1. Project Data:

<table>
<thead>
<tr>
<th>PROJ ID</th>
<th>P003539</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name</td>
<td>Cn-sustainable Coastal Resources Dev.</td>
</tr>
<tr>
<td>Country</td>
<td>China</td>
</tr>
<tr>
<td>Sector Board</td>
<td>ARD</td>
</tr>
</tbody>
</table>
| Sector(s):  | Animal production (70%)  
             | Other domestic and international trade (20%)  
             | Central government administration (10%)  |
| Theme(s):   | Export development and competitiveness (40% - P)  
             | Water resource management (40% - P)  
             | Biodiversity (20% - S)  |
| L/C Number  | L4322   |
| Board Approval Date | 05/19/1998 |

2. Project Objectives and Components:

a. Objectives:

"The project's objectives are to (a) support the Government's commitment to sustainable development of China's coastal resources, (b) reduce pressure on coastal fishery resources and (c) help improve aquatic product quality". (PAD, p.2)

The Loan Agreement specifies that the project covers four provinces: Fujian (all coastal municipalities plus Xiamen municipality); Jiangsu (Nantong municipality); Liaoning (Yingkou municipality); and Shandong (Weihai municipality). Following the August 2003 mid-term review, Nantong and some of the project areas in Fujian were dropped and 3 new areas in Guangxi and Hebei were added.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Components (or Key Conditions in the case of DPLs, as appropriate):

Coastal Zone Management (Estimated, US$16.1 million; Actual, US$41.6 million). Formulation and implementation of Coastal Zone Management plans in several municipalities (listed in Section 2a above), involving improvement of
3. Relevance of Objectives & Design:

Objectives. The public goods aspect of the project (improving coastal zone management and introducing international quality and safety norms at seafood processing factories) was highly relevant. Better coastal management was needed to address near-shore overfishing, shellfish disease, estuarine pollution and algae blooms. The relevance of the private goods aspect of the project (which involved on-lending to producers and processors by government intermediaries) is harder to assess because it is possible that the persons who received loans would have done so even without the project; the project did not attempt to facilitate lending to less-advantaged groups. The production focus of the project was consistent with the government's Ninth Five-Year Plan, which identified direct productive activities. These were very demand-driven; the portfolio of investments made and their geographical locations were significantly different from what had been envisaged at appraisal (p. 14). The support to private sector investment involved on-lending by the Bank, the details of which are not spelled out in the ICR. The project team explained to IEG that, as was typical for China at the time, on-lending was conducted through state-run Finance Bureaux whose operating procedures were not fully transparent. However, the project team stated that "the Bank audited all sub-projects in advance of including them under the project during appraisal and during restructuring. For the smallholder sub-projects such as the aquaculture investments, these were all assessed with regard to their technical, economic and financial feasibility and environmental soundness and social acceptability...For the seafood processing plants, the criteria for inclusion are set forth in the Loan Agreement" (e-mail, July 26, 2008).

Design. The design of the project responded opportunistically to changes in the political climate and state of development of China’s coastal provinces, building on the growth of environmental awareness and taking into account lessons learned about the serious drawbacks (e.g., disease risks) of intensive shrimp aquaculture. (PAD, pp.9-10) The risk proposed by typhoon damage and localized outbreaks of aquatic diseases was mitigated by the choice of a large number of project sites with diverse ecologies. Consistent with the sustainability objective, the project did not build new ponds, thereby avoiding further damage to wetlands and mangroves. There was sufficient flexibility in the specification of the components to allow for mid-course corrections and funding adjustments; although, as Section 2d above notes, the re-design process was lengthy. Weaknesses in project design included: major shortfalls in monitoring and evaluation (see Section 10 below); insufficient attention to building the capacity and fiduciary responsibility of local-level implementing agencies (see Section 11 below); and an acquiescence in the non-transparent on-lending procedures typical for China. Although this was not a targeted intervention more consideration could have been given to the likely distributional consequences of the broad-based growth promoted by the project (e.g., through increased demand for hired labor). The ICR also notes (p. 15) that the design could have made more provision for the market information needs of poorer producers.

