that is within gross regenerative and absorptive capacities of a

country. In this sense a macroapproach to sustainability may be the best strategy. Since all projects would have to pay the same prices, which then would reflect the cost of sustainability in the aggregate sense, there would be no cost in efficiency from socializing the costs among a program. Also, applying rules at a project level requires a large amount of micro level information and interference.

29. Although the macro approach seems better from the point of view of a country applying a national policy, the micro or project-level rules may be the more relevant from the point of view of a development bank that is committed to sustainable development as a criterion governing its own lending, but which is not in a position to dictate national policies at the macro level. Of course, imposing macroeconomic policies as a condition for making project loans, or lending directly to finance macroeconomic policy change is exactly what structural adjustment lending does. So one could indeed argue that sustainability ought to be treated as a macroeconomic goal to be attained by structural adjustment, and not as a set of project-level conditions. It could be argued that the proper way to treat sustainability is as a macroeconomic goal to be pursued through structural adjustment or through macroeconomic conditions tied to project lending, rather than as a characteristic of individual projects. Emphasis in this case would then shift from the project-level guides to some strictly analogous macro-level guides limiting the overall resource throughput to within the regenerative capacities of the larger national ecosystem. Because the EA OD focuses almost entirely on projects, this issue is not analysed further here, but will be addressed in ENV's proposal in paragraph 6.

30. Although sustainability was not usually discussed in the EA reports reviewed, there were several interesting suggestions that get at the main idea of sustainability. For example, in the Uganda livestock project the EA advocated a carrying capacity study for the rangelands to determine how many cattle could be grazed on the land without reducing the land's capacity to support grazing in the next year. The main focus of the project was to eliminate the tsetse fly, but, in a sense, the land had been protected from physical degradation by the infestation which reduced human presence. With the eradication of the tsetse fly human pressure on the land would increase, and the danger of that pressure reaching an unsustainable level was recognized. A study to establish the carrying capacity of the rangelands is a first step in avoiding unsustainable overgrazing. Also needed, of course, are institutions and laws that ensure that ranchers will not exceed that capacity.

31. Although the concept of carrying capacity has long been associated with cattle ranching, it is also applicable more generally. For example, in the Java (Suralaya) Thermal Power Project, a 1980 EA established that the site could accommodate up to 3,100 MW of generating capacity. Presumably this reflects environmental limits, although the more recent project EA did not specify how the 1980 study arrived at that figure. Nevertheless, that approximate figure was respected in the current expansion of the Suralaya generating station. It is not clear whether the limiting factor was air quality, or cooling water capacity, or capacity to dispose of ash, or some other factor, but some regional environmental factor limits the carrying capacity for coal-fired power plants, just as rainfall, soil nutrients, or temperature limits the growth of grass and thus the carrying capacity for cattle on rangelands.

32. The concept of carrying capacity also applies to industrial development in general as seen in the example of the Dahanu thermal power station in India. It was recognized that induced industrial development around the new power station would overwhelm the the environmental protection features of the project itself. To avoid exceeding the industrial "carrying capacity," part of the surrounding area was declared an "industrial exclusion zone." The point of these examples is to show that the above discussion of theoretical input and output guides based on regenerative and assimilative capacities is not impractical theory, but is in fact actually being approximated in rather ingenious ways by project designers. Such integration of concern for carrying capacity is still more the exception than the rule, but it is encouraging and instructive nonetheless.

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October 31, 1989

Operational Directive 4.00, Annex A: Environmental Assessment

1. Attached for insertion in the new Operational Manual is OD 4.00, Annex A, which provides guidance to staff on the Bank's policies and procedures for conducting environmental assessments (EAs) of proposed projects. It standardizes and formalizes a process which is already taking place for projects with major environmental impacts.
2. This annex makes the following points:
 - (a) EA is a flexible procedure, whose scope, depth, and analytical techniques vary by project (para. 1);
 - (b) The purpose of EA is to ensure environmentally sustainable development through the timely incorporation of environmental issues into project design (para. 3);
 - (c) EA is part of project preparation and is therefore the borrower's responsibility (para. 4);
 - (d) Regional and sectoral EAs are important tools for identifying environmental issues, and can reduce the work subsequently needed on project-specific EAs (paras. 6-8);
 - (e) Alternatives to EA that focus on a narrower range of issues are acceptable for projects with limited potential environmental impacts (para. 9);
 - (f) In the EA process, inter-agency coordination and the involvement of affected groups and local NGOs are important (paras. 11-12);
 - (g) The EA process should be used to strengthen environmental capability in the country (para. 13);
 - (h) In special cases, environmental advisory panels may be needed (para. 15);
 - (i) In the Bank, the task manager (TM), supported by the Regional environment division (RED), assists and monitors the implementation of the EA process (para. 16);
 - (j) The type, timing, and main issues of environmental analysis should be confirmed at the Initial Executive Project Summary (IEPS) meeting (para. 19), and reported and updated in the Monthly Operational Summary (para. 20); and
 - (k) The final EA report should normally be available to the Bank prior to appraisal (para. 22), and its recommendations reviewed and incorporated into the Board documents (paras. 25-26).
3. All projects which reach the IEPS stage after October 15, 1989, are fully subject to this directive. Projects currently in advanced stages of preparation are not normally subject to this annex. For other projects already past the IEPS stage, the TM and the RED should, by December 31, 1989, review the status and recommend how to achieve the objectives of this annex within the existing time and resource constraints.
4. A systematic training program for Bank staff on the application of this directive is currently being designed under the leadership of the Environment Department.

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5. Achieving the objectives of this directive will require close collaboration between the Bank and its borrowers, and strengthening of borrower capacity for carrying out, analyzing, and incorporating the recommendations of EAs. Country departments should therefore discuss with borrowers how to achieve smooth and efficient implementation of this annex through, e.g., EA seminars for implementing agencies' management, training programs for their environmental staff, and preparation of EA manuals (by sector) and procedures for the country.
6. As this is a new directive, progress and problems in its implementation will need to be monitored carefully. A review of experience will be prepared for Board discussion during FY91, and this directive will subsequently be modified based upon the lessons learned.
7. Questions on this annex should be referred to the Director, Environment Department.
8. Additional copies are available on a self-service basis in H 4234.

Attachment

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Operational Directive 4.00, Annex A: Environmental Assessment

Introduction

1. This annex outlines Bank policy and procedures for the environmental assessment (EA) of Bank investment lending operations,¹ and related types of environmental analysis. EA is a flexible procedure, which can vary in breadth, depth, and type of analysis, depending on the project. It may be carried out at one point in time, stretched over a year to account for seasonal variations, or done in discrete stages.

2. For the purpose of this annex, EA covers also project impacts on health, cultural property, and tribal people, and the environmental impact of project-induced resettlement.² EAs utilize the findings of country environmental studies and action plans which cover nationwide issues, the overall policy framework, legislation, and institutional capabilities in the country.

Purpose and Nature of EA

3. The purpose of EA is to ensure that the development options under consideration are environmentally sound and sustainable, and that any environmental consequences are recognized early in the project cycle and taken into account in project design. EAs identify ways of improving projects environmentally, and minimizing, mitigating, or compensating for adverse impacts. By alerting project designers, implementing agencies, and borrower and Bank staff to issues early, EAs (a) enable them to address environmental issues

in a timely and practical fashion, (b) reduce the need for project conditionality, because appropriate steps can be taken in advance or incorporated into project design, and (c) help avoid costs and delays in implementation due to unanticipated environmental problems. EAs also provide a formal mechanism for inter-agency coordination and for addressing the concerns of affected groups and local nongovernmental organizations (NGOs). In addition, they can play a major role in building environmental capability in the country.

4. Like economic, financial, institutional, and engineering analyses, EA is part of project preparation, and is therefore the borrower's responsibility. Close integration of EA with these other aspects of project preparation ensures that (a) environmental considerations are given due weight in project selection, siting, and design decisions, and (b) carrying out EAs does not unduly delay project processing.

Types of Environmental Analysis

Project-Specific EAs

5. Project-specific EAs are used to analyze specific investment projects (e.g., dams, factories, irrigation systems) with significant environmental issues. The detail and sophistication of analysis should be commensurate with the expected impacts. A project-specific EA should normally cover: (a) existing environmental "baseline" conditions; (b) potential environmental

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1. References to the Bank include IBRD and IDA; "loans" include credits. Investment lending covers specific and sector investments including rehabilitation, loans through financial intermediaries, and the investment component of hybrid loans. Sector and structural adjustment loans are not covered by this annex, but are subject to the general policies in OMS 2.36, *Environmental Aspects of Bank Work* (to be reissued as OD 4.00, *Environmental Policies*). IFC is developing similar procedures for environmental review, which reflect the special circumstances of its work. Bearing in mind its special circumstances, MIGA will cooperate with the Bank to ensure, to the extent possible, that the objectives of the directive are met in its operations.
 2. For Bank policies regarding such impacts, see (a) OPN 11.03, *Management of Cultural Property in Bank-Financed Projects*, to be reissued as OD 4.50, *Cultural Property*; (b) OMS 2.34, *Tribal People in Bank-Financed Projects*, to be reissued as OD 4.40, *Tribal People*; and (c) OMS 2.33, *Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects*, and OPN 10.08, *Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects*, to be reissued as OD 4.30, *Involuntary Resettlement*.

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impacts, direct and indirect,³ including opportunities for environmental enhancement; (c) systematic environmental comparison of alternative investments, sites, technologies, and designs; (d) preventive, mitigatory, and compensatory measures, generally in the form of an action plan; (e) environmental management and training, and (f) monitoring. To the extent possible, capital and recurrent costs, environmental staffing, training, and monitoring requirements, and the benefits of proposed alternatives and mitigation measures, should be quantified. Annex A1 gives a sample outline for a project-specific EA report, and Annex A2 is a checklist of specific issues to be covered where relevant.

Regional and Sectoral EAs

6. Regional EAs are used where a number of significant development activities with potentially cumulative impacts are planned for a reasonably localized area. In such cases, they are generally more efficient than a series of project-specific EAs, and may identify issues that the latter might overlook (e.g., interaction among effluents, or competition for water or land). Regional EAs compare alternative development scenarios, and recommend environmentally sustainable growth rates and land use patterns and policies. The study area is normally defined on a physical and/or biological basis (e.g., airshed, habitat type, river basin), and may sometimes extend across national boundaries; however, regional EAs with an institutional focus might follow administrative boundaries instead.

7. Sectoral EAs are used for the design of sector investment programs. They are particularly suitable for reviewing (a) sector investment alternatives; (b) the effect of sector policy changes; (c) institutional capacities and requirements for environmental review, implementation, and monitoring at the sectoral level; and (d) the cumulative impacts of many relatively small, similar investments which do not merit individual project-specific EAs.

8. In some cases, regional or sectoral EAs cover all the normal requirements of project-specific EAs. More often, the latter are still needed for major investments (see para. 14 concerning sector investment loans), but the regional or sectoral EAs will have identified the relevant issues, collected much of the data, and, in general, greatly reduced the work needed in the project-specific EAs.

Alternatives to EAs

9. Alternative approaches that focus on a narrower range of issues are acceptable for many types of projects, especially smaller ones and those not in environmentally sensitive areas. These approaches may be more effective in integrating environmental concerns into the borrower's planning process. Such alternative approaches include:

- (a) integrated pest management programs for many agricultural projects which do not involve major irrigation or land development;
- (b) specific environmental design criteria and pollution standards for small- or medium-scale industrial plants; and
- (c) specific environmental design criteria and construction supervision programs for small-scale rural works projects.

Other examples of projects for which alternative approaches are generally acceptable are listed in Annex A3, para. 3, under "Category B."

Consideration of Global Issues

10. A number of specialized agencies—inside and outside the U.N. system—carry out scientific investigations of global environmental issues (ozone depletion, global warming, hazardous wastes, etc.). The Bank keeps fully abreast of findings, primarily through its Principal Adviser, Science and Technology, and draws upon prevailing views

3. Indirect impacts are the induced consequences of the project which occur later or in another part of the environment, e.g., if a river is channelled or dammed, its capacity for self-purification may be reduced and the original aquatic ecosystem damaged or destroyed.

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in developing its own environmental, economic, and sectoral policies, with a view to minimizing possible adverse impacts on global systems such as the atmosphere and oceans. While EAs should collect or refer to the relevant data, the Bank does not normally expect global environmental issues to require separate analysis in project-specific EAs. Such issues should, however, be addressed where relevant in policy and sector work.

Institutional Aspects of Projects

Inter-Agency Coordination

11. Because environmental issues generally involve national, regional, and local government agencies, and cover a broad range of responsibilities (wildlife, health, water and land use, tourism, etc.), coordination among government agencies is crucial. This is best achieved through inter-agency meetings at key points in the EA cycle. The first meeting, normally held soon after the decision to prepare an EA, identifies the issues, types of analysis required, sources of relevant expertise, responsibilities and schedule for the EA, and mitigating measures to be considered. Another meeting should normally be held when the EA report is completed and submitted for final government review.

Involvement of Affected Groups and Nongovernmental Organizations

12. The Bank expects the borrower to take the views of affected groups and local NGOs⁴ fully into account in project design and implementation, and in particular in the preparation of EAs. This is important in order to understand both the nature and extent of any social or environmental impact, and the acceptability of proposed mitigation measures. An approach which has proven effective in many countries is to expand the initial inter-agency meeting (para. 11) into a "forum" or "scoping session" with representatives of affected groups and relevant NGOs. Similar con-

sultations after the EA report is completed are also a valuable way to obtain feedback on the report and to increase community cooperation in implementing the recommendations.

Strengthening Environmental Capabilities

13. The ultimate success of EA depends upon the development of environmental capability and understanding in the agencies concerned. Projects with major potential impacts normally require the establishment or strengthening of in-house environmental units for the project (located or represented on site), the implementing agency and the ministry. Involvement of these units throughout the EA process (a) ensures that the agency's/ministry's knowledge and perspective are taken into account in the EA, (b) provides on-the-job training for the staff, and (c) provides continuity for the implementation of the EA's recommendations. Such projects normally need to include an institutional development and training component for such units. In addition, to help develop EA capability in the country, the Bank should (a) encourage the use of local expertise in EA preparation (in association with international consultants, where appropriate), and (b) help arrange EA training courses for local specialist staff and consultants.

Sector and Financial Intermediary Lending

14. For sector investment loans and loans through financial intermediaries, subproject details may not be known at the time of project appraisal. In such cases, the project implementing institutions will need to screen subprojects (see para. 18) and carry out environmental analyses consistent with this directive. To ensure that this can be done, the Bank should appraise the implementing agencies' capabilities for EA, and strengthen them where necessary. The appraisal mission should also indicate the proper division of responsibility for preparing and reviewing EAs between the ultimate borrower, the financial

4. See OD 14.70, *Involving Nongovernmental Organizations in Bank-Supported Activities* for the Bank's overall approach to NGOs.

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intermediary or sector agency, and the agencies responsible for environmental regulation.

Environmental Advisory Panels

15. For major projects with serious and multi-dimensional environmental concerns, the Bank should explore with the borrower whether the latter needs to engage an advisory panel of independent, internationally recognized, environmental specialists, to review and advise on, *inter alia*, the terms of reference (TOR) and findings of the EA, the implementation of its recommendations, and the development of environmental capacity in the implementing agency/ministry. Such a panel should meet at least once a year until the project is operating routinely and environmental issues have been addressed satisfactorily.⁵

EA Procedures

Overview

16. Though EA preparation is the responsibility of the borrower, the task manager (TM) in the Bank assists and monitors the EA process, with support mainly from the Regional environment division (RED). The borrower and the Bank should agree as early as possible on the selection of consultants or borrower staff to prepare the EA, and the EA procedures, schedule, and outline. Major steps in the EA process normally include: (a) screening, (b) decisions based on the Initial Executive Project Summary (IEPS), (c) notification to the Board through the Monthly Operational Summary (MOS), (d) preparation of TORs for the EA, (e) EA preparation, (f) EA review and incorporation of environmental measures into the project, (g) supervision, and (h) ex post evaluation.

17. Since project and country conditions, national legislation, and institutional experience vary among borrowers, both the borrower and the Bank must exercise judgement in using these procedures to design and implement projects

which are both environmentally and economically sound, and consistent with the environmental laws, policies, and procedures of the borrower. The Environment Department (ENV), Legal Department, and the REDs maintain information on these requirements.

Screening

18. Projects/components should be screened at identification by the TM, with advice from the RED, and assigned to one of the following categories based upon the nature, magnitude, and sensitivity of environmental issues:

Category A—EA is normally required as the project may have diverse and significant environmental impacts.

Category B—More limited environmental analysis is appropriate, as the project may have specific environmental impacts.

Category C—Environmental analysis is normally unnecessary.

Category D—Environmental projects, for which separate EAs may not be required, as environment would be a major focus of project preparation.

Annex 3 gives illustrative lists, to be applied flexibly, of the type of project/component in each category.

Initial Executive Project Summary

19. In the IEPS, the TM, in consultation with the RED, should (a) identify key environmental issues, (b) indicate the category (A-D) and the type of environmental analysis recommended, and (c) provide a preliminary EA schedule. If an EA is not likely to be available prior to appraisal, the

5. See OD 4.00, Annex B, *Environmental Policy for Dam and Reservoir Projects*, para. 18, for more details on the selection and functions of the panel.

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IEPS should propose special procedures to address the situation. The IEPS meeting would confirm the type, timing, and issues of environmental analysis (although in the event of inadequate information, the decision may be deferred).

Monthly Operational Summary

20. The TM should ensure that the MOS, which is used to alert the executive directors to forthcoming projects, contains the following information as soon as available: (a) the category assigned (A-D); (b) the main issues to be examined; (c) whether agreement with the borrower has been reached on EA preparation; and (d) the EA schedule. The MOS entry should be updated whenever appropriate to reflect the progress of the EA, and the related Bank and borrower decisions.

Preparation of TORs for the EA

21. Following the IEPS meeting, the Bank should discuss with the borrower the scope of the EA, and assist the borrower, as necessary, in preparing TORs for the EA. For this purpose, a field visit by Bank environmental staff is generally desirable. The Bank should ensure that the TORs provide for adequate inter-agency coordination (para. 11) and consultation with affected groups and local NGOs (para. 12).

EA Preparation

22. An EA for a major project typically takes 6-18 months to prepare and review. EA drafts should be available at key points in the project cycle. The final EA should be available prior to appraisal, to minimize the risk of project design changes and resultant delays at a late stage.

23. In most cases, the EA should form part of the overall feasibility study, so that the EA's findings are directly integrated into project design. However, the EA is normally prepared separately by specialists. For projects which would have major impacts, such as large dams or projects

involving large scale resettlement, it is recommended that the borrower retain independent experts not affiliated with the project. Borrowers may request Bank assistance for financing EAs through a Project Preparation Facility (PPF) advance,⁶ or from the Technical Assistance Grant Program for the Environment. EAs generally account for 5-10 percent of the cost of project preparation.

24. For some projects, a full year of baseline data is desirable to capture the seasonal effects of certain environmental phenomena; however, so as not to delay critical project decisions, short-term monitoring should be used to provide conservative estimates of environmental impacts, while longer-term data collection is being undertaken. Since special care in designing the baseline monitoring program is warranted, the borrower should be encouraged to discuss the matter with the Bank.

EA Review and Project Appraisal

25. The borrower should submit the final EA report to the Bank prior to Bank appraisal. The EA report is the borrower's property, but the Bank encourages the borrower to release relevant information to appropriate interested parties. The Final Executive Project Summary should summarize the EA's status and describe how major environmental issues have been resolved or are to be addressed, noting any proposed conditionality. The appraisal mission should review both the procedural and substantive elements of the EA with the borrower, resolve any issues, assess the adequacy of the institutions responsible for environmental management in light of the EA's findings, and determine if the EA's recommendations are properly addressed in project design and economic analysis.

Loan Documents

26. The EA procedures followed and the EA's main findings should be explained briefly in the text of the Staff Appraisal Report (SAR) and the

6. See OMS 2.15, *Project Preparation Facility*, to be reissued as OD 8.00.

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Memorandum and Recommendation of the President. An SAR annex should summarize the EA more fully, covering, *inter alia*, environmental baseline conditions, alternatives considered, mitigating and compensatory actions, capability of environmental units and measures to strengthen them, environmental monitoring arrangements, and the borrower's consultations with affected groups and NGOs. These factors will provide the basis for the RED's formal environmental clearance prior to the authorization of negotiations by the Regional vice president. Measures critical to sound project implementation may require specific loan conditionality.

Supervision

27. EA recommendations provide the basis for supervising the environmental aspects of project

implementation. Compliance with environmental conditionality, the status of mitigating measures, and the findings of monitoring programs should be part of borrower reporting requirements and project supervision. When major issues arise, special supervision missions with adequate environmental expertise may be needed.

Ex Post Evaluation

28. The project completion report⁷ submitted to the Operations Evaluation Department should evaluate (a) environmental impacts, noting whether they were anticipated in the EA report, and (b) the effectiveness of mitigating measures taken and of institutional development and training.

7. See the OPNSV memoranda, *Guidelines for Preparing Project Completion Reports*, June 7, 1989, and OMS 3.58, *General Guidelines for Preparing Project Completion Reports*, which are to be combined and reissued as OD 13.55, *Project Completion Reports*.

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Sample Outline of a Project-Specific EA Report

1. EA reports should be concise and limited to significant environmental issues. The detail and sophistication of analysis should be commensurate with the potential impacts. The target audience should be project designers, implementing agencies, and borrower and Bank staff.
2. The EA report should include:
 - (a) *Executive Summary*. Concise discussion of significant findings and recommended actions.
 - (b) *Policy, legal, and administrative framework* within which the EA is prepared. The environmental requirements of any cofinanciers should be explained.
 - (c) *Project description* in a geographic, ecological, social, and temporal context, including any off-site investments that may be required by the project (e.g., dedicated pipelines, access roads, power plants, water supply, housing, and raw material and product storage facilities).
 - (d) *Baseline Data*. Dimensions of the study area and description of relevant physical, biological, and socio-economic conditions, including any changes anticipated before the project commences. Current and proposed development activities within the project area (but not directly connected to the project) should also be taken into account.
 - (e) *Environmental Impacts*. The positive and negative impacts likely to result from the proposed project should be identified and assessed. Mitigation measures and the residual impacts that cannot be mitigated should be identified. Opportunities for environmental enhancement should be explored. The extent and quality of available data, key data gaps, and uncertainties associated with predictions should be identified/estimated. Topics that do not require further attention should be specified.
 - (f) *Analysis of Alternatives*. Proposed investment design, site, technology, and operational alternatives should be compared systematically in terms of their potential environmental impacts; capital and recurrent costs; suitability under local conditions; and institutional, training, and monitoring requirements. To the extent possible, for each of the alternatives, the environmental costs and benefits should be quantified, and economic values attached where feasible.
 - (g) *Mitigation Plan*. Feasible and cost-effective measures which may reduce potentially significant adverse environmental impacts to acceptable levels should be proposed, and the potential environmental impacts, capital and recurrent costs, and institutional and training requirements of those measures estimated. The plan (sometimes known as an "action plan" or "environmental management plan") should provide details on proposed work programs and schedules, to ensure that the proposed environmental actions are in phase with engineering activities throughout preparation. The plan should consider compensatory measures if mitigation measures are not feasible or cost-effective.
 - (h) *Environmental Management and Training*. The existence, role, and capability of environmental units at the on-site, agency, and ministry level should be assessed, and recommendations made concerning the

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establishment and/or expansion of such units, and the training of staff, to the point that EA recommendations can be implemented.

- (i) *Monitoring Plan* regarding environmental impacts and performance. The plan should specify the type of monitoring, who would do it, how much it would cost, and what other inputs (e.g., training) are necessary.

Appendices

- (i) *List of EA preparers*—individuals and organizations.

- (ii) *References*—written materials used in study preparation. This is especially important given the large amount of unpublished documentation often used.

- (iii) *Record of Inter-Agency/Forum Meeting*, including list of both invitees and attendees. Where the views of affected groups and local NGOs were obtained by other means, these should be specified.

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Checklist of Potential Issues for an EA

Where applicable, EAs should address the following issues, which are subject to the Bank policies and guidelines identified below.

- (a) *Agrochemicals*. The Bank promotes the use of integrated pest management (IPM) and the careful selection, application, and disposal of pesticides (see OPN 11.01, *Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and their Procurement when Financed by the Bank*, to be reissued as OD 4.00, Annex C, *Agricultural Pest Management, and Selection and Use of Pesticides*). The use of fertilizers, due to their impacts on surface and groundwater quality, must also be carefully assessed.
- (b) *Biological Diversity*. The Bank promotes conservation of endangered plant and animal species, critical habitats, and protected areas (para. 9b, OMS 2.36, *Environmental Aspects of Bank Work*, and OPN 11.02, *Wildlands: Their Protection and Management in Economic Development*, to be reissued as OD 4.00, Annex D, *Wildlands: Their Protection and Management*).
- (c) *Coastal and Marine Resources Management*. Guidelines are available from the Environmental Department (ENV) on the planning and management of coastal marine resources including coral reefs, mangroves, and wetlands.
- (d) *Cultural Properties*. OPN 11.03, *Management of Cultural Property in Bank-Financed Projects* (to be reissued as OD 4.50, *Cultural Property*), confirms the Bank's commitment to actively protect archaeological sites, historic monuments, and historic settlements.
- (e) *Dams and Reservoirs*. OD 4.00, Annex B, *Environmental Policy for Dam and Reservoir Projects*, provides specific guidance for addressing environmental issues in the planning, implementation, and operation of dam and reservoir projects.
- (f) *Hazardous and Toxic Materials*. Guidelines are available from ENV on the safe manufacture, use, transport, storage, and disposal of hazardous and toxic materials.
- (g) *Induced Development and Other Socio-Cultural Aspects*. Secondary growth of settlements and infrastructure, often referred to as "induced development" or "boomtown" effects, can have major indirect environmental impacts, which relatively weak local governments may have difficulty addressing.
- (h) *Industrial Hazards*. All energy and industry projects should include a formal plan to prevent and manage industrial hazards. (See *Techniques of Assessing Industrial Hazards—A Manual*, World Bank Technical Paper No. 55.)
- (i) *International Treaties and Agreements on the Environment and Natural Resources*. EAs should review the status and application of such current and pending treaties and agreements, including their notification requirements. The Legal Department maintains a list of international treaties, and could obtain, whenever required, information on applicable law in individual countries.
- (j) *International Waterways*. OD 7.50, *Projects on International Waterways* provides guidance. This OD exempts from notification requirements rehabilitation projects which will not affect the quality or quantity of water flows.
- (k) *Involuntary Resettlement*. OMS 2.33, *Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects*, and OPN 10.08, *Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects* (to be reissued as OD 4.30, *Involuntary Resettlement*), provide guidance.

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- (l) *Land Settlement*. Due to the complex physical, biological, socioeconomic, and cultural impacts, land settlement should generally be carefully reviewed (see OD 4.31, *Land Settlement*, to be issued).
- (m) *Natural Hazards*. EAs should review whether the project may be affected by natural hazards (e.g., earthquakes, floods, volcanic activity), and should propose specific measures to address these concerns when appropriate (see OD 8.50, *Emergency Recovery Assistance*, to be issued).
- (n) *Occupational Health and Safety*. All industry and energy projects, and projects in other sectors where relevant, should include a formal plan to promote occupational health and safety (*Occupational Health and Safety Guidelines*, World Bank, 1988).
- (o) *Tribal Peoples*. OMS 2.34, *Tribal People in Bank-Financed Projects* (to be reissued as OD 4.40, *Tribal People*), provides specific guidance for addressing the rights of tribal peoples, including traditional land and water rights.
- (p) *Tropical Forests*. The Bank co-authored the Tropical Forest Action Plan (published in 1984); up-to-date information is available from ENV. OPN 11.02, *Wildlands: Their Protection and Management in Economic Development* (to be reissued as OD 4.00, Annex D), also addresses issues relating to tropical forests.
- (q) *Watersheds*. Bank policy is to promote protection and management of watersheds as an element of lending operations for dams, reservoirs, and irrigation systems (OD 4.00, Annex B, *Environmental Policy for Dam and Reservoir Projects*, para. 6).
- (r) *Wetlands*. The Bank promotes conservation and management of wetlands (e.g., estuaries, lakes, mangroves, marshes, and swamps). This is covered by OPN 11.02 on wildlands (see (s) below).
- (s) *Wildlands*. The Bank is committed to protect wildlands, including through compensatory measures when lending could result in adverse impacts (see OPN 11.02, *Wildlands: Their Protection and Management in Economic Development*, to be reissued as OD 4.00, Annex D, *Wildlands: Their Protection and Management*).

Operational Directive

Environmental Screening

Introduction

1. The task manager, in consultation with the Regional environment division, is responsible for screening a proposed project to determine the appropriate type of environmental analysis, based on the nature, potential magnitude, and sensitivity of the issues. The categories below, based upon prior Bank staff experience, are strictly illustrative. Alternatives to EA are acceptable where they are expected to result in an environmentally sound project.

2. *Category A: Projects/Components Which May Have Diverse and Significant Environmental Impacts—Normally Require EA¹*

- (i) Aquaculture/Mariculture (large scale);
- (ii) Dams and Reservoirs;²
- (iii) Electrical Transmission (large scale);
- (iv) Forestry;
- (v) Industrial Plants (large scale) and Industrial Estates;
- (vi) Irrigation and Drainage (large scale);
- (vii) Land Clearance and Leveling;
- (viii) Mineral Development (including oil and gas);
- (ix) Pipelines (oil, gas, and water);

- (x) Port and Harbor Development;
- (xi) Reclamation and New Land Development;
- (xii) Resettlement;³
- (xiii) River Basin Development;
- (xiv) Rural Roads;
- (xv) Thermal and Hydropower Development;
- (xvi) Tourism (large scale);
- (xvii) Transportation (airports, railways, roads, waterways);
- (xviii) Urban Development (large scale);
- (xix) Urban Water Supply and Sanitation (large scale);
- (xx) Manufacture, Transportation, and Use of Pesticides or other Hazardous and/or Toxic Materials;⁴ and
- (xxi) Projects which Pose Serious Accident Risks.⁵

3. *Category B: Projects/Components which may Have Specific Environmental Impacts—More Limited Environmental Analysis Appropriate*

Projects in this category normally require more limited environmental analysis than an EA.

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- 1. Except generally for projects directed to rehabilitation, improved operation and maintenance, and limited upgrading of facilities.
 - 2. See OD 4.00, Annex B, *Environmental Policy for Dam and Reservoir Projects*.
 - 3. While OMS 2.33, *Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects* (to be reissued as OD 4.30, *Involuntary Resettlement*), covers the social aspects of resettlement, the environmental implications of the resettlement itself can be major.
 - 4. In some cases, adherence to existing directives is an acceptable alternative to an EA (e.g., OPN 11.01, *Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and their Procurement when Financed by the Bank*, to be reissued as OD 4.00 Annex C, *Agricultural Pest Management, and Selection and Use of Pesticides*). Certain materials (e.g. PCBs) are not to be used in Bank projects and other materials (e.g. asbestos) are to be used only under extremely restricted conditions. A Restricted Toxic Materials List (RTML) will be available from ENV and updated periodically.
 - 5. See *Techniques of Assessing Industrial Hazard—A Manual*. World Bank Technical Paper No. 55.

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A wide range of environmental guidelines, developed by a number of organizations, are applicable. In addition, specific environmental pollution standards or design criteria can be developed for individual projects.

- (i) Agroindustries (small scale);
- (ii) Aquaculture and Mariculture (small scale);
- (iii) Electrical Transmission (small scale);
- (iv) Industries (small scale);
- (v) Irrigation and Drainage (small scale);
- (vi) Mini Hydro-Power;
- (vii) Public Facilities (hospitals, housing, schools, etc.);
- (viii) Renewable Energy;
- (ix) Rural Electrification;
- (x) Telecommunications;
- (xi) Tourism (small scale);
- (xii) Urban Development (small scale); and
- (xiii) Rural Water Supply and Sanitation.

4. *Category C: Projects/Components which Normally Do Not Result in Significant Environmental Impact—Environmental Analysis Normally Unnecessary*

Opportunities to enhance environmental benefits should be sought in these projects.

- (i) Education (except school construction);
- (ii) Family Planning;
- (iii) Health (except hospital construction);
- (iv) Nutrition;
- (v) Institutional Development; and
- (vi) Technical Assistance.

5. *Category D: Environmental Projects*

Projects with a major environmental focus may not require a separate EA, as environment would be a major part of the project preparation.

6. *Emergency Recovery Projects*

Because emergency recovery projects (a) need to be processed rapidly, and (b) seek mainly to restore existing facilities, they normally would not require a full EA. However, the extent to which the emergency was precipitated and/or exacerbated by inappropriate environmental practices should be determined, and corrective measures built into either the emergency project or a future lending operation.⁶

6. See OD 8.50, *Emergency Recovery Assistance*, to be issued.

The Bank's Experience with Environmental Assessment

Summary

1. While discussing the Operational Directive of Environmental Assessment in October 1989, the Board was promised a review of experience with EAs during FY 91. During the course of the review, staff realized that it would be of limited value, because of the smallness of the available sample. By mid-1991, only 20 EAs were available for review, of which five were not subject to the October 1989 procedures. These 20 EAs were collected and considered (listed in Figure 1). Although the number of EAs being received by the Bank has increased, a meaningful review of experience will be possible only in 1992. ENV is planning to mount such review, on a region-by-region basis, in cooperation with the Regional Environment Divisions (REDs). A synthesis of the Bank's first twenty EAs is attached.
2. To be meaningful, any review of Bank experience with Environmental Assessment should address a number of important questions including: has the Bank achieved substantial progress in incorporating environmental measures into project design and in avoiding environmentally unsound projects; what issues have arisen in disclosure of EA information, consultation with affected parties, and project classification; what is the state of dialogue between the Bank and NGOs and the borrowers; what is the capacity of the borrowers to carry out EA work; and what has been the resource impact of applying the provisions of the OD?
3. A few lessons have emerged from the limited review at this stage. The first is that EA has frequently led to mitigatory changes in project design. Second, engineering design changes have been the principal mode of dealing with environmental issues. Since design changes are usually not expensive when done very early, there is usually no impact on C/B analysis when engineering standards and specifications are altered for environmental reasons. Resettlement is of course an exception, being both expensive and mandatory. Treating environmental issues in engineering standards and specifications, on analogy with safety, is by and large a good procedure in that it pushes environmental considerations as far "upstream" as possible. Third, so far there has been very little incorporation of the sustainability criterion in EA. This is not surprising, given that guidelines for operationalizing the goal of sustainability have not yet been developed. The idea of sustainability has been incorporated indirectly in some EAs through the concept of carrying capacity applied most directly to rangelands in livestock projects, but also imaginatively extended to coal-fired power plants.
4. Two new issues were absent from the first 20 EAs, because the October 1989 OD excluded them. First, the global environmental effects of projects have not received attention, partly because project designers or their EA teams may consider that any single project's contribution to a global problem is usually negligible. Second, there were no cases of EAs done for adjustment lending. This would admittedly be a difficult task since it is often not clear what the physical production consequences would be of say trade liberalization. However, if adjustment requires an increase in fuel prices one could expect an increase in demand for firewood and the pressure for deforestation. Likewise an increase in fertilizer prices could be expected to shift agricultural expansion from the intensive to the extensive margin, thus putting pressure on forest lands.
5. Information on EAs is difficult to extract from the Bank's system of internal records. The Bank's internal documentation system is inadequate for the following four reasons: a) some regional environmental units keep their own records, while others deposit the EAs in the regional information centers; b) regional information centers often file EAs with correspondence; c) there is no separate documentation category for EAs; and d) the project identification number used in ENVIS does not enable librarians or task managers to locate project files.
6. Clearly, the Bank's internal documentation system needs improvement. EAs should have a filing category of their own, even if they are double filed as an annex to the SAR, and should be automatically filed with the regional information centers upon receipt by the Bank, so that they become available on request. As a result, ENVAP is allocating space for a complete collection of EAs and related materials. This will form the basis for dissemination of best practice and for subsequent reviews.

Figure 1: LIST OF PROJECTS REVIEWED¹

1. Ecuador -- Lower Guayas Flood Control
2. Uganda -- Livestock Services
3. Botswana -- Tuli Block Roads
4. Uganda -- Power Project III
5. Nigeria -- OSO Condensate (offshore oil)
6. China -- Daganba Multipurpose Project
7. China -- Shuikou Hydroelectric
8. China -- Yanshi Thermal Power
9. India -- Second Petrochemicals Project
10. India -- Private Power Utilities (Tata Electric)
11. Bangladesh -- Jamuna Multipurpose Bridge
12. Pakistan -- Fourth Karachi Port Project
13. Bolivia -- Bolivian Pipeline and Power Plant
14. Thailand -- Third Power System Development Project
15. Cyprus -- Southeast Coast Sewerage and Drainage Project
16. India -- Second Private Power Utilities -- Dahanu Station
17. China -- Ertan Hydroelectric Project
18. India -- Gas Flaring Reduction Project
19. Korea -- Seoul Solid Waste Management Program
20. Indonesia -- Java (Suralaya) Thermal Power Plant

(12 out of 20 in Asia)

Asia - 12

LAC - 2

Africa - 4

EMENA - 2

¹ This sample is unlikely to be fully representative, but comprises all EA category A project reports available. Therefore, the conclusions are tentative and subject to modification as more EAs are reviewed. This review does not examine the major inter-regional inconsistencies of use of the "A" category, nor the wide variation of environmental treatment of category "B" projects. This review is based on the information in EAs and SARs, supplemented by interviews with Bank staff and consultants. No site visits were undertaken; such visits would be essential for a thorough review of the EA process, especially monitoring of compliance, which most of those interviewed feel is the key to the whole EA effort.

Notes on Specific EA Reports

LAC-Ecuador: Lower Guayas Flood Control

1. The engineering design of this flood control project, as well as certain project components have been adjusted to reflect findings and recommendations of the EA. Specifically, El Mirador Lagoon was bypassed as an attenuating reservoir to avoid altering the environment of associated flora and fauna. Bypass water was conveyed through wetlands which act as a buffer to prevent agro-chemical contaminants from reaching mangroves, and also absorb the erosive force of the discharge flowing from the bypass. In El Churute Reserve, a hydrological study was done to determine engineering measures to prevent the possible drying effects on a lagoon. Analysis of chemical composition of silt deposits was recommended as a part of a sedimentation monitoring program. A comprehensive water quality control program for the basin was recommended to address expected development pressures resulting from flood control. Also, an integrated pest management program and pollution monitoring has been recommended to address the increased use of pesticides and fertilizers resulting from the expanded agriculture and livestock use made possible by flood control.

2. The local administrative institutions, CEDEGE and DINAF, are to be strengthened by adding specialists in ecology, forestry and geology. Also, local park guards are to be increased in number, with some hired from local families with land rights in the area in order to encourage local interest in conservation. Additional motorboats and motorbikes for patrolling the reserve will also be provided. Delimitation of reserve areas will be identified by remote sensing to monitor possible encroachment of shrimp farms. Further studies have been recommended to supply basic ecological information. Local NGOs are to aid in monitoring and evaluation, and visitor trails and informative signs are to be provided in the reserve.

3. In the cost/benefit analysis of the Guayas project, environmental expenditures reflecting sustainability "were not included in the cost stream because the associated benefits, although likely to be considerable in sustaining long-term development in the area, are not readily quantified." Additional work is needed to develop methods of incorporating non-quantifiable benefits so that environmental concerns can be incorporated into cost/benefit.

Africa -- Uganda Livestock Services (SAR July, 1990; EA April, 1990).

4. This project aims to improve livestock health, reduce the tsetse fly in order to reclaim former pastureland lost to tsetse invasion, privatize veterinary services, and develop forage. The overall environmental impacts of the project are believed to be favorable, as removal of tsetse fly reduces both animal and human disease, although the presence of the tsetse may be said to protect immune wildlife and habitat from human encroachment. Forage development would increase the vegetative cover on 52,000 acres of land, and the project involves no expansion into virgin lands.

5. The main environmental risk is said to be the potential for negligent use of pesticides in the tsetse control program, which is to be minimized by use of baited traps organized and maintained by the local community. The use of pyrethroid pesticides is also recommended because of their low mammalian toxicity and rapid rate of degradation in the environment. Staff are to be given training in pesticide use and instruction in local ecology and on the effect of livestock on soils and vegetation. Environmental consequences of success in the tsetse control program and the resulting increase in cattle herds have been anticipated, and studies are advocated to determine the carrying capacity of the land to prevent overgrazing. More cattle would also result in an increase in ticks and an expansion of the tick control program; the chemical cattle dips may result in groundwater pollution. An increase in cattle will also increase the activity of slaughterhouses and the danger of pollution from disposal of their wastes.

6. The weakness of the Ugandan currency also encourages over-grazing; for example, when overgrazing occurred as the Bahimas people adopted a more sedentary way of life, they were reluctant to exchange cattle for money because of the weakness of the currency.

7. Uganda subsidizes cattle for local consumption, encouraging the conversion of wildlands into rangelands. Options to cattle include game ranching and tourism, and the development domestic and foreign markets for game meat. Since local game fauna are naturally adapted to local conditions, problems of pest and disease control, as well as habitat destruction, would be much reduced. Currently, lack of consumer demand for game meat is a limiting factor.

8. Once again there is no separation of environmental factors in the formal cost/benefit. Since environmental effects are evidently positive, and the conventional rate of return quite high, there seems no need for a more detailed analysis. In other words if economic and environmental considerations both favor the project there is no need to trade off one against the other, and consequently no need to reduce them to a common monetary denominator. The idea of sustainability is strongly present in the recommendation to determine the carrying capacity of the land before the increasing herds overgraze it. The element of cultural sustainability in the pastoral life of the people is also stressed. An even stronger element of ecological sustainability is present in the suggestion that game ranching be investigated in the future as an alternative to cattle.

9. It is not clear whether any of the suggestions in the EA have actually been followed, nor whether the carrying capacity study has been done yet. Although there is no evidence of any lack of good will or intention to carry out the EA's very reasonable suggestions, it appears that it would be easy to overlook them unless someone has explicit responsibility for monitoring the project for compliance. Nearly all Bank staff and consultants interviewed felt that monitoring compliance with EA conditions was the weak point of the process.

Africa -- Botswana-Tuli Block Roads

(SAR June 1990; no EA; no EA Annex in SAR; summary of report of environmental and archeological specialists on p. 26 SAR).

10. In this EA, environmental specialists recommend storage of topsoil removed for road bed construction, protection of trees, drainage, landscape quality, etc., "all of which are adequately controlled through the existing RD Standard Specifications for Road and Bridge Works." In other words, the proper engineering specifications address the most immediate issues of environmental protection. There was no discussion of the problem of opening new areas to settlement, as apparently the roads do not open up unsettled lands. Archaeologists recommended shifts in road alignment in order to avoid sites of archeological importance. On one site, excavation prior to construction was recommended; in other cases sites were to be sampled before beginning construction. The changes in road alignment for archeological reasons were evidently not subjected to a separate comparison of costs and benefits. Rather, the preservation of archeological sites seems to have been taken into account as a part of the definition of an acceptable road. This seems a reasonable procedure.

Africa -- Uganda -- Power Project III

(1990 EA from SAR Annex, Full SAR not available, full EA not available).

11. This project consists of a 200 meter wide power channel beginning above the existing Owen Falls dam and rejoining the river one kilometer downstream from the dam after passing through a newly built powerhouse with three new turbines. This design will take advantage of the currently wasted potential of water that now spills from the sluices. The project is considered the least cost option for additional power generation in Uganda.

12. The environmental effects of the project are not expected to be large as the project involves the extension of an already existing site. Extra power lines are to be added to existing right-of-ways. The chief concerns are the loss of 20 hectares of garden plots and resettlement of about 25 families to land available nearby, along with possible effects on the fluctuation in water level in Lake Victoria. Apparently, electricity generation patterns may

result in a reduction in the water level fluctuation in Lake Victoria from the normal 2.5 meters to about 1.7 meters per year. The ecological effects of such a change on fish spawning and water plant growth are not understood, and careful monitoring and further study are recommended. If costs in terms of reduced fish are deemed greater than the generation benefits, a less disruptive pattern of discharge could be undertaken.

13. Malaria, schistosomiasis, onchocerciasis and AIDS are all present along the Victoria Nile, but the project is not expected to alter vector habitat. However during construction more people will be exposed to these diseases and prophylactic measures are recommended.

14. Apparently the decision of whether to build the channel is reversible, or is at least treated as such in the discussion. This is a case of an environmental cost being separated out for specific comparison with an associated benefit, rather than being subsumed under the definition of an "acceptable dam."

15. Satellite monitoring of changes in the perimeter of Lake Victoria was a part of the recommended study; evidently, affected riparian nations first have to agree to the modification of variation in water levels. The use of old borrow pits as the sites for disposing of land dug out to make the channel was also recommended.

16. During the technical review, it was discovered that the extent of damage in the event of failure of the 40-year old structure would be severe, and that the safety factor built into the dam is low by comparison with today's standards. This realization led to a larger power channel than originally planned, which would also serve as a spillway that could relieve pressure on the dam. Such a discovery indicates the large overlap between engineering safety standards and environmental criteria.

Africa -- Nigeria -- OSO Condensate

(Extract from Green Cover SAR, full SAR not available, being revised, especially environmental part, available around March 1. EA done for Mobil Oil by University of Calabar, 1990).

17. The project involves offshore oil drilling and operation with gas injection to maintain pressure, using previously flared natural gas. In addition to saving the natural gas for future use the reduced flaring results in lower CO₂ emissions in the present. Although higher CO₂ emissions will result from the burning of the extra oil pumped by the well, this global effect was not treated as part of the EA. Many of the environmental considerations coincide with engineering safety specifications, such as blow out preventors, fire control equipment, subsurface safety valves, pipelines buried three feet below the sea floor, etc.

18. The main environmental concern is the danger to mangrove swamps in the event of a spill, and the adequacy of Mobil's oil spill contingency plan. The economy of about 55,000 people and some 9,000 fishing boats depends on these mangrove swamps. Since chronic or routine spillage is not included in the oil spill contingency plan, it was recommended that bio-assays of marine organisms in the mangroves be done quarterly as a way of monitoring possible effects. Disposal of drilling mud is a concern during the drilling phase as well.

19. Environmental issues are closely linked to engineering safety concerns, and it seems that an acceptable offshore drilling project is by definition one that will not suffer a blowout or significant spill. The cost of the necessary safety measures are included as part of the project. However, experience shows that failures happen, and in this case an environmental assessment should indicate why the extra safety costs are worth paying by indicating the value of what might be loss in the case of an accident. It is not clear what extra safety measures beyond traditional engineering standards were incorporated as a result of the EA.

Asia -- China -- Daguangba Multipurpose Project

(EA October 1987, done by Chinese Mid-South Design Institute for Hydroelectric Projects -- SAR April 1990).

20. The project involves the construction of a dam for power generation and irrigation. The SAR states that "...no major environmental problems are expected under this project; indeed implementation of the proposed

environmental management program would generally enhance the environmental quality of the region" (p. vi). However, resettlement of about 21,400 people, 83% of whom are agricultural, is a major project expense.

21. The Environmental Management Program addressed a number of problems, through the following actions: (1) Maintenance of the Changhua River as a Grade I water source (potable but not pristine) by clearing reservoir of bush and trees one year prior to filling in order to lower risk of anaerobic conditions in reservoir and reduce subsequent fish kills downstream as a result of deoxygenation of by rotting vegetation. (2) Increasing volume of water downstream in dry season by between 50% and 30%, which will improve water quality by diluting industrial and municipal wastes. (3) Baoyou Sugar Refinery and municipal waste discharges from Ledong County Seat are presently dumped into Changhua River without treatment. Project will finance treatment of these wastes to enhance water quality. There was no indication of whether the wastes would be recycled as fertilizer. (4) Exposure to malaria minimized by refilling borrow pits and stopping seepage from irrigation canals by lining them. Disease to be monitored by Environmental Surveillance stations financed by the project. (5) Reservoir margins would be reforested and wire fences built to protect the habitat of the rare Datian deer.

22. Other environmental costs are hard to identify separately in the ERR calculation. No separate cost/benefit analysis seems to have been done for environmental components; apparently they were treated as part of the definition of an acceptable dam, similar to engineering safety specifications.

Asia -- China -- Shuikou Hydroelectric
(SAR Nov. 1986)

23. The project involves a hydroelectric site on the Min River to serve mainly as a peaking station for the East China Grid. Resettlement of 63,000 people in 88 villages and 15 townships in Fujian Province -- a predominantly agricultural area -- would be required. Apart from the major social impact of resettlement, no major environmental impacts are expected. The sedimentation rate is low -- only 3.4% of gross capacity would be lost in first 30 years. The choice of a high water level was made with environmental criteria in mind -- to avoid flooding a railway station and to protect Nanping City from a 20-year flood. The main consumptive withdrawal from Min River is for agriculture, but this occurs in the summer when the water level is high. In winter, when the water flow is low, irrigation does not compete for water with power generation.

24. Reference is made to downstream effects on an \$8 million eel export business, a decline in estuarine fisheries, and salt water intrusion, but no specific mitigatory measures are discussed. Water quality management is included as a project component. Effects on downstream fisheries would seem to represent an environmental cost not addressed through engineering specifications. Such a basic conflict in use of the river would seem to require a separate cost/benefit study.

25. This SAR was done well before OD 4.00; it is possible that the formal requirement of an EA would have led to more explicit comparison of cost to downstream fisheries.

Asia -- China -- Yanshi Thermal Power Plant

(SAR May, 1989, Reference made to an Environmental Impact Report, but it is not yet available).

26. This project consists of a thermal power station requiring no new land acquisition or rights-of-way, which would be located 2 km east of Yanshi. The prevailing wind direction is NE, considered favorable for flue gas diffusion. The project is designed on the basis of "internationally accepted environmental norms." These include: use of electrostatic precipitators for new units, with older units to be monitored and upgraded; liquid chemical effluent to be held in neutralization basin and treated before discharge into river; and ash disposal in gullies along northern slope of Mang-shan range enclosed by dams with storage capacity for 30 years of operation.

27. The pH value of the ash water released to the Yellow River is to be kept within the acceptable range of 6 to 9. No resettlement is required. There was no mention of the CO₂ contribution of the project. In this case it seems that environmental considerations were more or less adequately treated as engineering specifications, and not subjected to a separate cost/benefit analysis.

Asia -- India -- Second Petrochemicals Project

(SAR August 1990; Annex 5.5 is summary of EA referred to p. 69, done by Indian Petrochemicals Corp., Ltd. (IPCL) but not available).

28. The project involves expansion at two sites, Nagothane and Vadodara, but little impact is expected because of the relatively innocuous products and processes (polyolefins and derivatives). No land acquisition is required, nor is any additional housing for workers or additional access roads. The Vadodara complex is in a largely agricultural area, while Nagothane is in an area chosen for its poor soils, presumably to minimize conflict with agriculture. The Vadodara area is badly deforested and chemical companies are sponsoring a social forestry project, but it is not clear if it is a part of this project. At Nagothane, an effluent pipe into the bay was located so as to maximize dispersion and minimize backmixing into estuary, after oceanographic study. Spent catalysts will be returned to manufacturer for recycling, thus avoiding heavy metals pollution. In addition, there is greenbelt reforestation at Nagathane, a hazardous emissions warning system at Vadodara, a noise abatement program and air quality monitoring at both plants, and an incinerator and tertiary waste water treatment facility at Vadodara.

29. A review of the legal framework showed that IPCL is in compliance with air and water standards. Safe management of toxic wastes not adequately addressed in Indian legislation, but IPCL has won industry prizes for its pollution control. Environmental aspects were treated with engineering specifications, and were not subjected to a separate cost/benefit calculation.

Asia -- India -- Private Power Utilities (Tata Electric)

(SAR June 1990, Annex 3.9 summarizes and refers to a proforma EA done by Tata Electric, but not available).

30. This project involves expansion of existing facilities. The Bhira pumped storage unit would convert offpeak facilities into peak load capacity. There would be no change in the level of the reservoir over a 24 hour generation/pump cycle. Construction would take place on existing rights-of-way. Other components include the Bhira-Dharavi Transmission System, consisting of 220 kV transmission line over existing rights-of-way and underground in urban area; the Trombay gas-based combined cycle unit, where the major concern is air emission of NO_x, although these should be well within the limits of World Bank and Indian government standards. CO₂ is not considered. The stack height would be optimized for plume mixing, and there would be a reduction in the cooling water requirement as a new unit replaces an older one. A second flue gas desulphurization unit would also be included, to control SO₂ and stay within emission standards while taking advantage of cheap coal. The environmental aspects of the project were subsumed under engineering criteria and not subjected to a separate cost/benefit study.

Asia -- Bangladesh-Jamuna Multipurpose Bridge

(EA August 1988? -- SAR not yet available).

31. The 90-page EA for this project is very thorough. Without the SAR it is not possible to tell to what extent it has influenced the design of the project. The project involves a bridge for auto transportation, as well as rail transportation and pipeline transport of natural gas. The embankments also provide significant flood control features.

32. The EA states that its purpose is to indicate minor modifications to prevent environmental damage, not to modify the basic concept or design of the bridge. However, most of the analysis presented are relevant to the decision of whether or not a bridge should be built in the first place. Engineering specifications for bridges,

embankments, and hydrology are discussed, and many environmental considerations are addressed through engineering specifications. However, larger issues requiring independent cost/benefit studies are also discussed.

33. For example, the effect of the embankment on lateral fish migration and breeding throughout the extensive wetlands is noted, and the reduced navigability, reduced dry season agriculture, and reduced fish catch resulting from the reduced flow into the Dhaleswari River as a result of closing off an intake channel from the Jamuna are recognized as project costs. In addition, the costs of resettling 4,300 people is noted. These costs are weighed against the benefits of flood control, increased agricultural output in the monsoon, transportation improvement, and natural gas availability, including relief of pressure on firewood.

34. All of these considerations should have been a part of the decision of whether or not to build the bridge in the first place. Presumably they are currently being taken addressed in the SAR, which may be why it was not available at the time of writing.

35. The EA also urges attention to changes in land use patterns induced by the bridge, such as industrial development of sites along the road, with consequent dangers of pollution, increased landlessness as peasants sell their land for higher-valued industrial uses, etc. Increased traffic hazards and noise pollution are also foreseeable consequences on which the EA recommends further study. The EA recommends no mitigatory measures for navigation and water management. For fish production, it would be possible to use hatcheries to compensate for reduced spawning, but this is recommended against in view of the fact that the Fisheries Department is already overwhelmed with donor projects beyond its capacity to administer. Retraining of resettled farmers is recommended.

EMENA -- Pakistan -- Fourth Karachi Port Project

(SAR April 1974. No EA, one paragraph in SAR on "Ecology").

36. The SAR states that there will be no detrimental effects from dumping dredging spoil in an approved area previously used for this purpose. Also, "floating collars" will be used to contain and remove any spillage. Collars are also to be used during tanker discharge. Special tanks are to be provided to receive dirty ballast discharge. These environmental considerations are treated as engineering specifications and are not subjected to a separate cost/benefit analysis. The 1974 date of this project places it well before the increase in interest in EA within the Bank.

LAC -- Bolivian Pipeline, Santa Cruz-Puerto Suarez, and Thermal Electric Plant, Quijarro

(EA September 1990) (SAR not yet available as of 7/2/91)

37. This project consists of a gas pipeline from Santa Cruz to Puerto Suarez near the Paraguay River, and a thermal electric generating plant in Quijarro. The major negative environmental impacts for each component are discussed below.

Gas Pipeline

Direct effects: (1) Alteration of hydrological flow resulting from graded right of way embankments for the pipeline. Disruption of water flow is to be mitigated by baldenes. In the floodplain/wetlands (Banado de Izozog) such embankments will not be used and instead investments will be made in amphibious equipment for pipeline maintenance and repair. (2) Hunting of valuable species by workers during the construction period of the pipeline (to be monitored.) (3) Water and wind erosion in the plains, to be addressed by maintaining and replacing vegetative cover on and around the right of way.

Indirect effects: (4) Land use changes induced by access made possible by pipeline right of way, including settlement, agriculture, ranching, timber (to be monitored.)

Thermal Electric Generating Plant

Direct effects: (1) Noise pollution in Quijarro, to be mitigated by a curtain of trees surrounding the plant, supplemented by walls in some places. (2) Minor loss of land attractiveness. (3) Risk of pollution of Tamengo Canal with effluents from plant, (to be monitored.)

Indirect effects: (4) General inducement to urban expansion of Puerto Quijarro with attendant problems of pollution and increased hunting and fishing in the areas.

38. Criteria for siting the route of the pipeline reflected environmental considerations and were as follows: (1) to avoid going through the foothills (serranias); (2) to minimize passage through permanently or periodically flooded areas; (3) to minimize passage through lands with highest use capacity; and (4) to minimize passage through human settlements.

Overlay maps and GIS methods were used to combine these criteria in a weighted manner.

39. Indigenous peoples (186 families of Ayoreos) are affected by increased contacts resulting from the project. These communities consist largely of the old and very young, as young adults have migrated to find work. Apparently no resettlement is required and the Ayoreos are partly "acculturated."

Asia -- Thailand -- Third Power System Development Project

(EA Summary January 1991; SAR June 19, 1991).

40. The project consists of the Pak Mun Hydropower Project, the Mae Moh mine expansion for power units 8 and 9; and the Mae Moh environmental monitoring network. Also included is a technical assistance, training, and institution building program in environmental monitoring and regulation.

41. The focus of the project is on the Pak Mun Dam, a 17 m high, 255 m long, rockfill dam creating a reservoir with a capacity of 225 cubic meters and submerging an area of 60 square kilometers. The full supply level of the reservoir is 108 meters (equal to the historic flood level). Early plans had called for a 120 m full supply level, but that was changed to 108 m as a result of an environmental impact assessment in 1982. According to the SAR, the change was made to "reduce the project's adverse environmental impacts (i.e., submergence of rapids which are an important tourist attraction, and displacement of a large number of persons). The project's parameters were substantially revised, at the expense of the project's power benefits." This would seem to be a case where the extra economic benefits from the extra power were judged not worth the extra environmental costs in comparing the 120 meter level with the 108 meter level. There was no reference in the SAR to any formal cost/benefit study associated with the 1982 EIA, and it appears that the decision was a common-sense judgement requiring no elaborated methodology.

42. Apparently, opposition from NGOs was at least in part based on old information, before revisions were made on the basis of the 1982 EIA, reducing the number of people to be resettled from 20,000 persons to 1,500. It is not clear that all objections are based on old information, however, as there are still discrepancies regarding the number of people to be resettled.

43. Resettlement is the main problem, and two options are being presented to the affected communities. Households living between 107 and 108.5 meters in elevation and whose farmlands remain cultivable can have their house plot raised to 108.5 m and can reconstruct their house at basically the same location. The other option is for them to go with those who are will definitely be flooded to a 288 ha resettlement site 10 km away at the base of

the existing Sirindhorn Dam. Each household is to be given a 800 sq m houseplot and a 2.5 ha farm irrigated by the Sirindhorn reservoir. This land is EGAT property, and drinking water, electricity, streetlighting, and a paved access road to the highway are provided. Settlers have a choice of building their own house or accepting a core two-room house which they may expand using money from cash compensation. EGAT will also organize an agricultural cooperative with a 5 million Baht revolving fund for credit, as well as agricultural extension services. EGAT is responsible for execution of the resettlement plan, with monitoring by provincial government committees.

44. Although the site was chosen to preserve the rapids in the Kaeng Tana National Park (105,000 visitors in 1987) the park will be disrupted by the daily commute of workers during the construction period. There are plans to restore the construction site.

45. The effect of the dam on fish seems to be subject to considerable uncertainty regarding the importance of upstream migration for spawning. How far up the river spawning occurs, and whether fish in the Mekong River are also dependant on spawning in the Mun River is not clear. Thus, caution seems indicated and fish ladders and related research are proposed. The issue of whether all species that spawn upstream can use the same ladder also needs to be addressed, as large fish are likely to be killed as they are flushed through. EGAT plans upstream fisheries development which it is said will increase fish yield by 46%.

46. Measures to prevent the spread of waterborne diseases (liver fluke, malaria, schistosomiasis are included.

Cyprus -- "Southeast Coast Sewerage and Drainage Project" Larnaca Scheme
(Environmental Assessment Executive Summary, March 1991).

47. This project consists of a sewage collection network of pipelines, a sewage treatment plant, an effluent irrigation system, and a stormwater drainage system. It will serve a low lying coastal strip 13 km long and 1.5 km wide between Larnaca airport and Dekelia. Currently the area uses septic tanks with wastes periodically shipped by tanker to stabilization ponds near Kellia. These ponds are overloaded. Sceptic tanks must be emptied frequently due to the high water table, with attendant problems of odor, traffic disruption, and possible groundwater contamination. Hotels and apartment buildings in the area rely on private treatment plants that are near the end of their life span. The pipeline network consists of gravity sewers and force mains with 12 underground pumping stations. Pipes will be put beneath existing roadways, tracks, and public lands at depths of from 0.9 m to 3.5 m. The treated water from the plant will be used for irrigation in the dry summer months, and stored in a reservoir. The sludge will be used in part as a soil conditioner. The treatment plant is separated from the town of Larnaca by the airport, providing a buffer for odor, insect movement and noise.

48. Environmental problems during construction include disruption of traffic, accidental destruction of archeological sites, and disturbance to wildlife. Longer term negative impacts include: loss of vegetation at reservoir site and at sewage treatment plant; possible spillage of hazardous substances (chlorine); and the possibility that sludge may provide a breeding ground for pests, requiring pesticides and a sludge press.

49. Improving the basic infrastructure in this way could induce unplanned growth that would overload the environment in other ways. Strict adherence to the zoning regulations already in effect must be monitored closely. This last point may be viewed as an attempt to build sustainability into the project, in that it could be compatible with a broader program of sustainable development for the region or country. This project is an example of a high degree of overlap between engineering and environmental criteria.

50. The project also includes another sewerage scheme (Ayia Napa/Paralimni) which has similar problems and issues.

India -- "Second Private Power Utilities Project" -- Dahanu Thermal Power Station
(EA March, 1991).

51. This is a 500 MW coal-fired power plant to supply electricity to Bombay, 80 km to the south. The site was chosen from among nine alternatives based on the following economic and ecological advantages: once-through condenser cooling using seawater; adequate land away from population centers; no resettlement of displaced persons; secure freshwater supply; access to oil and gas delivery; and proximity to railroad for coal delivery.

52. Environmental impacts on air, land and water are considered. Regarding air quality the inclusion of a 275 m stack with electrostatic precipitator and contingency plans for flue gas desulphurization will keep SO₂, NO_x and particulates within World Bank standards. The major impact on land is the permanent commitment of 816 ha to the facility. The land is not environmentally unique and does not have high alternative uses. The biggest risk of a negative environmental impact concerns the aquatic environment, as the plant is adjacent to an estuary, drawing cooling and slurry water from the rivers and returning them to the rivers in the estuary system. Thermal pollution is to be kept within a maximum temperature increase of 5 degrees C. Slurry water will be treated before return to river. Cooling water treated with biocides (mainly chlorine) to control algal growth will be treated before return to the river. Leaching from ash disposal lagoons is to be controlled by lining the lagoons with clay. Discussions have been carried out with local NGOs who opposed the project.

53. Although the project cycle had begun before the EA OD was enacted by the Bank, and the project was therefore exempt from the EA requirement, an EA was done anyway out of concern for the environment. One of the most interesting points made in the EA is that "...Planning and zoning requirements will be established to ensure that this development does not become a focal point for other industrial development. The goal will be to preserve the region's rural character and culture. The government of Maharashtra has issued a written decision making the area an industrial exclusion zone." The initial project may be environmentally sustainable by itself, but the predictable induced investment in the same region may have more adverse impacts which would negate or overwhelm the environment protection measures built into the initial project. Zoning conditions that rule out such a result are thus a very important way of building sustainability into a project. It remains to be seen if such zoning will really be enforced and respected by future governments.

China -- Ertan Hydroelectric Project; Environmental Aspects and Human Resettlement May, 1988
(SAR June 11, 1991).

54. This EA was prepared before the Bank's 1989 EA OD, and perhaps for that reason was not held to very high standards of completeness or clarity. It is sketchy and difficult to follow, partly because it is very poorly written.

55. The report discusses the "three wastes of construction": (1) Waste residue -- excavation of earth and "living waste" and its disposal is cursorily discussed. (2) Waste gas, exhaust fumes from construction equipment, decay of rotting vegetation. The recommendation is to plant trees to diminish harmful gases. (3) Waste water -- effluents of construction are to be sufficiently diluted by the flow of the Yalong river.

56. Noise pollution during construction and the need for worker protection is mentioned. Public health measures including avoiding schistosomiasis are mentioned. Sedimentation is relatively low. An environmental monitoring station to cover both reservoir and catchment areas is planned.

57. The main issue is resettlement of some 28,500 people by 1995. The principle that resettled people should not be made worse off is stated, but no evidence is offered to show that this would be the case. In the SAR, however, some details of the resettlement scheme are offered along with a reported assurance from the government that they will be carried out.

58. In sum, this EA may be correct in its conclusion that the "project's beneficial effects on the environment are much larger than detrimental ones," but no real evidence is given in the May 1988 document to support this assertion. The SAR, however, points out that the environmental impacts are benign relative to thermal power and other hydro projects in China. Two thousand persons are displaced per 1 Twh of power for Ertan, compared to 10,000 to 15,000 in Central and East China. Also, the project avoids the mining of some ten million tons of coal per year with associated land use for sludge ponds as well as gaseous products of coal combustion.

India -- "Gas Flaring Reduction Project," Bombay High Oil Field (offshore) 1990

59. This project involves two offshore process platforms with associated pipelines to shore (255 km and 142 km), and expansion of a terminal to receive the additional gas supplies. The project will increase oil and gas production and simultaneously eliminate gas flaring. It will recover about 10.7 cubic meters of gas per day, most of which would have been flared. The project will increase the availability of gas in Bombay and benefit the environment, as this relatively clean fuel replaces relatively dirty fuels in many uses.

60. There is a very high overlap between environmental issues and basic engineering safety requirements such as blow out prevention, fire prevention, upgrading sea rescue operations, avoiding supply boat collisions with each other and with platforms, etc. Measures more specifically environmental include an expansion of the capacity to combat oil spills, and expansion of environmental monitoring capacity, especially of the marine ecosystem.

61. Indian law has no specific regulations governing offshore as distinct from onshore oil production facilities, but the government has commissioned development of the appropriate legal framework. Meanwhile, Oil and Natural Gas Commission (ONGC) follows its own "Recommended Code of Practice" and is self regulating, although it must obtain clearance for its projects from the Ministry of Environment and Forests. In this situation monitoring by the Bank becomes even more important.

Korea -- "Seoul Solid Waste Management Program"

(EA June 11, 1991).

62. This project consists of the Kimpo Coastal landfill, a 14 km access road, and seven transfer stations in metropolitan Seoul to rationalize the waste collection system and reduce the cost of moving waste to the disposal site. Resource recovery at the transfer stations (using a pre-load compaction method) was considered and rejected due to generation of odors and particulates and larger land requirements. Separation at source was recommended. The current Nanji-do landfill will be filled up in a few years. The new Kimpo site has an estimated life of thirty years. Eventually it will serve as a new land area, although landfill gas and uneven settling will prevent such use for ten years after closure. The entire site is divided into six areas, so land will become available in six installments. Problems include extra traffic, noise, odor, possible leachate contamination of groundwater and seawater, and air quality effects of truck exhausts and landfill gas.