Overall, relevance is rated substantial rather than high, owing (a) to the likelihood that China would have proceeded to improve coastal zone management without Bank intervention, (b) the limited attention to poverty impact and (c) the
4. Achievement of Objectives (Efficacy):

In the interests of greater clarity, the ICR proposes a useful reformulation of the project development objectives. The overarching objective is to promote sustainable coastal development. The specific objectives are:

(a) To design and implement sound Coastal Zone Management plans;
(b) To promote sustainable investments in marine aquaculture; and
(c) To improve the quality of aquatic products.

The PAD (Annex 1A) provides a series of "outcome" indicators relating to these three objectives and IEG's assessment of achievement takes account of data on these indicators, as well as other information in the ICR. Achievement of each of the three objectives is rated modest, based on the incompleteness of the monitoring data (see Note to Section 12 below, concerning IEG procedures).

With respect to objective (a) (coastal zone management), the PAD outcome indicators (and evidence) are:

- Environmental data linked to production decisions (the ICR states—and IEG concurs—that it is not clear how to interpret or measure this indicator; there are no data on it);
- Protected areas development plan completed (during project implementation protected areas were established at Xiamen and Xiangshan but it is not clear if plans were completed);
- "Fishery superintendence record improved" (there are no data on trends in the number of violations).

In general, coastal zone planning capacity has been strengthened in all project areas except Nantong, which withdrew from the project before the April 2004 re-structuring. Improved zoning policy has encouraged the relocation of aquaculture from peri-urban areas to the more rural eastern shores, partly owing to over-crowding and pollution threats in the original areas. But the ICR acknowledges that it is not clear how much the change in planning and zoning was attributable to the project: all coastal provinces experienced these changes, not just project areas. Similarly, while the project provided the means for fishery regulations to be better enforced (e.g., faster surveillance vessels), the absence of data on the number of infringements makes it impossible to assess whether the project actually led to a decline in violations. The Loan Agreement stipulates that processors limit capture fish to 30 percent of their process requirement but the ICR says that "this was not strictly adhered to" (p. 18), partly because of the booming demand for capture fish. The ICR acknowledges (p. 22) that, given the strong demand for fish, the effect of increasing processing capacity may have the unintended consequence of increasing pressure on capture fisheries.

With respect to objective (b) (marine aquaculture), the PAD outcome indicators (and evidence) are:

- "Increase in percentage of seedlings/fingerlings from hatcheries" (no baseline, no target, no ICR assessment);
- "Increase in beneficiary income" (no target for the increase was specified but between 1998 and 2007 the ICR presents two sets of figures showing income increased);
- "Results of shrimp trials" (no baseline, no target, ICR reports that trials were negative and consequently shrimp pond rehabilitation was dropped);
- "Carrying capacity research reflected in decisions on number of fish cages per site" (no baseline, no target, no ICR assessment);
- "Proportion of project sites in polyculture" (no baseline, no target, no ICR assessment);
- "Feed conversion efficiency increases (ratio of kg of feed to yield)" (no baseline, no target, no ICR assessment).

Based on village-level interviews conducted by the ICR mission, it seems that many farmers have adopted marine aquaculture as an alternative to capture fishing, thus helping to reduce the depletion of fish stocks. The economic and financial analysis (see Section 5 below) suggests that investments in marine aquaculture are sustainable. Another measure of sustainability is reduced incidence of disease but there are no comprehensive, project-specific data on this; project staff observed that in "some areas" incidence had declined.

With respect to objective (c) (product quality), the PAD outcome indicators (and evidence) are:

- "Number of pilot facilities conforming to guidelines for Hazard Analysis at Critical Control Points (HACCP)" and "Increase in the level of capacity utilization". The ICR does not assess achievements for these two indicators directly, inferring results from the upgrading of processing plants, which was supposed to include adoption of HACCP. The original target was upgrading of 14 processing plants by project end—increased to 19 when the project was restructured—and the value at completion was 18 plants. The ICR observes that "project-supported facilities have consistently adopted HACCP standards" (p. 18). There is no data on how much extra seafood was processed as a consequence of the upgrading and the proportion of this derived from capture fishery rather than marine aquaculture.