63. Mitigatory measures are discussed in great technical and modeling detail. The assessment appears very thorough, with the possible exception of the impact on aquatic ecosystems which is treated briefly because "it is expected that there will be no impact on fisheries and other activities," and the area around the outlet is classified as second grade ocean environment. Environmental safeguards are built into the engineering specifications of an acceptable landfill.

Indonesia -- "Java (Suralaya) Thermal Power Plant"

(EA Executive Summary, June 5, 1991).

64. This project consists of the construction of three 600 MW coal-fired electricity generating plants at Suralaya in West Java. These units will be added to four 400 MW units already in operation, giving a total capacity of 3,400 MW. An environmental assessment conducted in 1980, when the first two units were built, concluded that the Suralaya site could accommodate up to 3,100 MW of generating capacity. Evidently a further study raised that

figure to 3, 400 MW. The implicit use of the concept of "carrying capacity" of a site for power generation is particularly interesting. The 1991 EA does not explain this calculation, nor indicate which environmental conditions were considered limiting (air quality, space for ash disposal, cooling water capacity, etc.). Shared infrastructure and common facilities (cooling system, ash disposal, coal handling, electrical switchyard, and social support facilities) were all designed for the initially assessed ultimate station capacity.

65. In effect, the present project simply completes the larger project based on the earlier assessment of environmental capacity. It would be worthwhile to review the 1980 environmental assessment to see how they estimated capacity. But, for present purposes, it is important to note this as an attempt to operationalize the criterion of sustainability at the project level by estimating site-specific carrying capacity.

66. The usual environmental impacts and mitigatory measures for coal plants are discussed, as well as one bit of interesting environmental foresight. Adequate space was left in plant design to accommodate installation of flue gas desulphurization modules in the event that future shortage of low sulphur coal would require recourse to high sulphur coal whose untreated combustion would exceed air quality standards for sulphur.

The World Bank
Washington, D.C. 20433
U.S.A.

MOEEN A. QURESHI
Senior Vice President, Operations

November 21, 1990

To All Operations Staff

**Environmental Assessments: Instructions to Staff on the Release
of Environmental Assessments to Executive Directors**

1. Operational Directive 4:00, Annex A, "Environmental Assessment" makes it clear that the Environmental Assessment (EA) report prepared for a proposed Bank-financed project is the borrower's property, but notes that the Bank encourages the borrower to release relevant information to appropriate interested parties (para. 25). In light of the outcome of the Ninth Replenishment of IDA, management decided that for both IDA and Bank operations, the EA report would be made available to Executive Directors when it is initially received, i.e., in advance of project appraisal. The following paragraphs set forth the procedure for providing an English language summary of the EA report to all Executive Directors, and the full EA report to those Executive Directors who request a copy.
2. Since the EA report is the borrower's property, the Bank must obtain the borrower's permission for releasing the report to Executive Directors. This permission must be obtained early in the project cycle, normally when the need for an EA for a Category A project (where there may be a diverse and significant environmental impact) is identified, but no later than the time when the terms of reference for the EA are discussed with the borrower (OD 4.00, Annex A, para. 21). If the borrower indicates that it is not prepared to release the EA report to the Executive Directors, the Bank should not proceed with further work on the project, unless such work is recommended by the Regional Vice President and my approval is received.
3. To help ensure a complete EA report, the borrower should be provided the "Sample Outline of Project Specific EA Reports" (OD 4.00, Annex A1) at the time the terms of reference for the EA are reviewed by the Bank and informed of the need to have the report written in English, French, or Spanish. The requirement in the Outline for an executive summary, to be prepared in English, should specifically be called to the borrower's attention.
4. When an EA report is received from a borrower, the Task Manager (TM) for the project should ensure that a copy of the English language summary is sent to the Adviser & Board Operations, Secretary's Department for distribution to the Executive Directors. The transmittal memorandum, for signature by the Country Department director, should state that the EA report summary
 - (a) has been prepared by the borrower and has not been evaluated or endorsed by the Bank; and

- (b) is subject to review and possible change during the appraisal process.

The memorandum should identify the responsible TM and inform the Executive Director that he is available for consultation. Discussions with Executive Directors should be limited to an exchange of information and should not be a forum for negotiations on the environmental aspects of project design. The memorandum should also state that the Executive Director may request the full EA report from the Country Department director. The transmittal memorandum for this report from the Country Department director to the Executive Director, copied to the Regional Environment division chief, should repeat the statements in (a) and (b) above.

5. The TM should also ensure that the next issue of the Monthly Operational Summary contains the notation "EA Report received" in the column entitled "Stage of Processing and Action on Procurement." The receipt of the EA report should also be noted in the next issue of the Monthly Operational Summary which contains information on the EA process (Part B).
6. Any revisions to the EA that are required as a result of appraisal should be highlighted in the EA annex to the Staff Appraisal Report (OD 4.00, Annex A, para. 26). The EA annex should also indicate if a revised EA report has been prepared and included in the project file.
7. In the case of EAs underway before the issuance of these instructions, the borrower's agreement to release the EA report to Executive Directors should immediately be sought. In the event the borrower is not prepared to release the EA report, the Regional Vice President should review the situation and seek my approval if he still wishes to proceed with project preparation.
8. A number of EA reports have already been received by the Bank. I would now like you to send English language summaries of these to the Secretary's Department as expeditiously as possible under the procedure outlined in para. 4 and to arrange to have the receipt of the EA reports noted in the next Monthly Operational Summary.
9. I would like to use this occasion to remind you of the requirement for consultations by the borrower with affected groups and local NGOs during the preparation of the EA. Please refer to my memorandum of April 10, 1990 "Environmental Assessments: Instructions to Staff on the Handling of the Borrower's Consultation with Affected Groups and Relevant Local NGOs," a copy of which is attached.

Attachment



Moeen A. Qureshi

cc: Messrs. Conable (EXC), Thalwitz (PRESV), Shihata (LEGVP), Stern (FISVP), Thahane (SECGE), Ryrie (CEXVP) Rajagopalan (PRSVP), Piddington (ENVDR), Rovani (DGO)

The World Bank
Washington, D.C. 20433
U.S.A.

MOEEN A. QURESHI
Senior Vice President, Operations

April 10, 1990

To All Operations Staff

**RE: Environmental Assessments: Instructions to Staff on the Handling of
The Borrower's Consultations with Affected Groups and Relevant
Local NGOS**

The Operational Directive 4.00 Annex A, Environmental Assessment states in paragraph 12 that ..."the Bank expects the borrower to take the views of affected groups and relevant local NGOs fully into account in project design and implementation." The following instructions are designed to serve as a guideline to staff on the handling of the borrower's consultations with affected groups and relevant local NGOs with respect to Environmental Assessments (EAs) for IDA operations having significant environmental impact.

- (a) Borrowers seeking financial support from IDA for a project deemed to require an EA, i.e. a project assigned to category A, are expected, as part of the assessment process, to consult in a meaningful way with affected groups and relevant local NGOs. This consultation should include feedback to those consulted, with particular attention to the sharing of the conclusions of the EA. Generally, the objective of providing feedback is best accomplished by distributing a completed EA report to those consulted. Distributing the completed EA is, of course, the responsibility of the government concerned. IDA will not distribute an EA received for appraisal purposes outside of IDA without the prior consent of the government concerned.
- (b) It is recognized that there may be instances where a member country, for legal or other reasons, cannot make a report available to its affected citizens. This is not expected to occur very often in practice since governments will be aware of IDA's requirements in advance. Should such a situation arise, however, it will be necessary to consider the specific circumstances, assess whether the local consultation has been effective, and what alternative means have been used to convey to the relevant local NGOs and affected groups the results of the consultation process. IDA's management would then consult with the Executive Directors as to how to proceed under these circumstances.
- (c) In short, IDA staff will satisfy itself as part of the appraisal process, that meaningful consultations, as defined in (a) and (b) above have taken place between the borrower and affected groups and relevant local NGOs.

MOEEN A. QURESHI
Senior Vice President, Operations

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April 10, 1990

To All Operations Staff

**RE: Environmental Assessments: Instructions to Staff on the Handling of
The Borrower's Consultations with Affected Groups and Relevant
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The Operational Directive 4.00 Annex A, Environmental Assessment states in paragraph 12 that ..."the Bank expects the borrower to take the views of affected groups and relevant local NGOs fully into account in project design and implementation." The following instructions are designed to serve as a guideline to staff on the handling of the borrower's consultations with affected groups and relevant local NGOs with respect to Environmental Assessments (EAs) for IDA operations having significant environmental impact.

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- (c) In short, IDA staff will satisfy itself as part of the appraisal process, that meaningful consultations, as defined in (a) and (b) above have taken place between the borrower and affected groups and relevant local NGOs.

Rajagopalan, Visvanathan
PRSV
S 5055

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The World Bank
Washington, D.C. 20433
U.S.A.

MOEEN A. QURESHI
Senior Vice President, Operations

November 21, 1990

To All Operations Staff

**Environmental Assessments: Instructions to Staff on the Release
of Environmental Assessments to Executive Directors**

1. Operational Directive 4:00, Annex A, "Environmental Assessment" makes it clear that the Environmental Assessment (EA) report prepared for a proposed Bank-financed project is the borrower's property, but notes that the Bank encourages the borrower to release relevant information to appropriate interested parties (para. 25). In light of the outcome of the Ninth Replenishment of IDA, management decided that for both IDA and Bank operations, the EA report would be made available to Executive Directors when it is initially received, i.e., in advance of project appraisal. The following paragraphs set forth the procedure for providing an English language summary of the EA report to all Executive Directors, and the full EA report to those Executive Directors who request a copy.

2. Since the EA report is the borrower's property, the Bank must obtain the borrower's permission for releasing the report to Executive Directors. This permission must be obtained early in the project cycle, normally when the need for an EA for a Category A project (where there may be a diverse and significant environmental impact) is identified, but no later than the time when the terms of reference for the EA are discussed with the borrower (OD 4.00, Annex A, para. 21). If the borrower indicates that it is not prepared to release the EA report to the Executive Directors, the Bank should not proceed with further work on the project, unless such work is recommended by the Regional Vice President and my approval is received.

3. To help ensure a complete EA report, the borrower should be provided the "Sample Outline of Project Specific EA Reports" (OD 4.00, Annex A1) at the time the terms of reference for the EA are reviewed by the Bank and informed of the need to have the report written in English, French, or Spanish. The requirement in the Outline for an executive summary, to be prepared in English, should specifically be called to the borrower's attention.

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The memorandum should identify the responsible TM and inform the Executive Director that he is available for consultation. Discussions with Executive Directors should be limited to an exchange of information and should not be a forum for negotiations on the environmental aspects of project design. The memorandum should also state that the Executive Director may request the full EA report from the Country Department director. The transmittal memorandum for this report from the Country Department director to the Executive Director, copied to the Regional Environment division chief, should repeat the statements in (a) and (b) above.

5. The TM should also ensure that the next issue of the Monthly Operational Summary contains the notation "EA Report received" in the column entitled "Stage of Processing and Action on Procurement." The receipt of the EA report should also be noted in the next issue of the Monthly Operational Summary which contains information on the EA process (Part B).
6. Any revisions to the EA that are required as a result of appraisal should be highlighted in the EA annex to the Staff Appraisal Report (OD 4.00, Annex A, para. 26). The EA annex should also indicate if a revised EA report has been prepared and included in the project file.
7. In the case of EAs underway before the issuance of these instructions, the borrower's agreement to release the EA report to Executive Directors should immediately be sought. In the event the borrower is not prepared to release the EA report, the Regional Vice President should review the situation and seek my approval if he still wishes to proceed with project preparation.
8. A number of EA reports have already been received by the Bank. I would now like you to send English language summaries of these to the Secretary's Department as expeditiously as possible under the procedure outlined in para. 4 and to arrange to have the receipt of the EA reports noted in the next Monthly Operational Summary.
9. I would like to use this occasion to remind you of the requirement for consultations by the borrower with affected groups and local NGOs during the preparation of the EA. Please refer to my memorandum of April 10, 1990 "Environmental Assessments: Instructions to Staff on the Handling of the Borrower's Consultation with Affected Groups and Relevant Local NGOs," a copy of which is attached.

Attachment

Moeen A. Qureshi

Moeen A. Qureshi

cc: Messrs. Conable (EXC), Thalwitz (PRESV), Shihata (LEGVP), Stern (FISVP), Thahane (SECGE), Ryrie (CEXVP) Rajagopalan (PRSV), Piddington (ENVDR), Rovani (DGO)

OFFICE MEMORANDUM

DATE: October 23, 1989

TO: PRE Directors

FROM: J. Pratt, Acting Director, ENV

EXTENSION: 33202

SUBJECT: Operational Directive on Environmental Assessment

RECEIVED
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89 OCT 25 AM 11:12

SECTOR POLICY & RESEARCH

WJ
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At a recent Directors' meeting, a number of you expressed considerable interest in the new Operational Directive on Environmental Assessment. This apparently was not circulated to you at an earlier stage, for which I apologize. A copy of the Directive is attached. Your comments and reactions are still very welcome, especially as we will want to collaborate very closely with your staff in developing sector specific policies in this area as we proceed with implementation. I have asked Mr. Bernie Baratz (33401), who is PRE's member of the EAOD steering group, to serve as the contact point for gathering and integrating any feedback and suggestions you may have.

JPratt/rcr
Attachment

cc: Messrs. Rajagopalan (PREVP), Baratz (ENVOS), Rees (ASTEN),
Lintner (EMTEN), Ettinger (COD)
Ms. Davis (ASTEN)

VR

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

SecM89-1138

FROM: Vice President and Secretary

September 5, 1989

NOTICE OF SEMINAR

Draft Operational Directive on Environmental Assessment

A seminar of the Executive Directors will be held on Friday, September 8, 1989 at 2:30 p.m. in the Board Room, to discuss the "Draft Operational Directive on Environmental Assessment (SecM89-1130, dated August 31, 1989).

Distribution:

Executive Directors and Alternates
President
Senior Vice Presidents
Senior Management Council
Vice Presidents, IFC
Directors and Department Heads, Bank and IFC

International Bank for Reconstruction and Development

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WBG ARCHIVES

SecM89-1130

FROM: The Deputy Secretary

August 31, 1989

DRAFT OPERATIONAL DIRECTIVE ON ENVIRONMENTAL ASSESSMENT

Attached is a draft Operational Directive on Environmental Assessment which will be discussed at a seminar scheduled to be held on September 8, 1989.

Questions on this Directive should be referred to Mr. Piddington (X33202) or Mr. Etinger (X73352).

Distribution:

Executive Directors and Alternates
President
Senior Vice Presidents
Senior Management Council

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

August --, 1989

**Operational Directive 4.00, Annex A:
Environmental Assessment**

1. Attached for insertion in your new Operational Manual is OD 4.00, Annex A, Environmental Assessment. This annex sets out the Bank's policies and procedures for conducting environmental assessments (EAs) of proposed projects. It standardizes and formalizes a process which is already taking place for projects with major environmental impacts.
2. This annex makes the following points:
 - (a) The purpose of EA is to ensure environmentally sustainable development through the timely incorporation of environmental issues into project design (para. 2);
 - (b) The EA's scope, depth, and analytical techniques depend on project circumstances (para. 3);
 - (c) EA is part of project preparation and is therefore the borrower's responsibility (para. 4);
 - (d) Regional and sectoral EAs can reduce the work subsequently needed on project-specific EAs (paras. 6-8);
 - (e) Alternatives to EA that focus on a narrower range of issues are acceptable for projects with limited potential environmental impacts (para. 9);
 - (f) In the EA process, inter-agency coordination and the involvement of affected groups and NGOs are important (paras. 11-12);
 - (g) The EA process should be used to strengthen environmental capability in the country (para. 13);
 - (h) In special cases, environmental advisory panels are desirable (para. 15);
 - (i) In the Bank, the task manager (TM), supported by the Regional environment division (RED), supervises the implementation of the EA process (para.16);
 - (j) The IEPS meeting decides whether an EA or a more limited environmental analysis is to be done (para. 18); and
 - (k) The final EA report should normally be available to the Bank prior to appraisal (para. 21), and its recommendations reviewed and incorporated into the project and the Staff Appraisal Report (paras. 24-25).

3. Projects currently in advanced stages of preparation would not normally be subject to this annex. For other projects already past the IEPS stage, the TM and the RED should review the status and recommend how to achieve the objectives of this annex within the existing time and resource constraints. All projects which reached the IEPS stage after September 15, 1989, would be fully subject to this directive.

4. Country departments should discuss with borrowers how to achieve smooth and efficient implementation of this annex through, e.g., EA seminars for implementing agencies' management, training programs for their environmental staff, and preparation of EA manuals (by sector) and procedures for the country.

5. Questions on this annex should be referred to the Director, Environment Department.

6. Additional copies are available on a self-service basis in H 4234.

Operational Directive 4.00, Annex A:
Environmental Assessment

Introduction

1. This annex outlines Bank policy and procedures for the environmental assessment (EA) of Bank investment lending operations,¹ and related types of environmental analysis. For the purpose of this annex, environmental assessment covers also social concerns affecting, for example, health, cultural property, resettlement, and tribal people.² EAs utilize the findings of country environmental studies and action plans which cover nationwide issues, the overall policy framework, legislation, and institutional capabilities in the country.

Purpose and Nature of EA

2. The purpose of EA is to ensure that the development options under consideration are environmentally sound and sustainable and that any environmental consequences are recognized early in the project cycle and taken into account in project design. EAs identify ways of improving projects environmentally, and minimizing, mitigating, or compensating for adverse impacts. By alerting project designers, implementing agencies, and

1/ References to the Bank include IBRD and IDA. Investment lending covers specific and sector investments including rehabilitation, loans through financial intermediaries, and the investment component of hybrid loans. Sector and structural adjustment loans are excluded from consideration, but are subject to the general policies in OMS 2.36, Environmental Aspects of Bank Work (to be reissued as OD 4.00, Environmental Policies). IFC is developing similar internal procedures for environmental review, which reflect the special circumstances of its work. MIGA will cooperate with the Bank to ensure that the objectives of the OD are met in MIGA's operations to the extent possible, bearing in mind MIGA's special circumstances.

2/ For Bank policies and procedures see (a) OPN 11.03, Management of Cultural Property in Bank-Financed Projects, to be reissued as OD 4.50, Cultural Property; (b) OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects, to be reissued as OD 4.30, Involuntary Resettlement; and (c) OMS 2.34, Tribal People in Bank-Financed Projects, to be reissued as OD 4.40, Tribal People.

borrower and Bank staff to issues early, EAs (a) enable them to address environmental issues in a timely and practical fashion, and (b) help avoid costs and delays due to unanticipated environmental problems. EAs also provide a formal mechanism to help ensure inter-agency coordination and to address the concerns of potentially affected parties and local NGOs. In addition, they can play a major role in building environmental capability in the country.

3. Like economic, financial, institutional, and engineering analyses, EA is part of project preparation, and is the borrower's responsibility. Close integration of EA with these other aspects of project preparation is essential to ensure that environmental considerations are given due weight in project selection, siting, and design decisions.

4. EA is a flexible procedure, which can vary in breadth, depth, and type of analysis, depending on the project. It may be carried out at one point in time, stretched over a year to account for seasonal variations, or done in discrete stages.

Types of Environmental Analysis

Project-Specific EAs

5. Project-specific EAs are used to analyze specific investment projects (e.g., dams, factories, irrigation systems) with significant environmental issues. The level of detail and sophistication of analysis of each significant issue should be commensurate with the magnitude of expected impacts. A project-specific EA should normally cover: (a) existing environmental "baseline" conditions; (b) potential environmental impacts, direct and indirect, including opportunities for environmental enhancement;³ (c) systematic environmental comparison of alternative investments, sites, technologies, and designs; (d) preventive, mitigatory, and compensatory measures, generally in the form of an action plan; (e) environmental management and training, and (f) monitoring. To the extent possible, capital and recurrent costs, environmental staffing, training and monitoring requirements, and the benefits of proposed alternatives and mitigation measures should be quantified. Annex A1 gives a sample outline for a project-specific EA report, and Annex A2 is a checklist of specific issues to be covered where relevant.

3/ Indirect impacts are the induced consequences of the project which occur later or in another part of the environment, e.g., if a river is channelled or dammed, its capacity for self-purification may be reduced and the original aquatic ecosystem damaged or destroyed.

Regional EAs

6. Regional EAs are used where a number of significant development activities are planned for a reasonably localized area. In such cases, they are generally more efficient than a series of project-specific EAs, and may identify issues that the latter might overlook (e.g., interaction among effluents, or competition for water, land, or timber). Regional EAs compare alternative development scenarios, and recommend environmentally sustainable growth rates, land use patterns and policies. The study area is normally defined on a physical and/or biological basis (e.g., airshed, habitat type, river basin); however, regional EAs with an institutional focus might follow administrative boundaries instead. In some cases, a regional EA may be sufficiently substantial in scope to constitute a separate project.

Sectoral EAs

7. Sectoral EAs are used for the overall design of sector investment programs. They are particularly suitable for reviewing (a) sector investment alternatives; (b) the effect of sector policy changes; (c) institutional capacities and requirements for environmental review, implementation and monitoring at the sectoral level; and (d) cumulative impacts of many relatively small, similar investments which do not merit individual project-specific EAs.

8. In some cases, regional or sectoral EAs cover all the normal requirements of project-specific EAs. More often, the latter are still needed for major investments (see para. 14 concerning sector investment loans), but the regional or sectoral EAs will have identified the relevant issues, collected much of the data, and, in general, greatly reduced the work needed in the project-specific EAs.

Alternatives to EAs

9. Alternative approaches that focus on a narrower range of issues are acceptable for many types of projects, especially smaller ones and those not in environmentally sensitive areas. These approaches may be more effective in integrating environmental concerns into the borrower's planning process. Such alternative approaches include:

- (a) integrated pest management programs for many agricultural projects which do not involve major irrigation or land development;
- (b) specific environmental design criteria and pollution standards for small- or medium-scale industrial plants; and
- (c) specific environmental design criteria and construction supervision programs for small-scale rural works projects.

Other examples of projects for which alternative approaches are generally acceptable are listed in Annex A3, para. 3, under "Category B."

Consideration of Global Issues

10. While EAs should collect the relevant data, the Bank does not expect global environmental issues (ozone depletion, global warming, etc.) to normally be analyzed extensively in EAs. Major global environmental issues are monitored by the Bank's Office of the Principal Adviser, Science and Technology, and other specialized organizations responsible for scientific investigations on these issues. The Bank draws upon prevailing views in guiding the development of its own environmental, economic, and sectoral policies, with a view to minimizing possible adverse impacts on global systems such as the atmosphere and oceans.

Project Institutional Aspects

Inter-Agency Coordination

11. Because environmental issues generally involve national, regional, and local government agencies, and cover a broad range of responsibilities (wildlife, health, water and land use, tourism, etc.), coordination among government agencies in the EA process is crucial. This is best achieved through inter-agency meetings at key points in the EA cycle. The first meeting, normally held soon after a decision is made to prepare an EA, identifies the issues, types of analysis required, sources of relevant expertise, responsibilities and schedule for the EA, and mitigating measures to be considered. Another meeting should normally be held when the EA report is completed and submitted for final government review.

Involvement of Affected Groups and Nongovernmental Organizations

12. The Bank expects the borrower to take the views of affected groups and local nongovernmental organizations (NGOs) fully into account in project design and implementation, and in particular in the preparation of EAs (see OD 14.70, Involving Nongovernmental Organizations in Bank-Supported Activities). This is important in order to understand both the nature and extent of any social or environmental impact and the acceptability of proposed mitigation measures. An approach which has proven effective in many countries is to expand the initial inter-agency meeting (para. 11) into a "forum" or "scoping session" with representatives of affected groups and relevant NGOs. Similar consultations after the EA report is completed are also a valuable way to obtain feedback on the report and to increase community cooperation in implementing the recommendations.

Strengthening Environmental Capabilities

13. The ultimate success of EA depends upon the development of environmental capability and understanding in the agencies concerned. Projects with major potential impacts normally require the establishment or strengthening of in-house environmental units for the project (located or

represented on site), the implementing agency and the ministry. Involvement of these units throughout the EA process (a) ensures that the agency's/ministry's knowledge and perspective are taken into account in the EA; (b) provides on-the-job training for the staff; and (c) provides continuity for the implementation of the EA's recommendations. Such projects normally need to include an institutional development and training component for such units. In addition, to help develop EA capability in the country, the Bank should (a) encourage the use of local expertise in EA preparation (in consortia with international consultants, where appropriate), and (b) help arrange EA training courses for local specialist staff and consultants to attend.

Sector and Financial Intermediary Lending

14. For sector investment loans and loans through financial intermediaries, subproject details may not be known at the time of project appraisal. In such cases, the project implementing institutions will need to screen subprojects (see para. 19) and carry out environmental analyses consistent with this directive. To ensure that this can be done, the Bank should appraise the implementing agencies' capabilities for EA, and strengthen them where necessary. The appraisal mission should also indicate the proper division of responsibility for preparing and reviewing EAs between the ultimate borrower, the financial intermediary or sector agency, and the agencies responsible for environmental regulation.

Environmental Advisory Panels

15. For major projects with serious and multi-dimensional environmental concerns, the Bank should review with the borrower whether the latter needs to engage an advisory panel of independent, internationally recognized, environmental specialists, to review and advise on, inter alia, the TOR and findings of the EA, the implementation of its recommendations, and the development of environmental capacity in the implementing agency/ministry. Such panel should meet at least once a year until the project is operating routinely and environmental issues have been addressed satisfactorily.⁴

EA Procedures

Overview

16. Though EA preparation is the responsibility of the borrower, the task manager (TM) in the Bank generally supervises the EA process, with support mainly from the Regional environment division (RED). The borrower

^{4/} See OD 4.00 Annex B, Environmental Policy for Dam and Reservoir Projects, para. 18, for more detail on the selection and functions of the panel.

and the Bank should agree as early as possible on the selection of consultants or borrower staff to prepare the EA, and the EA procedures, scheduling, and outline. Major steps in the EA process normally include: (a) screening, (b) the initial executive project summary (IEPS), (c) preparation of terms of reference (TORs) for the EA, (d) EA preparation, (e) EA review and incorporation of environmental measures into the project, and (f) supervision and ex-post evaluation.

17. Since project and country conditions, national legislation, and institutional experience vary among borrowers, both the borrower and the Bank must exercise judgement in using these procedures to design and implement projects which are both environmentally and economically sound, and are consistent with the environmental laws, policies, and procedures of borrowers, the Bank, and cofinanciers. The Environment Department (ENV), Legal Department, and the REDs maintain information on these requirements.

Screening

18. Projects should be screened at identification by the TM, with advice from the RED, and assigned to one of the following categories based upon the nature, magnitude and sensitivity of environmental issues:

- Category A - EA is normally required as the project may have diverse and significant environmental impacts;
- Category B - More limited environmental analysis is appropriate, as the project may have specific environmental impacts; and
- Category C - Environmental analysis is normally unnecessary.
- Category D - Environmental projects, for which separate EAs may not be required, as environment would be a major focus of project preparation.

Annex 3 gives illustrative lists, to be applied flexibly, of the types of project/component in each category.

Initial Executive Project Summary

19. In the Initial Executive Project Summary (IEPS), the TM, in consultation with the RED, should (a) identify key environmental issues, (b) indicate whether an EA or alternative type of environmental analysis is recommended, and (c) provide a preliminary preparation schedule. If an EA is not likely to be available prior to appraisal, the IEPS should propose special procedures to address the situation. The IEPS meeting would confirm the type and timing of environmental analysis (although in the event of inadequate information, the decision may be deferred). The TM should ensure that the decision to prepare an EA and the main issues to be examined are mentioned in the Monthly Operational Summary.

Preparation of TORs for the EA

20. Following the IEPS meeting, the Bank should discuss with the borrower the scope of the EA, and assist the borrower, as necessary, in preparing TORs for the EA. A field visit by Bank environmental staff is generally desirable to confirm the issues to be covered in the TORs. The Bank should ensure that the TORs provide for adequate inter-agency coordination (para. 11) and consultation with affected groups and NGOs (para. 12).

EA Preparation

21. An EA for a major project typically takes 6-18 months to prepare and review. EA drafts should be available at key points in the project cycle. The final EA should be available prior to appraisal, to minimize the risk of project design changes and resultant delays at a late stage.

22. In most cases, the EA should form part of the overall feasibility study, so that the EA's findings are directly integrated into project design. However, the EA is normally prepared separately by analysts with appropriate expertise. For projects which would have major impacts, such as large dams or projects involving large scale resettlement, it is recommended that the borrower retain independent experts not affiliated with the project. Borrowers may request Bank assistance for financing EAs as part of an advance from the Project Preparation Facility (PPF)⁵ or, if anticipated EA costs are more than US \$100,000 equivalent, from the Bank's Technical Assistance Grant Program for the Environment. EAs generally account for 1-10 percent of the cost of project preparation.

23. For some projects, a full year of baseline data is desirable to capture the seasonal effects of certain environmental phenomena; however, as waiting for such data could delay critical project decisions, short-term monitoring should be used to provide conservative estimates of environmental impacts, while longer-term data collection is being carried out. Since special care in designing the baseline monitoring program is warranted, the borrower should be encouraged to discuss the matter with the Bank.

EA Review and Project Appraisal

24. The borrower should submit the final EA report to the Bank prior to Bank appraisal. The EA report is the borrower's property, but the Bank encourages the borrower to release relevant information to appropriate interested parties. The Final Executive Project Summary (FEPS) should summarize the status of the EA and describe how major environmental issues have been resolved or are to be addressed, noting any proposed

5/ See OMS 2.15, Project Preparation Facility, to be reissued as OD 8.00.

conditionality. The appraisal mission should review both the procedure and substantive elements of the EA with the borrower, resolve any issues, assess the adequacy of the institutions responsible for environmental planning and management in light of the EA's findings, and determine if the EA's recommendations are properly addressed in project design and economic analysis.

Staff Appraisal Report (SAR) and Loan Documents

25. The EA procedures followed and the main findings of the EA should be explained briefly in the text of the SAR. In addition, an SAR annex should summarize the EA more fully, covering, inter alia, environmental baseline conditions, alternatives considered, mitigating and compensatory actions, capability of environmental units and measures to strengthen them, environmental monitoring arrangements, and consultations with affected groups and NGOs. These factors will provide the basis for the RED's formal environmental clearance prior to the authorization of negotiations by the Regional vice president. Measures critical to sound project implementation may require specific conditionality in the loan documents.

Supervision

26. EA recommendations provide the basis for supervising the environmental aspects of project implementation. Compliance with environmental conditionality, the status of mitigating measures, and the findings of environmental monitoring programs should be part of borrower reporting requirements and project supervision.

Ex Post Evaluation

27. The project completion report (PCR)⁶ should evaluate (a) environmental impacts anticipated in the EA report, as well as any unanticipated ones; and (b) the effectiveness of mitigating measures taken and of institutional development and training.

^{6/} See the OPNSV memoranda, Guidelines for Preparing Project Completion Reports, July 17, 1989, and OMS 3.58, General Guidelines for Preparing Project Completion Reports, which are to be combined and reissued as OD 13.55, Project Completion Reports.

Sample Outline of a Project-Specific EA Report

1. EA reports should be concise and limited to significant environmental issues. The level of detail and sophistication of analysis should be commensurate with the magnitude of potential impacts. The target audience should be project designers, implementing agencies, and borrower and Bank staff.
2. The EA report should include:
 - (a) Executive Summary. Concise discussion of significant findings and recommended actions.
 - (b) Policy, legal, and administrative framework within which the EA is prepared. The environmental requirements of any cofinanciers should be explained.
 - (c) Project description in a geographic, ecological, social, and temporal context, including any off-site investments that may be required by the project (e.g. dedicated pipelines, access roads, power plants, water supply, housing, raw materials and product storage facilities).
 - (d) Baseline Data. Dimensions of the study area and description of relevant physical, biological, and socio-economic conditions, including any changes anticipated before the project commences. Current and proposed development activities within the project area (but not directly connected to the project) should also be taken into account.
 - (e) Environmental Impacts. The positive and negative impacts likely to result from the proposed project should be identified and assessed. Mitigation measures and the residual impacts that cannot be mitigated should be identified. Opportunities for environmental enhancement should be explored. The extent and quality of available data, key data gaps, and uncertainties associated with predictions should be identified/estimated. Topics that do not require further attention should be specified.
 - (f) Analysis of Alternatives. Proposed investment design, site, technology, and operational alternatives should be compared systematically in terms of their potential environmental impacts, capital and recurrent costs, suitability under local conditions, and institutional, training, and monitoring requirements. To the extent possible for each of the alternatives, the environmental costs and benefits should be quantified, and economic values attached where feasible.
 - (g) Mitigation Plan. Feasible and cost-effective measures which may reduce potentially significant adverse environmental impacts to acceptable levels should be proposed, and the potential environmental impacts, capital and recurrent costs,

and institutional and training requirements of those measures estimated. The plan (sometimes known as an "action plan" or "environmental management plan") should provide details on proposed work programs and schedules, to ensure that the proposed environmental actions are in phase with engineering activities throughout preparation. The plan should consider compensatory measures if mitigation measures are not feasible or cost-effective.

- (h) Environmental Management and Training. The existence, role and capability of environmental units at the on-site, headquarters and agency/ministry level should be assessed, and recommendations made concerning the establishment and/or expansion of such units, and the training of staff to the point that EA recommendations can be implemented.
- (i) Monitoring Plan regarding environmental impacts and performance. The plan should specify the type of monitoring, who would do it, how much it would cost, and what other inputs (e.g., training) are necessary.

Appendices

- (i) List of EA preparers--individuals and organizations.
- (ii) References--written materials used in study preparation. This is especially important given the large amount of unpublished documentation often used.
- (iii) Record of Inter-Agency/Forum Meeting, including list of both invitees and attendees.

Checklist of Potential Issues for an EA

Where applicable, EAs should address the following issues, which are subject to the Bank policies and guidelines identified below.

- (a) Agrochemicals. The Bank promotes the use of integrated pest management (IPM) and the careful selection, application, and disposal of pesticides (see OPN 11.01, Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and their Procurement when Financed by the Bank, to be reissued as OD 4.00, Annex C, Selection and Use of Pesticides). The use of fertilizers, due to their impacts on surface and groundwater quality, must also be carefully assessed;
- (b) Biological Diversity. The Bank promotes conservation of endangered plant and animal species, critical habitats, and protected areas (para. 9b, OMS 2.36, Environmental Aspects of Bank Work, and OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).
- (c) Coastal and Marine Resources Management. Guidelines are available from the Environmental Department (ENV) on the planning and management of coastal marine resources including coral reefs, mangroves, and wetlands.
- (d) Cultural Properties. OPN 11.03, Management of Cultural Property in Bank-Financed Projects (to be reissued as OD 4.50, Cultural Property), confirms the Bank's commitment to actively protect archaeological sites, historic monuments, and historic settlements.
- (e) Dams and Reservoirs. OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, provides specific guidance for addressing environmental issues in planning, implementation, and operation of dam and reservoir projects.
- (f) Hazardous and Toxic Materials. Guidelines are available from ENV on the safe manufacture, use, transport, storage, and disposal of hazardous and toxic materials.
- (g) Induced Development and Other Socio-Cultural Aspects. Secondary growth of settlements and infrastructure, often referred to as "induced development" or "boomtown" effects, can have major indirect environmental impacts. The costs of addressing this problem must frequently be borne by relatively weak local governments.
- (h) Industrial Hazards. All energy and industry projects should include a formal plan to prevent and manage industrial hazards. (See Techniques of Assessing Industrial Hazards - A Manual, World Bank Technical Paper No. 55.)

- themselves
has taken place*
- (i) International Treaties and Agreements on the Environment and Natural Resources. EAs should review the status and application of such current and pending treaties and agreements, including their notification requirements. Bank staff should assure compliance with relevant treaties and agreements. The Legal Department maintains a list of international treaties, and could obtain, whenever required, information on applicable law in individual countries.
 - (j) International Waterways. OMS 2.32, Projects on International Waterways (to be re-issued as OD 7.50), provides guidance on this matter. This OMS exempts from notification requirements rehabilitation projects which will not affect the quality or quantity of water flows.
 - (k) Involuntary Resettlement. OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects (to be reissued as OD 4.30, Involuntary Resettlement), provide guidance.
 - (l) Land Settlement. Due to the complex physical, biological, socio-economic, and cultural impacts, land settlement should generally be carefully reviewed in EAs (see OD 4.31, Land Settlement, to be issued).
 - (m) Natural Hazards. EAs should review whether the project may be affected by natural hazards (e.g., earthquakes, floods, volcanic activity), and should propose specific measures to address these concerns when appropriate, (see OD 8.50, Emergency Recovery Assistance, to be issued).
 - (n) Occupational Health and Safety. All industry and energy projects should include a formal plan to promote occupational health and safety (Occupational Health and Safety Guidelines, 1988).
 - (o) Tribal Peoples. OMS 2.34, Tribal People in Bank-Financed Projects (to be reissued as OD 4.40, Tribal People), provides specific guidance for addressing the rights of tribal peoples, including traditional land and water rights.
 - (p) Tropical Forests. The Bank co-authored the Tropical Forest Action Plan (published in 1984); up-to-date information is available from ENV. OPN 11.02, Wildlands: Their Protection and Management in Economic Development (to be reissued as OD 4.00, Annex D), also addresses issues relating to tropical forests.

- (q) Watersheds. Bank policy is to promote protection and management of watersheds as an element of lending operations for dams, reservoirs, and irrigation systems (OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, para. 6).
- (r) Wetlands. The Bank promotes conservation and management of wetlands (e.g., estuaries, lakes, mangroves, marshes, and swamps). This is covered by OPN 11.02 on Wildlands (see (s) below).
- (s) Wildlands. The Bank is committed to protect wildlands, including through compensatory measures when lending could result in adverse impacts (see OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).

Environmental Screening

Introduction

1. The task manager (TM), in consultation with the Regional environmental division is responsible for screening a proposed project to determine the appropriate type of environmental analysis, based on the nature, potential magnitude, and sensitivity of the issues. The categories below, based upon prior Bank staff experience, are strictly illustrative. Alternatives to EA are acceptable where they are expected to result in an environmentally sound project.

2. Category A: Projects/Components which may Have Diverse and Significant Environmental Impacts - Normally Require EA¹

- (i) Aquaculture/Mariculture (large scale);
- (ii) Dams and Reservoirs;²
- (iii) Electrical Transmission (large scale);
- (iv) Industrial Plants (large scale) and Industrial Estates;
- (v) Irrigation and Drainage (large scale);
- (vi) Land Clearance and Leveling;
- (vii) Mineral Development (including oil and gas);
- (viii) Pipelines (oil, gas and water);
- (ix) Port and Harbor Development;
- (x) Reclamation and New Land Development;
- (xi) Resettlement;³

1/ Except generally for projects directed to rehabilitation, improved operation and maintenance, and limited upgrading of facilities.

2/ See OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects.

3/ While OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects (to be reissued as OD 4.30, Involuntary Resettlement), covers the social aspects of resettlement, the environmental implications of the resettlement itself can be major.

- (xii) River Basin Development;
- (xiii) Rural Roads;
- (xiv) Thermal and Hydropower Development;
- (xv) Tourism (large scale);
- (xvi) Transportation (airports, railways, roads, waterways);
- (xvii) Urban Development (large scale); and,
- (xviii) Urban Water Supply and Sanitation (large scale).
- (xix) Manufacture, Transportation, and Use of Pesticides or other Hazardous and/or Toxic Materials;⁴ and
- (xx) Projects which Pose Serious Accident Risk.⁵

3. Category B: Projects/Components which may Have Specific Environmental Impacts - More Limited Environmental Analysis Appropriate

Projects in this category normally require more limited environmental analysis than an EA. A wide range of environmental guidelines, developed by a number of organizations, are applicable. In addition, specific environmental pollution standards or design criteria can be developed for individual projects.

- (i) Agroindustries (small scale);
- (ii) Aquaculture and Mariculture (small scale);
- (iii) Electrical Transmission (small scale);
- (iv) Industries (small scale);
- (v) Irrigation and Drainage (small scale);

^{4/} In some cases, adherence to existing directives is an acceptable alternative to an EA (see OD 4.00 Annex C, Selection and Use of Pesticides, to be reissued). Certain materials (e.g. PCBs) are not to be used in Bank projects and other materials (e.g. asbestos) are to be used only under extremely restricted conditions. A Restricted Toxic Materials List (RTML) will be available from ENV and updated periodically.

^{5/} See Techniques of Assessing Industrial Hazard - A Manual, World Bank Technical Paper No. 55.

- (vi) Mini Hydro-Power;
- (vii) Public Facilities (hospitals, housing, schools, etc.);
- (viii) Renewable Energy;
- (ix) Rural Electrification;
- (x) Telecommunications;
- (xi) Tourism (small scale);
- (xii) Urban Development (small scale); and,
- (xiii) Rural Water Supply and Sanitation.

4. Category C: Projects/Components which Normally Do Not Result in Significant Environmental Impact - Environmental Analysis Normally Unnecessary

Opportunities to enhance environmental benefits should be sought in these projects.

- (i) Education (except school construction);
- (ii) Family Planning;
- (iii) Health (except hospital construction);
- (iv) Nutrition;
- (v) Institutional Development; and
- (vi) Technical Assistance.

5. Category D: Environmental Projects

Projects with a major environmental focus may not require a separate EA, as environment would be a major part of the project preparation.

6. Emergency Recovery Projects

Because emergency recovery projects (a) need to be processed rapidly and (b) seek mainly to restore existing facilities, they normally would not require a full EA. However, the extent to which the emergency was precipitated and/or exacerbated by inappropriate environmental practices should be determined, and corrective measures built into either the emergency project or a future lending operation.⁶

^{6/} See OD 8.50, Emergency Recovery Assistance, to be issued.

OFFICE MEMORANDUM

DATE: September 25, 1989

TO: Distribution

FROM: Ducksoo Lee, Director, COD

EXTENSION: 73348

SUBJECT: OD 4.00, Annex A: Environmental Assessment

RECEIVED

116
89 SEP 28 PM 5:04

SECTOR POLICY & RESEARCH

Attached for your information is the directive on Environmental Assessment which has been approved by the President. The OD is being circulated in advance of the routine distribution to staff to alert senior managers to

- (a) the urgency of its implementation: all projects which reach the IEPS stage after October 15, 1989, are fully subject to this directive; and
- (b) possible enquiries from borrowing countries on account of the wide publicity received by the directive.

Attachment

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JDM:PC#3:AMB

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Rajagopalan, Visvanathan
S 5055

September 21, 1989

**Operational Directive 4.00, Annex A:
Environmental Assessment**

1. Attached for insertion in the new Operational Manual is OD 4.00, Annex A, which provides guidance to staff on the Bank's policies and procedures for conducting environmental assessments (EAs) of proposed projects. It standardizes and formalizes a process which is already taking place for projects with major environmental impacts.
2. This annex makes the following points:
 - (a) EA is a flexible procedure, whose scope, depth, and analytical techniques vary by project (para. 1);
 - (b) The purpose of EA is to ensure environmentally sustainable development through the timely incorporation of environmental issues into project design (para. 3);
 - (c) EA is part of project preparation and is therefore the borrower's responsibility (para. 4);
 - (d) Regional and sectoral EAs are important tools for identifying environmental issues, and can reduce the work subsequently needed on project-specific EAs (paras. 6-8);
 - (e) Alternatives to EA that focus on a narrower range of issues are acceptable for projects with limited potential environmental impacts (para. 9);
 - (f) In the EA process, inter-agency coordination and the involvement of affected groups and local NGOs are important (paras. 11-12);
 - (g) The EA process should be used to strengthen environmental capability in the country (para. 13);
 - (h) In special cases, environmental advisory panels may be needed (para. 15);
 - (i) In the Bank, the task manager (TM), supported by the Regional environment division (RED), assists and monitors the implementation of the EA process (para.16);
 - (j) The type, timing and main issues of environmental analysis should be confirmed at the Initial Executive Project Summary (IEPS) meeting (para. 19), and reported and updated in the Monthly Operational Summary (para. 20); and

- (k) The final EA report should normally be available to the Bank prior to appraisal (para. 22), and its recommendations reviewed and incorporated into the Board documents (paras. 25-26).

3. All projects which reach the IEPS stage after October 15, 1989, are fully subject to this directive. Projects currently in advanced stages of preparation are not normally subject to this annex. For other projects already past the IEPS stage, the TM and the RED should, by December 31, 1989, review the status and recommend how to achieve the objectives of this annex within the existing time and resource constraints.

4. A systematic training program for Bank staff on the application of this directive is currently being designed under the leadership of the Environment Department.

5. Achieving the objectives of this directive will require close collaboration between the Bank and its borrowers, and strengthening of borrower capacity for carrying out, analyzing, and incorporating the recommendations of EAs. Country departments should therefore discuss with borrowers how to achieve smooth and efficient implementation of this annex through, e.g., EA seminars for implementing agencies' management, training programs for their environmental staff, and preparation of EA manuals (by sector) and procedures for the country.

6. As this is a new directive, progress and problems in its implementation will need to be monitored carefully. A review of experience will be prepared for Board discussion during FY91, and this directive will subsequently be modified based upon the lessons learned.

7. Questions on this annex should be referred to the Director, Environment Department.

**Operational Directive 4.00, Annex A:
Environmental Assessment**

Introduction

1. This annex outlines Bank policy and procedures for the environmental assessment (EA) of Bank investment lending operations,¹ and related types of environmental analysis. EA is a flexible procedure, which can vary in breadth, depth, and type of analysis, depending on the project. It may be carried out at one point in time, stretched over a year to account for seasonal variations, or done in discrete stages.
2. For the purpose of this annex, EA covers also project impacts on health, cultural property, and tribal people, and the environmental impact of project-induced resettlement.² EAs utilize the findings of country environmental studies and action plans which cover nationwide issues, the overall policy framework, legislation, and institutional capabilities in the country.

Purpose and Nature of EA

3. The purpose of EA is to ensure that the development options under consideration are environmentally sound and sustainable, and that any environmental consequences are recognized early in the project cycle and

^{1/} References to the Bank include IBRD and IDA; "loans" include credits. Investment lending covers specific and sector investments including rehabilitation, loans through financial intermediaries, and the investment component of hybrid loans. Sector and structural adjustment loans are not covered by this annex, but are subject to the general policies in OMS 2.36, Environmental Aspects of Bank Work (to be reissued as OD 4.00, Environmental Policies). IFC is developing similar procedures for environmental review, which reflect the special circumstances of its work. MIGA will cooperate with the Bank to ensure that the objectives of the directive are met in MIGA's operations to the extent possible, bearing in mind MIGA's special circumstances.

^{2/} For Bank policies regarding such impacts, see (a) OPN 11.03, Management of Cultural Property in Bank-Financed Projects, to be reissued as OD 4.50, Cultural Property; (b) OMS 2.34, Tribal People in Bank-Financed Projects, to be reissued as OD 4.40, Tribal People; and (c) OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects, to be reissued as OD 4.30, Involuntary Resettlement.

taken into account in project design. EAs identify ways of improving projects environmentally, and minimizing, mitigating, or compensating for adverse impacts. By alerting project designers, implementing agencies, and borrower and Bank staff to issues early, EAs (a) enable them to address environmental issues in a timely and practical fashion, (b) reduce the need for project conditionality, because appropriate steps can be taken in advance or incorporated into project design, and (c) help avoid costs and delays in implementation due to unanticipated environmental problems. EAs also provide a formal mechanism for inter-agency coordination and for addressing the concerns of affected groups and local nongovernmental organizations (NGOs). In addition, they can play a major role in building environmental capability in the country.

4. Like economic, financial, institutional, and engineering analyses, EA is part of project preparation, and is therefore the borrower's responsibility. Close integration of EA with these other aspects of project preparation ensures that (a) environmental considerations are given due weight in project selection, siting, and design decisions, and (b) carrying out EAs does not unduly delay project processing.

Types of Environmental Analysis

Project-Specific EAs

5. Project-specific EAs are used to analyze specific investment projects (e.g., dams, factories, irrigation systems) with significant environmental issues. The detail and sophistication of analysis should be commensurate with the expected impacts. A project-specific EA should normally cover: (a) existing environmental "baseline" conditions; (b) potential environmental impacts, direct and indirect,³ including opportunities for environmental enhancement; (c) systematic environmental comparison of alternative investments, sites, technologies, and designs; (d) preventive, mitigatory, and compensatory measures, generally in the form of an action plan; (e) environmental management and training, and (f) monitoring. To the extent possible, capital and recurrent costs, environmental staffing, training and monitoring requirements, and the benefits of proposed alternatives and mitigation measures should be quantified. Annex A1 gives a sample outline for a project-specific EA report, and Annex A2 is a checklist of specific issues to be covered where relevant.

³/ Indirect impacts are the induced consequences of the project which occur later or in another part of the environment, e.g., if a river is channelled or dammed, its capacity for self-purification may be reduced and the original aquatic ecosystem damaged or destroyed.

Regional and Sectoral EAs

6. Regional EAs are used where a number of significant development activities with potentially cumulative impacts are planned for a reasonably localized area. In such cases, they are generally more efficient than a series of project-specific EAs, and may identify issues that the latter might overlook (e.g., interaction among effluents, or competition for water or land). Regional EAs compare alternative development scenarios, and recommend environmentally sustainable growth rates and land use patterns and policies. The study area is normally defined on a physical and/or biological basis (e.g., airshed, habitat type, river basin), and may sometimes extend across national boundaries; however, regional EAs with an institutional focus might follow administrative boundaries instead.

7. Sectoral EAs are used for the design of sector investment programs. They are particularly suitable for reviewing (a) sector investment alternatives; (b) the effect of sector policy changes; (c) institutional capacities and requirements for environmental review, implementation, and monitoring at the sectoral level; and (d) the cumulative impacts of many relatively small, similar investments which do not merit individual project-specific EAs.

8. In some cases, regional or sectoral EAs cover all the normal requirements of project-specific EAs. More often, the latter are still needed for major investments (see para. 14 concerning sector investment loans), but the regional or sectoral EAs will have identified the relevant issues, collected much of the data, and, in general, greatly reduced the work needed in the project-specific EAs.

Alternatives to EAs

9. Alternative approaches that focus on a narrower range of issues are acceptable for many types of projects, especially smaller ones and those not in environmentally sensitive areas. These approaches may be more effective in integrating environmental concerns into the borrower's planning process. Such alternative approaches include:

- (a) integrated pest management programs for many agricultural projects which do not involve major irrigation or land development;
- (b) specific environmental design criteria and pollution standards for small- or medium-scale industrial plants; and
- (c) specific environmental design criteria and construction supervision programs for small-scale rural works projects.

Other examples of projects for which alternative approaches are generally acceptable are listed in Annex A3, para. 3, under "Category B."

Consideration of Global Issues

10. A number of specialized agencies--inside and outside the U.N. system--carry out scientific investigations of global environmental issues (ozone depletion, global warming, hazardous wastes, etc.). The Bank keeps fully abreast of findings, primarily through the Principal Adviser, Science and Technology, and draws upon prevailing views in developing its own environmental, economic, and sectoral policies, with a view to minimizing possible adverse impacts on global systems such as the atmosphere and oceans. While EAs should collect or refer to the relevant data, the Bank does not normally expect global environmental issues to require separate analysis in project-specific EAs. Such issues should, however, be addressed where relevant in policy and sector work.

Institutional Aspects of Projects

Inter-Agency Coordination

11. Because environmental issues generally involve national, regional, and local government agencies, and cover a broad range of responsibilities (wildlife, health, water and land use, tourism, etc.), coordination among government agencies is crucial. This is best achieved through inter-agency meetings at key points in the EA cycle. The first meeting, normally held soon after the decision to prepare an EA, identifies the issues, types of analysis required, sources of relevant expertise, responsibilities and schedule for the EA, and mitigating measures to be considered. Another meeting should normally be held when the EA report is completed and submitted for final government review.

Involvement of Affected Groups and Nongovernmental Organizations

12. The Bank expects the borrower to take the views of affected groups and local NGOs⁴ fully into account in project design and implementation, and in particular in the preparation of EAs. This is important in order to understand both the nature and extent of any social or environmental impact and the acceptability of proposed mitigation measures. An approach which has proven effective in many countries is to expand the initial inter-agency meeting (para. 11) into a "forum" or "scoping session" with representatives of affected groups and relevant NGOs. Similar consultations after the EA report is completed are also a valuable way to obtain feedback on the report and to increase community cooperation in implementing the recommendations.

4/ See OD 14.70, Involving Nongovernmental Organizations in Bank-Supported Activities for the Bank's overall approach to NGOs.

Strengthening Environmental Capabilities

13. The ultimate success of EA depends upon the development of environmental capability and understanding in the agencies concerned. Projects with major potential impacts normally require the establishment or strengthening of in-house environmental units for the project (located or represented on site), the implementing agency and the ministry. Involvement of these units throughout the EA process (a) ensures that the agency's/ministry's knowledge and perspective are taken into account in the EA; (b) provides on-the-job training for the staff; and (c) provides continuity for the implementation of the EA's recommendations. Such projects normally need to include an institutional development and training component for such units. In addition, to help develop EA capability in the country, the Bank should (a) encourage the use of local expertise in EA preparation (in association with international consultants, where appropriate), and (b) help arrange EA training courses for local specialist staff and consultants to attend.

Sector and Financial Intermediary Lending

14. For sector investment loans and loans through financial intermediaries, subproject details may not be known at the time of project appraisal. In such cases, the project implementing institutions will need to screen subprojects (see para. 18) and carry out environmental analyses consistent with this directive. To ensure that this can be done, the Bank should appraise the implementing agencies' capabilities for EA, and strengthen them where necessary. The appraisal mission should also indicate the proper division of responsibility for preparing and reviewing EAs between the ultimate borrower, the financial intermediary or sector agency, and the agencies responsible for environmental regulation.

Environmental Advisory Panels

15. For major projects with serious and multi-dimensional environmental concerns, the Bank should explore with the borrower whether the latter needs to engage an advisory panel of independent, internationally recognized, environmental specialists, to review and advise on, inter alia, the TOR and findings of the EA, the implementation of its recommendations, and the development of environmental capacity in the implementing agency/ministry. Such a panel should meet at least once a year until the project is operating routinely and environmental issues have been addressed satisfactorily.⁵

5/ See OD 4.00 Annex B, Environmental Policy for Dam and Reservoir Projects, para. 18, for more detail on the selection and functions of the panel.

EA Procedures

Overview

16. Though EA preparation is the responsibility of the borrower, the task manager (TM) in the Bank assists and monitors the EA process, with support mainly from the Regional environment division (RED). The borrower and the Bank should agree as early as possible on the selection of consultants or borrower staff to prepare the EA, and the EA procedures, schedule, and outline. Major steps in the EA process normally include: (a) screening, (b) decisions based on the Initial Executive Project Summary (IEPS), (c) notification to the Board through the Monthly Operational Summary (MOS), (d) preparation of terms of reference (TORs) for the EA, (e) EA preparation, (f) EA review and incorporation of environmental measures into the project, (g) supervision, and (h) ex-post evaluation.

17. Since project and country conditions, national legislation, and institutional experience vary among borrowers, both the borrower and the Bank must exercise judgement in using these procedures to design and implement projects which are both environmentally and economically sound, and consistent with the environmental laws, policies, and procedures of the borrower. The Environment Department (ENV), Legal Department, and the REDs maintain information on these requirements.

Screening

18. Projects should be screened at identification by the TM, with advice from the RED, and assigned to one of the following categories based upon the nature, magnitude, and sensitivity of environmental issues:

Category A - EA is normally required as the project may have diverse and significant environmental impacts.

Category B - More limited environmental analysis is appropriate, as the project may have specific environmental impacts.

Category C - Environmental analysis is normally unnecessary.

Category D - Environmental projects, for which separate EAs may not be required, as environment would be a major focus of project preparation.

Annex 3 gives illustrative lists, to be applied flexibly, of the type of project/component in each category.

Initial Executive Project Summary

19. In the IEPS, the TM, in consultation with the RED, should (a) identify key environmental issues, (b) indicate the category (A-D) and the type of environmental analysis recommended, and (c) provide a

preliminary EA schedule. If an EA is not likely to be available prior to appraisal, the IEPS should propose special procedures to address the situation. The IEPS meeting would confirm the type, timing and issues of environmental analysis (although in the event of inadequate information, the decision may be deferred).

Monthly Operational Summary

20. The TM should ensure that the MOS, which is used to alert the Executive Directors to forthcoming projects, contains the following information as soon as available: (a) the category assigned (A-D); (b) the main issues to be examined; (c) whether agreement with the borrower has been reached on EA preparation; and (d) the EA schedule. The MOS entry should be updated whenever appropriate to reflect the progress of the EA and the related Bank and borrower decisions.

Preparation of TORs for the EA

21. Following the IEPS meeting, the Bank should discuss with the borrower the scope of the EA, and assist the borrower, as necessary, in preparing TORs for the EA. For this purpose, a field visit by Bank environmental staff is generally desirable. The Bank should ensure that the TORs provide for adequate inter-agency coordination (para. 11) and consultation with affected groups and local NGOs (para. 12).

EA Preparation

22. An EA for a major project typically takes 6-18 months to prepare and review. EA drafts should be available at key points in the project cycle. The final EA should be available prior to appraisal, to minimize the risk of project design changes and resultant delays at a late stage.

23. In most cases, the EA should form part of the overall feasibility study, so that the EA's findings are directly integrated into project design. However, the EA is normally prepared separately by specialists. For projects which would have major impacts, such as large dams or projects involving large scale resettlement, it is recommended that the borrower retain independent experts not affiliated with the project. Borrowers may request Bank assistance for financing EAs through a Project Preparation Facility (PPF) advance,⁶ or from the Technical Assistance Grant Program for the Environment. EAs generally account for 5-10 percent of the cost of project preparation.

24. For some projects, a full year of baseline data is desirable to capture the seasonal effects of certain environmental phenomena; however, so as not to delay critical project decisions, short-term monitoring should be used to provide conservative estimates of environmental impacts, while

6/ See OMS 2.15, Project Preparation Facility, to be reissued as OD 8.00.

longer-term data collection is being undertaken. Since special care in designing the baseline monitoring program is warranted, the borrower should be encouraged to discuss the matter with the Bank.

EA Review and Project Appraisal

25. The borrower should submit the final EA report to the Bank prior to Bank appraisal. The EA report is the borrower's property, but the Bank encourages the borrower to release relevant information to appropriate interested parties. The Final Executive Project Summary should summarize the EA's status and describe how major environmental issues have been resolved or are to be addressed, noting any proposed conditionality. The appraisal mission should review both the procedural and substantive elements of the EA with the borrower, resolve any issues, assess the adequacy of the institutions responsible for environmental management in light of the EA's findings, and determine if the EA's recommendations are properly addressed in project design and economic analysis.

Loan Documents

26. The EA procedures followed and the EA's main findings should be explained briefly in the text of the Staff Appraisal Report (SAR) and the Memorandum and Recommendation of the President. An SAR annex should summarize the EA more fully, covering, inter alia, environmental baseline conditions, alternatives considered, mitigating and compensatory actions, capability of environmental units and measures to strengthen them, environmental monitoring arrangements, and the borrower's consultations with affected groups and NGOs. These factors will provide the basis for the RED's formal environmental clearance prior to the authorization of negotiations by the Regional vice president. Measures critical to sound project implementation may require specific loan conditionality.

Supervision

27. EA recommendations provide the basis for supervising the environmental aspects of project implementation. Compliance with environmental conditionality, the status of mitigating measures, and the findings of monitoring programs should be part of borrower reporting requirements and project supervision. When major issues arise, special supervision missions with adequate environmental expertise may be needed.

Ex Post Evaluation

28. The project completion report⁷ submitted to the Operations Evaluation Department should evaluate (a) environmental impacts, noting whether they were anticipated in the EA report and (b) the effectiveness of mitigating measures taken and of institutional development and training.

7/ See the OPNSV memoranda, Guidelines for Preparing Project Completion Reports, June 7, 1989, and OMS 3.58, General Guidelines for Preparing Project Completion Reports, which are to be combined and reissued as OD 13.55, Project Completion Reports.

Sample Outline of a Project-Specific EA Report

1. EA reports should be concise and limited to significant environmental issues. The detail and sophistication of analysis should be commensurate with the potential impacts. The target audience should be project designers, implementing agencies, and borrower and Bank staff.
2. The EA report should include:
 - (a) Executive Summary. Concise discussion of significant findings and recommended actions.
 - (b) Policy, legal, and administrative framework within which the EA is prepared. The environmental requirements of any cofinanciers should be explained.
 - (c) Project description in a geographic, ecological, social, and temporal context, including any off-site investments that may be required by the project (e.g. dedicated pipelines, access roads, power plants, water supply, housing, and raw material and product storage facilities).
 - (d) Baseline Data. Dimensions of the study area and description of relevant physical, biological, and socio-economic conditions, including any changes anticipated before the project commences. Current and proposed development activities within the project area (but not directly connected to the project) should also be taken into account.
 - (e) Environmental Impacts. The positive and negative impacts likely to result from the proposed project should be identified and assessed. Mitigation measures and the residual impacts that cannot be mitigated should be identified. Opportunities for environmental enhancement should be explored. The extent and quality of available data, key data gaps, and uncertainties associated with predictions should be identified/estimated. Topics that do not require further attention should be specified.
 - (f) Analysis of Alternatives. Proposed investment design, site, technology, and operational alternatives should be compared systematically in terms of their potential environmental impacts, capital and recurrent costs, suitability under local conditions, and institutional, training, and monitoring requirements. To the extent possible for each of the alternatives, the environmental costs and benefits should be quantified, and economic values attached where feasible.
 - (g) Mitigation Plan. Feasible and cost-effective measures which may reduce potentially significant adverse environmental impacts to acceptable levels should be proposed, and the potential environmental impacts, capital and recurrent costs,

and institutional and training requirements of those measures estimated. The plan (sometimes known as an "action plan" or "environmental management plan") should provide details on proposed work programs and schedules, to ensure that the proposed environmental actions are in phase with engineering activities throughout preparation. The plan should consider compensatory measures if mitigation measures are not feasible or cost-effective.

- (h) Environmental Management and Training. The existence, role, and capability of environmental units at the on-site, agency and ministry level should be assessed, and recommendations made concerning the establishment and/or expansion of such units, and the training of staff to the point that EA recommendations can be implemented.
- (i) Monitoring Plan regarding environmental impacts and performance. The plan should specify the type of monitoring, who would do it, how much it would cost, and what other inputs (e.g., training) are necessary.

Appendices

- (i) List of EA preparers--individuals and organizations.
- (ii) References--written materials used in study preparation. This is especially important given the large amount of unpublished documentation often used.
- (iii) Record of Inter-Agency/Forum Meeting, including list of both invitees and attendees. Where the views of affected groups and local NGOs were obtained by other means, these should be specified.

Checklist of Potential Issues for an EA

Where applicable, EAs should address the following issues, which are subject to the Bank policies and guidelines identified below.

- (a) Agrochemicals. The Bank promotes the use of integrated pest management (IPM) and the careful selection, application, and disposal of pesticides (see OPN 11.01, Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and their Procurement when Financed by the Bank, to be reissued as OD 4.00, Annex C, Agricultural Pest Management, and Selection and Use of Pesticides). The use of fertilizers, due to their impacts on surface and groundwater quality, must also be carefully assessed;
- (b) Biological Diversity. The Bank promotes conservation of endangered plant and animal species, critical habitats, and protected areas (para. 9b, OMS 2.36, Environmental Aspects of Bank Work, and OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).
- (c) Coastal and Marine Resources Management. Guidelines are available from the Environmental Department (ENV) on the planning and management of coastal marine resources including coral reefs, mangroves, and wetlands.
- (d) Cultural Properties. OPN 11.03, Management of Cultural Property in Bank-Financed Projects (to be reissued as OD 4.50, Cultural Property), confirms the Bank's commitment to actively protect archaeological sites, historic monuments, and historic settlements.
- (e) Dams and Reservoirs. OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, provides specific guidance for addressing environmental issues in the planning, implementation, and operation of dam and reservoir projects.
- (f) Hazardous and Toxic Materials. Guidelines are available from ENV on the safe manufacture, use, transport, storage, and disposal of hazardous and toxic materials.
- (g) Induced Development and Other Socio-Cultural Aspects. Secondary growth of settlements and infrastructure, often referred to as "induced development" or "boomtown" effects, can have major indirect environmental impacts, which relatively weak local governments may have difficulty addressing.

- (h) Industrial Hazards. All energy and industry projects should include a formal plan to prevent and manage industrial hazards. (See Techniques of Assessing Industrial Hazards - A Manual, World Bank Technical Paper No. 55.)
- (i) International Treaties and Agreements on the Environment and Natural Resources. EAs should review the status and application of such current and pending treaties and agreements, including their notification requirements. The Legal Department maintains a list of international treaties, and could obtain, whenever required, information on applicable law in individual countries.
- (j) International Waterways. OMS 2.32, Projects on International Waterways (to be re-issued as OD 7.50), provides guidance. This OMS exempts from notification requirements rehabilitation projects which will not affect the quality or quantity of water flows.
- (k) Involuntary Resettlement. OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects (to be reissued as OD 4.30, Involuntary Resettlement), provide guidance.
- (l) Land Settlement. Due to the complex physical, biological, socio-economic, and cultural impacts, land settlement should generally be carefully reviewed (see OD 4.31, Land Settlement, to be issued).
- (m) Natural Hazards. EAs should review whether the project may be affected by natural hazards (e.g., earthquakes, floods, volcanic activity), and should propose specific measures to address these concerns when appropriate (see OD 8.50, Emergency Recovery Assistance, to be issued).
- (n) Occupational Health and Safety. All industry and energy projects, and projects in other sectors where relevant, should include a formal plan to promote occupational health and safety (Occupational Health and Safety Guidelines, World Bank, 1988).
- (o) Tribal Peoples. OMS 2.34, Tribal People in Bank-Financed Projects (to be reissued as OD 4.40, Tribal People), provides specific guidance for addressing the rights of tribal peoples, including traditional land and water rights.
- (p) Tropical Forests. The Bank co-authored the Tropical Forest Action Plan (published in 1984); up-to-date information is available from ENV. OPN 11.02, Wildlands: Their Protection and Management in Economic Development (to be reissued as OD 4.00, Annex D), also addresses issues relating to tropical forests.

- (q) Watersheds. Bank policy is to promote protection and management of watersheds as an element of lending operations for dams, reservoirs, and irrigation systems (OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, para. 6).
- (r) Wetlands. The Bank promotes conservation and management of wetlands (e.g., estuaries, lakes, mangroves, marshes, and swamps). This is covered by OPN 11.02 on Wildlands (see (s) below).
- (s) Wildlands. The Bank is committed to protect wildlands, including through compensatory measures when lending could result in adverse impacts (see OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).

Environmental Screening

Introduction

1. The task manager (TM), in consultation with the Regional environmental division is responsible for screening a proposed project to determine the appropriate type of environmental analysis, based on the nature, potential magnitude, and sensitivity of the issues. The categories below, based upon prior Bank staff experience, are strictly illustrative. Alternatives to EA are acceptable where they are expected to result in an environmentally sound project.