5. Efficiency (not applicable to DPLs):

The numbers in (a) below refer to the Economic Rate of Return quoted from the detailed analysis on p. 55 of the ICR; an alternative table (p. 20) gives a rate of 25.5%. The analysis does not include the benefits generated by the
Coastal Zone Management (CZM) component, which are difficult to quantify. But all project costs (including those related to CZM—about 22 percent of total project costs) are included in the estimation of ERR. Note that many financial input and output prices are used as proxies for economic prices because these items are primarily governed by domestic markets—there are no comparable international series available to calculate parity prices; also, the wedge between prices in China and those on the world market has narrowed in recent years. The financial rates of return for the various productive models ranged from 11 to 35 percent (13 to 30 percent at appraisal) suggesting that the marine aquaculture and processing components (on which most of the analysis is based) are financially sustainable. Based on numbers employed, the project benefited roughly 200,000 people, compared to an appraisal estimate of 85,000; but is not clear how many of these were new jobs, attributable to the project.

6. Outcome:
In line with IEG procedures (see Note to Section 12 below, efficacy is rated modest rather than substantial to reflect the incompleteness of the monitoring data. Based on substantial relevance, modest efficacy and substantial efficiency, the overall outcome rating is moderately satisfactory.

7. Rationale for Risk to Development Outcome Rating:

- Technical: the various technologies involved in coastal zone management, marine aquaculture and seafood processing are tried and tested and conform to international standards;
- Financial and Economic: The analysis in the ICR makes a plausible case that the net benefit flow is substantial and sustainable. Although shrimp production proved not to be financially viable there is a buoyant demand for the products of marine aquaculture.
- Stakeholder ownership: Strong support at the community level. Government has made coastal zone management mandatory for the whole of China's coastline.
- Governance: Stable
- Environmental: Support for coastal zone management is be growing although it is hard to quantify benefits (or sustainability). There is no evidence of negative environmental impacts.
- Institutional: The project worked through local governments rather than creating parallel institutions, helping to build capacity.
- Natural disasters: Typhoons are the largest single risk, particularly for the marine aquaculture investments (which account for 45 percent of total project cost). Three typhoons made land-fall in project provinces during implementation. For this reason IEG proposes that the overall ICR rating of risk be altered from low to moderate.

8. Assessment of Bank Performance:
This was a demanding project that was for the most part well served by the Bank, with appropriate deployment of technical expertise. But there were drawbacks which explain why IEG proposes a rating of moderately satisfactory. Before entry there were shortcomings related to the overly broad specification of development objectives, the inadequate arrangements for monitoring and evaluation (see Section 10 below), and the lack of detail about on-lending arrangements and fiduciary safeguards. There was no close assessment of the lower-level implementing agencies, “which led in a limited number of cases to inappropriate use of loan funds, misprocurement and failure to keep adequate records” (ICR, p. 59). During supervision, the monitoring and evaluation deficiencies inherited from the preparation phase were not resolved. A Quality Assurance Group assessment found that reporting on implementation progress before restructuring was over optimistic; and noted that supervision reports did not adequately specify the actions that management needed to take. The Borrower said that the Bank took six months to one year to review adjustment proposals (ICR, p. 52).
9. Assessment of Borrower Performance:
The Borrower's commitment to the overarching objective of the project was demonstrated by the passage of legislation in 2002 to extend the methodology of coastal zone management to all coastal areas. Implementation delays are attributed by the ICR to the complex nature of the project and its wide geographic dispersion rather than any lack of application by the government itself. There were various instances of misprocurement, reflecting deficiencies in local-level implementing agencies that could have been avoided with more training and oversight—as much a Bank as a Borrower failing.

- **Government Performance** : Satisfactory
- **Implementing Agency Performance** : Moderately Satisfactory
- **Overall Borrower Performance** : Satisfactory

10. M&E Design, Implementation, & Utilization:

**Design**. Not all of the key performance indicators were well specified and there were some inconsistencies in the presentation of them in the PAD. There was no attempt to specify baseline or target values, making it harder to assess progress toward development outcomes. No baseline survey was conducted. On the other hand, the economic and financial analysis was sufficiently thorough for a (positive) outcome to be inferred.