2. Category A: Projects/Components Which May Have Diverse and Significant Environmental Impacts - Normally Require EA¹

- (i) Aquaculture/Mariculture (large scale);
- (ii) Dams and Reservoirs;²
- (iii) Electrical Transmission (large scale);
- (iv) Forestry;
- (v) Industrial Plants (large scale) and Industrial Estates;
- (vi) Irrigation and Drainage (large scale);
- (vii) Land Clearance and Leveling;
- (viii) Mineral Development (including oil and gas);
- (ix) Pipelines (oil, gas, and water);
- (x) Port and Harbor Development;
- (xi) Reclamation and New Land Development;
- (xii) Resettlement;³

¹/ Except generally for projects directed to rehabilitation, improved operation and maintenance, and limited upgrading of facilities.

²/ See OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects.

³/ While OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects (to be reissued as OD 4.30, Involuntary Resettlement), covers the social aspects of resettlement, the environmental implications of the resettlement itself can be major.

- (xiii) River Basin Development;
- (xiv) Rural Roads;
- (xv) Thermal and Hydropower Development;
- (xvi) Tourism (large scale);
- (xvii) Transportation (airports, railways, roads, waterways);
- (xviii) Urban Development (large scale);
- (xix) Urban Water Supply and Sanitation (large scale).
- (xx) Manufacture, Transportation, and Use of Pesticides or other Hazardous and/or Toxic Materials;⁴ and
- (xxi) Projects which Pose Serious Accident Risks.⁵

3. Category B: Projects/Components which may Have Specific Environmental Impacts - More Limited Environmental Analysis Appropriate

Projects in this category normally require more limited environmental analysis than an EA. A wide range of environmental guidelines, developed by a number of organizations, are applicable. In addition, specific environmental pollution standards or design criteria can be developed for individual projects.

- (i) Agroindustries (small scale);
- (ii) Aquaculture and Mariculture (small scale);
- (iii) Electrical Transmission (small scale);
- (iv) Industries (small scale);
- (v) Irrigation and Drainage (small scale);

^{4/} In some cases, adherence to existing directives is an acceptable alternative to an EA (e.g., OPN 11.01, Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and their Procurement when Financed by the Bank, to be reissued as OD 4.00 Annex C, Agricultural Pest Management, and Selection and Use of Pesticides). Certain materials (e.g. PCBs) are not to be used in Bank projects and other materials (e.g. asbestos) are to be used only under extremely restricted conditions. A Restricted Toxic Materials List (RTML) will be available from ENV and updated periodically.

^{5/} See Techniques of Assessing Industrial Hazard - A Manual, World Bank Technical Paper No. 55.

- (vi) Mini Hydro-Power;
- (vii) Public Facilities (hospitals, housing, schools, etc.);
- (viii) Renewable Energy;
- (ix) Rural Electrification;
- (x) Telecommunications;
- (xi) Tourism (small scale);
- (xii) Urban Development (small scale); and,
- (xiii) Rural Water Supply and Sanitation.

4. Category C: Projects/Components which Normally Do Not Result in Significant Environmental Impact - Environmental Analysis Normally Unnecessary

Opportunities to enhance environmental benefits should be sought in these projects.

- (i) Education (except school construction);
- (ii) Family Planning;
- (iii) Health (except hospital construction);
- (iv) Nutrition;
- (v) Institutional Development; and
- (vi) Technical Assistance.

5. Category D: Environmental Projects

Projects with a major environmental focus may not require a separate EA, as environment would be a major part of the project preparation.

6. Emergency Recovery Projects

Because emergency recovery projects (a) need to be processed rapidly and (b) seek mainly to restore existing facilities, they normally would not require a full EA. However, the extent to which the emergency was precipitated and/or exacerbated by inappropriate environmental practices should be determined, and corrective measures built into either the emergency project or a future lending operation.⁶

6/ See OD 8.50, Emergency Recovery Assistance, to be issued.



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**Remarks by Barber B. Conable
President, World Bank**

**Conference on
Global Environment and Human Response
Toward Sustainable Development**

**Tokyo, Japan
September 11, 1989**

DEVELOPMENT AND THE ENVIRONMENT: A GLOBAL BALANCE

Mr. Chairman, Ladies and Gentlemen:

An old saying common to rural communities in many parts of the world reminds farmers that the land they till, on which they sow, and from which they harvest, is actually leased from their grandchildren. "The rent you pay for that land," the saying continues, "is your obligation to protect and preserve its fertility." As with the land, so too is it with the rest of the natural environment on which human survival and progress depend. Today's needs have to be weighed against tomorrow's obligations, or our children will be poorer than we are.

The human family, in its quest for change, engages in activities that can go on forever. The environment is finite. This disparity creates the environmental challenge: the critical need to reconcile a potential conflict between human effort and environmental constraints. If our response to that challenge is not defined with clarity, and if the human family does not act in partnership to meet the need for constant renewal of our environment, we will only falter collectively, stumbling toward a bleak tomorrow.

The environmental challenge is directly relevant to the World Bank's primary mission: supporting change in developing countries. Development is change. Disadvantaged societies that have not experienced the benefits of development -- that have not known change, and lack the resources to undertake change -- are themselves the victims of pollution, the pollution of poverty.

The World Bank has been entrusted with the responsibility of helping to rescue the world's poor from that form of pollution. The Bank's fight against poverty is therefore at the core of our mission. We will not turn away from that mission. But we have to ensure, as well, that change is constructive, and that change does not destroy the resources on which human progress is based.

So, reducing poverty and protecting the environment are related aspects of the same paradox which must be carefully and accurately integrated in human actions as they are in ecological reality. Development that is not sustainable is not development at all, but only an illusion of development.

I want to thank the Government of Japan and the United Nations Environment Programme (UNEP) for organizing this conference, giving us an opportunity to exchange ideas and experiences, to re-examine our priorities, to re-commit our assets and, together, to chart a course of action toward the future.

I am delighted, as well, to share the platform with such a distinguished group of panelists. Together, we have been entrusted with mantles of leadership in the arena of international development. Together, too, we share many concerns about the environment in which we live. And together, we can help to ease those concerns, not only by what we say here, but, more importantly, by how our institutions act.

A NEW AWARENESS

This is the first major conference of its kind in Asia. It has attracted participation from around the globe, demonstrating the depth of current interest in the care and maintenance of the fragile planet we all call our home. This level of concern was not always apparent. Just two decades ago at the Stockholm Conference on the Human Environment, there were doubts and skepticism expressed about similar concerns.

Attitudes have changed during the intervening years, in response to ecological realities. The World Bank and others in the development community have learned that protection of the environment warrants specific and discrete emphasis. We have also learned that environmental issues cut across all development sectors and are affected as much by domestic politics as by international trade practices.

A purely technical approach to the environmental challenge, insensitive to social, cultural, and public health considerations, results in a wide array of social problems. Profligate industrial policies assail the world's climate. The basic requirement of food for ceaselessly growing populations is met at the expense of degraded soils, making future agricultural efforts more costly. Development resting only on exploitation of non-renewable resources leaves us poorer in the long run. All these issues and others are intertwined and must be addressed.

We know also that we cannot fulfill our responsibilities by merely passing around "unleavened loaves of empty words." Words must be subsumed by action, meticulously planned and rigorously assessed. That, in essence, is the World Bank's approach to environmental issues as they intersect with the imperatives of development.

SOME KEY AREAS

We accept the all-encompassing nature of the environmental challenge. We believe also, however, that it is important to understand and deal with the various components relevant to both development and the environment, some of which I'd like to discuss in more detail.

Global Warming

The "greenhouse effect may be mostly hot air," reported an American magazine earlier this year, in reaction to testimony in the US Senate that "global warming, far from being a theoretical construct, had arrived with stunning certainty." Sharply contending viewpoints on this subject have already generated mythologies regarding global warming. In this exchange of viewpoints, unfortunately, some comments produce more heat than light. For this reason, I wish to review some facts.

A few long-surviving gases generated by industry and agriculture trap some of the radiant heat which the earth emits after receiving energy from the sun. This warming process is similar to the way in which the wraparound glass enclosures of "green houses" built for horticulture trap heat, therefore becoming known as the "greenhouse effect." Similarly, the heat-trapping gases are widely described as "greenhouse gases."

From the time of the industrial revolution, scientists have feared that man, by increasing emissions of greenhouse gases, would cause an unnatural warming of the earth's climate. In 1896, for instance, the Swedish scientist Svante Arrhenius cautioned that sometime in the "next century," industrial emissions would cause a global warming of 3.2 to 4.0 degrees Celsius. This hypothesis is the precedent of today's anxieties.

Of course, at one level, the greenhouse effect is natural to our planet, and essential to human life. If there were no greenhouse effect at all, if greenhouse gases did not trap a certain amount of heat, the earth would be more than 30 degrees Celsius, or 60 degrees Fahrenheit, cooler. Much of the world would be a bleak, extensive tundra, and life as we know it would not exist. When emissions of heat-trapping gases increase excessively as a result of human activity, however, the earth is unnaturally warmed. It is this additional warming that could raise global temperatures to levels which would threaten human life.

Some scientists are convinced that the 25 percent increase in carbon dioxide emissions since the earliest days of the industrial revolution has already resulted in a steady increase in global warming. They are concerned that, unless this trend is mitigated, a 5-8 degree Fahrenheit change of temperature may occur in higher altitudes. While this may not seem significant, it would be considerably more than the warming since the last Ice Age, or any change in human history. If that were to happen, instead of the tundra which would result if there were no global warming at all, parts of the world could be scorched. Others would be flooded. The number of natural disasters would increase. Some studies predict simultaneous crop failures in all those regions now considered the bread baskets of the world.

On the positive side, the cold and unproductive lands in the north could be warmed into productivity. Some arid lands might be made fertile as a result of increased rainfall. Overall, however, life as we know it would be altered drastically, threatening, and in some cases extinguishing, ecosystems and species. Among human communities, the poor would be the hardest hit, because they have the least resources with which to adapt to change.

In reviewing these facts, and some of the possibilities derived from them, it is not my intention to be a voice of gloom. The world's "doomsday watch" needs no help from me. Without minimizing the dangers I have described, I must add, therefore, that scientists cannot forecast when exactly the expected climatic changes might occur. Some scientists do not predict such catastrophic changes. Clearly, more research is needed, if we are to understand fully the implications of global warming for both developing and industrialized countries.

The possible risks are too high to justify complacency or evasion. The international community cannot sit back, hoping that the problems will somehow pass us by. We must be prepared to avert the worst, even as we desire the best. "Chance," as Louis Pasteur observed, "favors the prepared mind."

Accordingly, the World Bank closely monitors research on greenhouse gas emissions and climatic change. We will continue to assess the economic and social impact of this interaction, and its repercussions on natural resources. We will actively assist developing countries to formulate appropriate development responses to global warming concerns. In particular, we will support developing country programs to move to cleaner fuels, processes and systems.

Energy

The three major "offenders" among greenhouse gases are carbon dioxide, methane and chlorofluorocarbons (CFCs). Of these three, the highest cumulative contribution to global warming is made by carbon dioxide, which alone is responsible for almost half the world's greenhouse effect. Carbon dioxide, as a global warmer, is produced by the burning of fossil fuels -- coal, oil and natural gas -- and by deforestation. Methane, which is created, for example, by the decay of industrial and agricultural waste and by the extraction and transport of fossil fuels, accounts for some 20 percent of the greenhouse effect. CFCs, which currently account for up to 17 percent of the greenhouse effect but are expected to rise to as much as 24 percent, are man made.

Common sense tells us that, if carbon dioxide is the largest contributor to global warming, our most appropriate corrective would be to reduce the amount of that greenhouse gas released into the atmosphere. This brings us to the issue of energy and energy policy, because the industrial and domestic use of fossil fuels as energy cause the most emissions of carbon dioxide.

Energy, from whatever source it is derived, touches most aspects of social and economic activity in the world. Muscle-driven handpumps that provide African and Asian villages with water are as important to their users as are petroleum-fired factory furnaces to industrialized societies. The particular form of energy used by society, and what that energy is used for, are sometimes seen as what divides "less developed countries" from those that are "developed."

As Barbara Ward commented, "in this century, we have virtually identified the whole successful functioning of the economic system with a steady increase in our consumption of energy." This identification, she argued with some asperity, has created an unwholesome "interdependence between prosperity and energy use."

The quest for prosperity is a universal human impulse. The poor want to be rescued from their wretchedness. The rich want at least to remain rich, if not get richer. Countries, like individuals, nurture the same impulses. Developing countries reaching out toward prosperity need many transformations. As they seek to revitalize their economies, their demand for energy will increase, whatever the dimensions of their development. The extent to which that increase will be based on greater use of fossil fuels will determine the severity of the threat to the environment.

At the height of the "oil crunch" of the '70s, an Asian politician commented that many developing countries faced what accountants might call a "double bottom line." On the one hand, he explained, they had to transform their economies so that productivity would be increased, wealth would be enhanced and distributed. On the other hand, they had to do so at a time when non-renewable energy was "both scarce and expensive." The environmental challenge creates the phenomenon of a "triple bottom line," requiring that energy-based development should not be accomplished at the expense of further damage to the environment, which supports that development through the provision of many primary products and services.

Can this be achieved? Developing countries have been advised not to replicate the environmentally unsound policies and practices of the industrialized world. The World Bank itself can be used to transfer the knowledge learned from these mistakes. But unless such advice is accompanied by viable alternatives, it implies that developing countries should stagnate in the interests of overall environmental protection. The world's richer nations, for their part, would be free to maintain industry-based wealth and to engage in environmental depredation. This is unacceptable. Developing countries cannot be excluded from change. Industrialized countries cannot forever despoil the environment.

What then should be our advice? The Bank supports the move toward higher generation of energy, as a corollary of development, accompanied by greater end-use efficiencies. We lend for conservation programs. We look at the scope for increased use of renewable energy. We make it clear, too, that over the long term, science and industry must adapt to forms of energy whose use does not harm the environment.

Until we reach that goal, however, the energy requirements of developing countries will have to be met largely by the use of existing fossil fuels. The choice of fuels then becomes crucial. Expanded use of natural gas, which because of its efficiency releases substantially less carbon dioxide than oil or coal into the atmosphere, will significantly reduce the harmful emissions.

The World Bank is prepared to take an active leadership role during this transitional phase. We will take every opportunity to reiterate that greater conservation of energy and energy efficiency in all countries will further reduce the use of fossil fuels. Only a global response can deal with a global problem. We will also stress the need for new resources as part of this global action.

None of the proposed adjustments is cost free. The various actions that developing countries will need to take in their own interest, and in the international interest, require substantial additional costs. These must be folded into the overall development budget. This is not a matter of funds being redirected from one set of development objectives to another, but of genuine additionality. I am encouraged by the increased attention these issues are receiving in rich countries, including Japan, and I urge them to support developing country energy programs with the required additional resources. These measures will help satisfy the yearnings of developing countries for change while also protecting the environment.

Population

We must remember, however, that even without economic change in developing countries, the anticipated increase of global population will result in a greater demand for energy. If, for instance, the average amount of energy used per person across the world in 1985 remains unchanged, a 15 percent increase in energy would be needed by the year 2000 to meet the needs of a world population which would then stand at over 6 billion. That is just one anticipated consequence of unchecked population growth.

Earlier this year, the keynote speaker at the Fifth Asian Parliamentarians Meeting on Population and Development said that population growth was one of three major problems the international community confronted as it prepared for the 21st century. The other two were world peace, and world economic stability, both of which, in his view, are receiving attention. Population issues, he argued, were "more fundamental and their resolution more difficult."

The figures speak for themselves. In 130 years the world's population grew from 1 to 2 billion but, at present rates, in only 10 years it will jump from 5 billion today to some 6 billion by the year 2000. Ninety percent of this expected increase will be born in the developing regions of the world. The resulting additional demands on the resources of those countries will be formidable.

Population will be too large in relation to capital stock -- public and private, physical, biological and human. Infrastructure and other social overhead capital will probably lag the most. Many countries will be pushed further and locked more tightly into the poverty trap. They will be short of financial resources to meet day-to-day demands of increased numbers, let alone undertake measures to improve the quality of life growth and growth prospects for the future. Sickness, malnutrition, and numerous other consequences of poverty will be overwhelming.

Unchecked population growth will further aggravate the problems of urban and rural environments. In urban areas, water and air pollution, sanitation and waste disposal will become even more critical. Both urban and rural demand for more food will cause creation and exploitation of more agricultural land in rural areas. Forests will be destroyed; so will flora and fauna. Existing agricultural land will be more depleted to get that extra portion of food from it.

It is generally acknowledged that unchecked growth of population, threats to the environment, poverty, and underdevelopment are closely linked. The recent Caracas Declaration commemorating the 25th anniversary of the Group of 77 for example noted that "poverty and environmental degradation are closely inter-related." But acknowledging the linkage is only a first step. We must undertake programs which will help break that linkage.

The World Bank is well aware that population changes and the lowering of fertility in several countries have often followed economic and social improvements. Unfortunately, unprecedented rates of population growth in many developing regions of the world make it clear that the challenge is too great for us to await the impact of general social improvement on population growth rates.

In some countries of Africa, Asia, and Latin America, population will double every 20 to 30 years if present trends continue unchanged. Such high rates imperil the very socio-economic development that can bring about a reduction of population. We cannot neglect aspects of development that influence population trends, but we need also to support programs that directly influence fertility rates. In fact, family planning programs have succeeded even in adverse socio-economic conditions.

Despite such successes, today some 500 million couples worldwide are estimated to have no access to modern methods of fertility regulation. This cannot be condoned in an international community which accepted family planning and the ability to control one's fertility as basic human rights 21 years ago, at the Tehran Conference of 1968. Several conferences and declarations since then have restated the point, drawing particular attention to the fact that the role of women is a central, perhaps the central issue in population policy. Any effort to improve the status of women which does not enable them to have some control over their fertility is only a partial effort.

The role and rights of women, information about the availability of family planning, the voluntary nature of family planning, education, health, employment, and income are all strands that must be effectively intertwined. To achieve that, the global population issue must be made a high priority on the global agenda. The World Bank will pursue this objective vigorously in the future, as it has done in the past.

Industrialized Nations

Another key component relevant to both development and the environment is the responsibility of industrialized countries.

An Asian head of state recently asserted that industrialized countries should shoulder a larger responsibility for preserving the world's environment because, in effect, their economic policies and lifestyles "constitute the greatest threat to the environment." There is logic in the argument that those who have already imperilled our common heritage should compensate by their actions for the damage they have done. It is also true that industrialized countries have the greatest research capacity, particularly in their private sector, to grapple with the technical aspects of environmental protection.

I do not mean to suggest that developing countries should feel free to devastate the environment because some industrialized countries have done so. The care and health of our planet is a collective global responsibility.

Having said that, however, it is true that many aspects of economic activity and lifestyle in the industrial countries contribute to the world's accumulated pollution and resource depletion problems. North America and Europe, for example, together are responsible for nearly three quarters of the carbon dioxide emissions that contribute to global warming, while accounting for only about 8 percent of the world's population. The developing world, almost 80 percent of the world's population, is responsible for only 7 percent of the industrial emission of carbon dioxide.

Industrialized countries are also responsible for the damage caused by CFCs. Western industrialized countries are now planning to phase out the use of CFCs by the year 2000 but other nations have just begun large-scale refrigeration programs. The World Bank supports a total phasing out of CFCs from use in all countries.

How industrialized countries can and do respond to the environment challenge is not characterized by unbroken gloom. I visited here in 1971, and was saddened to see the tops of buildings obscured by smog. Today, Japan is both domestically and internationally alive to the links between growth and environmental good health. Japanese industry uses less energy than its counterparts in many other countries to produce the same or similar goods and services. Japan's endorsement of anti-pollution policies, its development of energy-efficient technologies, and its decision to emphasize environmental activities in its international development assistance programs have provided the world with a salutary example of how an industrialized nation can adapt its own policies to meet the environmental challenge.

As industrialized countries face the challenge of fulfilling their own responsibilities perhaps they might think not only of altruism, but also of the rewards to be gained from pursuing "environment friendly" policies. A recent editorial in "The Economist" put it well: "The country that pioneers the taxes and charges that makes polluters pay will enjoy a boom as purveyor of greenness to a dirty world."

AGENDA FOR ACTION

Mr. Chairman, Ladies, and Gentlemen -- At this point I want to make a brief personal comment. When I became President of the World Bank, I selected the environmental challenge for special emphasis. I wanted the World Bank to take a lead role in confronting the global question: how to harmonize the imperatives of development and environmental care. Then as now, I was convinced that through our efforts, through our influence on other development agencies, and through the redirection of our intellectual resources, we could create an appropriate and potentially effective global agenda.

I am proud of the progress we have made. Even though some of the most difficult tasks lie ahead, we are well beyond any concept of treating the environment in a superficial, cosmetic, or "public relations" fashion. We are committed to environmental issues and, what is more, this commitment does not detract at all from our primary mission of global development.

We have increased environmental lending, increased lending for population programs, increased forestry lending, increased the resources devoted to the environment by more than 100 staff years, and we have fully integrated environmental issues in the Bank's approach to development.

But we need to do more, and as we move on with our agenda, I expect that in the next three years World Bank support for free-standing environmental projects will be near \$1.3 billion. Even that may not be as important as our efforts increasingly to integrate environmental values into our ongoing development program.

In the course of reviewing some key areas of the development/environment relationship, I have already described to you the thrust of the Bank's major activities since the environment was selected for special emphasis. In addition, during this last year, the World Bank's Board of Directors approved more than 100 projects, 35 percent of all Bank and IDA projects, with significant environmental components. Sixty percent of projects approved in the agricultural sector included environmental elements. Other sectors with significant environmental work included energy and power, transportation, water supply and sewerage, and urban development. We will do still more in the next 12 months.

With funds recently made available by Japan, we have inaugurated a \$5 million Environmental Technical Assistance Program to speed up the preparation of environmental projects. There is an urgent need for more such funding mechanisms. Five months after the technical assistance program was announced, staff at the World Bank have reviewed and approved requests totalling \$23 million for immediate action.

We estimate that in any given year the resources required to meet the technical assistance demand for the preparation of environment projects could be in the range of \$60 - 80 million. Funding and speedy decision making by both donors and developing countries are essential pre-requisites for the preparation and implementation of environmental programs.

We have also designed Environmental Assessment Guidelines that strengthen the capacity of developing countries to deal with environmental problems. These guidelines ensure that developing countries and the World Bank systematically take environmental concerns into account at the earliest stage of designing development projects. Groups likely to be affected by the projects, as well as local NGOs, will also be fully involved in the assessment process.

In the energy sector, our approach is to assist developing countries in mitigating the emissions of greenhouse gases without curtailing development. Conservation and energy-efficiency are both important aspects of this effort.

We have created an Energy Efficiency and Strategy Unit to address financial and policy issues. A Household Energy Unit concentrates on the most suitable means of delivering traditional and modern forms of renewable energy to the homes of the world's poor, and to rural industry.

Today, I am pleased to announce that we are establishing a Gas Development Unit which will promote the economic production, consumption, and export of natural gas, the least polluting of fossil fuels.

I am also pleased to announce a tripling of our lending to forestry in the next few years, and a more direct involvement of World Bank staff in the Tropical Forest Action Program. The Bank will provide technical contributions and mission leadership for sector missions, and is renewing its commitment to work with co-donors (bilateral donors, FAO, UNDP, and the World Resources Institute) in all other aspects of this action program.

The Consultative Group on International Agricultural Research (CGIAR) -- of which the Bank is a co-sponsor and donor -- has re-emphasized the sustainability of agricultural production systems as one of its goals. At its mid-year meeting held last May in Canberra, the CGIAR included tropical forestry on its mandate. On that occasion, the Government of Japan indicated its willingness to increase its financial contribution to support the work of an expanded CGIAR, as a whole. Research on tropical forestry and enhanced food production will be carried out at CGIAR centers in the context of the wider issues of the management and utilization of renewable resources.

I have stressed the critical links between population, the environment, and development. The World Bank and IDA have lent over \$500 million for population projects over the last five years. We will raise this amount to over \$800 million in the three years 1990 to 1992. We will also expand our funding for health, education, and other sectors which should help support developing country efforts to hold back population growth.

In all these activities, we have sought cooperation with NGOs and benefitted from that association. As the annual meetings of the World Bank and International Monetary Fund approach, much attention will be given by the NGO community to the way in which we are tackling these issues. Some may say we have made no progress, we have not changed. They are wrong. Others may say that progress is slow. I am telling you here that we intend to accelerate, and that the momentum will be stronger if we are able to work in partnership with the worldwide NGO community.

TOWARD A GLOBAL BALANCE

Mr. Chairman, Ladies, and Gentlemen -- The World Bank's experience reinforces the view that environmental factors cut across all development sectors. It might even be said that they affect all aspects of human endeavor which make up the "infinite unity of our mutual needs."

Conservation, energy efficiency, natural resource management, population and family planning, resource transfers, justice in the international marketplace, research and development all these and more are part of the environmental challenge. The development challenge is equally compelling. The numbing statistics of poverty need no repetition, but they cannot be ignored. As I have stated today, we can meet both challenges effectively only when we are able to create a global balance in which a diversity of interests are reconciled. This is a responsibility for the human family as a whole, not just for its poorer members.

Currently, nations, regional organizations, other multi-nation groupings, non-government organizations, and international institutions are all active in a vibrant environmental debate. The Group of 77 has placed the issue high on its agenda. In a rare example of North-South concurrence, so has the Group of Seven. Words and good intentions alone will not produce results, however. Practice must match theory.

I urge, therefore, that all of us -- institutions, nations, and individuals -- work together to define the correct global balance between human aspirations and the human environment. Having done that, can we rededicate our resources and our efforts to creating and maintaining just such a balance?

As we do so, we might profit from Gro Harlem Brundtland's advice that "only growth can create the capacity to solve environmental problems. But growth must be managed to enhance the resource base on which developing countries all depend. We must create external conditions that will help rather than hinder developing countries in realizing their full potential."

The World Bank fully agrees. We do not believe that development and environmental protection are mutually hostile objectives. One cannot be sacrificed for the other. Working toward new models for development which bring both into a creative synergy exemplifies the kind of change to which the World Bank is irrevocably committed.

THE WORLD BANK
Washington, D.C. 20433
U.S.A.

BARBER B. CONABLE
President

August 28, 1989

Messrs. W. David Hopper and Moeen A. Qureshi

Re: Environment Assessment

I would like you to revise immediately the draft Operational Directive on Environment Assessment. Paragraph 12 should reflect the Bank's expectations that the Borrower takes fully into account the views of affected groups and local NGOs in project design and implementation, and, in particular, in the preparation of the Environment Assessment Report.

I hope the paper would be distributed to Board members this week for a Board seminar to be held well before the start of the Board recess. I will then make a final decision in light of Board discussions.

I also support the point made by Ibrahim Shihata, i.e., we should not give "an undertaking to the NGOs that their views would be taken into consideration when this Directive is revised". It goes without saying that we will take into account views of all interested parties as these "living documents" are being revised.

Barber Conable

cc: Members, President's Council
Mr. Rajagopalan

*JAVR
LSDG
RNCB*

August --, 1989

**Operational Directive 4.00, Annex A:
Environmental Assessment**

1. Attached for insertion in your new Operational Manual is OD 4.00, Annex A, Environmental Assessment. This annex sets out the Bank's policies and procedures for conducting environmental assessments (EAs) of proposed projects. It standardizes and formalizes a process which is already taking place for projects with major environmental impacts.

2. This annex makes the following points:

- (a) The purpose of EA is to ensure environmentally sustainable development through the timely incorporation of environmental issues into project design (para. 2);
- (b) The EA's scope, depth, and analytical techniques depend on project circumstances (para. 3);
- (c) EA is part of project preparation and is therefore the borrower's responsibility (para. 4);
- (d) Regional and sectoral EAs can reduce the work subsequently needed on project-specific EAs (paras. 6-8);
- (e) Alternatives to EA that focus on a narrower range of issues are acceptable for projects with limited potential environmental impacts (para. 9);
- (f) In the EA process, inter-agency coordination and the involvement of affected groups and NGOs are important (paras. 11-12);
- (g) The EA process should be used to strengthen environmental capability in the country (para. 13);
- (h) In special cases, environmental advisory panels are desirable (para. 15);
- (i) In the Bank, the task manager (TM), supported by the Regional environment division (RED), supervises the implementation of the EA process (para.16);
- (j) The IEPS meeting decides whether an EA or a more limited environmental analysis is to be done (para. 18); and
- (k) The final EA report should normally be available to the Bank prior to appraisal (para. 21), and its recommendations reviewed and incorporated into the project and the Staff Appraisal Report (paras. 24-25).

3. Projects currently in advanced stages of preparation would not normally be subject to this annex. For other projects already past the IEPS stage, the TM and the RED should review the status and recommend how to achieve the objectives of this annex within the existing time and resource constraints. All projects which reached the IEPS stage after September 15, 1989, would be fully subject to this directive.

4. Country departments should discuss with borrowers how to achieve smooth and efficient implementation of this annex through, e.g., EA seminars for implementing agencies' management, training programs for their environmental staff, and preparation of EA manuals (by sector) and procedures for the country.

5. Questions on this annex should be referred to the Director, Environment Department.

6. Additional copies are available on a self-service basis in H 4234.

Operational Directive 4.00, Annex A:
Environmental Assessment

Introduction

1. This annex outlines Bank policy and procedures for the environmental assessment (EA) of Bank investment lending operations,¹ and related types of environmental analysis. For the purpose of this annex, environmental assessment covers also social concerns affecting, for example, health, cultural property, resettlement, and tribal people.² EAs utilize the findings of country environmental studies and action plans which cover nationwide issues, the overall policy framework, legislation, and institutional capabilities in the country.

Purpose and Nature of EA

2. The purpose of EA is to ensure that the development options under consideration are environmentally sound and sustainable and that any environmental consequences are recognized early in the project cycle and taken into account in project design. EAs identify ways of improving projects environmentally, and minimizing, mitigating, or compensating for adverse impacts. By alerting project designers, implementing agencies, and

1/ References to the Bank include IBRD and IDA. Investment lending covers specific and sector investments including rehabilitation, loans through financial intermediaries, and the investment component of hybrid loans. Sector and structural adjustment loans are excluded from consideration, but are subject to the general policies in OMS 2.36, Environmental Aspects of Bank Work (to be reissued as OD 4.00, Environmental Policies). IFC is developing similar internal procedures for environmental review, which reflect the special circumstances of its work. MIGA will cooperate with the Bank to ensure that the objectives of the OD are met in MIGA's operations to the extent possible, bearing in mind MIGA's special circumstances.

2/ For Bank policies and procedures see (a) OPN 11.03, Management of Cultural Property in Bank-Financed Projects, to be reissued as OD 4.50, Cultural Property; (b) OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects, to be reissued as OD 4.30, Involuntary Resettlement; and (c) OMS 2.34, Tribal People in Bank-Financed Projects, to be reissued as OD 4.40, Tribal People.

borrower and Bank staff to issues early, EAs (a) enable them to address environmental issues in a timely and practical fashion, and (b) help avoid costs and delays due to unanticipated environmental problems. EAs also provide a formal mechanism to help ensure inter-agency coordination and to address the concerns of potentially affected parties and local NGOs. In addition, they can play a major role in building environmental capability in the country.

3. Like economic, financial, institutional, and engineering analyses, EA is part of project preparation, and is the borrower's responsibility. Close integration of EA with these other aspects of project preparation is essential to ensure that environmental considerations are given due weight in project selection, siting, and design decisions.

4. EA is a flexible procedure, which can vary in breadth, depth, and type of analysis, depending on the project. It may be carried out at one point in time, stretched over a year to account for seasonal variations, or done in discrete stages.

Types of Environmental Analysis

Project-Specific EAs

5. Project-specific EAs are used to analyze specific investment projects (e.g., dams, factories, irrigation systems) with significant environmental issues. The level of detail and sophistication of analysis of each significant issue should be commensurate with the magnitude of expected impacts. A project-specific EA should normally cover: (a) existing environmental "baseline" conditions; (b) potential environmental impacts, direct and indirect, including opportunities for environmental enhancement;³ (c) systematic environmental comparison of alternative investments, sites, technologies, and designs; (d) preventive, mitigatory, and compensatory measures, generally in the form of an action plan; (e) environmental management and training, and (f) monitoring. To the extent possible, capital and recurrent costs, environmental staffing, training and monitoring requirements, and the benefits of proposed alternatives and mitigation measures should be quantified. Annex A1 gives a sample outline for a project-specific EA report, and Annex A2 is a checklist of specific issues to be covered where relevant.

3/ Indirect impacts are the induced consequences of the project which occur later or in another part of the environment, e.g., if a river is channelled or dammed, its capacity for self-purification may be reduced and the original aquatic ecosystem damaged or destroyed.

Regional EAs

6. Regional EAs are used where a number of significant development activities are planned for a reasonably localized area. In such cases, they are generally more efficient than a series of project-specific EAs, and may identify issues that the latter might overlook (e.g., interaction among effluents, or competition for water, land, or timber). Regional EAs compare alternative development scenarios, and recommend environmentally sustainable growth rates, land use patterns and policies. The study area is normally defined on a physical and/or biological basis (e.g., airshed, habitat type, river basin); however, regional EAs with an institutional focus might follow administrative boundaries instead. In some cases, a regional EA may be sufficiently substantial in scope to constitute a separate project.

Sectoral EAs

7. Sectoral EAs are used for the overall design of sector investment programs. They are particularly suitable for reviewing (a) sector investment alternatives; (b) the effect of sector policy changes; (c) institutional capacities and requirements for environmental review, implementation and monitoring at the sectoral level; and (d) cumulative impacts of many relatively small, similar investments which do not merit individual project-specific EAs.

8. In some cases, regional or sectoral EAs cover all the normal requirements of project-specific EAs. More often, the latter are still needed for major investments (see para. 14 concerning sector investment loans), but the regional or sectoral EAs will have identified the relevant issues, collected much of the data, and, in general, greatly reduced the work needed in the project-specific EAs.

Alternatives to EAs

9. Alternative approaches that focus on a narrower range of issues are acceptable for many types of projects, especially smaller ones and those not in environmentally sensitive areas. These approaches may be more effective in integrating environmental concerns into the borrower's planning process. Such alternative approaches include:

- (a) integrated pest management programs for many agricultural projects which do not involve major irrigation or land development;
- (b) specific environmental design criteria and pollution standards for small- or medium-scale industrial plants; and
- (c) specific environmental design criteria and construction supervision programs for small-scale rural works projects.

Other examples of projects for which alternative approaches are generally acceptable are listed in Annex A3, para. 3, under "Category B."

Consideration of Global Issues

10. While EAs should collect the relevant data, the Bank does not expect global environmental issues (ozone depletion, global warming, etc.) to normally be analyzed extensively in EAs. Major global environmental issues are monitored by the Bank's Office of the Principal Adviser, Science and Technology, and other specialized organizations responsible for scientific investigations on these issues. The Bank draws upon prevailing views in guiding the development of its own environmental, economic, and sectoral policies, with a view to minimizing possible adverse impacts on global systems such as the atmosphere and oceans.

Project Institutional Aspects

Inter-Agency Coordination

11. Because environmental issues generally involve national, regional, and local government agencies, and cover a broad range of responsibilities (wildlife, health, water and land use, tourism, etc.), coordination among government agencies in the EA process is crucial. This is best achieved through inter-agency meetings at key points in the EA cycle. The first meeting, normally held soon after a decision is made to prepare an EA, identifies the issues, types of analysis required, sources of relevant expertise, responsibilities and schedule for the EA, and mitigating measures to be considered. Another meeting should normally be held when the EA report is completed and submitted for final government review.

Involvement of Affected Groups and Nongovernmental Organizations

12. The Bank expects the borrower to take the views of affected groups and local nongovernmental organizations (NGOs) fully into account in project design and implementation, and in particular in the preparation of EAs (see OD 14.70, Involving Nongovernmental Organizations in Bank-Supported Activities). This is important in order to understand both the nature and extent of any social or environmental impact and the acceptability of proposed mitigation measures. An approach which has proven effective in many countries is to expand the initial inter-agency meeting (para. 11) into a "forum" or "scoping session" with representatives of affected groups and relevant NGOs. Similar consultations after the EA report is completed are also a valuable way to obtain feedback on the report and to increase community cooperation in implementing the recommendations.

Strengthening Environmental Capabilities

13. The ultimate success of EA depends upon the development of environmental capability and understanding in the agencies concerned. Projects with major potential impacts normally require the establishment or strengthening of in-house environmental units for the project (located or

represented on site), the implementing agency and the ministry. Involvement of these units throughout the EA process (a) ensures that the agency's/ministry's knowledge and perspective are taken into account in the EA; (b) provides on-the-job training for the staff; and (c) provides continuity for the implementation of the EA's recommendations. Such projects normally need to include an institutional development and training component for such units. In addition, to help develop EA capability in the country, the Bank should (a) encourage the use of local expertise in EA preparation (in consortia with international consultants, where appropriate), and (b) help arrange EA training courses for local specialist staff and consultants to attend.

Sector and Financial Intermediary Lending

14. For sector investment loans and loans through financial intermediaries, subproject details may not be known at the time of project appraisal. In such cases, the project implementing institutions will need to screen subprojects (see para. 19) and carry out environmental analyses consistent with this directive. To ensure that this can be done, the Bank should appraise the implementing agencies' capabilities for EA, and strengthen them where necessary. The appraisal mission should also indicate the proper division of responsibility for preparing and reviewing EAs between the ultimate borrower, the financial intermediary or sector agency, and the agencies responsible for environmental regulation.

Environmental Advisory Panels

15. For major projects with serious and multi-dimensional environmental concerns, the Bank should review with the borrower whether the latter needs to engage an advisory panel of independent, internationally recognized, environmental specialists, to review and advise on, inter alia, the TOR and findings of the EA, the implementation of its recommendations, and the development of environmental capacity in the implementing agency/ministry. Such panel should meet at least once a year until the project is operating routinely and environmental issues have been addressed satisfactorily.⁴

EA Procedures

Overview

16. Though EA preparation is the responsibility of the borrower, the task manager (TM) in the Bank generally supervises the EA process, with support mainly from the Regional environment division (RED). The borrower

^{4/} See OD 4.00 Annex B, Environmental Policy for Dam and Reservoir Projects, para. 18, for more detail on the selection and functions of the panel.

and the Bank should agree as early as possible on the selection of consultants or borrower staff to prepare the EA, and the EA procedures, scheduling, and outline. Major steps in the EA process normally include: (a) screening, (b) the initial executive project summary (IEPS), (c) preparation of terms of reference (TORs) for the EA, (d) EA preparation, (e) EA review and incorporation of environmental measures into the project, and (f) supervision and ex-post evaluation.

17. Since project and country conditions, national legislation, and institutional experience vary among borrowers, both the borrower and the Bank must exercise judgement in using these procedures to design and implement projects which are both environmentally and economically sound, and are consistent with the environmental laws, policies, and procedures of borrowers, the Bank, and cofinanciers. The Environment Department (ENV), Legal Department, and the REDs maintain information on these requirements.

Screening

18. Projects should be screened at identification by the TM, with advice from the RED, and assigned to one of the following categories based upon the nature, magnitude and sensitivity of environmental issues:

Category A - EA is normally required as the project may have diverse and significant environmental impacts;

Category B - More limited environmental analysis is appropriate, as the project may have specific environmental impacts; and

Category C - Environmental analysis is normally unnecessary.

Category D - Environmental projects, for which separate EAs may not be required, as environment would be a major focus of project preparation.

Annex 3 gives illustrative lists, to be applied flexibly, of the types of project/component in each category.

Initial Executive Project Summary

19. In the Initial Executive Project Summary (IEPS), the TM, in consultation with the RED, should (a) identify key environmental issues, (b) indicate whether an EA or alternative type of environmental analysis is recommended, and (c) provide a preliminary preparation schedule. If an EA is not likely to be available prior to appraisal, the IEPS should propose special procedures to address the situation. The IEPS meeting would confirm the type and timing of environmental analysis (although in the event of inadequate information, the decision may be deferred). The TM should ensure that the decision to prepare an EA and the main issues to be examined are mentioned in the Monthly Operational Summary.

Preparation of TORs for the EA

20. Following the IEPS meeting, the Bank should discuss with the borrower the scope of the EA, and assist the borrower, as necessary, in preparing TORs for the EA. A field visit by Bank environmental staff is generally desirable to confirm the issues to be covered in the TORs. The Bank should ensure that the TORs provide for adequate inter-agency coordination (para. 11) and consultation with affected groups and NGOs (para. 12).

EA Preparation

21. An EA for a major project typically takes 6-18 months to prepare and review. EA drafts should be available at key points in the project cycle. The final EA should be available prior to appraisal, to minimize the risk of project design changes and resultant delays at a late stage.

22. In most cases, the EA should form part of the overall feasibility study, so that the EA's findings are directly integrated into project design. However, the EA is normally prepared separately by analysts with appropriate expertise. For projects which would have major impacts, such as large dams or projects involving large scale resettlement, it is recommended that the borrower retain independent experts not affiliated with the project. Borrowers may request Bank assistance for financing EAs as part of an advance from the Project Preparation Facility (PPF)⁵ or, if anticipated EA costs are more than US \$100,000 equivalent, from the Bank's Technical Assistance Grant Program for the Environment. EAs generally account for 1-10 percent of the cost of project preparation.

23. For some projects, a full year of baseline data is desirable to capture the seasonal effects of certain environmental phenomena; however, as waiting for such data could delay critical project decisions, short-term monitoring should be used to provide conservative estimates of environmental impacts, while longer-term data collection is being carried out. Since special care in designing the baseline monitoring program is warranted, the borrower should be encouraged to discuss the matter with the Bank.

EA Review and Project Appraisal

24. The borrower should submit the final EA report to the Bank prior to Bank appraisal. The EA report is the borrower's property, but the Bank encourages the borrower to release relevant information to appropriate interested parties. The Final Executive Project Summary (FEPS) should summarize the status of the EA and describe how major environmental issues have been resolved or are to be addressed, noting any proposed

5/ See OMS 2.15, Project Preparation Facility, to be reissued as OD 8.00.

conditionality. The appraisal mission should review both the procedure and substantive elements of the EA with the borrower, resolve any issues, assess the adequacy of the institutions responsible for environmental planning and management in light of the EA's findings, and determine if the EA's recommendations are properly addressed in project design and economic analysis.

Staff Appraisal Report (SAR) and Loan Documents

25. The EA procedures followed and the main findings of the EA should be explained briefly in the text of the SAR. In addition, an SAR annex should summarize the EA more fully, covering, inter alia, environmental baseline conditions, alternatives considered, mitigating and compensatory actions, capability of environmental units and measures to strengthen them, environmental monitoring arrangements, and consultations with affected groups and NGOs. These factors will provide the basis for the RED's formal environmental clearance prior to the authorization of negotiations by the Regional vice president. Measures critical to sound project implementation may require specific conditionality in the loan documents.

Supervision

26. EA recommendations provide the basis for supervising the environmental aspects of project implementation. Compliance with environmental conditionality, the status of mitigating measures, and the findings of environmental monitoring programs should be part of borrower reporting requirements and project supervision.

Ex Post Evaluation

27. The project completion report (PCR)⁶ should evaluate (a) environmental impacts anticipated in the EA report, as well as any unanticipated ones; and (b) the effectiveness of mitigating measures taken and of institutional development and training.

^{6/} See the OPNSV memoranda, Guidelines for Preparing Project Completion Reports, July 17, 1989, and OMS 3.58, General Guidelines for Preparing Project Completion Reports, which are to be combined and reissued as OD 13.55, Project Completion Reports.

Sample Outline of a Project-Specific EA Report

1. EA reports should be concise and limited to significant environmental issues. The level of detail and sophistication of analysis should be commensurate with the magnitude of potential impacts. The target audience should be project designers, implementing agencies, and borrower and Bank staff.

2. The EA report should include:

- (a) Executive Summary. Concise discussion of significant findings and recommended actions.
- (b) Policy, legal, and administrative framework within which the EA is prepared. The environmental requirements of any cofinanciers should be explained.
- (c) Project description in a geographic, ecological, social, and temporal context, including any off-site investments that may be required by the project (e.g. dedicated pipelines, access roads, power plants, water supply, housing, raw materials and product storage facilities).
- (d) Baseline Data. Dimensions of the study area and description of relevant physical, biological, and socio-economic conditions, including any changes anticipated before the project commences. Current and proposed development activities within the project area (but not directly connected to the project) should also be taken into account.
- (e) Environmental Impacts. The positive and negative impacts likely to result from the proposed project should be identified and assessed. Mitigation measures and the residual impacts that cannot be mitigated should be identified. Opportunities for environmental enhancement should be explored. The extent and quality of available data, key data gaps, and uncertainties associated with predictions should be identified/estimated. Topics that do not require further attention should be specified.
- (f) Analysis of Alternatives. Proposed investment design, site, technology, and operational alternatives should be compared systematically in terms of their potential environmental impacts, capital and recurrent costs, suitability under local conditions, and institutional, training, and monitoring requirements. To the extent possible for each of the alternatives, the environmental costs and benefits should be quantified, and economic values attached where feasible.
- (g) Mitigation Plan. Feasible and cost-effective measures which may reduce potentially significant adverse environmental impacts to acceptable levels should be proposed, and the potential environmental impacts, capital and recurrent costs,

and institutional and training requirements of those measures estimated. The plan (sometimes known as an "action plan" or "environmental management plan") should provide details on proposed work programs and schedules, to ensure that the proposed environmental actions are in phase with engineering activities throughout preparation. The plan should consider compensatory measures if mitigation measures are not feasible or cost-effective.

- (h) Environmental Management and Training. The existence, role and capability of environmental units at the on-site, headquarters and agency/ministry level should be assessed, and recommendations made concerning the establishment and/or expansion of such units, and the training of staff to the point that EA recommendations can be implemented.
- (i) Monitoring Plan regarding environmental impacts and performance. The plan should specify the type of monitoring, who would do it, how much it would cost, and what other inputs (e.g., training) are necessary.

Appendices

- (i) List of EA preparers--individuals and organizations.
- (ii) References--written materials used in study preparation. This is especially important given the large amount of unpublished documentation often used.
- (iii) Record of Inter-Agency/Forum Meeting, including list of both invitees and attendees.

Checklist of Potential Issues for an EA

Where applicable, EAs should address the following issues, which are subject to the Bank policies and guidelines identified below.

- (a) Agrochemicals. The Bank promotes the use of integrated pest management (IPM) and the careful selection, application, and disposal of pesticides (see OPN 11.01, Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and their Procurement when Financed by the Bank, to be reissued as OD 4.00, Annex C, Selection and Use of Pesticides). The use of fertilizers, due to their impacts on surface and groundwater quality, must also be carefully assessed;
- (b) Biological Diversity. The Bank promotes conservation of endangered plant and animal species, critical habitats, and protected areas (para. 9b, OMS 2.36, Environmental Aspects of Bank Work, and OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).
- (c) Coastal and Marine Resources Management. Guidelines are available from the Environmental Department (ENV) on the planning and management of coastal marine resources including coral reefs, mangroves, and wetlands.
- (d) Cultural Properties. OPN 11.03, Management of Cultural Property in Bank-Financed Projects (to be reissued as OD 4.50, Cultural Property), confirms the Bank's commitment to actively protect archaeological sites, historic monuments, and historic settlements.
- (e) Dams and Reservoirs. OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, provides specific guidance for addressing environmental issues in planning, implementation, and operation of dam and reservoir projects.
- (f) Hazardous and Toxic Materials. Guidelines are available from ENV on the safe manufacture, use, transport, storage, and disposal of hazardous and toxic materials.
- (g) Induced Development and Other Socio-Cultural Aspects. Secondary growth of settlements and infrastructure, often referred to as "induced development" or "boomtown" effects, can have major indirect environmental impacts. The costs of addressing this problem must frequently be borne by relatively weak local governments.
- (h) Industrial Hazards. All energy and industry projects should include a formal plan to prevent and manage industrial hazards. (See Techniques of Assessing Industrial Hazards - A Manual, World Bank Technical Paper No. 55.)

- (i) International Treaties and Agreements on the Environment and Natural Resources. EAs should review the status and application of such current and pending treaties and agreements, including their notification requirements. Bank staff should assure compliance with relevant treaties and agreements. The Legal Department maintains a list of international treaties, and could obtain, whenever required, information on applicable law in individual countries.
- (j) International Waterways. OMS 2.32, Projects on International Waterways (to be re-issued as OD 7.50), provides guidance on this matter. This OMS exempts from notification requirements rehabilitation projects which will not affect the quality or quantity of water flows.
- (k) Involuntary Resettlement. OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects (to be reissued as OD 4.30, Involuntary Resettlement), provide guidance.
- (l) Land Settlement. Due to the complex physical, biological, socio-economic, and cultural impacts, land settlement should generally be carefully reviewed in EAs (see OD 4.31, Land Settlement, to be issued).
- (m) Natural Hazards. EAs should review whether the project may be affected by natural hazards (e.g., earthquakes, floods, volcanic activity), and should propose specific measures to address these concerns when appropriate, (see OD 8.50, Emergency Recovery Assistance, to be issued).
- (n) Occupational Health and Safety. All industry and energy projects should include a formal plan to promote occupational health and safety (Occupational Health and Safety Guidelines, 1988).
- (o) Tribal Peoples. OMS 2.34, Tribal People in Bank-Financed Projects (to be reissued as OD 4.40, Tribal People), provides specific guidance for addressing the rights of tribal peoples, including traditional land and water rights.
- (p) Tropical Forests. The Bank co-authored the Tropical Forest Action Plan (published in 1984); up-to-date information is available from ENV. OPN 11.02, Wildlands: Their Protection and Management in Economic Development (to be reissued as OD 4.00, Annex D), also addresses issues relating to tropical forests.

- (q) Watersheds. Bank policy is to promote protection and management of watersheds as an element of lending operations for dams, reservoirs, and irrigation systems (OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, para. 6).
- (r) Wetlands. The Bank promotes conservation and management of wetlands (e.g., estuaries, lakes, mangroves, marshes, and swamps). This is covered by OPN 11.02 on Wildlands (see (s) below).
- (s) Wildlands. The Bank is committed to protect wildlands, including through compensatory measures when lending could result in adverse impacts (see OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).

Environmental Screening

Introduction

1. The task manager (TM), in consultation with the Regional environmental division is responsible for screening a proposed project to determine the appropriate type of environmental analysis, based on the nature, potential magnitude, and sensitivity of the issues. The categories below, based upon prior Bank staff experience, are strictly illustrative. Alternatives to EA are acceptable where they are expected to result in an environmentally sound project.

2. Category A: Projects/Components which may Have Diverse and Significant Environmental Impacts - Normally Require EA¹

- (i) Aquaculture/Mariculture (large scale);
- (ii) Dams and Reservoirs;²
- (iii) Electrical Transmission (large scale);
- (iv) Industrial Plants (large scale) and Industrial Estates;
- (v) Irrigation and Drainage (large scale);
- (vi) Land Clearance and Leveling;
- (vii) Mineral Development (including oil and gas);
- (viii) Pipelines (oil, gas and water);
- (ix) Port and Harbor Development;
- (x) Reclamation and New Land Development;
- (xi) Resettlement;³

¹/ Except generally for projects directed to rehabilitation, improved operation and maintenance, and limited upgrading of facilities.

²/ See OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects.

³/ While OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects (to be reissued as OD 4.30, Involuntary Resettlement), covers the social aspects of resettlement, the environmental implications of the resettlement itself can be major.

- (xii) River Basin Development;
- (xiii) Rural Roads;
- (xiv) Thermal and Hydropower Development;
- (xv) Tourism (large scale);
- (xvi) Transportation (airports, railways, roads, waterways);
- (xvii) Urban Development (large scale); and,
- (xviii) Urban Water Supply and Sanitation (large scale).
- (xix) Manufacture, Transportation, and Use of Pesticides or other Hazardous and/or Toxic Materials;⁴ and
- (xx) Projects which Pose Serious Accident Risk.⁵

3. Category B: Projects/Components which may Have Specific Environmental Impacts - More Limited Environmental Analysis Appropriate

Projects in this category normally require more limited environmental analysis than an EA. A wide range of environmental guidelines, developed by a number of organizations, are applicable. In addition, specific environmental pollution standards or design criteria can be developed for individual projects.

- (i) Agroindustries (small scale);
- (ii) Aquaculture and Mariculture (small scale);
- (iii) Electrical Transmission (small scale);
- (iv) Industries (small scale);
- (v) Irrigation and Drainage (small scale);

^{4/} In some cases, adherence to existing directives is an acceptable alternative to an EA (see OD 4.00 Annex C, Selection and Use of Pesticides, to be reissued). Certain materials (e.g. PCBs) are not to be used in Bank projects and other materials (e.g. asbestos) are to be used only under extremely restricted conditions. A Restricted Toxic Materials List (RTML) will be available from ENV and updated periodically.

^{5/} See Techniques of Assessing Industrial Hazard - A Manual, World Bank Technical Paper No. 55.

- (vi) Mini Hydro-Power;
- (vii) Public Facilities (hospitals, housing, schools, etc.);
- (viii) Renewable Energy;
- (ix) Rural Electrification;
- (x) Telecommunications;
- (xi) Tourism (small scale);
- (xii) Urban Development (small scale); and,
- (xiii) Rural Water Supply and Sanitation.

4. Category C: Projects/Components which Normally Do Not Result in Significant Environmental Impact - Environmental Analysis Normally Unnecessary

Opportunities to enhance environmental benefits should be sought in these projects.

- (i) Education (except school construction);
- (ii) Family Planning;
- (iii) Health (except hospital construction);
- (iv) Nutrition;
- (v) Institutional Development; and
- (vi) Technical Assistance.

5. Category D: Environmental Projects

Projects with a major environmental focus may not require a separate EA, as environment would be a major part of the project preparation.

6. Emergency Recovery Projects

Because emergency recovery projects (a) need to be processed rapidly and (b) seek mainly to restore existing facilities, they normally would not require a full EA. However, the extent to which the emergency was precipitated and/or exacerbated by inappropriate environmental practices should be determined, and corrective measures built into either the emergency project or a future lending operation.⁶

^{6/} See OD 8.50, Emergency Recovery Assistance, to be issued.

Called in to
D Mattheisen

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	APPROPRIATE DISPOSITION	NOTE AND RETURN
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X	CLEARANCE	PER OUR CONVERSATION
X	COMMENT	PER YOUR REQUEST
	FOR ACTION	PREPARE REPLY
	INFORMATION	RECOMMENDATION
	INITIAL	SIGNATURE
	NOTE AND FILE	URGENT

REMARKS: I would appreciate any comments on the attached briefing which Mr. Conable would read at the Seminar on Friday. I would appreciate your comments by noon on Thursday.

FROM: Dirk Mattheisen	ROOM NO.: D11041	EXTENSION: 74008
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Chairman's Briefing
September 8, 1989

(BANK/IDA SEMINAR)

Draft Operational Directive on Environmental Assessment

The item for discussion in this seminar is a "Draft Operational Directive on Environmental Assessment" (SecM89-1130), which will be finalized and issued to Bank staff shortly and made available to delegates and others at the Annual Meetings. Because of the interest of Executive Directors and their constituents in how environmental concerns are being incorporated into Bank operations, this seminar was arranged to inform the Executive Directors of the changes being considered, and to seek their comments before finalizing the directive.

I will ask Mr. Piddington to introduce the subject and will then invite your comments.

- Mr. Piddington (Director)

For disc. ✓ /
KP
9/07

Conclusion:

I would like to thank Directors for their comments. We will take these into account in finalizing the Directive.

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PRESIDENT'S COUNCIL MEETING

MONDAY, AUGUST 28, 1989

9:30 a.m.

AGENDA

- * 1. Environment Assessment: Draft Operational Directive 4.00, Annex A
(Memo from Messrs. Kashiwaya and Hopper dated August 21, 1989)

- ** 2. Paper on Bank Policy and Operational Options with Regard to Greenhouse Cases and Global Warming
(Memo from Mr. Hopper dated July 20, 1989)

-
- * Document attached
 - ** Document distributed on July 20, 1989

8/22/89

8/22/89

OFFICE MEMORANDUM

DATE: August 21, 1989

TO: Mr. Barber B. Conable

FROM: Koji Kashiwaya and W. David Hopper *W.D.H.*

EXTENSION: 70795 and 75678

SUBJECT: Draft OD 4.00, Annex A, Environmental Assessment

Attached for your consideration is a draft Operational Directive Annex on Environmental Assessment (EA), together with the agenda and minutes of the Operations Committee (OC) meeting held on August 11, and memoranda from IFC and MIGA. We would like to draw your attention to three issues:

- (a) the resource implications for the Bank (OC minutes, para. 5 and attachment);
- (b) the access by Executive Directors and their constituents to EAs (OC minutes, para. 8); and
- (c) the exclusion of IFC and MIGA from the coverage of the directive (memoranda from IFC and MIGA, and footnote 1 of the directive).

Attachments

- OD. would standardize and formalize a process already beginning to take place for Projects with major Potential Env Impact.
 - Putting Bank in line with major bilaterals who have formal EA procedures.
 - Demonstrate priority Bank gives to Environmental Concerns.
 - O.C discussed paper - points mentioned in Help/Spec memo
- Access to E.D.s -
 Encourage Consultation with NGOs. not mandate - para 12
 Resource issue
 Exclusion of IFC & MIGA.

The World Bank
OPERATIONS COMMITTEE

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Minutes of the Operations Committee Meeting
to consider the Draft OD 4.00, Annex A,
"Environmental Assessment"

Held on August 14, 1989, in Room E-1243

A. Participants

Committee

Messrs. S.S. Husain, Acting OPNSV
V. Rajagopalan, PREVP
H. Vergin, OPNSV
H. Scott, LEGVP
B. Kavalsky, FRS
A. Golan, ASIVP
M. Gillette, AFRVP
H. Kopp, EMNVP

Others

Messrs. K. Piddington, ENVDR
S. Burmester, SECGE
O. Rakhonen, SECGE
F. Earwaker, SPRPA
R. Srinivasan, CODPR
S. Ettinger, CODOP
S. El Serafy, EAS
P. Ofosu-Amaah, LEGAF
A. Khanna, EXC
B. Baratz, ENVOS
Mmes. G. Davis, ASTEN
N. Okonjo-Iweala, OPNSV

B. Introduction

1. The Environment Department introduced the proposed directive on environmental assessment (EA) as perhaps the Bank's most important tool for environmental analysis. The proposed directive had evolved from the practice in a number of Part I countries, but was sufficiently flexible and adapted to the realities of our borrowers. It would require considerable effort to gear up for implementation, but by the beginning of CY90, it should be possible to apply the directive Bankwide. The estimated annual incremental cost to the Bank of 10-13 staff years was considered more than justified by the benefits expected.

C. Issues

2. The Chairman noted that the OC could not deal with the applicability of the directive to IFC and MIGA, and proposed six topics for discussion:

- (a) Should the OD explain more about the contribution EA could make to sustainable development?

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- MAY 11 1988
- (b) Is the draft realistic in terms of borrowers' implementation capability?
 - (c) Are the estimated costs to the Bank realistic?
 - (d) Should NGOs be invited to comment on the OD in draft?
 - (e) Do the draft provisions for involvement of NGOs and affected groups infringe too much on our borrowers' prerogatives? and
 - (f) How, when and to what extent should executive directors (EDs) and their constituents have access to EAs or summaries of EAs?

D. Discussion and Decisions

3. Environmental Assessment - Development Linkage. The Committee recognized that the draft did not explain the contribution EA could make to the sustainability of development, but agreed that this OD Annex was not the proper place for such an analysis, because: (a) the economics of environment was not yet well enough developed; and (b) this directive focussed primarily on the approach to and procedures for EA, while other directives dealt with the substance.

4. Borrower Implementation Capacity. The Committee emphasized that Bank staff and consultants would need to provide extensive support to compensate for inadequate borrower capacity in many countries to undertake EA. There was considerable discussion about whether more flexibility needed to be built into the directive to reflect differences in borrower capacity, but the Committee eventually agreed that there was adequate flexibility already in the draft, and that any further loosening might damage the directive's credibility. In particular, the Committee decided not to modify the directive to specifically endorse the use of sectoral or regional EAs as alternatives to project-specific EAs, noting that sectoral and regional EAs would not always be lower cost means of meeting project requirements.

5. Costs to the Bank. The Committee agreed that the incremental cost to the Bank of EAs would be greater than the 10-13 staff-years per annum estimated in the agenda. In particular, there would be high start-up costs (involving divisional managers and above) to reach agreement with our borrowers on how to implement the directive, and significant follow-up costs to ensure that the EA requirements were faithfully implemented. Mr. Vergin volunteered to work with the authors in order to come up with more realistic figures. (The revised estimate is attached.)

6. NGOs' Review of this Directive. The Committee agreed that the directive should be finalized without discussing it with NGOs, as even the EDs were not invited to review ODs in draft. However, after the directive was finalized and made public, it should become the basis for a dialogue with relevant NGOs, starting at the forthcoming Annual Meetings and the October consultation in the Bank/NGO committee. NGOs should then be given an undertaking that their views would be taken into consideration when this directive was revised.

7. Participation of Affected Groups and NGOs. The Committee decided on modifications in: (a) para. 12, to make consultation with affected groups mandatory, while continuing to encourage consultation with local NGOs; (b) para. 24 (first sentence), so that the Bank would be sent the EA as soon as completed, without waiting for the potentially drawn out review process in the country, and (c) para. 11, to make clear that the para. refers to government agencies.

8. Documentation for EDs. The Committee agreed that for each project subject to EA, there should be a section in the SAR summarizing EA findings, with more detail in an annex. Furthermore, in accordance with existing policies, when the SAR was distributed, individual EDs could have personal access to the complete EAs upon request, but with restrictions on any further dissemination unless the borrower agreed. The Committee opposed the idea of providing EDs with detailed information on environmental aspects of projects in advance of SAR distribution to the Board, on the grounds that (a) this could tend to erode established management responsibility for project design, and (b) EDs should review all aspects of a project simultaneously, in order to get a balanced picture. While it was noted that this might not entirely satisfy some Part I governments, it was agreed that the OC should make its recommendation to the President based on the operational considerations outlined above.

E. Next Stage

9. The draft directive would be revised based on the OC decisions, and would be sent, together with these minutes, to the Office of the President by August 21 for consideration at the President's Council.

Attachment

Estimated Resource Implications for the Bank

Based on preliminary estimates, implementation of the Environmental Assessment OD will require about 23-30 staff-years (SY) per annum, of which about half would be from environmental specialists (either new positions or consultants) and the remainder mainly from country department managers and staff. The details are as follows:

	<u>Staff-Years Per Annum</u>
<p><u>Bankwide Start-up and External-Liaison Costs.</u> The cost of preparing sectoral guidelines, drafting sample TORs, collecting model EAs, and designing initial training modules is estimated at at least 1 SY. Interaction with international NGOs and other interested parties is expected to take about 2 SY per annum, mainly from ENV and the REDs.</p>	2-3
<p><u>Training.</u> Assuming that over a period of 3 years, one half of all operational staff should receive 2 days of EA training, training would consume about 3 SY annually, plus 1 SY to teach and manage the program.</p>	4
<p><u>Technical Review and Support.</u> The estimate (in the OC agenda) of 10-13 SY is for technical review and support, primarily from the REDs and ENV. It assumes that 5-6 staff weeks (SW) would be required for each project requiring an EA (to draft TORs, help engage and supervise consultants, review EA documents and agree on the implementation of EA findings). About 2 SW would be required for each project requiring limited environmental analysis. About 50-60 full EAs and 75-85 more limited assessments are anticipated annually.</p>	10-13
<p><u>Country Dialogue and CD Support.</u> As the OC pointed out, there will be a cost to task managers and higher level CD management in introducing new procedures to our borrowers and enlisting their agreement and support. This dialogue is estimated to take 15-20 SW annually per CD (depending on the number of countries in the CD and their current degree of involvement in EA work).</p>	7-10

Projects Already Under Preparation.

There are likely to be extra costs (which are hard to quantify a priori) in working out special arrangements for projects already under preparation for which EAs would have been begun earlier had the directive been in effect.

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Supervision. The resources dedicated for start-up and training in the early years would be needed for supervision and follow-up in later years.

-

23-30

August --, 1989

**Operational Directive 4.00, Annex A:
Environmental Assessment**

1. Attached for insertion in your new Operational Manual is OD 4.00, Annex A, Environmental Assessment. This annex sets out the Bank's policies and procedures for conducting environmental assessments (EAs) of proposed projects. It standardizes and formalizes a process which is already taking place for projects with major environmental impacts.

2. This annex makes the following points:

- (a) The purpose of EA is to ensure environmentally sustainable development through the timely incorporation of environmental issues into project design (para. 2);
- (b) The EA's scope, depth, and analytical techniques depend on project circumstances (para. 3);
- (c) EA is part of project preparation and is therefore the borrower's responsibility (para. 4);
- (d) Regional and sectoral EAs can reduce the work subsequently needed on project-specific EAs (paras. 6-8);
- (e) Alternatives to EA that focus on a narrower range of issues are acceptable for projects with limited potential environmental impacts (para. 9);
- (f) In the EA process, inter-agency coordination and the involvement of affected groups and NGOs should be encouraged (paras. 11-12);
- (g) The EA process should be used to strengthen environmental capability in the country (para. 13);
- (h) In special cases, environmental advisory panels are recommended (para. 15);
- (i) In the Bank, the task manager (TM), supported by the Regional environment division (RED), supervises the implementation of the EA process (para.16);
- (j) The IEPS meeting decides whether an EA or a more limited environmental analysis is to be done (para. 18); and
- (k) The final EA report should normally be available to the Bank prior to appraisal (para. 21), and its recommendations reviewed and incorporated into the project (paras. 24-25).

3. Projects currently in advanced stages of preparation would not normally be subject to this annex. For other projects already past the IEPS stage, the TM and the RED should review the status and recommend how to achieve the objectives of this annex within the existing time and resource constraints. All projects which reached the IEPS stage after September 15, 1989, would be fully subject to this directive.

4. Country departments should discuss with borrowers how to achieve smooth and efficient implementation of this annex through, e.g., EA seminars for implementing agencies' management, training programs for their environmental staff, and preparation of EA manuals (by sector) and procedures for the country.

5. Questions on this annex should be referred to the Director, Environment Department.

6. Additional copies are available on a self-service basis in H 4234.

**Operational Directive 4.00, Annex A:
Environmental Assessment**

Introduction

1. This annex outlines Bank policy and procedures for the environmental assessment (EA) of Bank investment lending operations,¹ and related types of environmental analysis. For the purpose of this annex, environmental assessment covers also social concerns affecting, for example, health, cultural property, resettlement, and tribal people.² EAs utilize the findings of country environmental studies and action plans which cover nationwide issues, the overall policy framework, legislation, and institutional capabilities in the country.

Purpose and Nature of EA

2. The purpose of EA is to ensure that the development options under consideration are environmentally sound and sustainable and that any environmental consequences are recognized early in the project cycle and taken into account in project design. EAs identify ways of improving projects environmentally, and minimizing, mitigating, or compensating for adverse impacts. By alerting project designers, implementing agencies, and

1/ References to the Bank include IBRD and IDA. Investment lending covers specific and sector investments including rehabilitation, loans through financial intermediaries, and the investment component of hybrid loans. Sector and structural adjustment loans are excluded from consideration, but are subject to the general policies in OMS 2.36, Environmental Aspects of Bank Work (to be reissued as OD 4.00, Environmental Policies). IFC is developing similar internal procedures for environmental review, which reflect the special circumstances of its work. MIGA will cooperate with the Bank to ensure that the objectives of the OD are met in MIGA's operations to the extent possible, bearing in mind MIGA's special circumstances.