**Implementation**. Reporting was not always timely, particularly before restructuring, and the quality of the data presented varied substantially between provinces, reflecting differences in local capacity. Monitoring focused on inputs and physical outputs and Bank supervision missions did not re-orient the system towards a focus on targets and outcomes.

**Utilization**. The project did not substantially enhance the quality of the monitoring and administrative systems already deployed at the various levels of government; this failure to build capacity means that the project's long-term contribution to planning and management of the coastal zone is less than it should have been.

**M&E Quality Rating** : Negligible

11. Other Issues (Safeguards, Fiduciary, Unintended Positive and Negative Impacts):

There were no manifest safeguard violations, with due regard being taken to avoid damage to mangroves and contamination from net cage culture of fish; resettlement issues did not arise. (However, safeguard compliance at the subproject level warrants further investigation to verify the thoroughness of Bank scrutiny.) The ICR records that numerous problems have been encountered with procurement over the life of the project and have been resolved, including four cases of misprocurement where funds were returned to the Bank and the respective amounts cancelled from the Loan” (p. 14). The project's demonstration effect possibly helped build support for the passage of a national coastal management law in 2002—an unintended positive effect. The increase in seafood processing capacity was only partially met from marine aquaculture (the exact extent is unknown)—an unintended negative impact of the project may have been to increase the volume of capture fishery (p. 22).

12. Ratings:

<table>
<thead>
<tr>
<th></th>
<th>ICR</th>
<th>IEG Review</th>
<th>Reason for Disagreement / Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Outcome</strong></td>
<td>Satisfactory</td>
<td>Moderately Satisfactory</td>
<td>IEG downgrades the rating when insufficient information is provided (see Note below); in this case, the inadequacy of the monitoring</td>
</tr>
</tbody>
</table>
framework and the lack of data made it hard to assess the extent of the project's achievements.

| Risk to Development Outcome | Negligible to Low | Moderate | The typhoon risk is non-negligible and could destroy, at least partially, the physical investments made by the project. |
| Bank Performance | Moderately Satisfactory | Moderately Satisfactory |
| Borrower Performance | Satisfactory | Satisfactory |
| Quality of ICR | Satisfactory |

NOTES:
- When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
- The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons:
- When projects are prepared close attention should be paid to specifying clear development objectives, backed by appropriate key performance indicators, accompanied by identification of baseline and target values: in the absence of this framework it will be difficult to assess progress toward development outcomes.
- Before loans become effective operational and financial manuals need to be prepared and arrangements for procurement training need to be made.
- The appraisal and supervision of projects involving lines of credit needs to consider the rigor with which sub-project proposals will be assessed, whether or not subsidies are involved and how they are targeted, and how the uptake of credit varies by the asset profile of the producer.

14. Assessment Recommended? ☐ Yes  ☑ No

Why? Fisheries and aquaculture are under-evaluated sectors. Also, there are sufficient gaps in the monitoring and evaluation record for this project to warrant further investigation. Due diligence procedures for credit line subprojects need to be assessed, including safeguards compliance.

15. Comments on Quality of ICR:
For the most part this is a comprehensive and well organized ICR, which grapples as well as can be expected with the manifest lack of monitoring data. There is a useful attempt to decompose the objectives of the project in order to facilitate the assessment of development outcome; and a good discussion of attribution issues. The economic and financial analysis is thorough and based on plausible assumptions; although the ICR does not acknowledge the differences between the estimate of the ERR in the Borrower's report (p. 55) and that reported in the main text (p. 20). The Lessons section could have been more systematic, first, specifying a lesson in terms general enough to apply beyond the project and then, by cross-reference to earlier paragraphs, indicating how that lesson was derived from the project evidence (not always clear in this case). There is a lack of analysis about the efficiency and equity implications of the on-lending (procedures which, in China, the Bank seems to have acquiesced in). Why does the Lessons section (p. 25) identify a possible need for more grant or soft loan finance when in previous sections of the CR there is no detail on the shortfall that this lesson is presumably based on? The data on staff time and costs are incomplete (p. 38) and do not correspond to the relevant period: the concept review was in FY97 but 99 percent of the costs ascribed to lending are shown as pre-1997; there are no cost data for FY07 and FY08.

Quality of ICR Rating: Satisfactory