2/ For Bank policies and procedures see (a) OPN 11.03, Management of Cultural Property in Bank-Financed Projects, to be reissued as OD 4.50, Cultural Property; (b) OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects, to be reissued as OD 4.30, Involuntary Resettlement; and (c) OMS 2.34, Tribal People in Bank-Financed Projects, to be reissued as OD 4.40, Tribal People.

borrower and Bank staff to issues early, EAs (a) enable them to address environmental issues in a timely and practical fashion, and (b) help avoid costs and delays due to unanticipated environmental problems. EAs also provide a formal mechanism to help ensure inter-agency coordination and to address the concerns of potentially affected parties and local NGOs. In addition, they can play a major role in building environmental capability in the country.

3. Like economic, financial, institutional, and engineering analyses, EA is part of project preparation, and is the borrower's responsibility. Close integration of EA with these other aspects of project preparation is essential to ensure that environmental considerations are given due weight in project selection, siting, and design decisions.

4. EA is a flexible procedure, which can vary in breadth, depth, and type of analysis, depending on the project. It may be carried out at one point in time, stretched over a year to account for seasonal variations, or done in discrete stages.

Types of Environmental Analysis

Project-Specific EAs

5. Project-specific EAs are used to analyze specific investment projects (e.g., dams, factories, irrigation systems) with significant environmental issues. The level of detail and sophistication of analysis of each significant issue should be commensurate with the magnitude of expected impacts. A project-specific EA should normally cover: (a) existing environmental "baseline" conditions; (b) potential environmental impacts, direct and indirect, including opportunities for environmental enhancement;³ (c) systematic environmental comparison of alternative investments, sites, technologies, and designs; (d) preventive, mitigatory, and compensatory measures, generally in the form of an action plan; (e) environmental management and training, and (f) monitoring. To the extent possible, capital and recurrent costs, environmental staffing, training and monitoring requirements, and the benefits of proposed alternatives and mitigation measures should be quantified. Annex A1 gives a sample outline for a project-specific EA report, and Annex A2 is a checklist of specific issues to be covered where relevant.

3/ Indirect impacts are the induced consequences of the project which occur later or in another part of the environment, e.g., if a river is channelled or dammed, its capacity for self-purification may be reduced and the original aquatic ecosystem damaged or destroyed.

Regional EAs

6. Regional EAs are used where a number of significant development activities are planned for a reasonably localized area. In such cases, they are generally more efficient than a series of project-specific EAs, and may identify issues that the latter might overlook (e.g., interaction among effluents, or competition for water, land, or timber). Regional EAs compare alternative development scenarios, and recommend environmentally sustainable growth rates, land use patterns and policies. The study area is normally defined on a physical and/or biological basis (e.g., airshed, habitat type, river basin); however, regional EAs with an institutional focus might follow administrative boundaries instead. In some cases, a regional EA may be sufficiently substantial in scope to constitute a separate project.

Sectoral EAs

7. Sectoral EAs are used for the overall design of sector investment programs. They are particularly suitable for reviewing (a) sector investment alternatives; (b) the effect of sector policy changes; (c) institutional capacities and requirements for environmental review, implementation and monitoring at the sectoral level; and (d) cumulative impacts of many relatively small, similar investments which do not merit individual project-specific EAs.

8. In some cases, regional or sectoral EAs cover all the normal requirements of project-specific EAs. More often, the latter are still needed for major investments (see para. 14 concerning sector investment loans), but the regional or sectoral EAs will have identified the relevant issues, collected much of the data, and, in general, greatly reduced the work needed in the project-specific EAs.

Alternatives to EAs

9. Alternative approaches that focus on a narrower range of issues are acceptable for many types of projects, especially smaller ones and those not in environmentally sensitive areas. These approaches may be more effective in integrating environmental concerns into the borrower's planning process. Such alternative approaches include:

- (a) integrated pest management programs for many agricultural projects which do not involve major irrigation or land development;
- (b) specific environmental design criteria and pollution standards for small- or medium-scale industrial plants; and
- (c) specific environmental design criteria and construction supervision programs for small-scale rural works projects.

Other examples of projects for which alternative approaches are generally acceptable are listed in Annex A3, para. 3, under "Category B."

Consideration of Global Issues

10. While EAs should collect the relevant data, the Bank does not expect global environmental issues (ozone depletion, global warming, etc.) to normally be analyzed extensively in EAs. Major global environmental issues are monitored by the Bank's Office of the Principal Adviser, Science and Technology, and other specialized organizations responsible for scientific investigations on these issues. The Bank draws upon prevailing views in guiding the development of its own environmental, economic, and sectoral policies, with a view to minimizing possible adverse impacts on global systems such as the atmosphere and oceans.

Project Institutional Aspects

Inter-Agency Coordination

11. Because environmental issues generally involve national, regional, and local government agencies, and cover a broad range of responsibilities (wildlife, health, water and land use, tourism, etc.), coordination among government agencies in the EA process is crucial. This is best achieved through inter-agency meetings at key points in the EA cycle. The first meeting, normally held soon after a decision is made to prepare an EA, identifies the issues, types of analysis required, sources of relevant expertise, responsibilities and schedule for the EA, and mitigating measures to be considered. Another meeting should normally be held when the EA report is completed and submitted for final government review.

Involvement of Affected Groups and Nongovernmental Organizations

12. The views of affected groups should be taken into account in project design and implementation. This is important in order to understand both the nature and extent of any social impact and the acceptability of proposed mitigation measures. The Bank also encourages the borrower to consult with local nongovernmental organizations (NGOs), recognizing the contribution they can make in defining environmental issues and the directions to be taken in the EA (see OD 14.70, Involving Nongovernmental Organizations in Bank-Supported Activities). An approach which has proven effective in many countries is to expand the initial inter-agency meeting (para. 11) into a "forum" or "scoping session" with representatives of affected groups and relevant NGOs. Similar consultations after the EA report is completed are also a valuable way to obtain feedback on the report and to increase community cooperation in implementing the recommendations.

Strengthening Environmental Capabilities

13. The ultimate success of EA depends upon the development of environmental capability and understanding in the concerned agencies. This frequently requires the establishment or strengthening of in-house

environmental units for the project (located or represented on site), the implementing agency and the ministry. Involvement of these units throughout the EA process (a) ensures that the agency's/ministry's knowledge and perspective are taken into account in the EA; (b) provides on-the-job training for the staff; and (c) provides continuity for the implementation of the EA's recommendations. Projects often need to include an institutional development and training component for such units. In addition, to help develop EA capability in the country, the Bank should (a) encourage the use of local expertise in EA preparation (in consortia with international consultants, where appropriate), and (b) help arrange EA training courses for local specialist staff and consultants to attend.

Sector and Financial Intermediary Lending

14. For sector investment loans and loans through financial intermediaries, subproject details may not be known at the time of project appraisal. In such cases, the project implementing institutions will need to screen subprojects (see para. 19) and carry out environmental analyses consistent with this directive. To ensure that this can be done, the Bank should appraise the implementing agencies' capabilities for EA, and strengthen them where necessary. The appraisal mission should also indicate the proper division of responsibility for preparing and reviewing EAs between the ultimate borrower, the financial intermediary or sector agency, and the agencies responsible for environmental regulation.

Environmental Advisory Panels

15. For major projects with serious and multi-dimensional environmental concerns, the Bank should review with the borrower whether the latter needs to engage an advisory panel of independent, internationally recognized, environmental specialists, to review and advise on, inter alia, the TOR and findings of the EA, the implementation of its recommendations, and the development of environmental capacity in the implementing agency/ministry. Such panel should meet at least once a year until the project is operating routinely and environmental issues have been addressed satisfactorily.⁴

EA Procedures

Overview

16. Though EA preparation is the responsibility of the borrower, the task manager (TM) in the Bank generally supervises the EA process, with support mainly from the Regional environment division (RED). The borrower

^{4/} See OD 4.00 Annex B, Environmental Policy for Dam and Reservoir Projects, para. 18, for more detail on the selection and functions of the panel.

and the Bank should agree as early as possible on the selection of consultants or borrower staff to prepare the EA, and the EA procedures, scheduling, and outline. Major steps in the EA process normally include: (a) screening, (b) the initial executive project summary (IEPS), (c) preparation of terms of reference (TORs) for the EA, (d) EA preparation, (e) EA review and incorporation of environmental measures into the project, and (f) supervision and ex-post evaluation.

17. Since project and country conditions, national legislation, and institutional experience vary among borrowers, both the borrower and the Bank must exercise judgement in using these procedures to design and implement projects which are both environmentally and economically sound, and are consistent with the environmental laws, policies, and procedures of borrowers, the Bank, and cofinanciers. The Environment Department (ENV), Legal Department, and the REDs maintain information on these requirements.

Screening

18. Projects should be screened at identification by the TM, with advice from the RED, and assigned to one of the following categories based upon the nature, magnitude and sensitivity of environmental issues:

Category A - EA is normally required as the project may have diverse and significant environmental impacts;

Category B - More limited environmental analysis is appropriate, as the project may have specific environmental impacts; and

Category C - Environmental analysis is normally unnecessary.

Category D - Environmental projects, for which separate EAs may not be required, as environment would be a major focus of project preparation.

Annex 3 gives illustrative lists, to be applied flexibly, of the types of project/component in each category.

Initial Executive Project Summary

19. In the Initial Executive Project Summary (IEPS), the TM, in consultation with the RED, should (a) identify key environmental issues, (b) indicate whether an EA or alternative type of environmental analysis is recommended, and (c) provide a preliminary preparation schedule. If an EA is not likely to be available prior to appraisal, the IEPS should propose special procedures to address the situation. The IEPS meeting would confirm the type and timing of environmental analysis (although in the event of inadequate information, the decision may be deferred). The TM should ensure that the decision to prepare an EA and the main issues to be examined are mentioned in the Monthly Operational Summary.

Preparation of TORs for the EA

20. Following the IEPS meeting, the Bank should discuss with the borrower the scope of the EA, and assist the borrower, as necessary, in preparing TORs for the EA. A field visit by Bank environmental staff is generally desirable to confirm the issues to be covered in the TORs. The Bank should ensure that the TORs provide for adequate inter-agency coordination (para. 11) and consultation with affected groups and NGOs (para. 12).

EA Preparation

21. An EA for a major project typically takes 6-18 months to prepare and review. EA drafts should be available at key points in the project cycle. The final EA should be available prior to appraisal, to minimize the risk of project design changes and resultant delays at a late stage.

22. In most cases, the EA should form part of the overall feasibility study, so that the EA's findings are directly integrated into project design. However, the EA is normally prepared separately by analysts with appropriate expertise. For projects which would have major impacts, such as large dams or projects involving large scale resettlement, it is recommended that the borrower retain independent experts not affiliated with the project. Borrowers may request Bank assistance for financing EAs as part of an advance from the Project Preparation Facility (PPF)⁵ or, if anticipated EA costs are more than US \$100,000 equivalent, from the Bank's Technical Assistance Grant Program for the Environment. EAs generally account for 1-10 percent of the cost of project preparation.

23. For some projects, a full year of baseline data is desirable to capture the seasonal effects of certain environmental phenomena; however, as waiting for such data could delay critical project decisions, short-term monitoring should be used to provide conservative estimates of environmental impacts, while longer-term data collection is being carried out. Since special care in designing the baseline monitoring program is warranted, the borrower should be encouraged to discuss the matter with the Bank.

EA Review and Project Appraisal

24. The borrower should submit the final EA report to the Bank prior to Bank appraisal. The EA report is the borrower's property, but the Bank encourages the borrower to release relevant information to appropriate interested parties. The Final Executive Project Summary (FEPS) should summarize the status of the EA and describe how major environmental issues have been resolved or are to be addressed, noting any proposed

5/ See OMS 2.15, Project Preparation Facility, to be reissued as OD 8.00.

conditionality. The appraisal mission should review both the procedure and substantive elements of the EA with the borrower, resolve any issues, assess the adequacy of the institutions responsible for environmental planning and management in light of the EA's findings, and determine if the EA's recommendations are properly addressed in project design and economic analysis.

Staff Appraisal Report (SAR) and Loan Documents

25. The EA procedures followed and the main findings of the EA should be explained briefly in the text of the SAR. In addition, an SAR annex should summarize the EA more fully, covering, inter alia, environmental baseline conditions, alternatives considered, mitigating and compensatory actions, capability of environmental units and measures to strengthen them, environmental monitoring arrangements, and consultations with affected groups and NGOs. These factors will provide the basis for the RED's formal environmental clearance prior to the authorization of negotiations by the Regional vice president. Measures critical to sound project implementation may require specific conditionality in the loan documents.

Supervision

26. EA recommendations provide the basis for supervising the environmental aspects of project implementation. Compliance with environmental conditionality, the status of mitigating measures, and the findings of environmental monitoring programs should be part of borrower reporting requirements and project supervision.

Ex Post Evaluation

27. The project completion report (PCR)⁶ should evaluate (a) environmental impacts anticipated in the EA report, as well as any unanticipated ones; and (b) the effectiveness of mitigating measures taken and of institutional development and training.

^{6/} See the OPNSV memoranda, Guidelines for Preparing Project Completion Reports, July 17, 1989, and OMS 3.58, General Guidelines for Preparing Project Completion Reports, which are to be combined and reissued as OD 13.55, Project Completion Reports.

Sample Outline of a Project-Specific EA Report

1. EA reports should be concise and limited to significant environmental issues. The level of detail and sophistication of analysis should be commensurate with the magnitude of potential impacts. The target audience should be project designers, implementing agencies, and borrower and Bank staff.
2. The EA report should include:
 - (a) Executive Summary. Concise discussion of significant findings and recommended actions.
 - (b) Policy, legal, and administrative framework within which the EA is prepared. The environmental requirements of any cofinanciers should be explained.
 - (c) Project description in a geographic, ecological, social, and temporal context, including any off-site investments that may be required by the project (e.g. dedicated pipelines, access roads, power plants, water supply, housing, raw materials and product storage facilities).
 - (d) Baseline Data. Dimensions of the study area and description of relevant physical, biological, and socio-economic conditions, including any changes anticipated before the project commences. Current and proposed development activities within the project area (but not directly connected to the project) should also be taken into account.
 - (e) Environmental Impacts. The positive and negative impacts likely to result from the proposed project should be identified and assessed. Mitigation measures and the residual impacts that cannot be mitigated should be identified. Opportunities for environmental enhancement should be explored. The extent and quality of available data, key data gaps, and uncertainties associated with predictions should be identified/estimated. Topics that do not require further attention should be specified.
 - (f) Analysis of Alternatives. Proposed investment design, site, technology, and operational alternatives should be compared systematically in terms of their potential environmental impacts, capital and recurrent costs, suitability under local conditions, and institutional, training, and monitoring requirements. To the extent possible for each of the alternatives, the environmental costs and benefits should be quantified, and economic values attached where feasible.
 - (g) Mitigation Plan. Feasible and cost-effective measures which may reduce potentially significant adverse environmental impacts to acceptable levels should be proposed, and the potential environmental impacts, capital and recurrent costs,

and institutional and training requirements of those measures estimated. The plan (sometimes known as an "action plan" or "environmental management plan") should provide details on proposed work programs and schedules, to ensure that the proposed environmental actions are in phase with engineering activities throughout preparation. The plan should consider compensatory measures if mitigation measures are not feasible or cost-effective.

- (h) Environmental Management and Training. The existence, role and capability of environmental units at the on-site, headquarters and agency/ministry level should be assessed, and recommendations made concerning the establishment and/or expansion of such units, and the training of staff to the point that EA recommendations can be implemented.
- (i) Monitoring Plan regarding environmental impacts and performance. The plan should specify the type of monitoring, who would do it, how much it would cost, and what other inputs (e.g., training) are necessary.

Appendices

- (i) List of EA preparers--individuals and organizations.
- (ii) References--written materials used in study preparation. This is especially important given the large amount of unpublished documentation often used.
- (iii) Record of Inter-Agency/Forum Meeting, including list of both invitees and attendees.

Checklist of Potential Issues for an EA

Where applicable, EAs should address the following issues, which are subject to the Bank policies and guidelines identified below.

- (a) Agrochemicals. The Bank promotes the use of integrated pest management (IPM) and the careful selection, application, and disposal of pesticides (see OPN 11.01, Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and their Procurement when Financed by the Bank, to be reissued as OD 4.00, Annex C, Selection and Use of Pesticides). The use of fertilizers, due to their impacts on surface and groundwater quality, must also be carefully assessed;
- (b) Biological Diversity. The Bank promotes conservation of endangered plant and animal species, critical habitats, and protected areas (para. 9b, OMS 2.36, Environmental Aspects of Bank Work, and OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).
- (c) Coastal and Marine Resources Management. Guidelines are available from the Environmental Department (ENV) on the planning and management of coastal marine resources including coral reefs, mangroves, and wetlands.
- (d) Cultural Properties. OPN 11.03, Management of Cultural Property in Bank-Financed Projects (to be reissued as OD 4.50, Cultural Property), confirms the Bank's commitment to actively protect archaeological sites, historic monuments, and historic settlements.
- (e) Dams and Reservoirs. OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, provides specific guidance for addressing environmental issues in planning, implementation, and operation of dam and reservoir projects.
- (f) Hazardous and Toxic Materials. Guidelines are available from ENV on the safe manufacture, use, transport, storage, and disposal of hazardous and toxic materials.
- (g) Induced Development and Other Socio-Cultural Aspects. Secondary growth of settlements and infrastructure, often referred to as "induced development" or "boomtown" effects, can have major indirect environmental impacts. The costs of addressing this problem must frequently be borne by relatively weak local governments.
- (h) Industrial Hazards. All energy and industry projects should include a formal plan to prevent and manage industrial hazards. (See Techniques of Assessing Industrial Hazards - A Manual, World Bank Technical Paper No. 55.)

- (i) International Treaties and Agreements on the Environment and Natural Resources. EAs should review the status and application of such current and pending treaties and agreements, including their notification requirements. Bank staff should assure compliance with relevant treaties and agreements. The Legal Department maintains a list of international treaties, and could obtain, whenever required, information on applicable law in individual countries.
- (j) International Waterways. OMS 2.32, Projects on International Waterways (to be re-issued as OD 7.50), provides guidance on this matter. This OMS exempts from notification requirements rehabilitation projects which will not affect the quality or quantity of water flows.
- (k) Involuntary Resettlement. OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects (to be reissued as OD 4.30, Involuntary Resettlement), provide guidance.
- (l) Land Settlement. Due to the complex physical, biological, socio-economic, and cultural impacts, land settlement should generally be carefully reviewed in EAs (see OD 4.31, Land Settlement, to be issued).
- (m) Natural Hazards. EAs should review whether the project may be affected by natural hazards (e.g., earthquakes, floods, volcanic activity), and should propose specific measures to address these concerns when appropriate, (see OD 8.50, Emergency Recovery Assistance, to be issued).
- (n) Occupational Health and Safety. All industry and energy projects should include a formal plan to promote occupational health and safety (Occupational Health and Safety Guidelines, 1988).
- (o) Tribal Peoples. OMS 2.34, Tribal People in Bank-Financed Projects (to be reissued as OD 4.40, Tribal People), provides specific guidance for addressing the rights of tribal peoples, including traditional land and water rights.
- (p) Tropical Forests. The Bank co-authored the Tropical Forest Action Plan (published in 1984); up-to-date information is available from ENV. OPN 11.02, Wildlands: Their Protection and Management in Economic Development (to be reissued as OD 4.00, Annex D), also addresses issues relating to tropical forests.

- (q) Watersheds. Bank policy is to promote protection and management of watersheds as an element of lending operations for dams, reservoirs, and irrigation systems (OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, para. 6).
- (r) Wetlands. The Bank promotes conservation and management of wetlands (e.g., estuaries, lakes, mangroves, marshes, and swamps). This is covered by OPN 11.02 on Wildlands (see (s) below).
- (s) Wildlands. The Bank is committed to protect wildlands, including through compensatory measures when lending could result in adverse impacts (see OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).

Environmental Screening

Introduction

1. The task manager (TM), in consultation with the Regional environmental division is responsible for screening a proposed project to determine the appropriate type of environmental analysis, based on the nature, potential magnitude, and sensitivity of the issues. The categories below, based upon prior Bank staff experience, are strictly illustrative. Alternatives to EA are acceptable where they are expected to result in an environmentally sound project.

2. Category A: Projects/Components which may Have Diverse and Significant Environmental Impacts - Normally Require EA¹

- (i) Aquaculture/Mariculture (large scale);
- (ii) Dams and Reservoirs;²
- (iii) Electrical Transmission (large scale);
- (iv) Industrial Plants (large scale) and Industrial Estates;
- (v) Irrigation and Drainage (large scale);
- (vi) Land Clearance and Leveling;
- (vii) Mineral Development (including oil and gas);
- (viii) Pipelines (oil, gas and water);
- (ix) Port and Harbor Development;
- (x) Reclamation and New Land Development;
- (xi) Resettlement;³

1/ Except generally for projects directed to rehabilitation, improved operation and maintenance, and limited upgrading of facilities.

2/ See OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects.

3/ While OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects (to be reissued as OD 4.30, Involuntary Resettlement), covers the social aspects of resettlement, the environmental implications of the resettlement itself can be major.

- (xii) River Basin Development;
- (xiii) Rural Roads;
- (xiv) Thermal and Hydropower Development;
- (xv) Tourism (large scale);
- (xvi) Transportation (airports, railways, roads, waterways);
- (xvii) Urban Development (large scale); and,
- (xviii) Urban Water Supply and Sanitation (large scale).
- (xix) Manufacture, Transportation, and Use of Pesticides or other Hazardous and/or Toxic Materials;⁴ and
- (xx) Projects which Pose Serious Accident Risk.⁵

3. Category B: Projects/Components which may Have Specific Environmental Impacts - More Limited Environmental Analysis Appropriate

Projects in this category normally require more limited environmental analysis than an EA. A wide range of environmental guidelines, developed by a number of organizations, are applicable. In addition, specific environmental pollution standards or design criteria can be developed for individual projects.

- (i) Agroindustries (small scale);
- (ii) Aquaculture and Mariculture (small scale);
- (iii) Electrical Transmission (small scale);
- (iv) Industries (small scale);
- (v) Irrigation and Drainage (small scale);

^{4/} In some cases, adherence to existing directives is an acceptable alternative to an EA (see OD 4.00 Annex C, Selection and Use of Pesticides, to be reissued). Certain materials (e.g. PCBs) are not to be used in Bank projects and other materials (e.g. asbestos) are to be used only under extremely restricted conditions. A Restricted Toxic Materials List (RTML) will be available from ENV and updated periodically.

^{5/} See Techniques of Assessing Industrial Hazard - A Manual, World Bank Technical Paper No. 55.

- (vi) Mini Hydro-Power;
- (vii) Public Facilities (hospitals, housing, schools, etc.);
- (viii) Renewable Energy;
- (ix) Rural Electrification;
- (x) Telecommunications;
- (xi) Tourism (small scale);
- (xii) Urban Development (small scale); and,
- (xiii) Rural Water Supply and Sanitation.

4. Category C: Projects/Components which Normally Do Not Result in Significant Environmental Impact - Environmental Analysis Normally Unnecessary

Opportunities to enhance environmental benefits should be sought in these projects.

- (i) Education (except school construction);
- (ii) Family Planning;
- (iii) Health (except hospital construction);
- (iv) Nutrition;
- (v) Institutional Development; and
- (vi) Technical Assistance.

5. Category D: Environmental Projects

Projects with a major environmental focus may not require a separate EA, as environment would be a major part of the project preparation.

6. Emergency Recovery Projects

Because emergency recovery projects (a) need to be processed rapidly and (b) seek mainly to restore existing facilities, they normally would not require a full EA. However, the extent to which the emergency was precipitated and/or exacerbated by inappropriate environmental practices should be determined, and corrective measures built into either the emergency project or a future lending operation.⁶

^{6/} See OD 8.50, Emergency Recovery Assistance, to be issued.

**THE WORLD BANK/INTERNATIONAL FINANCE CORPORATION
OFFICE MEMORANDUM**

DATE: August 8, 1989
TO: Mr. Moeen Qureshi, OPMSV
FROM: Jadhvir Parmar, CIOVP
SUBJECT: Bank Operational Directive on "Environmental Assessment".

1. I have just reviewed the draft Operational Directive on "Environmental Assessment" which is to be discussed at a meeting of the Operations Committee on Friday, August 11, 1989. We are, of course, in agreement with the basic thrust of the directive which is designed to increase the attention given to environmental aspects in Bank Group project design and appraisal.
2. As currently structured, however, the directive is designed to apply to the operations of the Bank, rather than of IFC or MIGA, referring as it does to the internal project cycle of the Bank. In addition, to a large extent, the proposals are relevant in situations where the involvement of the Bank is often at an early stage of project design and formulation, generally with public authorities, rather than in the situation which IFC often finds itself with its private sector clients.
3. As you are aware, IFC has been applying IBRD environmental guidelines and standards in the course of its project appraisals, and has always worked closely with the Bank's environmental staff in the past. We now have on board in the Corporation an Environmental Adviser who is responsible for clearance of projects on environmental grounds, and who coordinates his activities with the Environmental Department of the IBRD. In line with the Operational Directive now being considered by you for IBRD operations, we are well advanced in drafting a similar internal procedure for environmental review which would more closely reflect the nature of the Corporation's activities and internal processes, but which should have the same effect of ensuring the proper consideration of environmental issues in our project appraisal cycle.

cc Messrs Ryrie
Husain
Piddington
Srinivasan
Ettinger
Dehejia
Puri

NEzekiel/

B11023

**MULTILATERAL INVESTMENT GUARANTEE AGENCY
OFFICE MEMORANDUM**

DATE: August 10, 1989

TO: Mr. Kenneth Piddington, Director, ENVDR

FROM: Samir Bhatia, Acting Vice President, MIGPA

EXT.: 36164

[Handwritten signature]

SUBJECT: Draft Operational Directive (OD) 4.00,
Annex A. "Environmental Assessment"

1. We have reviewed the Draft Operational Directive (OD) on Environmental Assessment with great interest. The OD is timely and the treatment of the issue is comprehensive.
2. As you know, MIGA's operations are basically different from those of the Bank. We insure investments; we are not directly involved in the design, financing, implementation, and supervision of projects. Hence, the procedures proposed in the OD for the Bank cannot be applied to MIGA's activities in view of its particular responsibilities and circumstances. In addition, it should be noted that an application of these procedures to MIGA would require an amendment of MIGA's Operational Regulations, necessitating approval by a two-thirds majority of its Board.
3. This said, we do indeed take into account the effects of proposed investments on the environment in processing Guarantee requests. In this examination, we consult and cooperate closely with the Bank staff on a project-by-project basis.
4. In view of the special nature of MIGA's activities, as explained above, we propose that the procedures outlined in the OD should not be applied to MIGA. However, we will continue to cooperate with the Bank in ensuring that the objectives of the OD are met in MIGA's operations to the extent possible.

✓

cc: Mr. Etinger (CODOP), Ms. Davis (ASTEN)

SBhatia:cs

OFFICE MEMORANDUM

DATE: August 4, 1989

TO: Members of the Operations Committee

FROM: Kenneth Piddington, Director, ENV and
Raghavan Srinivasan, Acting Director, COD

EXTENSION: 33202 and 73331

SUBJECT: Draft OD 4.00, Annex A, "Environmental Assessment"
Agenda

1. Attached for your review is a draft Operational Directive (OD) Annex on Environmental Assessment (EA), which will be discussed at a meeting of the Operations Committee on Friday, August 11, at 3:00 p.m. in Room E-1243. Earlier versions have been reviewed at the divisional and departmental levels. Following the OC review, a revised version will be sent to the President for review in the President's Council during the week of August 28, so that the final version can be available prior to the Annual Meetings.

2. This OD Annex would standardize and formalize a process which is already beginning to take place for Bank projects with major potential environmental impacts. It would bring the Bank into line with several major bilateral donors who already have formal EA procedures, and further demonstrate the priority which the Bank gives to environmental concerns. An estimated 20-25% of Bank investment projects would be subject to a full EA, and some 30-35% to more limited environmental analysis. Adjustment loans would be excluded, on the grounds that the type of environmental analysis required would be very different than for investment projects, and would need to be applied first on a trial basis before being included in an OD. However, it is proposed that IFC and MIGA be covered by this directive (as IFC already is by other Bank environmental guidelines); this memorandum solicits their comments on the draft annex.

3. Projects currently in advanced stages of preparation would not normally be subject to this annex. For other projects already past the IEPS stage, the task manager (TM) and the Regional environmental division (RED) would review the project status and recommend how to achieve the objectives of this annex within the existing time and resource constraints.

4. This annex makes the following points:

- (a) The purpose of EA is to ensure timely incorporation of environmental issues into project design (para. 2 of the text);
- (b) The EA's scope, depth, and analytical techniques depend on project circumstances (para. 3);
- (c) EA is part of project preparation and is therefore the borrower's responsibility (para. 4);

- (d) Regional and sectoral EAs can reduce the work subsequently needed on project-specific EAs (paras. 6-8);
- (e) Alternatives to EA that focus on a narrower range of issues are acceptable for projects with limited potential environmental impacts (para. 9);
- (f) In the EA process, inter-agency coordination and the involvement of affected groups and NGOs should be encouraged (paras. 11-12);
- (g) The EA process should be used to strengthen environmental capability in the country (para. 13);
- (h) In special cases, environmental advisory panels are recommended (para. 15);
- (i) In the Bank, the TM, supported by the RED, supervises the implementation of the EA process (para.16);
- (j) The IEPS meeting decides whether an EA or a more limited environmental analysis is to be done (para. 18); and
- (k) The final EA report should normally be available to the Bank prior to appraisal (para. 21), and its recommendations reviewed and incorporated into the project (paras. 24-25).

Resource Implications and Priorities

5. The primary issue raised during the earlier reviews was the cost of EAs to both the Bank and our borrowers. The issue relates to (a) the absolute cost, (b) the availability of qualified people to carry out and review EAs, and (c) the relative priority EAs should be given in environmental work. A rough estimate is that about 5-6 staff weeks of Bank time would be required on average per EA (to help draft TORs, supervise consultants, review the EA finding, etc.), and 2 staff weeks per project with more limited environmental review. Assuming 50-60 EAs and 75-85 more limited reviews per annum, the total Bank staff requirement would be some 10-13 staff years. This would be primarily environmental input to be provided by the REDs, but would include extra work for TMs, especially in incorporating EA findings into projects. Most of this 10-13 staff years would be incremental, although EAs are already being required by the Bank for some projects, such as large dams and power plants. In the initial years, there would also be significant training and other start-up costs (e.g. preparation of model TORs by sector), and initial implementation of the OD would require close coordination between the Regions and ENV.

6. For our borrowers, who would be responsible for EA preparation, the costs would, of course, be greater. A number of the more advanced borrowers have or could develop in-house capability in doing EAs, reasonably quickly, especially if Bank assistance for this purpose is provided. In other cases, consultants could be financed by the TA Grant

Program for the Environment or the Project Preparation Facility. However, resources from both sources are limited. In all cases, borrowers would need to be convinced of the value of the process. Africa Region staff in particular have stressed the administrative as well as the financial burden that would be placed on their borrowers. They have also pointed out that most of the main environmental problems their countries face have little to do with Bank operations, and they question whether it would be cost-effective for the Region and its clients to allocate scarce environmental resources primarily to EAs. The OC might wish to discuss whether and how additional resources for Bank and borrower EA work could be made available.

Involvement of NGOs and Affected Groups

7. A second set of issues, raised by some Part I governments and NGOs, relates to (a) NGOs' desire to have the opportunity to comment on this directive in draft, (b) the extent of NGO and affected group participation in the EA process, and (c) interested groups' access to EAs. As regards (a), this draft directive has not been shared with NGOs, because it was considered necessary to obtain internal Bank consensus first. The OC might consider, however, whether once the directive has been approved, the Bank should specifically invite outside comments, to be taken into account in future revisions of the directive.

8. The main comments anticipated from NGOs would relate to (b) and (c) above. As regards (b), the issue is whether participation in the EA process by affected groups and NGOs should be mandatory, or merely encouraged (as per para. 12). As regards (c), the directive (para. 24) takes the position that an EA is the property of the borrower, although the Bank encourages borrowers to make them available to interested parties. Outside critics have asked that all EAs be made available at least to executive directors, and preferably to the public. A compromise the OC might consider would be for the Bank to make synopses of EAs available to executive directors.

9. Please send any written comments on the draft directive, including editorial suggestions, to Kenneth Piddington (ENVDR), S-5029, copied to Stephen Etinger (CODOP), B-11023, and Gloria Davis (ASTEN), A-8015, by c.o.b., Thursday, August 10, 1989.

Attachment

Distribution:

Messrs. Qureshi (OPNSV); Husain (LACVP); Jaycox (AFRVP); Thalwitz (EMNVP); Karaosmanoglu (ASIVP); Rajagopalan (PREVP); Fischer (DECVP); Shihata (LEGVP); Wood (FPRVP); Vergin (OPNSV)

cc: Messrs. Lee (COD); Dubey (EAS); Shakow (SPR); Picciotto (PBDDR);
Holsen (CEC); Rao (FRS); Thahane/Burmester (SEC);
Carter (SPRIE); Liebenthal (SPRPA); Steer (FRS);
Dehejia (CEVVP); Parmar, Ezekiel (CIOVP); El Rifai,
Bhatia (MIGPA); Kashiwaya (CFSVP); Carlsson (CTRVP); Harris,
Casley, (COD);

Ms. Okonjo-Iweala (OPNSV)

For Information

Messrs. Hopper (PPRSV); Stern (FINSV); Rovani (DGO); Bock (DFS);
Goldberg (LEGOP); Kavalsky (FRM); Parmar (CIO); Pfeffermann (CEI);
Baneth (IEC); Robless (OPNSV); Tanaka (EXC);
Aguirre-Sacasa (EXTDR); Goodland (LATEN); Christoffersen (AFTEN);
Baudon (EMTEN); Warford (ENVDR)

Ms. Haug (EXC); Davis (ASTEN); Pratt (ENVOS)

OFFICE MEMORANDUM

To M.R. on
8/10
8/14
2:30 PM

DATE: August 4, 1989

TO: Members of the Operations Committee

FROM: Kenneth Piddington, Director, ENV and
Raghavan Srinivasan, Acting Director, COD

K.P. Piddington
R. Srinivasan

EXTENSION: 33202 and 73331

SUBJECT: Draft OD 4.00, Annex A, "Environmental Assessment" Agenda

moved to 8/14
2:30 PM

1. Attached for your review is a draft Operational Directive (OD) Annex on Environmental Assessment (EA), which will be discussed at a meeting of the Operations Committee on Friday, August 11, at 3:00 p.m. in Room E-1243. Earlier versions have been reviewed at the divisional and departmental levels. Following the OC review, a revised version will be sent to the President for review in the President's Council during the week of August 28, so that the final version can be available prior to the Annual Meetings.

2. This OD Annex would standardize and formalize a process which is already beginning to take place for Bank projects with major potential environmental impacts. It would bring the Bank into line with several major bilateral donors who already have formal EA procedures, and further demonstrate the priority which the Bank gives to environmental concerns. An estimated 20-25% of Bank investment projects would be subject to a full EA, and some 30-35% to more limited environmental analysis. Adjustment loans would be excluded, on the grounds that the type of environmental analysis required would be very different than for investment projects, and would need to be applied first on a trial basis before being included in an OD. However, it is proposed that IFC and MIGA be covered by this directive (as IFC already is by other Bank environmental guidelines); this memorandum solicits their comments on the draft annex.

3. Projects currently in advanced stages of preparation would not normally be subject to this annex. For other projects already past the IEPS stage, the task manager (TM) and the Regional environmental division (RED) would review the project status and recommend how to achieve the objectives of this annex within the existing time and resource constraints.

4. This annex makes the following points:

- (a) The purpose of EA is to ensure timely incorporation of environmental issues into project design (para. 2 of the text);
- (b) The EA's scope, depth, and analytical techniques depend on project circumstances (para. 3);
- (c) EA is part of project preparation and is therefore the borrower's responsibility (para. 4);

- (d) Regional and sectoral EAs can reduce the work subsequently needed on project-specific EAs (paras. 6-8);
- (e) Alternatives to EA that focus on a narrower range of issues are acceptable for projects with limited potential environmental impacts (para. 9);
- (f) In the EA process, inter-agency coordination and the involvement of affected groups and NGOs should be encouraged (paras. 11-12);
- (g) The EA process should be used to strengthen environmental capability in the country (para. 13);
- (h) In special cases, environmental advisory panels are recommended (para. 15);
- (i) In the Bank, the TM, supported by the RED, supervises the implementation of the EA process (para.16);
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- (k) The final EA report should normally be available to the Bank prior to appraisal (para. 21), and its recommendations reviewed and incorporated into the project (paras. 24-25).

Resource Implications and Priorities

5. The primary issue raised during the earlier reviews was the cost of EAs to both the Bank and our borrowers. The issue relates to (a) the absolute cost, (b) the availability of qualified people to carry out and review EAs, and (c) the relative priority EAs should be given in environmental work. A rough estimate is that about 5-6 staff weeks of Bank time would be required on average per EA (to help draft TORs, supervise consultants, review the EA finding, etc.), and 2 staff weeks per project with more limited environmental review. Assuming 50-60 EAs and 75-85 more limited reviews per annum, the total Bank staff requirement would be some 10-13 staff years. This would be primarily environmental input to be provided by the REDs, but would include extra work for TMs, especially in incorporating EA findings into projects. Most of this 10-13 staff years would be incremental, although EAs are already being required by the Bank for some projects, such as large dams and power plants. In the initial years, there would also be significant training and other start-up costs (e.g. preparation of model TORs by sector), and initial implementation of the OD would require close coordination between the Regions and ENV.

6. For our borrowers, who would be responsible for EA preparation, the costs would, of course, be greater. A number of the more advanced borrowers have or could develop in-house capability in doing EAs, reasonably quickly, especially if Bank assistance for this purpose is provided. In other cases, consultants could be financed by the TA Grant

Program for the Environment or the Project Preparation Facility. However, resources from both sources are limited. In all cases, borrowers would need to be convinced of the value of the process. Africa Region staff in particular have stressed the administrative as well as the financial burden that would be placed on their borrowers. They have also pointed out that most of the main environmental problems their countries face have little to do with Bank operations, and they question whether it would be cost-effective for the Region and its clients to allocate scarce environmental resources primarily to EAs. The OC might wish to discuss whether and how additional resources for Bank and borrower EA work could be made available.

Involvement of NGOs and Affected Groups

7. A second set of issues, raised by some Part I governments and NGOs, relates to (a) NGOs' desire to have the opportunity to comment on this directive in draft, (b) the extent of NGO and affected group participation in the EA process, and (c) interested groups' access to EAs. As regards (a), this draft directive has not been shared with NGOs, because it was considered necessary to obtain internal Bank consensus first. The OC might consider, however, whether once the directive has been approved, the Bank should specifically invite outside comments, to be taken into account in future revisions of the directive.

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Baudon (EMTEN); Warford (ENVDR)

Ms. Haug (EXC); Davis (ASTEN); Pratt (ENVOS)

August --, 1989

**Operational Directive 4.00, Annex A:
Environmental Assessment**

1. Attached for insertion in your new Operational Manual is OD 4.00, Annex A, Environmental Assessment. This annex sets out the Bank's policies and procedures for conducting environmental assessments (EAs) of proposed projects. It standardizes and formalizes a process which is already taking place for projects with major environmental impacts.

2. This annex makes the following points:

- (a) The purpose of EA is to ensure timely incorporation of environmental issues into project design (para. 2);
- (b) The EA's scope, depth, and analytical techniques depend on project circumstances (para. 3);
- (c) EA is part of project preparation and is therefore the borrower's responsibility (para. 4);
- (d) Regional and sectoral EAs can reduce the work subsequently needed on project-specific EAs (paras. 6-8);
- (e) Alternatives to EA that focus on a narrower range of issues are acceptable for projects with limited potential environmental impacts (para. 9);
- (f) In the EA process, inter-agency coordination and the involvement of affected groups and NGOs should be encouraged (paras. 11-12);
- (g) The EA process should be used to strengthen environmental capability in the country (para. 13);
- (h) In special cases, environmental advisory panels are recommended (para. 15);
- (i) In the Bank, the task manager (TM), supported by the Regional environment division (RED), supervises the implementation of the EA process (para.16);
- (j) The IEPS meeting decides whether an EA or a more limited environmental analysis is to be done (para. 18); and
- (k) The final EA report should normally be available to the Bank prior to appraisal (para. 21), and its recommendations reviewed and incorporated into the project (paras. 24-25).

3. Projects currently in advanced stages of preparation would not normally be subject to this annex. For other projects already past the IEPS stage, the TM and the RED should review the status and recommend how to achieve the objectives of this annex within the existing time and resource constraints. All projects which reached the IEPS stage after September 15, 1989, would be fully subject to this directive.

4. Country departments should discuss with borrowers how to achieve smooth and efficient implementation of this annex through, e.g., EA seminars for implementing agencies' management, training programs for their environmental staff, and preparation of EA manuals (by sector) and procedures for the country.

5. Questions on this annex should be referred to the Director, Environment Department.

6. Additional copies are available on a self-service basis in H 4234.

**Operational Directive 4.00, Annex A:
Environmental Assessment**

Introduction

1. This annex outlines Bank policy and procedures for the environmental assessment (EA) of Bank investment lending operations,¹ and related types of environmental analysis. For the purpose of this annex, environmental issues are defined to include social concerns affecting, for example, health, cultural property, resettlement, and tribal people.² EAs build on the conclusions of country environmental studies and action plans, which cover nationwide issues, the overall policy framework, legislation, and institutional capabilities, and often identify the key issues and approaches to be pursued by EAs at the project level.

Purpose and Nature of EA

2. The purpose of EA is to ensure that potential environmental consequences are recognized and considered early in the project cycle, and taken into account in project design. EAs identify ways of improving projects environmentally, and minimizing, mitigating, or compensating for adverse impacts. By alerting project designers, implementing agencies, and borrower and Bank staff to issues early, EAs (a) enable them to address environmental issues in a timely and practical fashion, and (b) help avoid costs and delays due to unanticipated environmental problems. EAs also provide a formal mechanism to help ensure inter-agency coordination and to address the concerns of potentially affected parties and local NGOs. And they can play a major role in building environmental capability in the country.

1/ References to the Bank include IBRD, IDA, IFC, and MIGA. Investment lending covers specific and sector investments including rehabilitation, loans through financial intermediaries, and the investment component of hybrid loans. Sector and structural adjustment loans are excluded from consideration, but are subject to the general policies in OMS 2.36, Environmental Aspects of Bank Work (to be reissued as OD 4.00, Environmental Policies).

2/ For Bank policies and procedures see (a) OPN 11.03, Management of Cultural Property in Bank-Financed Projects, to be reissued as OD 4.50, Cultural Property; (b) OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects, to be reissued as OD 4.30, Involuntary Resettlement; and (c) OMS 2.34, Tribal People in Bank-Financed Projects, to be reissued as OD 4.40, Tribal People.

3. EA is a flexible procedure, which can vary in breadth, depth, and type of analysis, depending on the project. It may be carried out at one point in time, stretched over a year to account for seasonal variations, or done in discrete stages (e.g., first to help select among alternatives, and then to design mitigation measures for the alternative chosen).

4. Like economic, financial, institutional, and engineering analyses, EA is part of project preparation, and is the borrower's responsibility. Close integration of EA with these other aspects of project preparation is essential to ensure that environmental considerations are given due weight in project selection and design decisions.

Types of Environmental Analysis

Project-Specific EAs

5. Project-specific EAs are used to analyze specific investment projects (e.g., dams, factories, irrigation systems) with significant environmental issues. The level of detail and sophistication of analysis of each significant issue should be commensurate with the magnitude of potential impacts. A project-specific EA should normally cover: (a) existing environmental "baseline" conditions; (b) potential environmental impacts, direct and indirect, including opportunities for environmental enhancement;³ (c) systematic environmental comparison of alternative investments, sites, technologies, and designs; (d) preventive, mitigatory, and compensatory measures, generally in the form of an action plan; (e) environmental management and training, and (f) monitoring. To the extent possible, capital and recurrent costs, environmental staffing, training and monitoring requirements, and the benefits of proposed alternatives and mitigation measures should be quantified. Annex A1 gives a sample outline for a project-specific EA report, and Annex A2 is a checklist of specific issues to be covered where relevant.

Regional EAs

6. Regional EAs are used where a number of significant development activities are planned for a reasonably localized area. In such cases, they are generally more efficient than a series of project-specific EAs, and may identify issues that the latter might overlook (e.g., interaction among effluents, or competition for water, land, or timber). The study area is normally defined on a physical and/or biological basis (e.g., airshed, habitat type, river basin) rather than an administrative one.

^{3/} Indirect impacts are the induced consequences of the project which occur later or in another part of the environment, e.g., if a river is channelled or dammed, its capacity for self-purification may be reduced and the original aquatic ecosystem damaged or destroyed.

Regional EAs compare alternative development scenarios, and recommend environmentally sustainable growth rates, land use patterns and policies, etc.

Sectoral EAs

7. Sectoral EAs are used for the overall design of sector investment programs. They are particularly suitable for reviewing (a) sector investment alternatives; (b) the effect of sector policy changes; (c) institutional capacities and requirements for environmental review, implementation and monitoring at the sectoral level; and (d) cumulative impacts of many relatively small, similar investments which do not merit individual project-specific EAs.

8. In some cases, regional or sectoral EAs cover all the normal requirements of project-specific EAs. More often, the latter are still needed for major investments (see para. 14 concerning sector investment loans), but the regional or sectoral EAs will have identified the relevant issues, collected much of the data, and, in general, greatly reduced the work needed in the project-specific EAs.

Alternatives to EAs

9. Alternative approaches that focus on a narrower range of issues are acceptable for many types of projects, especially smaller ones and those not in environmentally sensitive areas. These approaches may be more effective in integrating environmental concerns into the borrower's planning process. Such alternative approaches include:

- (a) integrated pest management programs for many agricultural projects which do not involve major irrigation or land development;
- (b) specific environment design criteria and pollution standards for small- or medium-scale industrial plants; and
- (c) specific environment design criteria and construction supervision programs for small-scale rural works projects.

Other examples of projects for which alternative approaches are generally acceptable are listed in Annex A3, para. 3, under "Category B."

Consideration of Global Issues

10. The Bank does not expect global environmental issues (ozone depletion, global warming, etc.) to normally be analyzed extensively in EAs. Major global environmental issues are monitored by the Bank's Office of the Principal Adviser, Science and Technology, and other specialized organizations responsible for scientific investigations on these issues. The Bank draws upon prevailing views in guiding the development of its own environmental, economic, and sectoral policies, with a view to minimizing possible adverse impacts on global systems such as the atmosphere and oceans.

Project Institutional Aspects

Inter-Agency Coordination

11. Because environmental issues generally involve national, regional, and local government agencies, and cover a broad range of responsibilities (wildlife, health, water and land use, tourism, etc.), inter-agency coordination in the EA process is crucial. This is best achieved through inter-agency meetings at key points in the EA cycle. The first meeting, normally held soon after a decision is made to prepare an EA, identifies the issues, types of analysis required, sources of relevant expertise, responsibilities and schedule for the EA, and mitigating measures to be considered. Another meeting should normally be held when the EA report is completed and submitted for final government review.

Involvement of Affected Groups and Nongovernmental Organizations

12. The Bank encourages the borrower to consult with affected groups and local nongovernmental organizations (NGOs), recognizing the contribution they can make in defining environmental issues and the directions to be taken in the EA (see OD 14.70, Involving Nongovernmental Organizations in Bank-Supported Activities). An approach which has proven effective in many countries is to expand the initial inter-agency meeting (para. 11) into a "forum" or "scoping session" with representatives of affected groups and relevant NGOs. Similar consultations after the EA report is completed are also a valuable way to obtain feedback on the report and to increase community cooperation in implementing the recommendations.

Strengthening Environmental Capabilities

13. The ultimate success of EA depends upon the development of environmental capability and understanding in the concerned agencies. This frequently requires the establishment or strengthening of in-house environmental units in the implementing agency (located or represented on site) and ministry. Involvement of these units throughout the EA process (a) ensures that the agency's/ministry's knowledge and perspective are taken into account in the EA; (b) provides on-the-job training for the staff; and (c) provides continuity for the implementation of the EA's recommendations. In many cases, projects subject to EA should also include an institutional development and training component for the environmental unit of the project, the implementing agency, and/or the responsible ministry. In addition, to help develop EA capability in the country, the Bank should (a) encourage the use of local expertise in EA preparation (in consortia with international consultants, where appropriate), and (b) arrange for local specialist staff and consultants to attend EA training courses.

Sector and Financial Intermediary Lending

14. For sector investment loans and loans through financial intermediaries, subproject details may not be known at the time of project appraisal. In such cases, the project implementing institutions will need to screen subprojects (see para. 19) and carry out environmental analyses consistent with this directive. To ensure that this can be done, the Bank should appraise the implementing agencies' capabilities for EA, and strengthen them where necessary. The appraisal mission should also indicate the proper division of responsibility for preparing and reviewing EAs between the ultimate borrower, the financial intermediary or sector agency, and the agencies responsible for environmental regulation.

Environmental Advisory Panels

15. For major projects with serious and multi-dimensional environmental concerns, the borrower should be encouraged to engage an advisory panel of independent, internationally recognized, environmental specialists, to review and advise on, inter alia, the TOR and findings of the EA, the implementation of its recommendations, and the development of environmental capacity in the implementing agency/ministry. The panel should meet at least once a year until the project is operating routinely and environmental issues have been addressed satisfactorily.⁴

EA Procedures

Overview

16. Though EA preparation is the responsibility of the borrower, the task manager (TM) in the Bank generally supervises the EA process, with support mainly from the Regional environment division (RED). The borrower and the Bank should agree as early as possible on the selection of consultants or borrower staff to prepare the EA, and the EA procedures, scheduling, and outline. Major steps in the EA process normally include: (a) screening, (b) the initial executive project summary (IEPS), (c) preparation of terms of reference (TORs) for the EA, (d) EA preparation, (e) EA review and incorporation of environmental measures into the project, and (f) supervision and ex-post evaluation.

17. Since project and country conditions, national legislation, and institutional experience vary among borrowers, both the borrower and the Bank must exercise judgement in using these procedures to design and implement projects which are both environmentally and economically sound,

4/ See OD 4.00 Annex B, Environmental Policy for Dam and Reservoir Projects, para. 18, for more detail on the selection and functions of the panel.

and are consistent with the environmental laws, policies, and procedures of borrowers, the Bank, and cofinanciers. The Environment Department (ENV), Legal Department, and the REDs maintain information on these requirements.

Screening

18. Projects should be screened at identification by the TM, with advice from the RED, and assigned to one of the following categories based upon the nature, magnitude and sensitivity of environmental issues:

Category A - EA is normally required as the project may have diverse and significant environmental impacts;

Category B - More limited environmental analysis is appropriate, as the project may have specific environmental impacts; and

Category C - Environmental analysis is normally unnecessary.

Annex 3 gives illustrative lists, to be applied flexibly, of the types of project/component in each category.

Initial Executive Project Summary

19. In the Initial Executive Project Summary (IEPS), the TM, in consultation with the RED, should (a) identify key environmental issues, (b) indicate whether an EA or alternative type of environmental analysis is recommended, and (c) provide a preliminary preparation schedule. If an EA is not likely to be available prior to appraisal, the IEPS should propose special procedures to address the situation. The IEPS meeting would confirm the type and timing of environmental analysis (although in the event of inadequate information, the decision may be deferred). The TM should ensure that the decision to prepare an EA and the main issues to be examined are mentioned in the Monthly Operational Summary.

Preparation of TORs for the EA

20. Following the IEPS meeting, the Bank should discuss with the borrower the scope of the EA, and assist the borrower, as necessary, in preparing TORs for the EA. A field visit by Bank environmental staff is generally desirable to confirm the issues to be covered in the TORs. The Bank should ensure that the TORs reflect the results of and provide for further adequate inter-agency coordination (para. 11) and consultation with affected groups and NGOs (para. 12).

EA Preparation

21. An EA for a major project typically takes 6-18 months to prepare and review. EA drafts should be available at key points in the project cycle. The final EA should be available prior to appraisal, to minimize the risk of project design changes and resultant delays at a late stage.

22. In most cases, the EA should form part of the overall feasibility study, so that the EA's findings are directly integrated into project design. However, the EA is normally prepared separately by analysts with appropriate expertise. For projects which would have major impacts, such as large dams or projects involving large scale resettlement, it is recommended that the borrower retain independent experts not affiliated with the project. Borrowers may request Bank assistance for financing EAs as part of an advance from the Project Preparation Facility (PPF)⁵ or, if anticipated EA costs are more than US \$100,000 equivalent, from the Bank's Technical Assistance Grant Program for the Environment. EAs generally account for 1-10 percent of the cost of project preparation.

23. For some projects, a full year of baseline data is desirable to capture the seasonal effects of certain environmental phenomena; however, as waiting for such data could delay critical project decisions, short-term monitoring should be used to provide conservative estimates of environmental impacts, while longer-term data collection is being carried out. Since special care in designing the baseline monitoring program is warranted, the borrower should be encouraged to discuss the matter with the Bank.

EA Review and Project Appraisal

24. After the EA report has been reviewed in the borrowing country (see paras. 11-12), the borrower should submit it, with the reviewers' comments, to the Bank prior to Bank appraisal. The EA report is the borrower's property, but the Bank encourages the borrower to release relevant information to appropriate interested parties. The Final Executive Project Summary (FEPS) should summarize the status of the EA and describe how major environmental issues have been resolved or are to be addressed, noting any proposed conditionality. The appraisal mission should review both the procedure and substantive elements of the EA with the borrower, resolve any issues, assess the adequacy of the institutions responsible for environmental planning and management in light of the EA's findings, and determine if the EA's recommendations are properly addressed in project design and economic analysis.

Staff Appraisal Report (SAR) and Loan Documents

25. The EA procedures followed (including consultations with affected groups and NGOs), environmental baseline conditions, alternatives, mitigating and compensatory actions, capability of environmental units, and environmental monitoring arrangements should be summarized in the SAR. These factors provide the basis for the RED's formal environmental clearance prior to the authorization of negotiations by the Regional vice president. Measures critical to sound project implementation may require specific conditionality in the loan documents.

5/ See OMS 2.15, Project Preparation Facility, to be reissued as OD 8.00.

Supervision and Ex Post Evaluation

26. EA recommendations provide the basis for supervising and evaluating the environmental aspects of project implementation. Compliance with environmental conditionality, the status of mitigating measures, and the findings of environmental monitoring programs should be part of borrower reporting requirements and project supervision. The project completion report (PCR)⁶ should evaluate (a) environmental impacts anticipated in the EA report, as well as any unanticipated ones; and (b) the effectiveness of mitigating measures taken and of institutional development and training.

6/ See the OPNSV memoranda, Guidelines for Preparing Project Completion Reports, July 17, 1989, and OMS 3.58, General Guidelines for Preparing Project Completion Reports, which are to be combined and reissued as OD 13.55, Project Completion Reports.

Sample Outline of a Project-Specific EA Report

1. EA reports should be concise and limited to significant environmental issues. The level of detail and sophistication of analysis should be commensurate with the magnitude of potential impacts. The target audience should be project designers, implementing agencies, and borrower and Bank staff.
2. The EA report should include:
 - (a) Executive Summary. Concise discussion of significant findings and recommended actions.
 - (b) Policy, legal, and administrative framework within which the EA is prepared. The environmental requirements of any cofinanciers should be explained.
 - (c) Project description in a geographic, ecological, social, and temporal context, including any off-site investments that may be required by the project (e.g. dedicated pipelines, access roads, power plants, water supply, housing, raw materials and product storage facilities).
 - (d) Baseline Data. Dimensions of the study area and description of relevant physical, biological, and socio-economic conditions, including any changes anticipated before the project commences. Current and proposed development activities within the project area (but not directly connected to the project) should also be taken into account.
 - (e) Environmental Impacts. The positive and negative impacts likely to result from the proposed project should be identified and assessed. Mitigation measures and the residual impacts that cannot be mitigated should be identified. Opportunities for environmental enhancement should be explored. The extent and quality of available data, key data gaps, and uncertainties associated with predictions should be identified/estimated. Topics that do not require further attention should be specified.
 - (f) Analysis of Alternatives. Proposed investment design, site, technology, and operational alternatives should be compared systematically in terms of their potential environmental impacts, capital and recurrent costs, suitability under local conditions, and institutional, training, and monitoring requirements. To the extent possible for each of the alternatives, the environmental costs and benefits should be quantified, and economic values attached where feasible.
 - (g) Mitigation Plan. Feasible and cost-effective measures which may reduce potentially significant adverse environmental impacts to acceptable levels should be proposed, and the potential environmental impacts, capital and recurrent costs,

and institutional and training requirements of those measures estimated. The plan (sometimes known as an "action plan" or "environmental management plan") should provide details on proposed work programs and schedules, to ensure that the proposed environmental actions are in phase with engineering activities throughout preparation. The plan should consider compensatory measures if mitigation measures are not feasible or cost-effective.

- (h) Environmental Management and Training. The existence, role and capability of environmental units at the project, agency/ministry, and national level should be explored, and recommendations made concerning the establishment, expansion, training, etc. of such units.
- (i) Monitoring Plan regarding environmental impacts and performance. The plan should specify the type of monitoring, who would do it, how much it would cost, and what other inputs (e.g., training) are necessary.

Appendices

- (i) List of EA preparers--individuals and organizations.
- (ii) List of Persons Contacted--individuals and organizations, including addresses and phone numbers.
- (iii) References--written materials used in study preparation. This is especially important given the large amount of unpublished documentation often used.
- (iv) Record of Inter-Agency/Forum Meeting, including list of both invitees and attendees.

Checklist of Potential Issues for an EA

1. Where applicable, EAs should address the following issues, which are subject to the Bank policies and guidelines identified below.
 - (a) Agrochemicals. The Bank promotes the use of integrated pest management (IPM) and the careful selection, application, and disposal of pesticides (see OPN 11.01, Guidelines for the Selection and Use of Pesticides in Bank-Financed Projects and their Procurement when Financed by the Bank, to be reissued as OD 4.00, Annex C, Selection and Use of Pesticides). The use of fertilizers, due to their impacts on surface and groundwater quality, must also be carefully assessed;
 - (b) Biological Diversity. The Bank promotes conservation of endangered plant and animal species, critical habitats, and protected areas (para. 9b, OMS 2.36, Environmental Aspects of Bank Work, and OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).
 - (c) Coastal and Marine Resources Management. Guidelines are available from the Environmental Department (ENV) on the planning and management of coastal marine resources including coral reefs, mangroves, and wetlands.
 - (d) Cultural Properties. OPN 11.03, Management of Cultural Property in Bank-Financed Projects (to be reissued as OD 4.50, Cultural Property), confirms the Bank's commitment to actively protect archaeological sites, historic monuments, and historic settlements.
 - (e) Dams and Reservoirs. OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, provides specific guidance for addressing environmental issues in planning, implementation, and operation of dam and reservoir projects.
 - (f) Hazardous and Toxic Materials. Guidelines are available from ENV on the safe manufacture, use, transport, storage, and disposal of hazardous and toxic materials.
 - (g) Induced Development and Other Socio-Cultural Aspects. Secondary growth of settlements and infrastructure, often referred to as "induced development" or "boomtown" effects, can have major indirect environmental impacts. The costs of addressing this problem must frequently be borne by relatively weak local governments.
 - (h) Industrial Hazards. All energy and industry projects should include a formal plan to prevent and manage industrial hazards. (See Techniques of Assessing Industrial Hazards - A Manual, World Bank Technical Paper No. 55.)

- (i) International Treaties and Agreements on the Environment and Natural Resources. EAs should review the status and application of such current and pending treaties and agreements, including their notification requirements. Bank staff should assure compliance with relevant treaties and agreements. The Legal Department maintains a list of international treaties, and could obtain, whenever required, information on applicable law in individual countries.
- (j) International Waterways. OMS 2.32, Projects on International Waterways (to be re-issued as OD 7.50), provides guidance on this matter. This OMS exempts from notification requirements rehabilitation projects which will not affect the quality or quantity of water flows.
- (k) Involuntary Resettlement. OMS 2.33, Social Issues Associated with Involuntary Resettlement in Bank-Financed Projects, and OPN 10.08, Operations Issues in the Treatment of Involuntary Resettlement in Bank-Financed Projects (to be reissued as OD 4.30, Involuntary Resettlement), provide guidance.
- (l) Land Settlement. Due to the complex physical, biological, socio-economic, and cultural impacts, land settlement should generally be carefully reviewed in EAs (see OD 4.31, Land Settlement, to be issued).
- (m) Natural Hazards. EAs should review whether the project may be affected by natural hazards (e.g., earthquakes, floods, volcanic activity), and should propose specific measures to address these concerns when appropriate, (see OD 8.50, Emergency Recovery Assistance, to be issued).
- (n) Occupational Health and Safety. All industry and energy projects should include a formal plan to promote occupational health and safety (Occupational Health and Safety Guidelines, 1988).
- (o) Trans boundary Impacts. EAs should analyze potential impacts on adjacent or nearby countries (e.g. acid rain, ocean dumping). In some cases transboundary impacts are subject to international agreements (see (i) above);
- (p) Tribal Peoples. OMS 2.34, Tribal People in Bank-Financed Projects (to be reissued as OD 4.40, Tribal People), provides specific guidance for addressing the rights of tribal peoples, including traditional land and water rights.
- (q) Tropical Forests. The Bank co-authored the Tropical Forest Action Plan (published in 1984); up-to-date information is available from ENV. OPN 11.02, Wildlands: Their Protection and Management in Economic Development (to be reissued as OD 4.00, Annex D), also addresses issues relating to tropical forests.

- (r) Watersheds. Bank policy is to promote protection and management of watersheds as an element of lending operations for dams, reservoirs, and irrigation systems (OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects, para. 6).
- (s) Wetlands. The Bank promotes conservation and management of wetlands (e.g., estuaries, lakes, mangroves, marshes, and swamps). This is covered by OPN 11.02 on Wildlands (see (s) below).
- (t) Wildlands. The Bank is committed to protect wildlands, including through compensatory measures when lending could result in adverse impacts (see OPN 11.02, Wildlands: Their Protection and Management in Economic Development, to be reissued as OD 4.00, Annex D, Wildlands: Their Protection and Management).

Environmental Screening

Introduction

1. The task manager (TM), in consultation with the Regional environmental division is responsible for screening a proposed project to determine the appropriate type of environmental analysis, based on the nature, potential magnitude, and sensitivity of the issues. The categories below, based upon prior Bank staff experience, are strictly illustrative. Alternatives to EA are acceptable where they are expected to result in an environmentally sound project.

2. Category A: Projects/Components which may Have Diverse and Significant Environmental Impacts - Normally Require EA¹

- (i) Aquaculture/Mariculture (large scale);
- (ii) Dams and Reservoirs;²
- (iii) Electrical Transmission (large scale);
- (iv) Industrial Plants (large scale) and Industrial Estates;
- (v) Irrigation and Drainage (large scale);
- (vi) Land Clearance and Leveling;
- (vii) Mineral Development (including oil and gas);
- (viii) Pipelines (oil, gas and water);
- (ix) Port and Harbor Development;
- (x) Reclamation and New Land Development;
- (xi) Resettlement;³

1/ Except generally for projects directed to rehabilitation, improved operation and maintenance, and limited upgrading of facilities.

2/ See OD 4.00, Annex B, Environmental Policy for Dam and Reservoir Projects.

3/ While existing directives cover the social aspects of resettlement, the environmental implications of the resettlement itself can be major. (See OD 4.30 Involuntary Resettlement, to be reissued.)

- (xii) River Basin Development;
- (xiii) Rural Roads;
- (xiv) Thermal and Hydropower Development;
- (xv) Tourism (large scale);
- (xvi) Transportation (airports, railways, roads, waterways);
- (xvii) Urban Development (large scale); and,
- (xviii) Urban Water Supply and Sanitation (large scale).
- (xix) Manufacture, Transportation, and Use of Pesticides or other Hazardous and/or Toxic Materials;⁴ and
- (xx) Projects which Pose Serious Accident Risk.⁵

3. Category B: Projects/Components which may Have Specific Environmental Impacts - More Limited Environmental Analysis Appropriate

Projects in this category normally require more limited environmental analysis than an EA. A wide range of environmental guidelines, developed by a number of organizations, are applicable. In addition, specific environmental pollution standards or design criteria can be developed for individual projects.

- (i) Agroindustries (small scale);
- (ii) Aquaculture and Mariculture (small scale);
- (iii) Electrical Transmission (small scale);
- (iv) Industries (small scale);
- (v) Irrigation and Drainage (small scale);

^{4/} In some cases, adherence to existing directives is an acceptable alternative to an EA (see OD 4.00 Annex C, Selection and Use of Pesticides, to be reissued). Certain materials (e.g. PCBs) are not to be used in Bank projects and other materials (e.g. asbestos) are to be used only under extremely restricted conditions. A Restricted Toxic Materials List (RTML) will be available from ENV and updated periodically.

^{5/} See Techniques of Assessing Industrial Hazard - A Manual, World Bank Technical Paper No. 55.

- (vi) Mini Hydro-Power;
- (vii) Public Facilities (hospitals, housing, schools, etc.);
- (viii) Renewable Energy;
- (ix) Rural Electrification;
- (x) Telecommunications;
- (xi) Tourism (small scale);
- (xii) Urban Development (small scale); and,
- (xiii) Rural Water Supply and Sanitation.

4. Category C: Projects/Components which Normally Do Not Result in Significant Environmental Impact - Environmental Analysis Normally Unnecessary

Opportunities to enhance environmental benefits should be sought in these projects.

- (i) Education (except school construction);
- (ii) Family Planning;
- (iii) Health (except hospital construction);
- (iv) Nutrition;
- (v) Institutional Development; and
- (vi) Technical Assistance.

5. Emergency Recovery Projects:

Because emergency recovery projects (a) need to be processed rapidly and (b) seek mainly to restore existing facilities, they normally would not require a full EA. However, the extent to which the emergency was precipitated and/or exacerbated by inappropriate environmental practices should be determined, and corrective measures built into either the emergency project or a future lending operation.⁶

⁶/ See OD 8.50, Emergency Recovery Assistance, to be issued.

THE WORLD BANK
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cc: Mr. Kiddington
VP
8/29

BARBER B. CONABLE
President

OFFICE OF THE VICE PRESIDENT
SECTOR POLICY & RESEARCH

August 28, 1989

Messrs. W. T. [redacted] and Moeen A. Qureshi

Re: Environment Assessments

The draft [redacted] should reflect the [redacted] the [redacted] take fully into account the [redacted] in project design and [redacted] in the preparation of the [redacted] report.

I hope [redacted] to Board members [redacted] a Board meeting to be held well before the start of the Board [redacted] I will then make a final decision in light of Board [redacted]

I also expect the point made by Ibrahim Shihata, i.e., we should not give an undertaking to the NGOs that their views would be taken into consideration when this Directive is revised. It goes without saying that we will take into account views of all interested parties as their "living documents" are being revised.

Done + Sent to
Mr. Amman
8/30/89